

REFINITIV

DELTA REPORT

10-K

ARLP - ALLIANCE RESOURCE PARTNER
10-K - DECEMBER 31, 2023 COMPARED TO 10-K - DECEMBER 31, 2022

The following comparison report has been automatically generated

TOTAL DELTAS	24318
CHANGES	895
DELETIONS	4362
ADDITIONS	19061

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2022 2023

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
FOR THE TRANSITION PERIOD FROM _____ TO _____

COMMISSION FILE NO.: 0-26823

ALLIANCE RESOURCE PARTNERS, L.P.
(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

Delaware 73-1564280
(State or Other Jurisdiction of (IRS Employer Identification No.)
Incorporation or Organization)

1717 South Boulder Avenue, Suite 400, Tulsa, Oklahoma 74119

(Address of Principal Executive Offices and Zip Code)

(918) 295-7600

(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol	Name of Each Exchange On Which Registered
Common Units representing limited partner interests	ARLP	The NASDAQ Stock Market LLC
Securities registered pursuant to Section 12(g) of the Act: None		

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. ☒ Yes ☐ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. ☐ Yes ☒ No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§322.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). ☒ Yes ☐ No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer ☒ Accelerated Filer ☐ Non-Accelerated Filer ☐ Smaller Reporting Company ☐
(Do not check if smaller reporting company)

Emerging Growth Company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 726(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). ☐ Yes ☒ No

The aggregate value of the common units held by non-affiliates of the registrant (treating all executive officers and directors of the registrant, for this purpose, as if they may be affiliates of the registrant) was approximately \$1,929,455,252 \$1,948,772,132 as of June 30, 2022 June 30, 2023, the last business day of the registrant's most recently completed second fiscal quarter, based on the reported closing price of the common units as reported on The NASDAQ Stock Market LLC on such date.

As of February 24, 2023 February 23, 2024, 127,198,650 128,061,981 common units were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE: None



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GLOSSARY OF COAL TERMS

The following are abbreviations and definitions of certain terms used in this document, some of which are defined by authoritative sources and others reflect those we commonly use in the coal **industry** and oil & gas industries:

2020 Grants	Restricted units that were granted in 2020
2022 Registration Statement	In February 2022, we filed with the SEC a universal shelf registration statement which allows us to issue from time to time an indeterminate amount of debt or equity securities.
A&D	Acquisitions and Divestitures
ACE Rule	The Affordable Clean Energy Rule
Acquisition Gain	The \$177.0 million non-cash acquisition gain recognized in 2019 related to the acquisition of the remaining interests in AllDale Minerals LP and AllDale Minerals II, LP
AGP	Alliance GP, LLC
AHGP	Our subsidiary, Alliance Holdings GP, L.P.
AllDale I	Our subsidiary, AllDale Minerals, LP
AllDale I & II	Collectively our subsidiaries, AllDale Minerals, LP and AllDale Minerals II, LP
AllDale II	Our subsidiary, AllDale Minerals II, LP
AllDale III	AllDale Minerals III, LP
Alliance Coal	Alliance Coal, LLC, an indirect wholly owned subsidiary of ARLP
Alliance Design	Our subsidiary, Alliance Design Group, LLC
Alliance Finance	Our subsidiary, Alliance Resource Finance Corporation
Alliance Minerals	Alliance Minerals, LLC, an indirect wholly owned subsidiary of ARLP
Alliance Properties	Our subsidiary, Alliance Properties, LLC
Alliance Resource Properties	Alliance Resource Properties, LLC, an indirect wholly owned subsidiary of ARLP
Alliance WOR Properties	Our subsidiary, Alliance WOR Properties, LLC
Allocation Date	That first day of each month in which we prorate our items of income, gain, loss and deduction between transferors and transferees of our units based upon the ownership of our units on that day
AR Midland	Our subsidiary, AR Midland, LP
ARH	Alliance Resource Holdings, Inc.
ARLP	Alliance Resource Partners, L.P., individually as the parent company, and not on a consolidated basis

ARLP Partnership	The business and operations of Alliance Resource Partners, L.P., the parent company, as well as its consolidated subsidiaries; references to "Partnership", "we", "us" or "our" also refer to the ARLP Partnership
AROP Funding	Our subsidiary, AROP Funding, LLC
ASC	Accounting Standards Codification
Ascend	Ascend Elements, Inc.
ASI	Our subsidiary, Alliance Service, Inc.
Assigned reserves	Reserves that have been designated for mining by a specific operation
Bituminous coal ASU	Coal used primarily to generate electricity and to make coke for the steel industry with a heat value ranging between 10,500 and 15,500 Btus per pound Accounting Standards Update
Btu ASU 2023-07	British thermal unit ASU 2023-07, <i>Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures</i>
Compliance coal ASU 2023-09	Coal which, when burned, emits 1.2 pounds or less of sulfur dioxide per MMBtus, requiring no blending or other sulfur dioxide reduction technologies in order ASU 2023-09, <i>Income Taxes (Topic 740): Improvements to comply with the requirements of the Federal Clean Air Act Income Tax Disclosures</i>
Continuous miner Audit Committee	A machine used in underground mining to cut coal from The audit committee of the seam and load it onto conveyors or into shuttle cars in a continuous operation Board of Directors
High-sulfur coal Bankruptcy Code	Based on market expectations, we classify coal with a sulfur content Title 11 of greater than 3% the United State Code
Indicated mineral resource	That part of a mineral resource for which quantity and grade or quality are estimated on the basis of adequate geological evidence and sampling. The level of geological certainty associated with an indicated mineral resource is sufficient to allow a qualified person to apply modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Because an indicated mineral resource has a lower level of confidence than the level of confidence of a measured mineral resource, an indicated mineral resource may only be converted to a probable mineral reserve.
Inferred mineral resource	That part of a mineral resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. The level of geological uncertainty associated with an inferred mineral resource is too high to apply relevant technical and economic factors likely to influence the prospects of economic extraction in a manner useful for evaluation of economic viability. Because an inferred mineral resource has the lowest level of geological confidence of all mineral resources, which prevents the application of the modifying factors in a manner useful for evaluation of economic viability, an inferred mineral resource may not be considered when assessing the economic viability of a mining project, and may not be converted to a mineral reserve.
Long-term contracts	Contracts having a term of one year or greater
Longwall mining	One of two major underground coal mining methods, utilizing specialized equipment to remove nearly all of a coal seam over a very large area
Low-sulfur coal	Based on market expectations, we classify coal with a sulfur content of less than 1.5%

Measured mineral resource	That part of a mineral resource for which quantity and grade or quality are estimated on the basis of conclusive geological evidence and sampling. The level of geological certainty associated with a measured mineral resource is sufficient to allow a qualified person to apply modifying factors, as defined in this section, in sufficient detail to support detailed mine planning and final evaluation of the economic viability of the deposit. Because a measured mineral resource has a higher level of confidence than the level of confidence of either an indicated mineral resource or an inferred mineral resource, a measured mineral resource may be converted to a proven mineral reserve or to a probable mineral reserve.
Medium-sulfur coal	Based on market expectations, we classify coal with a sulfur content of 1.5% to 3%

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Metallurgical coal	Coal primarily used in the production of steel
Mineral reserve	An estimate of tonnage and grade or quality of indicated and measured mineral resources that, in the opinion of the qualified person, can be the basis of an economically viable project. More specifically, it is the economically mineable part of a measured or indicated mineral resource, which includes diluting materials and allowances for losses that may occur when the material is mined or extracted.
Mineral resource	A concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for economic extraction. A mineral resource is a reasonable estimate of mineralization, taking into account relevant factors such as cut-off grade, likely mining dimensions, location or continuity that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable. It is not merely an inventory of all mineralization drilled or sampled.
MMBtus	Million British thermal units
Preparation plant	A facility used for crushing, sizing, and washing coal to remove impurities and to prepare it for use by a particular customer
Probable mineral reserve	The economically mineable part of an indicated and, in some cases, a measured mineral resource.
Proven mineral reserve	The economically mineable part of a measured mineral resource and can only result from conversion of a measured mineral resource.
Reclamation	The restoration of land and environmental standards to a mining site after the coal is extracted, including returning the land to its approximate original appearance, restoring topsoil, and planting native grass and ground covers
Room-and-pillar mining	One of two major underground coal mining methods, utilizing continuous miners creating a network of "rooms" within a coal seam, leaving behind "pillars" of coal used to support the roof of a mine
Thermal coal	Coal used primarily in the generation of electricity
Unassigned reserves	Reserves that have not yet been designated for mining by a specific operation

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GLOSSARY OF OIL & GAS TERMS

The following are abbreviations and definitions of certain terms used in this document, some of which are defined by authoritative sources and others reflect those we commonly use in the oil & gas industry:

<i>Basin</i>	A depression in the crust of the Earth, caused by plate tectonic activity and subsidence, in which sediments accumulate. If rich hydrocarbon source rocks occur in combination with appropriate depth and duration of burial, then a petroleum system can develop within the basin. Most basins contain some amount of shale, thus providing opportunities for shale oil & gas exploration and production.
<i>Basis differential</i>	The difference between the spot price of a commodity and the sales price at the delivery point where the commodity is sold
<i>Bbl</i>	Stock tank barrel, or 42 United States gallons liquid volume, used in reference to crude oil or other liquid hydrocarbons
<i>Belvedere</i>	Belvedere Operating, LLC
<i>Belvedere Acquisition</i>	On September 9, 2022, AR Midland acquired approximately 394 net oil & gas royalty acres in the Delaware Basin from Belvedere.
<i>Belvedere Acquisition Date</i>	September 9, 2022
<i>Bituminous coal</i>	Coal used primarily to generate electricity and to make coke for the steel industry with a heat value ranging between 10,500 and 15,500 Btus per pound
<i>BLBA</i>	Federal Black Lung Benefits Act
<i>Bluegrass Minerals</i>	Bluegrass Minerals Management, LLC
<i>Board of Directors</i>	The board of directors of our general partner
<i>BOE</i>	Barrels of oil equivalent, with six Mcf of natural gas being equivalent to one Bbl of crude oil, condensate, or natural gas liquids

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<i>Boulders</i>	Boulders Royalty Corp.
<i>Boulders Acquisition</i>	On October 13, 2021, AR Midland acquired approximately 1,480 oil & gas net royalty acres in the Delaware Basin from Boulders.
<i>BSEER</i>	Best System of Emission Reduction
<i>Btu</i>	British thermal unit
<i>CAA</i>	Federal Clean Air Act
<i>CAIR</i>	Clean Air Mercury Rule
<i>Cavalier Minerals</i>	Our subsidiary, Cavalier Minerals JV, LLC
<i>CCB</i>	Coal combustion by-products
<i>CCRs</i>	Coal combustion residues
<i>CEO</i>	Chief Executive Officer
<i>CERCLA</i>	Federal Comprehensive Environmental Response, Compensation and Liability Act
<i>CEQ</i>	Council on Environmental Quality
<i>CFO</i>	Chief Financial Officer
<i>CGA</i>	Cawley, Gillespie & Associates, Inc.
<i>Circuit Court</i>	United States Court of Appeals for the District of Columbia
<i>CODM</i>	Chief operating decision maker
<i>Compensation Committee</i>	The compensation committee of the Board of Directors
<i>Compliance coal</i>	Coal which, when burned, emits 1.2 pounds or less of sulfur dioxide per MMBtus, requiring no blending or other sulfur dioxide reduction technologies in order to comply with the requirements of the Federal Clean Air Act
<i>Conflicts Committee</i>	The conflicts committee of the Board of Directors
<i>Continuous miner</i>	A machine used in underground mining to cut coal from the seam and load it onto conveyors or into shuttle cars in a continuous operation
<i>COP26</i>	26 th Conference of the Parties
<i>COP27</i>	27 th Conference of the Parties
<i>COP28</i>	28 th Conference of the Parties
<i>Corps of Engineers</i>	United States Army Corps of Engineers
<i>COSO</i>	Committee of Sponsoring Organizations of the Treadway Commission
<i>CPP</i>	Clean Power Plan

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<i>Credit Agreement</i>	The credit agreement entered into by Alliance Coal, as borrower, on January 13, 2023
<i>CSAPR</i>	Cross-State Air Pollution Rule
<i>CSX</i>	CSX Transportation, Inc.
<i>CTO</i>	Chief Technology Officer
<i>CWA</i>	Federal Clean Water Act
<i>DERs</i>	Distribution equivalent rights
<i>Developed acreage</i>	Acreage allocated or assignable to productive wells
<i>Directors' Deferred Compensation Plan</i>	Alliance Resource Management GP, L.P. Amended & Restated Deferred Compensation Plan for Directors
<i>DMP</i>	Division of Mine Permits
<i>DOL</i>	U.S. Department of Labor
<i>EGUs</i>	Electric generating units
<i>ELG</i>	Effluent Limitations Guidelines and Standards
<i>EPA</i>	United States Environmental Protection Agency
<i>EPU</i>	Earnings per limited partner unit
<i>ESA</i>	Endangered Species Act
<i>EV</i>	Electric vehicle
<i>Excel</i>	Excel Mining, LLC
<i>Exchange Act</i>	Securities Exchange Act of 1934
<i>FASB</i>	Financial Accounting Standards Board
<i>FIPs</i>	Federal Implementation Plans
<i>FMSHA</i>	Federal Mine Health and Safety Act of 1977, as amended by the Federal Mine Improvement and New Emergency Response Act of 2006

<i>Francis</i>	Francis Renewable Energy, LLC
<i>GAAP</i>	Generally Accepted Accounting Principles
<i>GFANZ</i>	Glasgow Financial Alliance for Net Zero
<i>GHG</i>	Greenhouse gas
<i>Gibson</i>	Our subsidiary, Gibson County Coal, LLC
<i>Gibson South</i>	Our subsidiary, Gibson County Coal (South), LLC

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<i>Grant Thornton</i>	Grant Thornton LLP
<i>Gross Acres</i>	The total acres in a specified tract in which an owner has a real property interest. For example, an owner who has a 25 percent interest in 100 acres has an ownership interest in 100 gross acres.
<i>Hamilton</i>	Our subsidiary, Hamilton County Coal, LLC
<i>Haymaker</i>	Haymaker Minerals & Royalties II, LLC
<i>High-sulfur coal</i>	Based on market expectations, our classification of coal with a sulfur content of greater than 3%
<i>HLBV</i>	Hypothetical liquidation at book value
<i>Indicated mineral resource (coal)</i>	That part of a mineral resource for which quantity and grade or quality are estimated on the basis of adequate geological evidence and sampling. The level of geological certainty associated with an indicated mineral resource is sufficient to allow a qualified person to apply modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Because an indicated mineral resource has a lower level of confidence than the level of confidence of a measured mineral resource, an indicated mineral resource may only be converted to a probable mineral reserve.
<i>Inferred mineral resource (coal)</i>	That part of a mineral resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. The level of geological uncertainty associated with an inferred mineral resource is too high to apply relevant technical and economic factors likely to influence the prospects of economic extraction in a manner useful for evaluation of economic viability. Because an inferred mineral resource has the lowest level of geological confidence of all mineral resources, which prevents the application of the modifying factors in a manner useful for evaluation of economic viability, an inferred mineral resource may not be considered when assessing the economic viability of a mining project, and may not be converted to a mineral reserve.
<i>Infinitum</i>	Infinitum Electric, Inc.
<i>Intermediate Partnership</i>	Alliance Resource Operating Partners, L.P., the intermediate partnership of Alliance Resource Partners, L.P.

IRAs	Individual retirement accounts
IRS	Internal Revenue Service
Island Creek	Island Creek Coal Company
Jase	Jase Minerals, LP
Jase Acquisition	On October 26, 2022, AR Midland acquired approximately 3,928 net oil & gas royalty acres in the Permian Basin from Jase.
Jase Acquisition Date	October 26, 2022
JC Land	JC Land LLC
JC Resources	JC Resources LP
JC Resources Acquisition	On February 22, 2023, we acquired approximately 2,682 oil & gas net royalty acres in the Delaware Basin from JC Resources LP.

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KYDNR	Kentucky Department of Natural Resources
Long-term contracts	Contracts having a term of one year or greater
Longwall mining	One of two major underground coal mining methods, utilizing specialized equipment to remove nearly all of a coal seam over a very large area.
Low-sulfur coal	Based on market expectations, we classify coal with a sulfur content of less than 1.5%
LTIP	Amended and Restated Alliance Coal, LLC 2000 Long-Term Incentive Plan
MAC	Our subsidiary, Mid-America Carbonates, LLC
Matrix Design	Our subsidiary, Matrix Design Group, LLC
Matrix Group	Collectively our subsidiaries, Alliance Design, ASI and its subsidiary, Matrix Design and its subsidiaries Matrix Design International, LLC, Matrix Design Africa (PTY) LTD, and Matrix Design (Australia) PTY, LTD
MATS	Mercury and Air Toxics Standards
MBbls	Thousand barrels of crude oil or other liquid hydrocarbons
MBOE	One thousand barrels of crude oil equivalent, determined using a ratio of six Mcf of natural gas to one Bbl of crude oil, condensate, or natural gas liquids

MC Mining	Our subsidiary, MC Mining, LLC
Mcf	Thousand cubic feet of natural gas
Measured mineral resource (coal)	That part of a mineral resource for which quantity and grade or quality are estimated on the basis of conclusive geological evidence and sampling. The level of geological certainty associated with a measured mineral resource is sufficient to allow a qualified person to apply modifying factors, as defined in this section, in sufficient detail to support detailed mine planning and final evaluation of the economic viability of the deposit. Because a measured mineral resource has a higher level of confidence than the level of confidence of either an indicated mineral resource or an inferred mineral resource, a measured mineral resource may be converted to a proven mineral reserve or to a probable mineral reserve.
Medium-sulfur coal	Based on market expectations, our classification of coal with a sulfur content of 1.5% to 3%
Metallurgical coal	Coal primarily used in the production of steel
Mettiki	Mettiki Complex, including the Mountain View mine operated by our subsidiary, Mettiki (WV) and the preparation plant operated by our subsidiary, Mettiki (MD)
Mettiki (MD)	Our subsidiary, Mettiki Coal, LLC
Mettiki (WV)	Our subsidiary, Mettiki Coal (WV), LLC
MGP	Alliance Resource Management GP, L.P., ARLP's general partner
MINER Act	Federal Mine Improvement and New Emergency Response Act of 2006

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Mineral Interest	Mineral interests are real-property interests that are typically perpetual and grant ownership to the oil & gas under a tract of land or the rights to explore for, develop, and produce oil & gas on that land or to lease those exploration and development rights to a third party
Mineral reserve (coal)	An estimate of tonnage and grade or quality of indicated and measured mineral resources that, in the opinion of the qualified person, can be the basis of an economically viable project. More specifically, it is the economically mineable part of a measured or indicated mineral resource, which includes diluting materials and allowances for losses that may occur when the material is mined or extracted.
Mineral resource (coal)	A concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for economic extraction. A mineral resource is a reasonable estimate of mineralization, taking into account relevant factors such as cut-off grade, likely mining dimensions, location or continuity that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable. It is not merely an inventory of all mineralization drilled or sampled.
MMBtus	Million British thermal units

<i>MMcf</i>	Million cubic feet of natural gas
<i>Mr. Craft</i>	Joseph W. Craft III, the Chairman, President and Chief Executive Officer of MGP
<i>MSHA</i>	Mine Safety and Health Administration
<i>Mt. Vernon</i>	Our subsidiary, Mt. Vernon Transfer Terminal, LLC
<i>NAAQS</i>	National Ambient Air Quality Standards
<i>Named Executive Officers</i>	Our Chairman, President and CEO (our principal executive officer), the Senior Vice President and Chief Financial Officer (our principal financial officer) and the three most highly compensated executive officers in 2023
<i>NEPA</i>	National Environmental Policy Act
<i>Net acres</i>	The percentage of total acres an owner owns out of a particular number of acres actual ownership interest within a specified tract, tract expressed in acres. For example, an owner who has a 50 percent interest in 100 acres owns 50 net acres.
<i>Net royalty acres</i>	Mineral ownership standardized to a 12.5%, or 1/8 th , royalty interest
<i>NGFS</i>	Network for Greening the Financial System
<i>NGLs</i>	Natural gas liquids are components of natural gas that are liquid at the surface in field facilities or gas-processing plants. Natural gas liquids can be classified according to their vapor pressures as low (condensate), intermediate (natural gasoline), and high (liquefied petroleum gas) vapor pressure. Natural gas liquids include propane, butane, pentane, hexane, and heptane, but not methane and ethane since these hydrocarbons need refrigeration to be liquefied. The term is commonly abbreviated as NGL.
<i>NGP</i>	NGP Energy Capital Management, LLC
<i>NGP ET IV</i>	NGP Energy Transition, L.P.
<i>NS</i>	Norfolk Southern Railway Company

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<i>NSPS</i>	New Source Performance Standards
<i>NSR</i>	New source review
<i>Oil & gas</i>	Crude oil, natural gas, and natural gas liquids

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<i>Old Ben</i>	Old Ben Coal Company
<i>Old Ben Leases</i>	Leases originally taken by AMAX Coal Company and Old Ben Coal Company in the mid to late 1970's and early 1980's
<i>Operator</i>	The individual or company responsible for the exploration and/or production of a Mineral Interest which, with respect to our Mineral Interests, are unaffiliated third-parties
<i>OSM</i>	Federal Office of Surface Mining
<i>OWCP</i>	Office of Workers' Compensation Programs
<i>PADEP</i>	Pennsylvania Department of Environmental Protection
<i>PAL</i>	Paducah & Louisville Railway, Inc.
<i>Patriot</i>	Patriot Coal Corporation
<i>PCAOB</i>	Public Company Accounting Oversight Board
<i>Peabody</i>	Peabody Energy Corporation
<i>Pension Plan</i>	Alliance Coal, LLC and Affiliates Pension Plan for Coal Employees
<i>PM</i>	Fine particulate matter
<i>Preparation plant</i>	A facility used for crushing, sizing, and washing coal to remove impurities and to prepare it for use by a particular customer
<i>Probable mineral reserve (coal)</i>	The economically mineable part of an oil or natural gas well or lease indicated and, in some cases, a measured mineral resource
<i>Productive well</i>	A well that is found to be capable of producing hydrocarbons in sufficient quantities such that proceeds from the sale of the production exceed production expenses and taxes
<i>Proved developed reserves (oil & gas)</i>	Proved reserves that can be expected to be recovered through existing wells with existing equipment and operating methods
<i>Proved reserves or properties (oil & gas)</i>	Proved reserves are those quantities of oil & gas which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible—from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations—prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence the project within a reasonable time.
<i>Proved undeveloped reserves (oil & gas)</i>	Proved reserves that are expected to be recovered from new wells on undrilled acreage or from existing wells where a relatively major expenditure is required for recompletion

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<i>Proven mineral reserve (coal)</i>	The economically mineable part of a measured mineral resource and can only result from conversion of a measured mineral resource
<i>PSSP</i>	Profit sharing and savings plan
<i>PUDs</i>	Proved undeveloped reserves
<i>RCRA</i>	Federal Resource Conservation and Recovery Act
<i>Reclamation</i>	The restoration of land and environmental standards to a mining site after the coal is extracted, including returning the land to its approximate original appearance, restoring topsoil, and planting native grass and ground covers
<i>Reserves (oil & gas)</i>	Reserves are estimated remaining quantities of oil and natural gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations. In addition, there must exist, or there must be a reasonable expectation that there will exist, the legal right to produce or a revenue interest in the production, installed means of delivering oil and natural gas or related substances to the market, and all permits and financing required to implement the project. Reserves should not be assigned to adjacent reservoirs isolated by major, potentially sealing, faults until those reservoirs are penetrated and evaluated as economically producible.
<i>RESPEC</i>	RESPEC Company, LLC
<i>Revolving Credit Facility</i>	The Credit Agreement provides for a \$425 million revolving credit facility, which includes a sublimit of \$15.0 million for swingline borrowings and permits the issuance of letters of credit up to the full amount of \$425 million
<i>RGGI</i>	Regional Greenhouse Gas Initiative agreement
<i>River View</i>	Our subsidiary, River View Coal, LLC
<i>Room-and-pillar mining</i>	One of two major underground coal mining methods, utilizing continuous miners creating a network of "rooms" within a coal seam, leaving behind "pillars" of coal used to support the roof of a mine
<i>Royalty interest</i>	An interest that gives an the owner the right to receive a portion of the resources or revenues without having to carry any costs of development or operations
<i>Sebree</i>	Our subsidiary, Sebree Mining, LLC
<i>SEC</i>	United States Securities and Exchange Commission
<i>Securities Act</i>	Securities Act of 1933
<i>Securitization Facility</i>	Certain direct and indirect wholly owned subsidiaries of our Intermediate Partnership are party to a \$90.0 million accounts receivable securitization facility.

<i>Senior Notes</i>	An aggregate original principal amount of \$400.0 million of senior unsecured notes due 2025 issued on April 24, 2017 by the Intermediate Partnership and Alliance Finance.
<i>SERP</i>	Alliance Coal, LLC Supplemental Executive Retirement Plan
<i>SIPs</i>	State implementation plans
<i>Skyland</i>	Skyland Minerals, L.P.

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<i>Skyland Acquisition</i>	On December 7, 2023, we acquired approximately 2,372 oil & gas net royalty acres predominantly in the Anadarko Basin, along with acreage in the Williston and Delaware Basins from Skyland Minerals, L.P. and Haymaker Minerals & Royalties II, LLC.
<i>Skyland Acquisition Date</i>	December 7, 2023
<i>SMCRA</i>	Federal Surface Mining Control and Reclamation Act of 1977
<i>STIP</i>	Alliance Resource Management GP, LLC Short-Term Incentive Plan
<i>Subsidiary Guarantors</i>	Certain subsidiaries of ARLP, including the Intermediate Partnership and most of the direct and indirect subsidiaries of Alliance Coal, guaranteeing the Credit Agreement.
<i>Tax Election</i>	On March 15, 2022, Alliance Minerals changed its federal income tax status from a pass-through entity to a taxable entity via a "check the box" election.
<i>Term Loan</i>	The Credit Agreement provides for a term loan in an aggregate principal amount of \$75 million.
<i>Thermal coal</i>	Coal used primarily in the generation of electricity
<i>TMDL</i>	Total Maximum Daily Load
<i>TRRC</i>	Texas Railroad Commission
<i>TRS</i>	Technical Report Summary
<i>Tunnel Ridge</i>	Our subsidiary, Tunnel Ridge, LLC
<i>UIC</i>	Underground Injection Control
<i>Unassigned reserves (coal)</i>	Reserves that have not yet been designated for mining by a specific operation
<i>Undeveloped acreage (oil & gas)</i>	Acreage on which wells have not been drilled or completed to a point that would permit the production of commercial quantities of oil & gas regardless of whether such acreage contains proved reserves

Unproved reserves or Properties with no proved reserves. We also consider unproved reserves or properties to be defined as the estimated quantities of oil & gas determined based on geological and engineering data similar to that used in estimates of proved reserves; but technical, contractual, economic, or regulatory uncertainties preclude such reserves from being classified as proved.

USEA	United States Energy Association
USFWS	United States Fish and Wildlife Service
USGA	United States Geological Survey
Valley Camp	Valley Camp Coal Company
VIE	Variable interest entity
VOC	Volatile organic compound
Warrior	Our subsidiary, Warrior Coal, LLC

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Webster	Our subsidiary, Webster County Coal, LLC
Wildcat Insurance	Our subsidiary, Wildcat Insurance, LLC
WKY CoalPlay	WKY CoalPlay, LLC
WKY11	West Kentucky No. 11
WKY6	West Kentucky No. 6
WKY7	West Kentucky No. 7
WKY9	West Kentucky No. 9
WOTUS	Waters of the United States
WVDEP	West Virginia Department of Environmental Protection

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FORWARD-LOOKING STATEMENTS

Certain statements and information in this Annual Report on Form 10-K, and certain oral statements made from time to time by our representatives, constitute "forward-looking statements." These statements are based on our beliefs as well as assumptions made by, and information currently available to, us. When used in this document, the words "anticipate," "believe," "continue," "could," "estimate," "expect," "forecast," "foresee," "may," "outlook," "plan," "project," "potential," "should," "will," "would," and similar expressions identify forward-looking statements. Without limiting the foregoing, all statements relating to our future outlook, anticipated capital expenditures, future cash flows and borrowings, and sources of funding are forward-looking statements. These forward-looking statements are based on our current expectations and beliefs concerning future developments and reflect our current views with respect to future events and are subject to numerous assumptions that we believe are reasonable, but are open to a wide range of uncertainties and business risks, and actual results could differ materially from those discussed in these statements. Among the factors that could cause actual results to differ from those in the forward-looking statements are:

- decline in the coal industry's share of electricity generation, including as a result of environmental concerns related to coal mining and combustion, and the cost and perceived benefits of other sources of electricity and fuels, such as oil & gas, nuclear energy, and renewable fuels; fuels and the planned retirement of coal-fired power plants in the U.S.;
- changes in macroeconomic and market conditions and market volatility, and the impact of such changes and volatility on our financial position;
- changes in global economic and geo-political conditions or changes in industries in which our customers operate;
- changes in commodity prices, demand and availability which could affect our operating results and cash flows;
- the outcome or escalation of current hostilities in Ukraine; Ukraine and the Israel-Gaza conflict;
- the severity, magnitude, and duration of any future pandemics and impacts of the pandemic such pandemics and of businesses' and governments' responses to the pandemic such pandemics on our operations and personnel, and on demand for coal, oil, and natural gas, the financial condition of our customers and suppliers and Operators, available liquidity and capital sources and broader economic disruptions;
- actions of the major oil-producing countries with respect to oil production volumes and prices could have direct and indirect impacts over the near and long term on oil & gas exploration and production operations at the properties in which we hold mineral interests;
- changes in competition in domestic and international coal markets and our ability to respond to such changes;
- potential shut-ins of production by operators the Operators of the properties in which we hold oil & gas mineral interests due to low commodity prices or the lack of downstream demand or storage capacity;
- risks associated with the expansion of our operations and properties;
- our ability to identify and complete acquisitions and to successfully integrate such acquisitions into our business and achieve the anticipated benefits therefrom;
- our ability to identify and invest in new energy and infrastructure transition ventures;
- the success of our development plans for our wholly owned subsidiary, Matrix Design Group, LLC, and our investments in emerging infrastructure and technology companies;
- dependence on significant customer contracts, including renewing existing contracts upon expiration;
- adjustments made in price, volume, or terms to existing coal supply agreements;
- the effects of and changes in trade, monetary and fiscal policies and laws central bank policy actions including the interest rate policies of the Federal Reserve Board; rates, bank failures, and associated liquidity risks;
- the effects of and changes in taxes or tariffs and other trade measures adopted by the United States and foreign governments;
- legislation, regulations, and court decisions and interpretations thereof, both domestic and foreign, including those relating to the environment and the release of greenhouse gases, mining, miner health and safety, hydraulic fracturing, and health care;
- deregulation of the electric utility industry or the effects of any adverse change in the coal industry, electric utility industry, or general economic conditions;
- investors' and other stakeholders' increasing attention to environmental, social, and governance ("ESG") matters;
- liquidity constraints, including those resulting from any future unavailability of financing;
- customer bankruptcies, cancellations or breaches to existing contracts, or other failures to perform;
- customer delays, failure to take coal under contracts or defaults in making payments;

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- our productivity levels and margins earned on our coal sales;
- disruptions to oil & gas exploration and production operations at the properties in which we hold mineral interests;
- changes in equipment, raw material, service or labor costs or availability, including due to inflationary pressures;
- changes in our ability to recruit, hire and maintain labor;
- our ability to maintain satisfactory relations with our employees;
- increases in labor costs including costs of health insurance and taxes resulting from the Affordable Care Act, adverse changes in work rules, or cash payments or projections associated with workers' compensation claims;
- increases in transportation costs and risk of transportation delays or interruptions;
- operational interruptions due to geologic, permitting, labor, weather, supply chain shortage of equipment or mine supplies, or other factors;
- risks associated with major mine-related accidents, mine fires, mine floods, or other interruptions;
- results of litigation, including claims not yet asserted;
- foreign currency fluctuations that could adversely affect the competitiveness of our coal abroad;
- difficulty maintaining our surety bonds for mine reclamation as well as workers' compensation and black lung benefits;
- difficulty in making accurate assumptions and projections regarding post-mine reclamation as well as pension, black lung benefits, and other post-retirement benefit liabilities;
- uncertainties in estimating and replacing our coal mineral reserves and resources;
- uncertainties in estimating and replacing our oil & gas reserves;
- uncertainties in the amount of oil & gas production due to the level of drilling and completion activity by the operators of our oil & gas properties;
- uncertainties in the future of the electric vehicle industry and the market for EV charging stations;
- the impact of current and potential changes to federal or state tax rules and regulations, including a loss or reduction of benefits from certain tax deductions and credits;
- difficulty obtaining commercial property insurance, and risks associated with our participation in the commercial insurance property program;
- evolving cybersecurity risks, such as those involving unauthorized access, denial-of-service attacks, malicious software, data privacy breaches by employees, insiders or others with authorized access, **cyber cyber-** or **phishing-attacks, phishing attacks,** ransomware, malware, social engineering, physical breaches, or other actions;
- difficulty in making accurate assumptions and projections regarding future revenues and costs associated with equity investments in companies we do not control; and
- other factors, including those discussed in "Item 1A. Risk Factors" and "Item 3. Legal Proceedings."

If one or more of these or other risks or uncertainties materialize, or should our underlying assumptions prove incorrect, our actual results could differ materially from those described in any forward-looking statement. When considering forward-looking statements, you should also keep in mind our risk factors and legal proceedings. Known material factors that could cause our actual results to differ from those in the forward-looking statements are described in "Item 1A. Risk Factors" and "Item 3. Legal Proceedings." We disclaim any obligation to update or revise any forward-looking statements or to announce publicly the result of any revisions to any of the forward-looking statements to reflect future events or developments unless required by law.

You should consider the information above when reading any forward-looking statements contained in this Annual Report on Form 10-K; other reports filed by us with the **United States ("United States" or "U.S.") Securities and Exchange Commission ("SEC"); SEC;** our press releases; our website **www.arlp.com;** and written or oral statements made by us or any of our officers or other authorized persons acting on our behalf.

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Significant Relationships Referenced in this Annual Report

- **References to "we," "us," "our," "Partnership" or "ARLP Partnership" mean the business and operations of Alliance Resource Partners, L.P., the parent company, as well as its consolidated subsidiaries.**
- **References to "ARLP" mean Alliance Resource Partners, L.P., individually as the parent company, and not on a consolidated basis.**
- **References to "MGP" mean Alliance Resource Management GP, LLC, ARLP's general partner.**
- **References to "Mr. Craft" mean Joseph W. Craft III, the Chairman, President and Chief Executive Officer of MGP.**

- References to "Intermediate Partnership" mean Alliance Resource Operating Partners, L.P., the intermediate partnership of Alliance Resource Partners, L.P.
- References to "Alliance Coal" mean Alliance Coal, LLC, an indirect wholly owned subsidiary of ARLP.
- References to "Alliance Minerals" mean Alliance Minerals, LLC, an indirect wholly owned subsidiary of ARLP.
- References to "Alliance Resource Properties" mean Alliance Resource Properties, LLC, an indirect wholly owned subsidiary of ARLP.

PART I

ITEM 1. BUSINESS

General

Introduction

Introduction

We are a diversified natural resource company that generates operating and royalty income from the production and marketing of coal to major domestic and international utilities and industrial users as well as royalty income from oil & gas mineral interests located in strategic producing regions across the United States. The primary focus of our business is to maximize the value of our existing mineral assets, both in the production of coal from our mining assets and the leasing and development of our coal and oil & gas mineral ownership. In addition, we are positioning ourselves as a reliable energy provider for the future as we pursue opportunities that support the advancement of energy and related infrastructure. We intend to pursue strategic investments that leverage our core competencies and relationships with electric utilities, industrial customers, and federal and state governments. We believe that our diverse and rich resource base and strategic investments will allow us to continue to create long-term value for unitholders.

We are currently the second-largest largest coal producer in the eastern United States with seven operating underground mining complexes in Illinois, Indiana, Kentucky, Maryland, Pennsylvania, and West Virginia as well as a coal-loading terminal in Indiana on the Ohio River. We manage and report our coal operations under two regions, Illinois Basin and Appalachia. We market our coal production to major domestic and international utilities and industrial users.

We currently own mineral and royalty interests in approximately 61,400 67,700 net royalty acres, including approximately 4,000 net royalty acres attributable to our equity interest in AllDale III, in premier oil & gas producing regions in the United States, primarily the Permian, Anadarko, and Williston Basins. While we own both oil & gas mineral and royalty interests, we refer to them collectively as mineral interests throughout our discussions of our business as the majority of our holdings are mineral interests. We market our oil & gas mineral interests for lease to operators Operators in those regions and generate royalty income from the leasing and development of those mineral interests. Reserve additions and the associated cash flows are expected to increase from the development of our existing mineral interests and through acquisitions of additional mineral interests.

We currently have approximately 580.7 million 663.2 million tons of proven and probable coal mineral reserves and 1.17 billion 1.06 billion tons of measured, indicated and inferred coal mineral resources in Illinois, Indiana, Kentucky, Maryland, Pennsylvania and West Virginia. Substantially, all of our measured, indicated and inferred coal mineral resources and 464.8 million 557.7 million tons of our coal mineral reserves are owned or leased by Alliance Resource Properties, which are (a) leased or subleased to internal mining complexes or (b) near other internal and external coal mining operations but not yet leased. We market our coal mineral reserves and resources to the coal mining operations that are able to access them and generate royalty income from the leasing and development of those coal mineral reserves and resources.

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We have invested in energy and infrastructure opportunities including Ascend, Francis, Renewable Energy, LLC ("Francis"), Infinitem, Electric, Inc. ("Infinitem"), and NGP ETP ET IV L.P. ("NGP ETP IV") as described below.

In addition, through our technology company, Matrix Group, we develop and market industrial, mining and technology products and services, services worldwide.

ARLP, a Delaware limited partnership, completed its initial public offering on August 19, 1999, and is listed on the NASDAQ Global Select Market under the ticker symbol "ARLP." We are managed by our sole general partner, MGP, a Delaware limited liability company, which holds a non-economic general partner interest in ARLP.

Oil & Gas Acquisitions

Boulders

On October 13, 2021, AR Midland, LP ("AR Midland"), an indirect subsidiary of Alliance Minerals, acquired approximately 1,480 oil & gas net royalty acres in the Delaware Basin from Boulders Royalty Corp. ("Boulders") for a purchase price of \$31.0 million (the "Boulders Acquisition").

Belvedere

On September 9, 2022, AR Midland acquired approximately 394 oil & gas net royalty acres in the Delaware Basin from Belvedere Operating, LLC ("Belvedere") for a purchase price of \$11.4 million (the "Belvedere Acquisition").

Jase

On October 26, 2022, AR Midland acquired approximately 3,928 oil & gas net royalty acres. The following acquisitions enhance our ownership position in the Permian Basin from Jase Minerals, LP ("Jase") for a purchase price of \$81.2 million (the "Jase Acquisition"). and further our business strategy to grow our Oil & Gas Royalties segment.

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Acquisition Agreement

On January 27, 2023, we entered into a one-year collaborative agreement with a third party effective January 1, 2023, committing up to \$35.0 million for the acquisition of oil & gas mineral interests in the Midland and Delaware basins. Under the agreement, the third party will assist assisted us in the identification, evaluation, and acquisition of target oil & gas mineral interests. In exchange for these services, the third party will receive received a participation share, partially funded by the third party, and will be was paid a periodic management fee. We acquired \$13.2 million oil & gas mineral interests under the agreement in 2023. On February 19, 2024, we renewed this agreement for an additional one-year term, committing up to \$25.0 million.

JC Resources

On February 22, 2023, we acquired approximately 2,682 oil & gas net royalty acres in the Delaware Basin from JC Resources, LP ("JC Resources"), a related party entity owned by Mr. Craft, for \$72.3 million, which was funded with cash on hand (the "JC Resources Acquisition").

These acquisitions enhance our ownership position Skyland

On December 7, 2023, we acquired approximately 2,372 oil & gas net royalty acres predominantly in the Permian Anadarko Basin, along with acreage in the Williston and Delaware Basins from Skyland and Haymaker for a combined purchase price of \$14.5 million.

Growth Investments and Opportunities

The following investments in the advancement of energy and related infrastructure further our business strategy to grow develop strategic relationships and invest in attractive opportunities that leverage our Oil & Gas Royalties segment core competencies and build platforms for future lines of business with long-term growth and cash flow generation. For more information on our acquisitions and investments, please read "Item 8. Financial Statements and Supplementary Data—Note 3 – Acquisitions", "—Note 11 – Variable Interest Entities" and "—Note 12 – Equity Investments" of this Annual Report on Form 10-K.

New Ventures Investments

Francis

Francis

On April 5, 2022, we made a \$20.0 million convertible note investment in Francis. Francis which converted to a preferred equity interest on April 1, 2023. Francis currently is active in the installation, management and operation of metered-for-fee, public-access electric vehicle ("EV") EV charging stations. Francis also develops and constructs EV charging stations for third-party customers.

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[Table of Contents](#) [Ascend](#)

Infinitum

On April 29, 2022 September 6, 2023, we purchased \$32.6 million \$25.0 million of Series D Preferred Stock in Ascend. Ascend is a U.S.-based manufacturer and recycler of sustainable, closed-loop engineered battery materials for electric vehicles. Ascend is currently constructing North America's first commercial-scale manufacturing facility located near Hopkinsville, Kentucky, that when complete, will produce enough cathode materials for 750,000 electric vehicles per year.

Infinitum

On September 8, 2023, we increased our investment in Infinitum to \$66.6 million by purchasing \$24.6 million of Series E Preferred Stock. Infinitum is a Texas-based startup developer and manufacturer of electric motors featuring printed circuit board stators which have the potential to result in motors that are smaller, lighter, quieter, more efficient and capable of operating at a fraction of the carbon footprint of conventional electric motors. On November 2, 2022, we purchased an additional \$9.4 million of Series D Preferred Stock in Infinitum. The preferred stock provides for non-cumulative dividends when and if declared by Infinitum's board of directors. Each share is convertible, at any time, at our option, into shares of common stock of Infinitum.

NGP ETP IVMatrix Group

Matrix Group provides a variety of technology products and services for our mining operations and certain industrial and mining technology products and services to third parties. On June 2, 2022 January 16, 2024, we committed Matrix Design entered into an agreement with Infinitum to purchase \$25.0 million of limited partner interests in NGP ETP IV, a private equity fund sponsored by NGP Energy Capital Management, LLC ("NGP"). As of December 31, 2022 we have funded \$4.1 million of this commitment. NGP ETP IV focuses on investments that are part of jointly develop and distribute high-efficiency motors and advanced motor controllers designed specifically for the global transition toward a lower carbon economy by partnering with top-tier management teams and investing growth equity in companies that drive or enable mining industry. Under the growth of renewable energy, the electrification agreement, Matrix Design will integrate Infinitum's motor technology into mining equipment of our economy, or the efficient use of energy.

Our investments operating subsidiaries to provide performance validation in the advancement of energy and related infrastructure further our business strategy to develop strategic relationships and invest in attractive opportunities. For more information on our acquisitions and investments, please read "Item 8. Financial Statements and Supplementary Data—Note 3 – Acquisitions", "—Note 13 – Variable Interest

Entities", "—Note 14 – Investments" and "—Note 26 – Subsequent Events" of this Annual Report on Form 10-K. production environments for jointly

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developed products and to improve our operational efficiency, and market the jointly developed technology and products to third parties worldwide.

The following diagram depicts our simplified organization and ownership as of December 31, 2022 December 31, 2023:



Graphic

Our internet address is www.arlp.com, and we make available free of charge on our website our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q, our Current Reports on Form 8-K, Forms 3, 4 and 5 for our Section 16 filers and other documents (and amendments and exhibits, such as press releases, to such filings) as soon as reasonably practicable after we electronically file with or furnish such material to the SEC. Information on our website or any other website is not incorporated by reference into this report and does not constitute a part of this report.

The SEC maintains a website that contains reports, proxy and information statements, and other information for issuers, including us. The public can obtain any documents that we file with the SEC at www.sec.gov.

Coal Mining Operations

Coal is used primarily for the generation of electric power and the production of steel but is also used for chemical, food, and cement processing. We produce bituminous coal from our underground mines that is sold to customers principally for electric power generation

(thermal) and the production of steel (metallurgical). We have established long-term relationships with customers through exemplary and consistent performance.

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At December 31, 2022 December 31, 2023, our mining operations had access to approximately 580.7 million 663.2 million tons of proven and probable coal mineral reserves and 1.17 billion 1.06 billion tons of measured, indicated and inferred coal mineral resources in Illinois, Indiana, Kentucky, Maryland, Pennsylvania, and West Virginia. Substantially, all of our measured, indicated and inferred coal mineral resources and 464.8 million 557.7 million tons of our coal mineral reserves are owned or leased by Alliance Resource Properties and are currently leased or subleased or held for lease or sublease to our mining operations or others. We produce a diverse range of thermal and metallurgical coal with varying sulfur and heat contents, which enables us to satisfy the broad range of specifications required by our customers. In 2022, 2023, we sold 35.6 million 34.4 million tons of coal and produced 35.5 million 34.9 million tons. Of the 35.6 million 34.4 million tons sold, approximately two-thirds 60% were leased from Alliance Resource Properties. The coal we sold in 2022 2023 was approximately 4.4% 3.6% low-sulfur coal, 60.4% 33.4% medium-sulfur coal, and 35.2% 63.0% high-sulfur coal. In 2022, 2023, approximately 82.4% 80.9% of our tons sold were purchased by domestic electric utilities and 12.5% 15.7% were sold into the international markets through brokered transactions. The balance of our tons sold was to third-party resellers and industrial consumers. For tons sold to domestic electric utilities, 100.0% were sold to utility plants with installed pollution control devices. The Btu content of our coal ranges from 11,450 to 13,200.

The following chart summarizes our coal production by region for the last three years.

Coal Regions	Year Ended December 31,			Year Ended December 31,		
	2022	2021	2020	2023	2022	2021
	(tons in millions)					
				(tons in millions)		
Illinois Basin	24.2	22.2	17.9	25.2	24.3	22.2
Appalachia	11.3	10.0	9.1	9.7	11.2	10.0
Total	35.5	32.2	27.0	34.9	35.5	32.2

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The following map shows the location of our coal mining operations:



Graphic

Illinois Basin Operations:

1. A. GIBSON COMPLEX

Gibson South Mine
Mining Type: Underground
Mining Access: Slope & Shaft
Mining Method: Continuous Miner
Coal Type: Low/Medium-Sulfur
Transportation: Barge, Railroad & Truck

B. RIVER VIEW COMPLEX

2. HAMILTON COMPLEX

Hamilton a) River View Mine
b) Henderson County Mine
Mining Type: Underground
Mining Access: Slope & Shaft
Mining Method: Longwall Room & Pillar
Coal Type: Medium/High-Sulfur
Transportation: Barge Railroad & Truck

C. HAMILTON COMPLEX

3. RIVER VIEW COMPLEX Hamilton Mine

River View Mine
Mining Type: Underground
Mining Access: Slope & Shaft
Mining Method: Continuous Longwall & Continuous Miner
Coal Type: Medium/High-Sulfur

4. D. WARRIOR COMPLEX

Warrior Mine
Mining Type: Underground
Mining Access: Slope & Shaft
Mining Method: Continuous Room & Pillar Miner
Coal Type: Medium/High-Sulfur
Transportation: Barge, Railroad, & Truck

5. E. MOUNT VERNON

TRANSFER TERMINAL

TRANSFER TERMINAL

Rail or Truck to Ohio River Barge

Transloading Facility

Transloading Facility

Appalachian Operations:

Appalachian Operations: F. TUNNEL RIDGE COMPLEX

6. MC MINING COMPLEX

Excel Tunnel Ridge Mine No. 5
Mining Type: Underground
Mining Access: Slope & Shaft
Mining Access: Slope & Shaft
Mining Method: Continuous Longwall & Continuous Miner
Coal Type: Low-Sulfur
Transportation: Barge, Railroad, Coal Type: Medium/High-Sulfur
& Truck Transportation: Barge

7. G. METTIKI COMPLEX

Mountain View Mine
Mining Type: Underground
Mining Access: Slope & Shaft
Mining Method: Longwall Room & Continuous Miner
Coal Type: Low/Medium & Continuous Miner
Sulfur - Metallurgical Coal Type: Low/Medium
Transportation: Railroad Sulfur - Metallurgical & Truck Transportation: Railroad & Truck

8. TUNNEL RIDGE COMPLEX

Tunnel Ridge H. MC MINING COMPLEX

Excel Mine No. 5
Mining Type: Underground
Mining Access: Slope & Shaft
Mining Method: Longwall & Continuous Miner Pillar
Coal Type: Medium/High-Sulfur Low-Sulfur
Transportation: Barge, & Railroad, & Truck

Transportation: Barge, & Truck Railroad

& Truck

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We lease most of our coal mineral reserves and resources from Alliance Resource Properties or private parties and generally have the right to maintain leases in force until the exhaustion of mineable and merchantable coal located within the leased premises or a larger coal mineral reserve or resource area. These leases provide for royalties to be paid to the lessors at a fixed amount per ton or as a percentage of the sales price. Many leases require payment of minimum royalties, payable either at the time of the execution of the lease or in periodic installments, even if no mining activities have begun.

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These minimum royalties are normally credited against the production royalties owed to a lessor once coal production has commenced.

Illinois Basin Operations

Our Illinois Basin mining operations are located in western Kentucky, southern Illinois, and southern Indiana. As of December 31, 2022 December 31, 2023, we have 2,067 2,189 employees and we operate four active mining complexes in the Illinois Basin.

Gibson Complex, Complex

Our subsidiary, Gibson, County Coal, LLC ("Gibson County Coal"), operates the Gibson South mine, located near the city of Princeton in Gibson County, Indiana. The Gibson South mine is an underground mine and utilizes continuous mining units employing room-and-pillar mining techniques to produce low/medium-sulfur coal. The Gibson South mine's preparation plant has throughput capacity of 1,800 tons of raw coal per hour. Production from the Gibson South mine is shipped by truck or transported by rail on the CSX Transportation, Inc. ("CSX") or Norfolk Southern Railway Company ("NS") NS railroads from our rail loadout facility directly to customers or various transloading facilities, including our Mt. Vernon Transfer Terminal, LLC ("Mt. Vernon") transloading facility, for barge delivery. Production from the mine began in April 2014. Gibson County Coal production in 2022 2023 was 5.3 million tons.

River View Complex

Our subsidiary, River View, operates the River View mine and the Henderson County mine. The River View mine is located in Union County, Kentucky and is currently the largest room-and-pillar coal mine in the United States. The River View mine began production in 2009 and utilizes continuous mining units to produce medium/high-sulfur coal from multiple seams. The Henderson County mine is located in Henderson County, Kentucky and is currently under development, with full production expected to begin in 2024 from the No. 9 seam.

Both mines will utilize the existing preparation plant, refuse disposal, and loadout facilities. River View's preparation plant has throughput capacity of 2,700 tons of raw coal per hour. Coal produced from the River View complex is transported by overland belt to a barge loading

facility on the Ohio River. River View coal production in 2023 was 9.9 million tons.

Hamilton ~~Complex~~, ~~Complex~~

Our subsidiary, Hamilton, ~~County Coal, LLC ("Hamilton")~~, operates the Hamilton mine, located near the city of McLeansboro in Hamilton County, Illinois. The Hamilton mine is an underground longwall mining operation producing medium/high-sulfur coal. Longwall mining began in October 2014 and we acquired complete ownership and control in 2015. Hamilton's preparation plant has throughput capacity of 2,000 tons of raw coal per hour. Hamilton has the ability to ship coal from the Hamilton mine via the CSX, Evansville Western Railway, or NS rail directly to customers or various transloading facilities, including our Mt. Vernon transloading facility, for barge deliveries. Hamilton coal production in ~~2022~~ 2023 was ~~4.7 million~~ 5.6 million tons.

~~River View Complex.~~ Our subsidiary, River View Coal, LLC ("River View"), operates the River View mine, which is located in Union County, Kentucky and is currently the largest room-and-pillar coal mine in the United States. The River View mine began (multi-seam) production in 2009 and utilizes continuous mining units to produce medium/high-sulfur coal. River View's preparation plant has throughput capacity of 2,700 tons of raw coal per hour. Coal produced from the River View mine is transported by overland belt to a barge loading facility on the Ohio River. River View coal production in 2022 was 10.2 million tons.

Warrior ~~Complex.~~

Our subsidiary, Warrior, ~~Coal, LLC ("Warrior")~~, operates an underground mining complex located near the city of Madisonville in Hopkins County, Kentucky. The Warrior complex was opened in 1985, and we acquired it in February 2003. Warrior utilizes continuous mining units employing room-and-pillar mining techniques to produce medium/high-sulfur coal. Warrior's preparation plant has throughput capacity of 1,200 tons of raw coal per hour. Warrior's production is shipped via the CSX or ~~Paducah & Louisville Railway, Inc. ("PAL")~~ PAL railroads or by truck directly to customers or potentially to various transloading facilities, including our Mt. Vernon transloading facility, for barge deliveries. Warrior coal production in ~~2022~~ 2023 was ~~4.1 million~~ 4.4 million tons.

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Mt. Vernon Transfer Terminal, ~~LLC.~~ ~~LLC~~

Our subsidiary, Mt. Vernon, leases land and operates a coal-loading terminal on the Ohio River at Mt. Vernon, Indiana. Coal is delivered to Mt. Vernon by both rail and truck. The terminal has a capacity of 8.0 million tons per year with existing ground storage of approximately 200,000 tons. In ~~2022~~, 2023, the terminal loaded approximately ~~1.9 million~~ 3.6 million tons for customers of Gibson ~~County Coal~~ and Hamilton.

Appalachian Operations

Our Appalachian mining operations are located in eastern Kentucky, Maryland, and West Virginia. As of ~~December 31, 2022~~ December 31, 2023, we had ~~973~~ 1,014 employees and we operate three mining complexes in Appalachia.

~~MC Mining Complex.~~ ~~Tunnel Ridge Complex~~The MC Mining Complex is

Our subsidiary, Tunnel Ridge, operates the Tunnel Ridge mine, an underground longwall mine in the Pittsburgh No. 8 coal seam, located near the city of Pikeville in Pike County, Kentucky. We acquired the original mine in 1989. Our subsidiary, MC Mining, LLC ("MC Mining"), through our subsidiary, Excel Mining, LLC ("Excel") operates the Excel Mine No. 5. Excel completed the development of Mine No. 5 ~~Wheeling, West Virginia.~~ Longwall mining operations began at Tunnel Ridge in May 2020 and transitioned its employees and equipment from Mine No. 4 in July 2020. 2012. The underground operation utilizes continuous mining units employing room-and-pillar mining techniques to produce low-sulfur coal. The existing ~~Tunnel Ridge~~ preparation plant which has throughput capacity of ~~1,000~~ 2,000 tons of raw coal per hour, is utilized by

Mine No. 5. Substantially all of the coal produced at MC Mining in 2022 met or exceeded the compliance requirements of Phase II of the Federal Clean Air Act

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("CAA") (see "—Environmental, Health and Safety Regulations—Air Emissions" below). hour. Coal produced from the Tunnel Ridge mine is shipped via the CSX railroad directly medium/high-sulfur coal and is transported by conveyor belt to customers or various transloading facilities a barge loading facility on the Ohio River River. Tunnel Ridge has the ability through a third-party facility to transload coal from barges for barge deliveries, or by truck directly to customers or various docks rail shipment on the Big Sandy River for barge deliveries. MC Mining Wheeling and Lake Erie Railway with connections to the CSX and the NS railroads. Tunnel Ridge coal production in 2022 2023 was 1.5 million 7.7 million tons.

Mettiki Complex. Complex

The Mettiki Complex ("Mettiki") comprises the Mountain View mine located in Tucker County, West Virginia operated by our subsidiary Mettiki Coal (WV), LLC ("Mettiki (WV)") and a preparation plant located near the city of Oakland in Garrett County, Maryland operated by our subsidiary Mettiki Coal, LLC ("Mettiki (MD)"). Mettiki (WV) began longwall mining in November 2006. The Mountain View mine produces low/medium-sulfur coal, which is transported by truck either to the Mettiki (MD) preparation plant for processing for shipment into the metallurgical coal market or otherwise, or directly to the coal blending facility at the Virginia Electric and Power Company Mt. Storm Power Station. The Mettiki (MD) preparation plant has throughput capacity of 1,350 tons of raw coal per hour. Coal processed at the preparation plant can be trucked to the blending facility at Mt. Storm or shipped via the CSX railroad, which provides the opportunity to ship into the domestic and international thermal and metallurgical coal markets. Mettiki WV coal production in 2022 2023 was 1.4 million 0.8 million tons.

Tunnel Ridge Complex. MC Mining Complex

The MC Mining Complex is located near the city of Pikeville in Pike County, Kentucky. We acquired the original mine in 1989. Our subsidiary, Tunnel Ridge, LLC ("Tunnel Ridge"), MC Mining, through our subsidiary, Excel operates the Tunnel Ridge mine, an underground longwall mine in Excel Mine No. 5. Excel completed the Pittsburgh development of Mine No. 8 coal seam, located near Wheeling, West Virginia. Longwall mining operations began at Tunnel Ridge 5 in May 2012. 2020 and transitioned its employees and equipment from Mine No. 4 in July 2020. The Tunnel Ridge underground operation utilizes continuous mining units employing room-and-pillar mining techniques to produce low-sulfur coal. The existing preparation plant, which has throughput capacity of 2,000 1,000 tons of raw coal per hour. hour, is utilized by Mine No. 5. Substantially all of the coal produced at MC Mining in 2023 met or exceeded the compliance requirements of Phase II of the Federal CAA (see "—Environmental, Health and Safety Regulations—Air Emissions" below). Coal produced from the Tunnel Ridge mine is medium/high-sulfur coal and is transported by conveyor belt shipped via the CSX railroad directly to a barge loading facility customers or various transloading facilities on the Ohio River. Tunnel Ridge has the ability through a third-party facility River for barge deliveries, or by truck directly to transload coal from barges for rail shipment customers or various docks on the Wheeling and Lake Erie Railway with connections to the CSX and the NS railroads. Tunnel Ridge Big Sandy River for barge deliveries. MC Mining coal production in 2022 2023 was 8.3 million 1.2 million tons.

Coal Marketing and Sales

We sell coal to an established customer base through opportunities as a result of existing business relationships or through formal bidding processes. As is customary in the coal industry, we have entered into long-term coal supply agreements with many of our customers. These arrangements are mutually beneficial to our customers and us in that they provide greater predictability of sales volumes and sales prices. Although some utility customers have appeared to favor a shorter-term contracting strategy, in 2022 2023 approximately 85.0% 93.4% and 65.6% 92.0% of our sales tonnage and total coal sales, respectively, were sold under long-term contracts with committed term expirations ranging from 2022 2024 to 2029. Our initial 2023 2024 guidance includes 34.7 million 32.5 million priced and committed tons for delivery in 2023, 2024. The contractual time commitments

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for customers to nominate future purchase volumes under these contracts are typically sufficient to allow us to balance our sales commitments with prospective production capacity.

The provisions of long-term contracts are the results of both bidding procedures and extensive negotiations with each customer. As a result, the provisions of these contracts vary significantly in many respects, including, among other factors, price adjustment features, price, and contract reopener terms, permitted sources of supply, force majeure provisions, and coal qualities and quantities. A portion of our long-term contracts is subject to price adjustment provisions, which periodically permit an increase or decrease in the contract price, typically to reflect changes in specified indices or changes in production costs resulting from regulatory changes, or both. These provisions, however, may not assure ensure that the contract price will reflect every change in production or other costs. Failure of the parties to agree on a price pursuant to an adjustment or a reopener provision can, in some instances, lead to the early termination of a contract. Some of the long-term contracts also permit the contract to be reopened for renegotiation of terms and conditions other than pricing terms, and where a mutually acceptable agreement on terms and conditions cannot be concluded, either party may have the option to terminate the contract. Long-term contracts typically stipulate procedures for the transportation of coal, quality control, sampling, and weighing. Most contain provisions requiring us to deliver coal within stated ranges for specific coal characteristics such as heat, sulfur, ash, moisture, grindability, volatility, and other qualities. Failure to meet these specifications can result in economic penalties, rejection or suspension of shipments, or termination of the contracts. While most of the contracts specify the approved seams and/or approved locations from which the coal is to be mined, some contracts allow the coal to be sourced from more than one mine or location. Although the volume to be delivered pursuant to a long-term contract is stipulated, the buyers often have the option to vary the volume within specified limits. Coal contracts typically contain force majeure provisions allowing for the suspension of performance by either party for the duration of specified events. Force majeure events include but are not limited to unexpected significant geological conditions and weather events that may disrupt transportation. Depending on the language of the contract, some contracts may terminate upon an event of force majeure that extends for a certain period.

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The international coal market has been a part of our business with indirect sales to end-users in Europe, Africa, Asia, North America, and South America. Our sales into the international coal market are considered exports and the majority are made through brokered transactions. During the years ended December 31, 2022, December 31, 2023, 2021, 2022, and 2020, 2021, export tons represented approximately 15.7%, 12.5%, 12.5% and 3.3% 12.5% of tons sold, respectively. Because title to our export shipments typically transfers to our brokerage customers at a point that does not necessarily reflect the end-usage point, we attribute export tons to the country with the end-usage point, if known.

Reliance on Major Customers

In 2022, 2023, we derived more than 10% of our total revenue from each of Duke Energy, Louisville Gas and American Electric Company, Power and Tennessee Valley Authority. We did not derive 10% or more of our revenues from any other single customer. For more information about these customers, please read "Item 8. Financial Statement and Supplemental Data—Note 24 22 – Concentration of Credit Risk and Major Customers."

Coal Competition

The coal industry is intensely competitive. The most important factors on which we compete are coal price, coal quality (including sulfur and heat content), reliability and diversity of supply, and transportation costs from the mine to the customer. We are currently the second-largest largest coal producer in the eastern United States. Our principal competitors include American Consolidated Natural Resources Inc., CONSOL Energy, Inc., Alpha Metallurgical Resources, Inc., Foresight Energy LP, and Peabody Energy Corporation. We also compete directly with smaller producers in the Illinois Basin and Appalachian regions. In addition, we seek to export a portion of our coal into the international coal markets and we compete with companies that produce coal from one or more foreign countries.

The prices we are able to obtain price per ton for our export coal have been sales is influenced by many factors, such as global economic conditions, weather patterns, and global supply and demand, among others. The prices we are able to obtain price per ton for our domestic coal sales of coal are primarily linked to coal consumption patterns of domestic electricity-generating utilities, which in turn are influenced by economic activity, government regulations, weather, and technological developments, as well as the location, quality, price and availability of competing sources of fuel and alternative energy sources such as natural gas, nuclear energy, petroleum and renewable energy sources for electrical power generation.

For additional information, please see "Item 1A. Risk Factors."

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Coal Transportation

Our coal is transported from our mining complexes to our customers by barge, rail, and truck, reflecting important flexibility advantages in supplying our customers. Depending on the proximity of the customer to the mining complex and the transportation available for delivering coal to that customer, transportation costs can be a substantial part of the total delivered cost of a customer's coal. As a consequence, Consequently, the availability and cost of transportation constitute important factors in the marketability of coal. We believe our mines are located in favorable geographic locations that minimize transportation costs for our customers, and in many cases, we can accommodate multiple transportation options. Our customers typically negotiate and pay the transportation costs from the mining complex to the destination, which is the standard practice in the industry. Approximately 51.8% 50.2% of our 2022 2023 sales volume was initially shipped from the mining complexes by barge, 30.0% 32.1% was shipped from the mining complexes by rail, and 18.2% 17.7% was shipped from the mining complexes by truck. The practices of, rates set by and available capacity availability of the transportation company serving a particular mine or customer may affect, either adversely or favorably, our marketing efforts concerning coal produced from the relevant mining complex. With respect to our export volumes from the United States to other countries, we generally sell coal to our customers at an export terminal in the United States and we are responsible for the cost of transporting coal to the export terminals. Our export customers generally negotiate and pay for ocean vessel transportation.

Mineral Interest Activities

Our mineral interest activities include both oil & gas and coal mineral interests. Our oil & gas mineral interest business includes all activities related to the oil & gas mineral interests held directly or indirectly by Alliance Minerals and includes Alliance Minerals' equity interest in AllDale Minerals III, L.P. ("AllDale III"). III. Our mineral interests are primarily located on private lands in three basins, which are also our areas of focus for future development by operators.

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These include the Permian (Delaware and Midland), Anadarko (SCOOP/STACK), and Williston (Bakken) Basins. Our developed and undeveloped net acres standardized to a 1/8th royalty equate to nearly 61,400 more than 67,745 oil & gas net royalty acres, including 3,968 3,969 oil & gas net royalty acres owned through our equity interest in AllDale III.

Our coal mineral interests include substantially all of our measured, indicated and inferred coal mineral resources and 464.8 million 557.7 million tons of coal mineral reserves which are owned or leased by Alliance Resource Properties and are (a) leased or subleased to internal mining complexes or (b) near other internal and external coal mining operations but not yet leased. Our coal mineral interests are located in both the Illinois Basin and the Appalachia Basin.

Oil & Gas Royalties

In 2014, we began to invest in oil & gas mineral interests in some of the nation's premier oil-rich basins. Beginning in 2019, we transitioned from a passive investor in mineral interests to an active and material participant in oil & gas minerals.

When our oil & gas mineral interests are leased, we typically receive an upfront cash payment, known as a lease bonus, and we retain a mineral royalty, which entitles us to receive a fixed percentage of the revenue or production from the oil & gas produced from the acreage underlying our interests, free of lease operating expenses and capital costs. A lessee can extend the lease beyond the initial lease term with continuous drilling, production, or other operating activities, or by making an extension payment. When production or drilling ceases, the lease terminates, allowing us to lease the exploration and development rights to another party. As an owner of mineral interests, we incur the initial cost to acquire our interests but thereafter only incur our proportionate share of production and ad valorem taxes. Unlike owners of working interests in oil & gas properties, we are not obligated to fund drilling and completion costs, lease operating expenses, or plugging and abandonment costs associated with oil & gas production.

The following chart summarizes the production of our oil & gas mineral interests for the year ended December 31, 2022 December 31, 2023, 2021, 2022, and 2020, 2021, not including our equity interest in AllDale III:

	Year Ended December 31,		
	2023	2022*	2021*
Production:			
Oil (MBbls)	1,418	1,061	898
Natural gas (MMcf)	5,759	4,814	3,460
Natural gas liquids (MBbls)	726	541	402
BOE (MBbls)	3,105	2,404	1,877

* Recast to reflect the JC Resources Acquisition as if we, rather than JC Resources, acquired the mineral interests in 2019. Please see "Item 8. Financial Statement and Supplemental Data—Note 1 – Organization and Presentation and Note 3 – Acquisitions" for more information.

	Year Ended December 31,		
	2022	2021	2020
Production:			
Oil (MBbls)	974	794	905
Natural gas (MMcf)	4,425	3,069	3,301
Natural gas liquids (MBbls)	496	357	337
BOE (MBbls)	2,208	1,663	1,792

The following map shows the location of our oil & gas mineral interests:



Graphic

Permian Basin—Delaware and Midland Basins

The Permian Basin ranges from West Texas into southeastern New Mexico and is currently the most active area for horizontal drilling in the United States. The Permian Basin is further subdivided into the Delaware Basin in the west and the Midland Basin in the east. Based on geologic data and the ongoing development by operators, our mineral interests in the Permian Basin contain multiple producing zones of economic horizontal development including but not limited to the Wolfcamp, Spraberry, and Bone Spring formations. Our recent purchases of acreage located entirely in the Permian Basin through the Belvedere, Acquisition, the Jase Acquisition and the JC Resources Acquisition Acquisitions demonstrate our commitment to continued acquisition of mineral interests in the nation's highest growth oil & gas plays.

Anadarko Basin—SCOOP and STACK Plays

The SCOOP play (South Central Oklahoma Oil Province) is located in central Oklahoma in Grady, Garvin, Stephens, and McClain Counties. Based on geologic data and the ongoing development by operators, our mineral interests in the SCOOP play contain multiple producing zones of economic horizontal development including multiple Woodford benches and the Springer Shale. In addition, operators are also currently testing other formations in the area including the Sycamore, Caney, and Osage, which is also referred to as SCORE (Sycamore Caney Osage Resource Expansion). The STACK play (derived from Sooner Trend, Anadarko Basin, Canadian and Kingfisher Counties) is located in central Oklahoma in Kingfisher, Canadian, Caddo, and Blaine Counties. Based on geologic data and the ongoing development by operators, our mineral interests in the STACK play contain multiple producing zones of economic horizontal development including but not limited to the Meramec and Woodford formations.

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Williston Basin—Bakken

The Williston Basin stretches from western North Dakota into eastern Montana. Based on geologic data and ongoing development by operators, our mineral interests contain multiple producing zones of economic horizontal development including the Bakken and Three Forks formations.

Other

Our other interests are comprised primarily of mineral interests owned in the Appalachia Basin that stretches throughout most of Ohio, West Virginia, and Pennsylvania, and extends into other states. The Appalachia Basin's most active plays in which we have acreage are the Marcellus Shale and Utica plays, which cover most of Pennsylvania, northern West Virginia, and eastern Ohio. In addition to the interests held in the Appalachia Basin, we own a small number of mineral interests in the Tuscaloosa Marine Shale play in Mississippi. AllDale III also owns mineral interests in the Haynesville Shale formation located in northwest Louisiana.

Coal Royalties

Our Coal Royalties segment includes approximately 464.8 million 557.7 million tons of proven and probable reserves and substantially all of the 1.17 billion 1.06 billion tons of our measured, indicated and inferred coal mineral resources. Our coal mineral reserves and resources are located in the Appalachia and Illinois Basins in the United States. We lease our reserves and resources to our mining complexes under long-term leases. Approximately two-thirds 60% of our royalty-based leases have initial terms of five to 40 years, with substantially all lessees having the option to extend the lease for additional terms.

Under our standard royalty lease, we grant the lessees the right to mine and sell our reserves and resources in exchange for royalty payments based on a percentage of the sale price or a fixed royalty per ton of coal mined and sold. Lessees calculate royalty payments due to us and are required to report tons of coal mined and sold as well as the sales prices of the extracted coal.

The following chart summarizes the coal sales associated with our coal mineral interests for the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021.

Coal Regions	Year Ended December 31,		
	2022	2021	2020
	(tons in millions)		
Illinois Basin	21.2	18.9	16.6
Appalachia	0.6	1.3	2.3
Total	21.8	20.2	18.9

Coal Regions	Year Ended December 31,		
	2023	2022	2021
	(tons in millions)		
Illinois Basin	19.9	21.2	18.9
Appalachia	0.3	0.6	1.3
Total	20.2	21.8	20.2

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The following map shows the location of our coal mineral interests:



Graphic

Illinois Basin:

1. A. GIBSON RESERVES AND RESOURCES

Mining Type: Underground B. HAMILTON RESERVES AND RESOURCES

Mining Access: Slope & Shaft C. RIVER VIEW RESERVES

Mining Method: Continuous

Miner

Coal Type: Low/Medium-Sulfur

Transportation: Barge, Railroad

& Truck D. WARRIOR RESERVES

2. HAMILTON

Mining Type: Underground

Mining Access: Slope & Shaft

Mining Method: Longwall

& Continuous Miner

Coal Type: Medium/High-Sulfur

Transportation: Barge, Railroad

& Truck

3. RIVER VIEW

Mining Type: Underground

Mining Access: Slope & Shaft

Mining Method: Continuous

Miner

Coal Type: Medium/High-Sulfur

Transportation: Barge & Truck

4. WARRIOR

Mining Type: Underground E. HENDERSON/UNION RESOURCES

Mining Access: Slope & Shaft F. DOTIKI RESOURCES

Mining Method: Continuous G. SEBREE SOUTH RESOURCES

Miner

Coal Type: Medium/High-Sulfur

Transportation: Barge, Railroad

& Truck

5. HENDERSON/UNION

Mining Type: Underground

Mining Access: Slope & Shaft

Mining Method: Continuous Miner

Coal Type: Medium/High-Sulfur

Transportation: Barge & Truck

6. DOTIKI

Mining Type: Underground

Mining Access: Slope & Shaft

Mining Method: Continuous

Miner

Coal Type: Medium/High-Sulfur

Transportation: Barge, Railroad

& Truck

7. SEBREE SOUTH

Mining Type: Underground

Mining Access: Slope & Shaft

Mining Method: Continuous

Miner

Coal Type: Medium/High-Sulfur

Transportation: Barge & Truck

Appalachian Basin:

8. H. TUNNEL RIDGE RESERVES AND RESOURCES

Mining Type: Underground I. MOUNTAIN VIEW RESERVES AND RESOURCES

Mining Access: Slope & Shaft J. PENN RIDGE RESOURCES

Mining Method: Longwall

& Continuous Miner

Coal Type: Medium/High-Sulfur

Transportation: Barge & Railroad

9. MOUNTAIN VIEW

Mining Type: Underground

Mining Access: Slope & Shaft

Mining Method: Longwall

& Continuous Miner

Coal Type: Low/Medium

Sulfur: Metallurgical

Transportation: Railroad

& Truck

10. PENN RIDGE

Mining Type: Underground

Mining Access: Slope & Shaft

Mining Method: Longwall

& Continuous Miner

Coal Type: High-Sulfur

Transportation: Barge & Railroad

& Continuous Miner

Illinois Basin

Alliance Resource Properties, either directly or through its subsidiaries, holds coal mineral reserves and resources in the following counties in the Illinois Basin:

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- Hopkins County, Kentucky
- Webster County, Kentucky
- Union County, Kentucky
- Henderson County, Kentucky
- Hamilton County, Illinois
- Jefferson County, Illinois
- Gibson County, Indiana

Alliance Resource Properties leases some of the reserves and resources in Union and Henderson Counties from WKY CoalPlay LLC ("WKY CoalPlay") or its subsidiaries, which are related parties. For more information about our WKY CoalPlay transactions, please read "Item 8. Financial Statements and Supplementary Data—Note 22 20 – Related-Party Transactions."

Approximately 388.0 million 477.0 million tons of proven and probable reserves and 1.08 billion 977.2 million tons of measured, indicated and inferred coal mineral resources are controlled by Alliance Resource Properties in the Illinois Basin and are leased/subleased or held for lease/sublease to our mining complexes or third parties held for lease/sublease in the future as follows:

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Gibson Reserves and Resources.

Approximately 5.7 million 4.4 million tons of the reserves and resources are currently leased/subleased or held for lease/sublease to our subsidiary, Gibson County Coal. Gibson.

Hamilton. Hamilton Reserves and Resources

Approximately 565.2 million 564.5 million tons of the reserves and resources are currently leased/subleased or held for lease/sublease to our subsidiary, Hamilton.

River View Reserves.

Approximately 197.1 million 303.1 million tons of the reserves are currently leased/subleased or held for lease/sublease to our subsidiary, River View.

Warrior Reserves.

Approximately 59.7 million 50.0 million tons of the reserves are currently leased/subleased or held for lease/sublease to our subsidiary, Warrior.

Henderson/Union. Union Resources

Approximately 520.8 million 412.7 million tons of the resources are not under lease or currently anticipated to be leased by our operating companies. Leasing of these properties is dependent upon further development by our operating subsidiaries or third-party mining complexes, which is regulatory and market dependent.

Dotiki Resources.

Approximately 76.0 million tons of the resources are currently leased/subleased or held for lease/sublease to our subsidiary, Webster County Coal, LLC ("Webster County Coal"). Webster.

Sebree South Resources.

Approximately 43.5 million tons of the resources are currently leased/subleased to our subsidiary, Sebree Mining, LLC ("Sebree"). Sebree.

Appalachia Basin

Alliance Resource Properties, either directly or through its subsidiaries, holds coal mineral reserves and resources in the following counties in the Appalachian Basin:

- Brooke County, West Virginia
- Grant County, West Virginia
- Ohio County, West Virginia
- Tucker County, West Virginia
- Washington County, Pennsylvania

Approximately 76.8 million 80.7 million tons of proven and probable reserves and 85.4 million tons of measured, indicated and inferred coal mineral resources are controlled by Alliance Resource Properties in the Appalachian Basin and are leased/subleased or held for lease/sublease to our mining complexes or third parties held for lease/sublease in the future as follows:

Tunnel Ridge Reserves and Resources.

Approximately 71.5 million 75.0 million tons of the reserves and resources are currently leased/subleased or held for lease/sublease to our subsidiary, Tunnel Ridge, LLC. Ridge.

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Mountain View Reserves and Resources

Mountain View. Approximately 12.7 million 13.1 million tons of the reserves and resources are currently leased/subleased or held for lease/sublease to our subsidiary, Mettiki (WV).

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Penn Ridge ~~Resources~~ Resources

Approximately 78.0 million tons of the resources are not under a lease. The resources are near our Tunnel Ridge mining complex and leasing of these resources is dependent upon further development by Tunnel Ridge or third-party mining complexes, which is regulatory and market dependent.

Minerals Interest Competition

Many companies are engaged in the search for and the acquisition of coal and oil & natural gas interests, and there is a limited supply of desirable coal and oil & natural gas reserves. Our ability to acquire additional oil & gas mineral interests in the future will be dependent upon our ability to evaluate and select suitable properties and to consummate transactions in a highly competitive environment. Many of our competitors not only own and acquire oil & gas mineral interests but also explore for and produce oil & gas and, in some cases, conduct midstream and refining operations and market petroleum and other products on a regional, national, or worldwide basis. By engaging in such other activities, our competitors may be able to develop or obtain information that is superior to the information that is available to us. In addition, because we have fewer financial and human resources than many companies in the oil & gas industry, we may be at a disadvantage in bidding for oil & gas properties. Further, oil & gas compete with other forms of energy available to customers, primarily based on price. These alternate forms of energy include electricity, coal, and fuel oils. Changes in the availability or price of oil & gas or other forms of energy, as well as business conditions, conservation, legislation, regulations, and the ability to convert to alternative fuels and other forms of energy, may affect the demand for oil & gas.

We also face competition from land companies, coal producers, and international steel companies in purchasing coal mineral reserves and resources as well as royalty-producing properties. Our mining complexes in which we lease our reserves compete with coal producers in various regions of the United States for domestic sales on the basis of coal price at the mine, coal quality, transportation cost from the mine to the customer, and the reliability of supply. Continued demand for our coal and the prices that our lessees obtain are also affected by the demand for electricity and steel, as well as government regulations, technological developments, and the availability and the cost of generating power from alternative fuel sources, including nuclear, natural gas, wind, solar, and hydroelectric power.

For additional information, please see "Item 1A. Risk Factors".

Oil & Gas Minerals Interest - Seasonal Nature of Business

Generally, demand for oil increases during the summer months and decreases during the winter months while demand for natural gas increases during the winter and summer months and decreases during the spring and fall months. Certain buyers of natural gas use natural gas storage facilities and purchase some of their anticipated winter requirements during the summer, which can lessen seasonal demand fluctuations. Seasonal weather conditions and lease stipulations can limit drilling and producing activities and other oil & gas operations in a portion of our leasing areas. These seasonal anomalies can pose challenges for ~~our operators~~ ~~the Operators~~ in meeting well-drilling objectives and can increase competition for equipment, supplies, and personnel during the spring and summer months, which could lead to shortages and increase costs or delay operations.

Other Operations

Matrix Group

Our subsidiaries, Matrix Design Group LLC ("Matrix Design") and its subsidiaries Matrix Design International, LLC, Matrix Design (Australia) PTY LTD and Matrix Design Africa (PTY) LTD, and Alliance Design Group, LLC ("Alliance Design") (collectively the Matrix Design entities and Alliance Design are referred to as the "Matrix Group"), provide ~~provides~~ a variety of technology products and services for our mining operations and certain industrial and mining technology products and services to third ~~parties~~ ~~parties around the world~~. Matrix Group's products and services include data network, communication and tracking systems, mining proximity detection systems, industrial collision avoidance systems, and data and analytics software. ~~We acquired~~ ~~In addition~~, Matrix Design ~~has entered into an agreement with Infinitem to jointly develop and distribute high-efficiency motors and advanced motor controllers designed specifically for the mining industry. Under the~~

agreement, Matrix Design will integrate Infinitem's motor technology into mining equipment of our operating subsidiaries to provide performance validation in September 2006. production environments for jointly

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developed products and to improve our operational efficiency. Matrix Design will also work with Infinitem to market the jointly developed technology products to third parties worldwide. We acquired Matrix Design in September 2006. Over the past 15 years, Matrix Group has become a leader in collision avoidance and proximity detection technologies, providing safety and productivity solutions for mining companies worldwide, while extending its reach into other industrial applications.

Growth Investments and Opportunities

Our subsidiary, AROP II, LLC, and its subsidiary, AROP II Investments, LLC, make makes strategic investments in attractive opportunities that support the advancement of energy and related infrastructure. We intend to pursue opportunities that leverage our core competencies and relationships with electric utilities, industrial customers, and federal and state governments. We Our strategy is to continue to identify and make strategic investments in the advancement of energy and related infrastructure opportunities that may create new platforms for future lines of business with long-term growth and cash flow generation. As of December 31, 2023, we have made investments of \$25 million in Ascend, \$20 million in Francis, \$42 million \$66.6 million in Infinitem and as of December 31, 2022, \$4.1 million \$6.6 million (of a \$25 million commitment) in NGP ETP ET IV. In 2022, 2023, revenues from these investments were immaterial.

Ascend is a U.S.-based manufacturer and recycler of sustainable, closed-loop engineered battery materials for electric vehicles. Ascend is currently constructing North America's first commercial-scale manufacturing facility located near Hopkinsville, Kentucky, that when complete, will produce enough cathode materials for 750,000 electric vehicles per year.

Francis is currently active in the installation, management and operation of metered-for-fee, public-access EV charging stations. Francis also develops and contracts EV charging stations for third-party customers.

Infinitem is a Texas-based developer and manufacturer of electric motors featuring printed circuit board stators that have the potential to result in motors that are smaller, lighter, quieter, more efficient and capable of operating at a fraction of the carbon footprint of conventional electric motors.

NGP ETP ET IV focuses on investments that are part of the global transition toward a lower carbon economy by partnering with top-tier management teams and investing growth equity in companies that drive or enable the growth of renewable energy, the electrification of our economy, or the efficient use of energy.

Environmental, Health, and Safety Regulations

Our coal operations, and those of the operators on the properties in which we hold oil & gas mineral interests, are subject to extensive regulation by federal, state, and local authorities on matters such as:

- employee health and safety;
- permits and other licensing requirements for mining or exploration and production activities;
- air quality standards;
- water quality standards;
- storage of petroleum products and substances that are regarded as hazardous under applicable laws or that, if spilled, could reach waterways or wetlands;
- plant and wildlife protection that could limit or prohibit mining or exploration and production activities;
- restrict the types, quantities, and concentration of materials that can be released into the environment in the performance of mining or exploration and production activities;

- initiate investigatory and remedial measures to mitigate pollution from former or current operations, such as restoration of waste ponds, mining areas, drilling pits, and plugging of abandoned wells;
- storage and handling of explosives;
- wetlands protection;
- surface subsidence from underground mining; and
- the effects, if any, that mining has on groundwater quality and availability.

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Failure to comply with environmental laws and regulations may result in the assessment of administrative, civil, and criminal sanctions, including monetary penalties, the imposition of strict, joint and several liability, investigatory and remedial obligations, and the issuance of injunctions limiting or prohibiting some or all of the operations on our properties. The regulatory burden on fossil-fuel industries increases the cost of doing business and consequently affects profitability. The trend in environmental regulation has been to place more restrictions and limitations on activities that may affect the environment, and thus, any changes in environmental laws and regulations or reinterpretation of enforcement policies that result in more stringent and costly obligations could increase our or our mineral interest operators' costs and adversely affect our performance.

In addition, the utility industry is subject to extensive regulation regarding the environmental impact of its power generation activities, which has adversely affected the demand for coal. It is possible that new legislation or regulations may be adopted, or that existing laws or regulations may be differently interpreted or more stringently enforced, any of which could have a significant impact on our mining operations, our customers' ability to use coal, or the value of or amount of royalties received from our mineral interests. For more information, please see the risk factors described in "Item 1A. Risk Factors" below.

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We are committed to conducting mining operations in compliance with applicable federal, state, and local laws and regulations. However, because of the extensive and detailed nature of these regulatory requirements, particularly the regulatory system of **the Mine Safety and Health Administration ("MSHA")** **MSHA** where citations can be issued without regard to fault and many of the standards include subjective elements, it is not reasonable to expect any coal mining company to be free of citations. When we receive a citation, we attempt to promptly remediate any identified condition. While we have not quantified all of the costs of compliance with applicable federal and state laws and associated regulations, those costs have been and are expected to continue to be significant. Compliance with these laws and regulations has substantially increased the cost of coal mining for domestic coal producers.

Expenditures for environmental matters have not been material in recent years. We have accrued for the present value of the estimated cost of asset retirement obligations and mine closings, including the cost of treating mine water discharge, when necessary. The accruals for asset retirement obligations and mine closing costs are based on permit requirements and the estimated costs and timing assumptions of asset retirement obligations and mine closing procedures. Although management believes it has made adequate provisions for all expected reclamation and other costs associated with mine closures, future operating results would be adversely affected if these accruals were insufficient.

Mining Permits and Approvals

Numerous governmental permits or approvals are required for mining operations. Applications for permits require extensive engineering and data analysis and presentation and must address a variety of environmental, health, and safety matters associated with a proposed mining operation. These matters include the manner and sequencing of coal extraction, the storage, use, and disposal of waste and other substances and impacts on the environment, the construction of water containment areas, and reclamation of the area after coal extraction. Meeting all requirements imposed by any of these authorities may be costly and time-consuming and may delay or prevent the commencement or continuation of mining operations.

The permitting process for certain mining operations can extend over several years and can be subject to administrative and judicial challenges, including by the public. Some required mining permits are becoming increasingly difficult to obtain in a timely manner, or at all. We cannot assure you that we will not experience difficulty or delays in obtaining mining permits in the future or that a current permit will not be revoked.

We are required to post bonds to secure performance under our permits. Under some circumstances, substantial fines, and penalties, including revocation of mining permits, may be imposed under the laws and regulations described above. Monetary sanctions and, in severe circumstances, criminal sanctions may be imposed for failure to comply with these laws and regulations. Regulations also provide that a mining permit can be refused or revoked if the permit applicant or permittee owns or controls, directly or indirectly through other entities, mining operations that have outstanding environmental violations. Although like other coal companies, we have been cited for violations in the ordinary course of our business, we have never had a permit suspended or revoked because of any violation, and the penalties assessed for these violations have not been material.

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Mine Health and Safety Laws

The operation of our mines is subject to [the Federal Mine Safety and Health Act of 1977 \("FMSHA"\)](#), [FMSHA](#), and regulations adopted pursuant thereto. FMSHA imposes extensive and detailed safety and health standards on numerous aspects of mining operations, including training of mine personnel, mining procedures, blasting, the equipment used in mining operations, and numerous other matters. MSHA monitors and rigorously enforces compliance with these federal laws and regulations. In addition, most of the states where we operate have state programs for mine safety and health regulation and enforcement. Federal and state safety and health regulations affecting the coal mining industry are perhaps the most comprehensive and rigorous system in the United States for the protection of employee safety and have a significant effect on our operating costs. Although many of the requirements primarily impact underground mining, our competitors in all of the areas in which we operate are subject to the same laws and regulations.

FMSHA has been construed as authorizing MSHA to issue citations and orders pursuant to the legal doctrine of strict liability, or liability without fault, and FMSHA requires the imposition of a civil penalty for each cited violation. Negligence and gravity assessments, along with other factors, can result in the issuance of various types of orders, including orders requiring withdrawal from the mine or the affected area, and some orders can also result in the imposition of civil penalties. FMSHA also contains criminal liability provisions. For example, criminal liability may be imposed upon corporate operators who knowingly and willfully authorize, order, or carry out violations of the FMSHA, or its mandatory health and safety standards.

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The [Federal Mine Improvement and New Emergency Response \(MINER\) Act of 2006](#) ("MINER Act") significantly amended the FMSHA, imposing more extensive and stringent compliance standards, increasing criminal penalties, and establishing a maximum civil penalty for non-compliance, and expanding the scope of federal oversight, inspection, and enforcement activities. Following the passage of the MINER Act, MSHA has issued new or more stringent rules and policies on a variety of topics, including:

- sealing off abandoned areas of underground coal mines;
- mine safety equipment, training, and emergency reporting requirements;
- substantially increased civil penalties for regulatory violations;
- training and availability of mine rescue teams;
- underground "refuge alternatives" capable of sustaining trapped miners in the event of an emergency;
- flame-resistant conveyor belts, fire prevention and detection, and use of air from the belt entry; and
- post-accident two-way communications and electronic tracking systems.

MSHA continues to interpret and implement various provisions of the MINER Act, along with introducing new proposed regulations and standards.

In 2014, MSHA began implementation of a finalized new regulation titled "Lowering Miner's Exposure to Respirable Coal Mine Dust, Including Continuous Personal Dust Monitors." The final rule implemented a reduction in the allowable respirable dust exposure to coal mine dust, which has resulted in progressively stricter exposure limits imposed by MSHA regulations. These requirements impose a number of sampling data taken from a single sample rather than an average of samples, dust monitoring obligation and increases oversight by MSHA regarding coal mine dust and ventilation issues at each mine, including the approval process for ventilation plans at each mine, all of which increase mining costs. The second phase of the rule began in February 2016 and requires additional sampling for designated and other occupations using the new continuous personal dust monitor technology, which provides real-time dust exposure information to the miner. Phase three of the rule began in August 2016 and resulted in lowering the current respirable dust level of 2.0 milligrams per cubic meter to 1.5 milligrams per cubic meter of air. Compliance with these rules can result in increased costs on our operations, including, but not limited to, the purchasing of new equipment and the hiring of additional personnel to assist with monitoring, reporting, and recordkeeping obligations. MSHA previously published a request for information regarding engineering controls and best practices to lower miners' exposure to respirable coal mine dust; however, to date no further action has been taken and the comment period closed we cannot predict what actions, if any, MSHA may take in July 2022. It is uncertain whether MSHA will present additional proposed rules, or revisions in response to the final rule, following the closing of the comment period, this information request.

MSHA has also published, and may continue to publish, various proposed rules or requests for information, which may result in additional rulemaking. For example:

- In June 2016, MSHA published a request for information on Exposure of Underground Miners to Diesel Exhaust. Following a comment period that closed in November 2016 for this matter, MSHA received requests for MSHA and the National Institute for Occupational Safety and Health to hold a Diesel Exhaust Partnership to address the issues covered by MSHA's 2016 request for information. The comment period for the request for information for the Diesel Exhaust Partnership closed in September 2020, 2020 and it is uncertain whether this will result in additional rulemaking.
- In August 2019, July of 2023, MSHA published a request for information regarding exposure to proposed rule on respirable crystalline silica, most commonly found in the mining environment through quartz. The request solicited information regarding best practices proposed rule would amend the existing MSHA standards to protect miners' health from exposure to quartz, including examination of a new reduced lower the permissible exposure limit potential of respirable crystalline silica, as well as set forth new or developing protective technologies, and/or technical revised standards for

exposure sampling, corrective actions, medical surveillance for metal and educational assistance, non-metal miners, and respiratory protection requirements. The comment period for on the request for information closed proposed rule ended in October 2019. August of 2023 and the final rule is expected in April 2024.

- In November 2020, MSHA published a proposed rule to revise Testing, Evaluation, and Approval of Electric Motor-Driven Mine Equipment and Accessories within underground mining environments. The comment period for the proposed rule closed in December 2020. 2020 and the final rule is expected in August 2024.
- In September 2021, MSHA published a proposed rule requiring that mine operators employing six or more miners develop and implement a written safety program for mobile and powered haulage equipment at surface mines and surface areas of underground mines (Safety Program for Surface Mobile Equipment). The comment period for the proposed rule closed in November 2021. However, MSHA reopened the rulemaking record for additional public comments. A virtual hearing was held in January 2022 and the comment period closed in February 2022. The final rule was released in December 2023, with an effective date of January 19, 2024. All mines subject to the rule are required to develop, implement, and periodically update a written safety program for surface mobile equipment (excluding belt conveyors) at surface mines and surface areas of underground mines. Compliance with the rule must be achieved by July 17, 2024.

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It is uncertain whether MSHA will present a final rule addressing any of the above issues or any of the other various proposed rules or requests for information or whether any such rule would have material impacts on our operations or our costs of operation.

Subsequent to the passage of the MINER Act, Illinois, Kentucky, Pennsylvania, and West Virginia have enacted legislation addressing issues such as mine safety and accident reporting, increased civil and criminal penalties, and increased inspections and oversight. Additionally, state administrative agencies can promulgate administrative rules and regulations affecting our operations. Other states may pass similar legislation or administrative regulations in the future.

Some of the costs of complying with existing regulations and implementing new safety and health regulations may be passed on to our customers. Although we have not quantified the full impact, implementing and complying with these new federal and state safety laws and regulations have had, and are expected to continue to have, an adverse impact on our results of operations and financial position.

Black Lung Benefits Act

The Black Lung Benefits Act of 1977 and the Black Lung Benefits Reform Act of 1977, as amended in 1981 ("BLBA") require BLBA requires businesses that conduct current mining operations to make payments of black lung benefits to current and former coal miners with black lung disease, to some survivors of a miner who dies from this disease, and to a trust fund for the payment of benefits and medical expenses under circumstances including where no responsible coal mine operator has been identified for claims. The coal we sell into international markets is generally not subject to this tax. In addition, the BLBA provides that some claims for which coal operators not affiliated with us had previously been responsible are or will become obligations of the government trust funded by the tax. As excise tax referenced in this paragraph. The Federal government established such a trust fund and as of January 1, 2022, the trust fund was funded by an excise tax on industry-wide production of up to \$0.50 per ton for underground-mined coal and up to \$0.25 per ton for surface-mined coal, but not to exceed 2% of the applicable gross sales price. The Inflation Reduction Act of 2022 raised the excise tax, effective October 1, 2022, up to \$1.10 per ton of coal from underground mines and up to \$0.55 per ton of coal from surface mines, neither amount to exceed 4.4% of the gross sales price. The coal we sell into international markets is generally not subject to the excise tax referenced in this paragraph. The Company recognized expenses related to the BLBA excise tax of \$30.5 million for the year ended December 31, 2023.

Workers' Compensation and Black Lung

We provide income replacement and medical treatment for work-related traumatic injury claims as required by applicable state laws. Workers' compensation laws also compensate provide for the potential compensation of survivors of workers who suffer employment-related deaths. We generally self-insure this potential expense using our actuary estimates of the cost of present and future claims. In addition, coal mining companies are subject to federal legislation and various state statutes for the payment of medical and disability benefits to eligible

recipients related to coal worker's pneumoconiosis, or black lung. We also provide for these claims through self-insurance programs. The DOL's OWCP is responsible for authorizing coal mine operators to self-insure for federal black lung and for setting applicable security amounts. In January 2023, the OWCP issued a Notice of Proposed Rulemaking to update its regulations authorizing coal producers to self-insure and for determining appropriate security amounts, and announced that it plans to solicit public comments for that proposal. A change in requirements for security posted to self-insure black lung liabilities could result in the Company being required to post additional security for its obligations. Our pneumoconiosis benefits liability is calculated using the

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service cost method based on the actuarial present value of the estimated pneumoconiosis benefits obligation. Our actuarial calculations are based on numerous assumptions including disability incidence, medical costs, mortality, death benefits, dependents, and discount rates. For more information concerning our requirement to maintain bonds to secure our workers' compensation obligations, see the discussion of surety bonds below under "—Bonding Requirements."

The revised BLBA regulations took effect in January 2001, relaxing the stringent award criteria established under previous regulations and thus potentially allowing new federal claims to be awarded and allowing previously denied claimants to refile under the revised criteria. These regulations may also increase black lung-related medical costs by broadening the scope of conditions for which medical costs are reimbursable and increase legal costs by shifting more of the burden of proof to the employer.

The Patient Protection and Affordable Care Act, enacted in 2010, includes significant changes to the federal black lung program retroactive to 2005, including an automatic survivor benefit paid upon the death of a miner with an awarded black lung claim and establishes a rebuttable presumption with regard to pneumoconiosis among miners with 15 or more years of coal mine employment that are totally disabled by a respiratory condition. These changes have caused a significant increase in our costs expended in association with the federal black lung program. We may also be liable under various state statutes with respect to black lung claims.

Surface Mining Control and Reclamation Act

The Federal Surface Mining Control and Reclamation Act of 1977 ("SMCRA") SMCRA and similar state statutes establish operational, reclamation, and closure standards for all aspects of surface mining as well as many aspects of deep mining.

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Although we have minimal surface mining activity and no mountaintop removal mining activity, SMCRA nevertheless requires that comprehensive environmental protection and reclamation standards be met during the course of and upon completion of our mining activities.

SMCRA and similar state statutes require, among other things, that mined property be restored in accordance with specified standards and approved reclamation plans. SMCRA requires us to restore the surface to approximate the original contours as contemporaneously as practicable with the completion of surface mining operations. Federal law and some states impose on mine operators the responsibility for replacing certain water supplies damaged by mining operations and repairing or compensating for damage to certain structures occurring on the surface as a result of mine subsidence, a consequence of longwall mining and possibly other mining operations. We believe we are in compliance in all material respects with applicable regulations relating to reclamation. We have accrued \$150.4 million for the estimated costs

of reclamation and mine closing, including the cost of treating mine water discharge when necessary. Please read "Item 8. Financial Statements and Supplementary Data—Note 18 – Asset Retirement Obligations."

In addition, the Abandoned Mine Lands Program, which is part of SMCRA and relates to industry-wide operations, imposes a reclamation fee on all current mining operations, the proceeds of which are used to restore mines closed before 1977. The fee expired on September 30, 2021, and was reauthorized through September 30, 2034, under the Infrastructure Investment and Jobs Act which was signed on November 15, 2021. The fee, as reauthorized, for surface-mined and underground-mined coal is \$0.224 per ton and \$0.096 per ton, respectively, through September 30, 2034. We have accrued the estimated costs of reclamation and mine closing, including the cost of treating mine water discharge when necessary. Please read "Item 8. Financial Statements and Supplementary Data—Note 20 – Asset Retirement Obligations." In addition, states from time to time have increased and may continue to increase their fees and taxes to fund reclamation or orphaned mine sites and acid mine drainage control on a statewide basis.

Under SMCRA, responsibility for unabated violations, unpaid civil penalties, and unpaid reclamation fees of independent contract mine operators and other third parties can be imputed to other companies that are deemed, according to the regulations, to have "owned" or "controlled" the third-party violator. Sanctions against the "owner" or "controller" are quite severe and can include being blocked from receiving new permits and having any permits revoked that were issued after the time of the violations or after the time civil penalties or reclamation fees became due. We are not aware of any currently pending or asserted claims against us relating to the "ownership" or "control" theories discussed above. However, we cannot assure you that such claims will not be asserted in the future.

In April 2015, the U.S. Environmental Protection Agency ("EPA") finalized rules on coal combustion residuals ("CCRs"); however, the final rule does not address the placement of CCRs in minefills or non-minefill uses of CCRs at coal mine sites. The Federal Office of Surface Mining ("OSM") has announced its intention to release a proposed rule to regulate the placement and use of CCRs at coal mine sites, but, to date, no further action has been taken. These actions by OSM potentially could result in additional delays and costs associated with obtaining permits, prohibitions or restrictions relating to mining activities, and additional enforcement actions.

Bonding Requirements

Federal and state laws require bonds to secure our obligations to reclaim lands used for mining, to pay federal and state workers' compensation, to pay certain black lung claims, and to satisfy other miscellaneous obligations. These bonds are typically renewable on a yearly basis. It has become increasingly difficult for us and for our competitors to secure new surety bonds without posting collateral and in some cases it is unclear what level of collateral will be required. In addition, surety bond costs have increased while the market terms of surety bonds have generally become less favorable to us. It is possible that surety bond issuers may refuse to renew bonds or may demand additional collateral upon those renewals. Our failure to maintain or inability to acquire, surety bonds that are required by federal and state laws would have a material adverse effect on our ability to produce coal, which could affect our profitability and cash flow. For additional information, please see "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Cash Requirements."

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Air Emissions

The CAA and similar state and local laws and regulations regulate emissions into the air and affect coal mining, as well as oil & gas, operations. The CAA imposes permitting requirements and, in some cases, requirements to install certain emissions control equipment, achieve certain emissions standards, or implement certain work practices on sources that emit various air pollutants. The CAA also indirectly affects coal mining operations by extensively regulating the air emissions of coal-fired electric power generating plants and other coal-burning facilities. There have been a series of federal rulemakings focused on emissions from coal-fired electric generating facilities. Installation of additional emissions control technology and any additional measures required under applicable federal and state laws and regulations related

to air emissions will make it more costly to operate coal-fired power plants and possibly other facilities that consume coal and, depending on the requirements of individual state implementation plans ("SIPs"), SIPs could make fossil fuels a less attractive fuel alternative in the planning and building of power plants in the future. A significant reduction in fossil fuels' share of power generating capacity could have a material adverse effect on our business, financial condition, and results of operations.

In addition to the greenhouse gas ("GHG") GHG issues discussed below, the air emissions programs that may affect our operations or the operations of those on the properties in which we hold mineral interests, directly or indirectly, include but are not limited to the following:

- The EPA's Acid Rain Program, provided in Title IV of the CAA, regulates emissions of sulfur dioxide from electric generating facilities. Sulfur dioxide is a by-product of coal combustion. Affected facilities purchase or are otherwise allocated sulfur dioxide emissions allowances, which must be surrendered annually in an amount equal to a facility's sulfur dioxide emissions in that year. Affected facilities may sell or trade excess allowances to other facilities that require additional allowances to offset their sulfur dioxide emissions. In addition to purchasing or trading for additional sulfur dioxide allowances, affected power facilities can satisfy the requirements of the EPA's Acid Rain Program by switching to lower-sulfur fuels, installing pollution control devices such as flue gas desulfurization systems, or "scrubbers," or by reducing electricity-generating levels. In 2022, 2023, we sold 82.4% 80.9% of our total tons to electric utilities in the United States, substantially all of which was sold to utility plants with installed pollution control devices. These requirements would not be supplanted by a replacement rule for the Clean Air Interstate Rule ("CAIR"), CAIR, discussed below.
- The CAIR calls called for power plants in 28 states and Washington, D.C. to reduce emission levels of sulfur dioxide and nitrogen oxide pursuant to a cap-and-trade program similar to the system in effect for acid rain. In June 2011, the EPA finalized the Cross-State Air Pollution Rule ("CSAPR"), CSAPR, a replacement rule for CAIR, which would have required 28 twenty-eight states in the Midwest and eastern seaboard to reduce power plant emissions that cross state lines and contribute to ozone and/or fine particle pollution in other states. CSAPR has become increasingly irrelevant with continuing coal plant retirements making the nitrogen oxide ozone budget less stringent and lowering emission allowance prices to levels closer to average operating cost for many of our customers. The full impacts of CSAPR are presently unknown due to the implementation of Mercury and Air Toxic Standards ("MATS"), MATS, discussed below, and the impact of the continuing coal plant retirements.
- In February 2012, May 2020, EPA issued a final rule that reversed the EPA adopted Agency's prior determination from 2000 to 2016 that it was "appropriate and necessary" to regulate hazardous air pollutants from coal-fueled EGUs under the MATS rule, which regulates the emission of mercury and other metals, fine particulates, and acid gases such as hydrogen chloride from coal and oil-fired power plants. In March 2013, the However, in February 2023, EPA finalized published a reconsideration final revocation of the MATS rule as it pertains to new power plants, principally adjusting emissions limits to levels attainable by existing control technologies. In subsequent litigation, the U.S. Supreme Court struck down the MATS rule based on the EPA's failure to take costs into consideration. The D.C. Circuit Court allowed the current rule to stay May 2020 finding. Then, in place until the EPA issued a new finding. In April 2016, the EPA issued a final supplemental finding upholding the rule and concluding that a cost analysis supports the MATS rule. In April 2017, the D.C. Circuit Court of Appeals granted the EPA's request to cancel oral arguments and ordered the case held in abeyance for an EPA review of the supplemental finding. In December 2018, 2023, the EPA issued a proposed Supplemental Cost Finding, as well as the CAA required "risk and technology review." In May 2020, EPA issued a final rule that reverses the Agency's prior determination from 2000 and 2016 that it was "appropriate and necessary" to regulate hazardous air pollutants from coal-fueled Electric Generating Units ("EGUs") under the MATS rule. However, in February 2022, EPA published a proposed rule proposing to revoke the May 2020 finding. The final rule remains pending. Although various issues surrounding amend the MATS rule, remain subject to litigation reflect developments in control technologies and plant performance. Although the D.C. Circuit, impacts of the potential final rule are unknown, the MATS rule has forced electric power generators to make capital investments to retrofit power plants and

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could lead to additional premature retirements of older coal-fired generating units and many electric power generators have already announced retirements due to the uncertainty surrounding the MATS rule. The announced and possible additional retirements are likely to reduce the demand for coal. Apart from MATS, several states have enacted or proposed regulations requiring reductions in mercury emissions from coal-fired power plants, and federal legislation to reduce mercury emissions from power plants has been proposed. Regulation of mercury emissions by the EPA, states, or Congress may decrease the future demand for coal. We continue to evaluate the possible scenarios associated with CSAPR Update updates and MATS and the effects they may have on our business and our results of operations, financial condition, or cash flows.

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- The EPA is required by CAA requires the CAA EPA to periodically reevaluate the available health effects information to determine whether the National Ambient Air Quality Standards ("NAAQS") NAAQS should be revised. Pursuant to this process, the EPA has adopted more stringent NAAQS for fine particulate matter ("PM"), PM, ozone, nitrogen oxide, and sulfur dioxide. As a result, some states will be required to amend their existing SIPs to attain and maintain compliance with the new air quality standards and other states will be required to develop new SIPs for areas that were previously in "attainment" but do not attain the new standards. In addition, under the revised ozone NAAQS, significant additional emissions control expenditures may be required at coal-fired power plants. In March 2019, the EPA published a final rule that retained the current primary NAAQS for sulfur oxide. In December 2020, EPA published a final rule to retain the current NAAQS for both PM and ozone; however, various entities filed litigation against one or both of these rulemakings, and the Biden Administration announced that it would reconsider and potentially revise the NAAQS. However, with With respect to ozone, a draft assessment released in April 2022 indicates EPA staff have reached indicated a preliminary conclusion that the December 2020 decision will stand, but uncertainty remains until would stand. However, on August 21, 2023, the EPA announced a final decision new review of the ozone NAAQS to reflect updated ozone science in combination with the reconsideration of the December 2020 decision. The Agency is reached, expected to release its Integrated Review Plan in the fall of 2024. New standards may impose additional emissions control requirements on new and expanded coal-fired power plants and industrial boilers. Because coal mining operations and coal-fired electric generating facilities emit particulate matter and sulfur dioxide, our mining operations and our customers could be affected when the new standards are implemented by the applicable states, and developments could indirectly reduce the demand for coal. Separately, the implementation of new standards by states has the potential to delay or otherwise impact oil & gas production activities, which could reduce the profitability of our mineral interests.
- The EPA's regional haze program is designed to protect and improve visibility at and around national parks, national wilderness areas, and international parks. Under the program, states are required to develop SIPs to improve visibility. Typically, these plans call for reductions in sulfur dioxide and nitrogen oxide emissions from coal-fueled electric plants. In prior cases, the EPA has decided to negate the SIPs and impose stringent requirements through Federal Implementation Plans ("FIPs"). FIPs. The regional haze program, including particularly the EPA's FIPs, and any future regulations may restrict the construction of new coal-fired power plants whose operation may impair visibility at and around federally protected areas and may require some existing coal-fired power plants to install additional control measures designed to limit haze-causing emissions. These requirements could limit the demand for coal in some locations. In September 2018, the EPA issued a memorandum that detailed plans to assist states as they develop their SIPs, which was followed by a supplemental memorandum in July 2021 for SIPs for the second implementation period.
- The EPA's new source review ("NSR") NSR program under the CAA in certain circumstances requires existing coal-fired power plants, when modifications to those plants significantly increase emissions, to install more stringent air emissions control equipment. The Department of Justice, on behalf of the EPA, has filed lawsuits against a number of coal-fired electric generating facilities alleging violations of the NSR program. The EPA has alleged that certain modifications have been made to these facilities without first obtaining certain permits issued under the program. Several of these lawsuits have been settled, but others remain pending. In October 2020, the EPA finalized a rule to clarify the process for evaluating whether the NSR permitting program would apply to a proposed modification of a source of air emissions. The EPA has announced that it will review the NSR program. Depending on the ultimate resolution of the EPA's litigation and review, demand for coal could be affected.
- The EPA's New Source Performance Standards ("NSPS") NSPS under the CAA require the reduction of certain pollutants and methane emissions from certain stimulated oil & gas wells for which well completion operations are conducted and further require that most wells use reduced emission completions, also known as "green completions." These regulations also establish specific new requirements regarding emissions from production-related wet seal and reciprocating compressors, and pneumatic controllers and storage vessels.

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Although the Trump Administration revised prior regulations in September 2020 to rescind certain methane standards and remove the transmission and storage segments from the source category for certain regulations, the U.S. Congress passed, and President Biden signed into law, a revocation of the 2020 rulemaking, effectively reinstating the 2016 standards. Additionally, in November 2021, in December 2023, EPA issued a proposed rule its final methane rules, known as OOOOb and OOOOc, that if finalized, would establish new source and first-time existing source standards of performance for GHG and volatile organic compound ("VOC") VOC emissions for crude oil and natural gas well sites, natural gas gathering and boosting compressor stations, natural gas

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processing plants, and transmission and storage facilities. In November 2022, EPA published a supplemental methane proposal which, among other items, sets forth specific revisions strengthening the first The final rules include nationwide emissions guidelines for states to limit methane emissions from existing crude oil and natural gas facilities. facilities and states have two years to prepare and submit their plans to impose methane emission controls on existing sources. The proposal rules also revises revise requirements for fugitive emissions monitoring and repair as well as equipment leaks and the frequency of monitoring surveys and establishes a "super-emitter" response program to timely mitigate emissions events. The proposal is currently subject to public comment and is expected to be finalized in 2023; however, it is likely that the final rule and its requirements will be subject to legal challenges. Moreover, compliance with the new rules may effect the amount oil & gas companies owe under the Inflation Reduction Act, which amended the CAA to impose a first-time fee on the emission of methane from sources required to report their GHG emissions to the EPA. The methane emissions fee applies to excess methane emissions from certain facilities and starts at \$900 per metric ton of leaked methane in 2024 and increases to \$1,200 in 2025 and \$1,500 in 2025 and thereafter. Compliance with the EPA's new final rules would exempt an otherwise covered facility from the requirement to pay the methane fee. Oil & gas production on the properties in which we hold mineral interests could be adversely affected to the extent the rules and any final rule imposes of their requirements impose increased operating costs on the oil & gas industry.

GHG Emissions

Combustion of fossil fuels, such as the coal we produce and the oil & gas produced from our mineral interests, results in the emission of GHGs, such as carbon dioxide and methane. Combustion of fuel for mining equipment used in coal production also emits GHGs. Future regulation of GHG emissions in the United States could occur pursuant to future United States treaty commitments, new or existing domestic legislation, or regulation by the EPA. Although no comprehensive climate change regulation has been adopted at the federal level in the United States, President Biden has made it clear that climate change will be a focus of his administration. For example, in January 2021, President Biden issued an executive order that commits to substantial action on climate change, calling for, among other things, the increased use of zero-emissions vehicles by the federal government, the elimination of subsidies provided to the fossil-fuel industry, a doubling of electricity generated by offshore wind by 2030, and increased emphasis on climate-related risks across governmental agencies and economic sectors. Internationally, the Paris Agreement requires member states to submit non-binding, individually-determined individually determined emissions reduction targets. These commitments could further reduce demand and prices for fossil fuels. Although the United States had withdrawn from the Paris Agreement, President Biden recommitted the United States to the Paris Agreement in February 2021 and, in April 2021, announced a new, more rigorous nationally determined emissions reduction level of 50-52% reduction from 2005 levels in economy-wide economy wide net GHG emissions by 2030. The international community gathered again at the 26th Conference to the Parties ("COP26") COP26 during which multiple announcements were made, including a call for parties to eliminate fossil fuel subsidies, among other measures. Relatedly, the United States and European Union jointly announced at COP26 the launch of the Global Methane Pledge, an initiative committing to a collective goal of reducing global methane emissions by at least 30% from 2020 levels by 2030, including "all feasible reductions" in the energy sector. Also at COP26, more than forty countries pledged to phase out coal, although the United States did not sign the pledge. At COP27, countries reiterated In December 2023, the agreements United Arab Emirates hosted the COP28 where parties signed onto an agreement to transition "away from COP26 and were called upon to accelerate efforts toward the phase out of inefficient fossil fuel subsidies. The United States also announced, in conjunction with the European Union and other partner countries, that it would develop standards for monitoring and reporting methane emissions to help create a market for low methane-intensity natural gas. Although no firm commitment or timeline to phase out or phase down all fossil fuels in energy systems in a just, orderly and equitable manner" and increase renewable energy capacity so as to achieve net zero by 2050, although no timeline for doing so was made at COP27, there can be no guarantees that countries will not seek to implement such a phase out in the future. set. The full impact of these actions remains unclear at this time. Moreover, many states, regions, and governmental bodies have adopted GHG initiatives and have or are considering the imposition of fees or taxes based on the emission of

GHGs by certain facilities, including coal-fired electric generating facilities. Others have announced their intent to increase the use of renewable energy sources, displacing coal, and other fossil fuels. Depending on the particular regulatory program that may be enacted, at either the federal or state level, the demand for coal and oil & gas could be negatively impacted, which would have an adverse effect on our operations.

Even in the absence of new federal legislation, the EPA has begun to regulate GHG emissions under the CAA based on the U.S. Supreme Court's 2007 decision that the EPA has the authority to regulate GHG emissions. Although the U.S. Supreme Court's holding did not expressly involve the EPA's authority to regulate GHG emissions from stationary sources, such as coal-fueled power plants, the EPA has determined on its own that it has the authority to regulate GHG emissions from power plants and issued a final rule which found that GHG emissions, including carbon dioxide and methane, endanger both the public health and welfare. Several rulemakings have been issued under the NSPS that constrain the GHG emissions of fossil-fuel-fired power plants. In January 2021, the EPA published a final significant contribution

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finding for purposes of regulating source category of GHG emissions, confirming that such power plants are a source category for such regulations. However, this finding also excludes several sectors and may, therefore, be subject to revision, and future implementation of the NSPS is uncertain at this time. The EPA is expected to publish a notice of proposed rulemaking in Spring 2023.

existing federal CAA. In August 2015, the EPA issued its final Clean Power Plan ("CPP") rules that establish CPP Rule, which established carbon pollution standards for power plants, called CO2 emission performance rates. Judicial challenges led plants. The CPP was subsequently challenged by multiple states and industry participants in the U.S. Supreme Court to grant a stay of Appeals for the D.C. Circuit and, in February 2016, of the implementation of the CPP before was stayed by the U.S. Court of Appeals for the District of Columbia ("Circuit Court") even issued a decision. Supreme Court. Then, in October 2017 September 2019, the EPA proposed to repeal the CPP. The EPA subsequently proposed the Affordable Clean Energy ("ACE") rule to replace repealed the CPP with a and finalized the ACE rule. The ACE rule specified that utilizes heat rate improvement measures qualified as the "best system of emission reduction". The ACE rule adopts new implementing regulations under the CAA to clarify BSER for existing coal-fired power plants, clarified the roles of the EPA and the states including an extension in the implementation of the deadline for state plans ACE, and EPA approvals; and, the rule revises revised the NSR permitting program to provide EGUs the opportunity to make efficiency improvements without triggering NSR permit requirements. In June 2019, January 2021, however, the EPA published the final repeal of the CPP and promulgation of the ACE rule. On January 19, 2021, the D.C. Circuit Court struck down vacated the ACE rule and found concluding that the EPA's "repeal of the CPP rested critically on a mistaken reading of the CAA." On June 30, 2022, Although the D.C. Circuit ultimately agreed to stay its mandate, such that the CPP remained repealed, in June 2022, the U.S. Supreme Court of the United States in *West Virginia v. EPA* reversed and remanded the Circuit Court's D.C. Circuit's decision in *West Virginia v. EPA* and found that in the promulgation of the CPP, the EPA had acted outside the bounds of the legal agency's authority granted to in the agency by Congress.

promulgation of the CPP. Notwithstanding the ACE rule, litigation, the

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CPP and the CPP's requirements and impact during the pendency of the litigation ACE led to premature retirements and could lead to additional premature retirements of coal-fired generating units and reduce the demand for coal. Congress has not currently yet adopted legislation to restrict carbon dioxide emissions from existing power plants and has not otherwise expanded the legal authority of the EPA

following *West Virginia v. EPA*, including as it relates to authority to regulate carbon dioxide emissions from existing and modified power plants as proposed in the NSPS and CPP. We but we cannot predict whether such legislation will be signed into law passed in the future, future or what the potential impacts of such legislation would be.

Several rulemakings have been issued under the NSPS that constrain the GHG emissions of fossil-fuel-fired power plants. In October 2015, EPA published its final rule on performance standards for GHG emissions from new, modified, and reconstructed EGUs, which required use of efficient supercritical pulverized coal boilers that use partial post-combustion carbon capture and storage technology and imposed a new emission standard. The October 2015 rule was challenged by several states, industry participants and other parties in the D.C. Circuit and, in April 2017, the Court granted EPA's motion to hold the litigation in abeyance while EPA reviewed the rule. Then, in December 2018, the EPA issued a proposed rule to replace the October 2015 rule, including revising the BSER for newly constructed coal-fired EGUs. Although the EPA has not taken further action on the December 2018 proposed rule, in May 2023, the EPA published a proposed NSPS rule for GHG emissions from new, modified, and reconstructed fossil fuel-fired EGUs and emissions guidelines for existing fossil fuel-fired EGUs. The final rule is expected in 2024.

There have been numerous are further uncertainties surrounding the potential impacts and costs associated with the reduction of GHG emissions, such as: protests and challenges to the permitting of new fossil-fuel infrastructure including power plants and pipelines, by environmental organizations and state regulators for concerns related to GHG emissions. For instance, various regulators; state regulatory authorities have rejected the construction tort liability; and state adoption of new coal-fueled power plants based on the uncertainty surrounding the potential costs associated with GHG emissions from these plants under future laws limiting the emissions of carbon dioxide. In addition, several permits issued to new coal-fueled power plants without limits on GHG emissions have been appealed to the EPA's Environmental Appeals Board. In addition, over thirty states have currently adopted "renewable energy standards" or "renewable portfolio standards," which encourage or require electric utilities to obtain a certain percentage of their electric generation portfolio from renewable resources by a certain date. Several For example, several states have announced their intent to have renewable energy comprise 100% of their electric generation portfolio. Other states may adopt similar requirements, portfolio and, federal legislation is a possibility in this area. In December 2021, President Biden issued an executive order setting a goal for a carbon pollution-free electricity sector across the country by 2035. To the extent these requirements or similar requirements that may be enacted or adopted in the future affect our current and prospective customers or those of our mineral interest producers, they may reduce the demand for fossil-fuel energy and may affect the long-term demand for our coal and the oil & gas producers produced from the properties in which we hold mineral interests. Finally, while the U.S. Supreme Court has held that federal common law provides no basis for public nuisance claims against utilities due to their carbon dioxide emissions, the Court did not decide whether similar claims can be brought under state common law. As a result, despite this favorable ruling, tort-type liabilities remain a concern. For more information, see our risk factor titled "We, our customers, or the operators of our oil & gas mineral interests could be subject to litigation related to climate change."

In addition, environmental advocacy groups have filed a variety of judicial challenges claiming that the environmental analyses conducted by federal agencies before granting permits and other approvals necessary for certain coal activities do not satisfy the requirements of the National Environmental Policy Act ("NEPA"). NEPA. These groups assert that the environmental analyses in question do not adequately consider the climate change impacts of these particular projects. In April 2022, the Council on Environmental Quality ("CEQ") CEQ issued a final rule, considered "Phase I" of the Biden Administration's two-phased approach to modifying the NEPA, revoking some of the modifications made to the NEPA regulations under the previous administration and reincorporated reincorporating the consideration of direct, indirect, and cumulative effects of major federal actions, including GHG emissions. In July 2023, the CEQ announced a "Phase 2" Notice of Proposed Rulemaking, the "Bipartisan Permitting Reform Implementation Rule," which revises the implementing regulations of the procedural provisions of NEPA and implements the amendments to NEPA included in the June 3, 2023, Fiscal Responsibility Act of 2023. The public comment period for the proposed rule closed in September 2023, and the final rule is expected in the second quarter of 2024. And, in January 2023, the CEQ released guidance, effective immediately, upon publication, to assist federal agencies in assessing the GHG emissions and climate change effects of their proposed actions under NEPA.

Many states and regions have adopted GHG initiatives and certain governmental bodies have or are considering the imposition of fees or taxes based on the emission of GHG by certain facilities, including coal-fired electric generating

facilities. For example, in 2005, ten Northeastern states entered into the Regional Greenhouse Gas Initiative agreement ("RGGI"), calling RGGI calls for the implementation of a cap and trade cap-and-trade program aimed at reducing carbon dioxide emissions from power plants in the participating states. The members of RGGI have established in statutes and/or regulations a carbon dioxide trading program. Auctions for carbon dioxide allowances under the program began in September 2008. Since its inception, several additional states and Canadian provinces have joined RGGI as participants or observers, while Virginia has withdrawn from RGGI via executive order by its governor. Similar to RGGI, five western states launched the Western Regional Climate Initiative, although only California, Washington and certain Canadian provinces are currently active participants. We cannot predict what other regional greenhouse gas reduction initiatives may arise in the future.

It is possible that future international, federal, and state initiatives to control GHG emissions could result in increased costs associated with fossil-fuel production and consumption, such as costs to install additional controls to reduce carbon dioxide emissions or costs to purchase emissions reduction credits to comply with future emissions trading programs. Such increased costs for fossil-fuel consumption could result in some customers switching to alternative sources of fuel, or otherwise adversely affect our operations and demand for our products, or those of the operators of our mineral interests, which could have a material adverse effect on our business, financial condition, and results of operations. Finally, activists

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may try to hamper fossil-fuel companies by other means, including pressuring financing and other institutions into restricting access to capital, bonding, and insurance, as well as pursuing tort litigation for various alleged climate-related impacts. For more information, see our Risk Factor titled "Our operations are subject to a series of risks resulting from climate change."

Water Discharge

The Federal Clean Water Act ("CWA") CWA and similar state and local laws and regulations regulate discharges into certain waters, primarily through permitting. Section 404 of the CWA imposes permitting and mitigation requirements associated with the dredging and filling of certain wetlands and streams. The CWA and equivalent state legislation, where such equivalent state legislation exists, affect coal mining operations that impact such wetlands and streams. Although permitting requirements have been tightened in recent years, we believe we have obtained all necessary permits required under CWA Section 404 as it has traditionally been interpreted by the responsible agencies. However, mitigation requirements under existing and possible future "fill" permits may vary considerably. For that reason, the setting of post-mine asset retirement obligation accruals for such mitigation projects is difficult to ascertain with certainty and may increase in the future. For more information about asset retirement obligations, please read "Item 8. Financial Statements and Supplementary Data—Note 20 18 - Asset Retirement Obligations." Although more stringent permitting requirements may be imposed in the future, we are not able to accurately predict the impact, if any, of such permitting requirements.

For us or the operators of the properties in which we hold oil & gas mineral interests to conduct certain activities, an operator may need to obtain a permit for the discharge of fill material from the U.S. Army Corps of Engineers ("Corps of Engineers") and/or a discharge permit from the state regulatory authority under the state counterpart to the CWA. Our coal mining operations typically require Section 404 permits to authorize activities such as the creation of slurry ponds and stream impoundments. The CWA authorizes the EPA to review Section 404 permits issued by the Corps of Engineers, and in 2009, the EPA began reviewing Section 404 permits issued by the Corps of Engineers for coal mining in Appalachia. Currently, significant uncertainty exists regarding the obtaining of permits under the CWA for coal mining operations in Appalachia due to various initiatives launched by the EPA regarding these permits.

The EPA also has statutory "veto" power over a Section 404 permit if the EPA determines, after notice and an opportunity for a public hearing, that the permit will have an "unacceptable adverse effect." In January 2011, the EPA exercised its veto power to withdraw or restrict the use of a previously issued permit for Spruce No. 1 Surface Mine in West Virginia, which is one of the largest surface mining operations ever authorized in Appalachia. This action was the first time that such power was exercised with regard to a previously permitted coal mining project which veto was subsequently authority has been upheld by the D.C. Circuit Court of Appeals in 2013. Circuit. Any future use of the

EPA's Section 404 "veto" power could create uncertainty with regard to our continued use of current permits, as well as impose additional time and cost burdens on future operations, potentially adversely affecting our coal revenues. In addition, the EPA initiated a preemptive veto prior to the filing of any actual permit application for a copper and gold mine based on a fictitious mine scenario. The implications of this decision could allow the EPA to bypass the state permitting process and engage in watershed and land use planning.

Total Maximum Daily Load ("TMDL") States also have the ability to review the Corps of Engineers' Section 404 permitting process, pursuant to CWA Section 401, which is also subject to ongoing litigation. In October 2021, the Northern District of California federal court vacated a 2020 rule revising the Section 401 certification process. The Supreme Court stayed this vacatur and, in September 2023, the EPA finalized its Clean Water Act Section 401 Water Quality Certification Improvement Rule, effective on November 27, 2023. While the full extent and impact of these actions is unclear at this time, any disruption in the ability to obtain required permits may result in increased costs and project delays.

TMDL regulations under the CWA establish a process to calculate the maximum amount of a pollutant that an impaired waterbody can receive and still meet state water quality standards, and to allocate

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pollutant loads among the point and non-point pollutant sources discharging into that water body. Likewise, when water quality in a receiving stream is better than required, states are required to conduct an antidegradation review before approving discharge permits. The adoption of new TMDL-related allocations or any changes to antidegradation policies for streams near our coal mines could require more costly water treatment and could adversely affect our coal production.

Considerable legal uncertainty exists surrounding the standard for what constitutes jurisdictional waters and wetlands subject to the protections and requirements of the CWA. Rulemakings to establish the extent of such jurisdiction were finalized in 2015 and 2020, respectively, and both rulemakings have been subject to substantial litigation. Although the EPA and Corps of Engineers did not seek to vacate the 2020 rule on an interim basis, two federal district courts in Arizona and New Mexico vacated the 2020 rule in decisions announced during the third quarter of 2021. In December 2022, January 2023, the EPA and Corps of Engineers released published a final revised definition of "waters of the United States" ("WOTUS") WOTUS founded upon a pre-2015 definition, and including updates to incorporate existing Supreme Court decisions. However, continued uncertainty remains as to the government's

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jurisdictional reach as the rule is likely to be subject to legal challenge. Judicial developments further add to this uncertainty. In October 2022, the Supreme Court heard oral arguments in *Sackett v. EPA* regarding the scope and authority of the CWA and the definition of WOTUS and is expected to release an opinion in this case in May 2023, which could impact the regulatory definition and its implementation. To the extent any decision expands the scope issued a ruling invalidating certain parts of the EPA January 2023 rule, and further limiting the Corps federal government's jurisdiction over wetlands and tributaries. A revised WOTUS rule was issued in September 2023. Due to the injunction in certain states, however, the implementation of Engineers' jurisdiction under the CWA, we could face increased costs and delays due to additional permitting and regulatory requirements and possible challenges to permitting decisions. September 2023 rule currently varies by state.

Hazardous Substances and Wastes

The **Federal Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA")**, **CERCLA**, otherwise known as the "Superfund" law, and analogous state laws, impose liability, without regard to fault or the legality of the original conduct on certain classes of persons that are considered to have contributed to the release of a "hazardous substance" into the environment. These persons include the owner or operator of the site where the release occurred and companies that disposed of or arranged for the disposal of the hazardous substances found at the site. Persons who are or were responsible for the release of hazardous substances may be subject to joint and several liability under CERCLA for the costs of cleaning up releases of hazardous substances and natural resource damages. Some products used in coal mining operations generate waste containing hazardous substances. We are currently unaware of any material liability associated with the release or disposal of hazardous substances from our past or present mine sites.

The **Federal Resource Conservation and Recovery Act ("RCRA")**, **RCRA** and analogous state laws impose requirements for the generation, transportation, treatment, storage, disposal, and cleanup of hazardous and non-hazardous wastes. Many mining wastes are excluded from the regulatory definition of hazardous wastes, and coal mining operations covered by SMCRA permits are by statute exempted from RCRA permitting. Similarly, most wastes associated with the exploration, development, and production of oil & gas are exempt from regulation as hazardous wastes under RCRA, though these wastes typically constitute "solid wastes" that are subject to less stringent non-hazardous waste requirements. However, it is possible that RCRA could be amended or the EPA or state environmental agencies could adopt policies to require such wastes to become subject to more stringent storage, handling, treatment, or disposal requirements, which could impose significant additional costs on the operators of the properties in which we own oil & gas mineral interests. RCRA also allows the EPA to require corrective action at sites where there is a release of hazardous substances. In addition, each state has its own laws regarding the proper management and disposal of waste material. While these laws impose ongoing compliance obligations, such costs are not believed to have a material impact on our operations.

RCRA impacts the coal industry in particular because it regulates the disposal of certain **coal combustion by-products ("CCB")**, **CCB**. On April 17, 2015, the EPA finalized regulations under RCRA for the disposal of CCB. Under the finalized regulations, CCB is regulated as "non-hazardous" waste and avoids the stricter, more costly, regulations under RCRA's "hazardous" waste rules. While the classification of CCB as a hazardous waste would have led to more stringent restrictions and higher costs, this regulation may still increase our customers' operating costs and potentially reduce their ability to purchase coal. The CCB rule was subject to legal challenge and ultimately remanded to the EPA. On August 28, 2020, the EPA published a final revised rule mandating the closure of unlined impoundments, with deadlines to initiate closure between 2021 and 2028, depending on site-specific circumstances. Certain provisions of the revised CCB rule were vacated by the D.C. Circuit in 2018. The EPA **proposed a coal ash rule in May 2023 and the final rule is expected to finalize additional rules addressing those specific provisions in June 2023, April 2024**. Meanwhile, on January 25, 2022, the EPA published determinations for 9 of 57 CCB facilities that sought approval to continue disposal of CCB and non-CCB waste streams until 2023, as opposed to the initial 2021 deadline for unlined impoundments prescribed by the current rule. While the EPA issued one conditional approval, the EPA required the remaining facilities to cease receipt of waste within 135 days of completion of public comment, or

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around July 2022. And, in January 2023, the EPA issued six proposed determinations to deny facilities' requests to continue disposal into unlined surface impoundments. The current determinations, future determinations of the same nature, or similar actions in expected future rulemakings could lead to accelerated, abrupt, or unplanned suspension of coal-fired boilers. The combined effect of the CCB rules and the **Effluent Limitations Guidelines and Standards ("ELG")**, **ELG** regulations (discussed below) has compelled power generating companies to close existing ash ponds and may force the closure of certain existing coal burning power plants that cannot comply with the new standards. Such retirements may adversely affect the demand for our coal.

On November 3, 2015, the EPA published the final rule ELG, revising the regulations for the Steam Electric Power Generating category which became effective on January 4, 2016. The rule sets the first federal limits on the levels of toxic metals in wastewater that can be discharged from power plants, based on technological improvements in the steam electric power industry over the last three decades. The combined effect of the CCB and ELG regulations has forced power generating companies to close existing ash ponds and will likely force the closure of certain older existing coal-burning power plants that cannot comply with the new standards. In November 2019, the EPA proposed revisions to the 2015 ELG

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rule and announced proposed changes to regulations for the disposal of coal ash in order to reduce compliance costs. In October 2020, EPA published a final rule. In August 2021, EPA initiated supplemental rulemaking indicating that it intended to strengthen certain discharge limits. In March 2023, the EPA expects proposed a rule to issue a proposed establish more stringent ELG regulations and the final rule for public comment is expected in the summer of 2023. April 2024. It is unclear what impact these regulations will have on the market for our products.

Endangered Species Act

The federal Endangered Species Act ("ESA") ESA and counterpart state legislation protect species threatened with possible extinction. The U.S. Fish and Wildlife Service (the "USFWS") USFWS works closely with the OSM and state regulatory agencies to ensure that species subject to the ESA are protected from potential impacts from mining-related and oil & gas exploration and production activities. In October 2021, the Biden Administration proposed the rollback of new rules promulgated under the Trump Administration and published an advanced notice of proposed rulemaking to codify a general prohibition on incidental take while establishing a process to regulate or permit exceptions to such a prohibition. In February 2023, the USFWS published a proposed rule that revised the requirements for an incidental take permit application. A final rule is scheduled for release in the first quarter of 2024. Additionally, in June 2022, the USFWS and the National Marine Fisheries Service published a final rule rescinding the 2020 regulatory definition of "habitat." If the USFWS were to designate species indigenous to the areas in which we operate as threatened or endangered or to redesignate a species from threatened to endangered, we or the operators of the properties in which we hold oil & gas mineral interests could be subject to additional regulatory and permitting requirements, which in turn could increase operating costs or adversely affect our revenues.

Other Environmental, Health, and Safety Regulations

In addition to the laws and regulations described above, we are subject to regulations regarding underground and above-ground storage tanks in which we may store petroleum or other substances. Some monitoring equipment that we use is subject to licensing under the Federal Atomic Energy Act. Water supply wells located on our properties are subject to federal, state, and local regulations. In addition, our use of explosives is subject to the Federal Safe Explosives Act. We are also required to comply with the Federal Safe Drinking Water Act, the Toxic Substance Control Act, and the Emergency Planning and Community Right-to-Know Act. The costs of compliance with these regulations should not have a material adverse effect on our business, financial condition, or results of operations.

Human Capital

To conduct our operations, as of December 31, 2022 December 31, 2023, we employed 3,371 3,595 full-time employees, including 2,901 3,038 employees involved in active coal mining operations, 230 408 employees in other operations, and 240 193 corporate employees. In 2023 we reviewed the work duties of our employees and reclassified 68 of our technical services employees from corporate employees to employees involved in other operations. Our workforce is entirely union-free. Our typical employee has approximately six years of experience with the Partnership and more than 40% of all employees remain employed for more than five years.

To attract and retain the most qualified personnel across all functions of our business we offer competitive compensation packages. In making decisions regarding employee compensation, we review current compensation levels for each position within other companies in the coal industry and other peers and use our discretion to determine an appropriate total compensation package, which generally includes some combination of base salary, possible incentive compensation, medical, dental health and life insurance welfare benefits and participation in our profit sharing and savings plan. Depending on the position and employer, incentive compensation bonuses can be based on production and safety goals at a specific coal operation or broader performance goals across the Partnership, among other factors. We intend for each employee's total compensation to be competitive in the marketplace.

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Workplace safety is fundamental to our culture. By providing a work environment that rewards safety and encourages employee participation in the safety process, we have a demonstrated history as a leader in safety performance in the coal mining industry. We are focused on improving employee safety through regular training and continuous monitoring of our progress through various industry-standard metrics. In addition, we collected approximately 13,000 13,800 respirable dust samples from the mining environment where our miners regularly work and travel. The average concentration of those samples was 55% 56% below the regulatory standard. We are also regularly inspected by MSHA. For more information about citations or orders for violations of standards under the FMSHA, as amended by the MINER Act, please see our Exhibit 95.1 to this Annual Report on Form 10-K.

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We are focused on the health of our employees. In addition to providing medical, dental, and vision insurance with no out-of-pocket premiums benefits for our employees, we also provide on-site medical clinics to provide medical services to our employees and their families. Furthermore, at each of our coal operations and corporate offices, we provide a human resource representative to assist employees with various human resource matters. The Partnership also administers our medical plan, which allows us to control costs and work directly on behalf of our employees with healthcare providers. To date, we have been able to continue providing health and welfare benefits with no out-of-pocket premiums for our employees. employees and 100% coverage with direct contract providers.

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ITEM 1A. RISK FACTORS

Summary Risk Factors

Our business is subject to a number of risks, including risks that could prevent us from achieving our business objectives or could adversely affect our business, financial condition, results of operations, cash flows, and prospects. These risks are discussed more fully below and include but are not limited to risks related to:

Risks Inherent in an Investment in Us

- Cash distributions are not guaranteed
- Ownership of limited partner interests could be diluted
- Sales of our common units could cause decline in the market price of our common units
- Increase in interest rates could cause decline in the market price of our common units
- The credit risk of our general partner could adversely impact us
- Our unitholders do not elect the general partner
- The control of our general partner may be transferred to a third party

- Unitholders may be required to sell their units to our general partner
- Cost reimbursements due to our general partner could be substantial
- Your liability as a limited partner may not be limited under certain circumstances
- Our general partner's fiduciary duties are limited
- Our general partner has discretion in determining the level of cash reserves
- Our general partner has potential conflicts of interest
- Some executive officers and directors face potential conflicts of interest
- ESG scores could adversely impact our securities

Risks Related to Our Business

- Declining global economic conditions could adversely impact us
- Material adverse effects on our financial condition as a result of future pandemic outbreaks could adversely impact us
- Financing may not be available to us on favorable terms or at all
- Our indebtedness could adversely impact us
- We depend upon the leadership of key personnel
- Legal proceedings could adversely impact us
- Our customers may not honor their contracts or may not enter into new contracts for our products
- Some of our contracts may be renegotiated or terminated
- We depend upon a few customers for significant portions of our revenues
- The credit risk of our customers could adversely impact us
- Cyber or terrorist attacks could adversely impact us
- Establishment of labor unions at our operations could adversely affect our profitability

Risks Related to Our Industries

- Changes in coal prices and/or oil & gas prices could impact our results of operations
- Competition within the coal industry could adversely affect our ability to sell coal
- Changes in taxes or tariffs and trade measures could adversely impact us
- **The Russian-Ukrainian conflict, and sanctions brought against Russia, Global geopolitical tensions which have caused, and may cause in the future,** significant market disruptions disputes that may lead to increased volatility in the price of commodities
- Changes in consumption patterns by utilities could affect our ability to sell coal and/or impact the price of our natural gas
- Tort claims based on climate change
- Litigation resulting from disputes with customers could result in costs and liabilities
- Unanticipated mine operating conditions could affect our profitability
- Inability to obtain and renew permits necessary for operations could limit our ability to continue or expand our operations
- Fluctuations in transportation costs and availability could reduce demand for our products
- Unexpected increases in raw material costs could impact the profitability of our operations

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- The ability to recruit, hire and retain skilled labor could impact the profitability of our operations
- Disruptions in supply chains could impact the profitability of our operations
- Inflationary pressures could impact the profitability of our operations
- Unavailability of economic coal mineral reserves and resources could limit our ability to continue or expand our operations
- Estimates of our coal mineral reserves and resources could be inaccurate and could result in decreased profitability
- Coal mining in certain areas could be difficult and involve regulatory constraints which could impact our operations
- Extensive environmental laws and regulations could reduce demand for coal as a fuel source
- Legislative and regulatory compliance is costly
- Legislative and regulatory compliance could impact our business
- Legislative and regulatory initiatives relating to hydraulic fracturing could impact our mineral interests
- Legislative and regulatory initiatives relating to seismic activity could impact our business
- Legislative and regulatory initiatives relating to climate change could impact demand for our products
- Mine facilities may be located in a leased portion of the surface properties which introduces a risk of disruption to our operations
- Inability to acquire or failure to maintain surety bonds could limit our ability to continue or expand our operations
- Dependency on unaffiliated operators to explore and drill on our oil & gas properties limits our ability to control the timing and quantity of production
- Delays in royalty payments and optional royalty payments could impact our business
- Suspension of the right to receive royalty payments could impact our business
- Estimates of our oil & gas reserves could be inaccurate and could result in decreased profitability

- Uncertainties involved in drilling for and producing oil & gas could impact our business
- Availability of transportation and facilities for the products could impact our business
- Lack of hedging arrangements exposes us to the impact of commodity prices
- Expansions and acquisitions have inherent risks that could adversely impact us
- Integration of expansions or acquisitions has inherent risks that could adversely impact us
- Inability to obtain commercial insurance at acceptable rates could have a negative impact on our business

Tax Risks to Our Common Unitholders

- Our tax treatment depends on our status as a partnership for U.S. federal income tax purposes, and not being subject to a material amount of entity-level taxation. Our cash available for distribution to unitholders may be substantially reduced if we become subject to entity-level taxation as a result of the Internal Revenue Service ("IRS") IRS treating us as a corporation or legislative, judicial, or administrative changes, and may also be reduced by any audit adjustments if imposed directly on the Partnership.
- Even if unitholders do not receive any cash distributions from us, unitholders will be required to pay taxes on their share of our taxable income. A unitholder's share of our taxable income may be increased as a result of the IRS successfully contesting any of the federal income tax positions we take.
- Tax gain or loss on the disposition of our units could be more than expected and create tax liabilities for our unitholders
- Limitation on unitholders' ability to deduct interest expense incurred by us could create tax liabilities for our unitholders
- Tax Exempt entities and non-U.S. unitholders face unique tax issues from owning our common units that may result in adverse tax consequences for them
- IRS challenging our allocation of depreciation and amortization deductions could cause adverse tax consequences
- IRS challenging methods of prorating items of income, gain, loss, and deduction could cause adverse tax consequences
- Unitholders with units subject to securities loans could face adverse tax consequences
- Certain U.S. federal income tax deductions currently available with respect to coal mining and production may be eliminated as a result of future legislation
- Unitholders could be subject to state and local taxes and income tax return filing due to their status as a unitholder

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Risks Inherent in an Investment in Us

Cash distributions to unitholders are not guaranteed.

The payment and amount of any future distribution will be subject to the sole discretion of the board of directors of our general partner ("Board of Directors") Directors and will depend upon many factors, including our financial condition and prospects, our capital requirements and access to financing, covenants associated with our debt obligations, and other factors that our Board of Directors may deem relevant, and there can be no assurance that we will pay a distribution in the future. The amount of cash we can distribute to holders of our common units or other partnership securities each quarter principally depends on the amount of cash we generate from our operations, which fluctuates from quarter to quarter. In addition, the actual amount of cash available for distribution may depend on other factors, including capital allocation decisions, financing availability, restrictions in debt agreements, and the amount of cash reserves, if any, established by the general partner, in its discretion, for the proper conduct of our business.

Furthermore, since the amount of cash we have available for distribution is not solely a function of profitability, which will be affected by non-cash items, we may make cash distributions during periods when we record net losses and may be unable to make cash distributions during periods when we record net income. Please read "—Risks Related to our Business" for a discussion of further risks affecting our ability to generate available cash.

We may issue an unlimited number of limited partner interests, on terms and conditions established by our general partner, without the consent of our unitholders, which will dilute your ownership interest in us and could increase the risk that we will not have sufficient available cash to make distributions.

The issuance by us of additional common units or other equity securities of equal or senior rank will have the following effects:

- our unitholders' proportionate ownership interest in us will decrease;
- the amount of cash available for distribution on each unit could decrease;
- the relative voting strength of each previously outstanding unit could be diminished;
- the ratio of taxable income to distributions could increase; and
- the market price of our common units could decline.

The market price of our common units could be adversely affected by sales of substantial amounts of our common units in the public markets, including sales by our existing unitholders.

The sale or disposition of a substantial number of our common units by our existing unitholders in the public markets could have a material adverse effect on the price of our common units or could impair our ability to obtain capital through an offering of equity securities. We do not know whether any such sales would be made in the public market or private placements, nor do we know what impact such potential or actual sales would have on our unit price in the future.

An increase in interest rates could cause the market price of our common units to decline.

Like all equity investments, an investment in our common units is subject to certain risks. In exchange for accepting these risks, investors may expect to receive a higher rate of return than would otherwise be obtainable from lower-risk investments. Accordingly, as interest rates rise, the ability of investors to obtain higher risk-adjusted rates of return by purchasing government-backed debt securities could cause a corresponding decline in demand for riskier investments generally, including yield-based equity investments such as publicly traded limited partnership interests. Reduced demand for our common units resulting from investors seeking other more favorable investment opportunities could cause the trading price of our common units to decline.

The credit and risk profile of our general partner and its owners could adversely affect our credit ratings and profile.

The credit and risk profile of our general partner or its owners may be factors in credit evaluations of us as a master limited partnership. This is because our general partner can exercise significant influence or control over our business activities, including our cash distribution policy, acquisition strategy, and business risk profile.

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Our unitholders do not elect our general partner or vote on our general partner's officers or directors.

Unlike the holders of common stock in a corporation, our unitholders have only limited voting rights on matters affecting our business and, therefore, limited ability to influence management's decisions regarding our business. Unitholders did not elect our general partner and will have no right to elect our general partner on annual or other continuing bases. If our unitholders are dissatisfied with the performance of our general partner, they will have little ability to remove our general partner. Our general partner may not be removed except upon the vote of the holders of at least 66.7% of our outstanding units.

Our unitholders' voting rights are also restricted by a provision in our partnership agreement that provides that any units held by a person that owns 20.0% or more of any class of units then outstanding, other than our general partner and its affiliates, cannot be voted on any matter.

The control of our general partner may be transferred to a third party without unitholder consent.

Our general partner may transfer its general partner interest in us to a third party in a merger or a sale of its equity securities without the consent of our unitholders. Furthermore, there is no restriction in the partnership agreement on the ability of the members of our general partner to sell or transfer all or part of their ownership interest in our general partner to a third party. The new owner or owners of our general partner would then be in a position to replace the directors and officers of our general partner and control the decisions made and actions taken by the Board of Directors and officers.

Unitholders may be required to sell their units to our general partner at an undesirable time or price.

If at any time less than 20.0% of our outstanding common units are held by persons other than our general partner and its affiliates, our general partner will have the right to acquire all, but not less than all, of those units at a price no less than their then-current market price. As a consequence, a unitholder may be required to sell his common units at an undesirable time or price. Our general partner may assign this purchase right to any of its affiliates or us.

Cost reimbursements due to our general partner could be substantial and could reduce our ability to pay distributions to unitholders.

Before making any distributions to our unitholders, we will reimburse our general partner and its affiliates for all expenses they have incurred on our behalf. The reimbursement of these expenses and the payment of these fees could adversely affect our ability to make distributions to the unitholders. Our general partner has sole discretion to determine the amount of these expenses and fees. For additional information, please see "Item 13. Certain Relationships and Related Transactions, and Director Independence—Related-Party Transactions—Administrative Services."

Your liability as a limited partner may not be limited, and our unitholders could have to repay distributions or make additional contributions to us under certain circumstances.

As a limited partner in a partnership organized under Delaware law, you could be held liable for our obligations to the same extent as a general partner if you participate in the "control" of our business. Our general partner generally has unlimited liability for the obligations of the partnership, except for those contractual obligations of the partnership that are expressly made without recourse to our general partner. Additionally, the limitations on the liability of holders of limited partner interests for the obligations of a limited partnership have not been established in many jurisdictions.

Under certain circumstances, our unitholders could have to repay amounts wrongfully distributed to them. Under Delaware law, we may not make a distribution to our unitholders if the distribution would cause our liabilities to exceed the fair value of our assets. Delaware law provides that for three years from the date of the impermissible distribution, partners who received the distribution and who knew at the time of the distribution that it violated Delaware law will be liable to the partnership for the distribution amount. Liabilities to partners on account of their partnership interest and liabilities that are non-recourse to the partnership are not counted for purposes of determining whether a distribution is permitted.

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Our partnership agreement limits our general partner's fiduciary duties to our unitholders and restricts the remedies available to unitholders for actions taken by our general partner that may otherwise constitute breaches of fiduciary duty.

Our partnership agreement contains provisions that waive or consent to conduct by our general partner and its affiliates and which reduce the obligations to which our general partner would otherwise be held by state-law fiduciary duty standards. The following is a summary of the material restrictions contained in our partnership agreement on the fiduciary duties owed by our general partner to the limited partners. Our partnership agreement:

- permits our general partner to make many decisions in its "sole discretion." This entitles our general partner to consider only the interests and factors that it desires, and it has no duty or obligation to give any consideration to any interest of, or factors affecting us, our affiliates, or any limited partner;
- provides that our general partner is entitled to make other decisions in its "reasonable discretion";

- generally provides that affiliated transactions and resolutions of conflicts of interest not involving a required vote of unitholders must be "fair and reasonable" to us and that, in determining whether a transaction or resolution is "fair and reasonable," our general partner may consider the interests of all parties involved, including its own. Unless our general partner has acted in bad faith, the action taken by our general partner shall not constitute a breach of its fiduciary duty; and
- provides that our general partner and our officers and directors will not be liable for monetary damages to us, our limited partners, or assignees for errors of judgment or any acts or omissions if our general partner and those other persons acted in good faith.

All limited partners are bound by the provisions in the partnership agreement, including the provisions discussed above.

Our general partner's discretion in determining the level of cash reserves may adversely affect our ability to make cash distributions to our unitholders.

Our partnership agreement requires our general partner to deduct from available cash reserves that in its reasonable discretion are necessary for the proper conduct of our business, to comply with applicable law or agreements to which we are a party, or to provide funds for future distributions to partners. These cash reserves will affect the amount of cash available for distribution to unitholders.

Our general partner has conflicts of interest and limited fiduciary responsibilities, which may permit our general partner to favor its interests to the detriment of our unitholders.

Conflicts of interest could arise in the future as a result of relationships between our general partner and its affiliates, on the one hand, and us, on the other hand. As a result of these conflicts, our general partner may favor its interests and those of its affiliates over the interests of our unitholders. The nature of these conflicts includes the following considerations:

- Remedies available to our unitholders for actions that, without the limitations, could constitute breaches of fiduciary duty are limited. Unitholders are deemed to have consented to some actions and conflicts of interest that could otherwise be deemed a breach of fiduciary or other duties under applicable state law.
- Our general partner is allowed to take into account the interests of parties in addition to us in resolving conflicts of interest, thereby limiting its fiduciary duties to our unitholders.
- Our general partner's affiliates are not prohibited from engaging in other businesses or activities, including those in direct competition with us, except as provided in the omnibus agreement (please see "Item 13. Certain Relationships and Related Transactions, and Director Independence—Omnibus Agreement").
- Our general partner determines the amount and timing of our asset purchases and sales, capital expenditures, borrowings, and reserves, each of which can affect the amount of cash that is distributed to unitholders.
- Our general partner determines whether to issue additional units or other equity securities in us.
- Our general partner determines which costs are reimbursable by us.
- Our general partner controls the enforcement of obligations owed to us by it.
- Our general partner decides whether to retain separate counsel, accountants, or others to perform services for us.

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- Our general partner is not restricted from causing us to pay it or its affiliates for any services rendered on terms that are fair and reasonable to us or from entering into additional contractual arrangements with any of these entities on our behalf.
- In some instances, our general partner may direct us to borrow funds to permit the payment of distributions.

Some of our executive officers and directors face potential conflicts of interest in managing our business.

Certain of our executive officers and directors are also officers and/or directors of Alliance GP, LLC ("AGP"). AGP. These relationships could create conflicts of interest regarding corporate opportunities and other matters. The resolution of any such conflicts may not always be in our or our unitholders' best interests. These officers and directors face potential conflicts regarding the allocation of their time, which could adversely affect our business, results of operations, and financial condition.

Increasing attention to ESG matters may negatively impact our business, financial results, and unit price.

Companies across all industries, including companies in fossil-fuel industries, are facing increased scrutiny from stakeholders related to their ESG practices. Companies that do not adapt or comply with evolving investor or stakeholder expectations and standards, or are perceived to have not responded appropriately to ESG issues, regardless of any legal requirement to do so, may suffer reputational damage and the business, financial condition, and valuation of such companies could be materially and adversely affected. Several advocacy groups, both domestically and internationally, have campaigned for governmental and private action to promote change at public companies related to ESG matters, including through the investment and voting practices of investment advisers, public pension funds, universities, and other members of the investing community. These activities include increasing attention to and demands for action related to climate change, promoting the use of substitutes to fossil-fuel products, encouraging the divestment of fossil-fuel equities, and pressuring lenders to limit funding to companies engaged in the extraction of fossil-fuel reserves. These activities could increase costs, reduce demand for our coal and hydrocarbon products, reduce our profits, increase the potential for investigations and litigation, impair our brand, limit our choices for lenders, insurance providers and business partners, and have negative impacts on our unit price and access to capital markets.

In addition, certain organizations that provide corporate governance and other corporate risk information to investors and unitholders have developed scores and ratings to evaluate companies and investment funds based on ESG or "sustainability" metrics. Currently, there are no universal standards for such scores or ratings, but consideration of sustainability evaluations is becoming more broadly accepted by investors. Indeed, many investment funds focus on positive ESG business practices and sustainability scores when making investments, whereas other funds may use certain ESG criteria to "screen" certain sectors, such as coal or fossil fuels more generally, out of their investments. In addition, investors, particularly institutional investors, use these scores to benchmark companies against their peers and if a company is perceived as lagging, these investors may engage with companies to require improved ESG disclosure or performance or sell their interests in the company, particularly if its ESG performance does not improve. Moreover, certain members of the broader investment community may consider a company's sustainability score as a reputational or other factor in making an investment decision. Companies in the energy industry, and in particular those focused on coal, natural gas, or oil extraction, often do not score as well under ESG assessments compared to companies in other industries. Consequently, a low ESG or sustainability score could result in our securities, both debt and equity, being excluded from the portfolios of certain investment funds and investors, restricting our access to capital to fund our continuing operations and growth opportunities. Additionally, to the extent ESG matters negatively impact our reputation, we may not be able to compete as effectively to recruit or retain employees, which may adversely affect our operations.

Public statements with respect to ESG matters, such as emission reduction goals, other environmental targets, or other commitments addressing certain social issues, are becoming increasingly subject to heightened scrutiny from public and governmental authorities related to the risk of potential "greenwashing," i.e., misleading information or false claims overstating potential ESG benefits. For example, in March 2021, the SEC established the Climate and ESG Task Force in the Division of Enforcement to identify and address potential ESG-related misconduct, including greenwashing. Certain non-governmental organizations and other private actors have also filed lawsuits under various securities and consumer protection laws alleging that certain ESG-statements, **emission reduction claims, approaches to accounting for GHG emissions reductions, or other ESG-related** goals, or standards were misleading, false, or otherwise deceptive. As a result, we may face increased litigation risks from private parties and governmental authorities related to our ESG efforts. In addition, any alleged claims of greenwashing against us or others in our industry may lead to further negative sentiment and diversion of investments. Additionally, we could face increasing costs as we attempt to comply with and navigate further ESG-related focus and scrutiny.

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Risks Related to our Business

Global economic conditions or economic conditions in any of the industries in which our customers operate as well as sustained uncertainty in financial markets could have material adverse impacts on our business and financial condition that we currently cannot predict.

Weakness in global economic conditions or economic conditions in any of the industries we serve or in the financial markets could materially adversely affect our business and financial condition. For example:

- the demand for electricity in the United States and globally could decline if economic conditions deteriorate, which could negatively impact the revenues, margins, and profitability of our business;
- any inability of our customers to raise capital could adversely affect their ability to honor their obligations to us; and
- our future ability to access the capital markets could be restricted as a result of future economic conditions, which could materially impact our ability to grow our business, including the development of our coal mineral reserves and resources.

We face various risks related to pandemics and similar outbreaks, which have had and may continue to in the future have material adverse effects on our business, financial position, results of operations, and/or cash flows.

Since first reported in late 2019, the COVID-19 pandemic has dramatically impacted the global Pandemics, outbreaks or other public health and economic environment, including millions of confirmed cases, business slowdowns or shutdowns, government challenges, and market volatility of an unprecedented nature. The COVID-19 pandemic and related economic repercussions have created significant volatility, uncertainty, and turmoil in the coal and oil & gas industries driven by widespread government-imposed lockdowns. While most government-imposed shut-downs in the United States and abroad have been phased out, there is a possibility events that such shut-downs may be reinstated if COVID-19 or another pandemic were to again become an acute, severe risk. This could cause a sustained decrease in demand for our coal and the failure are outside of our customers to purchase coal from us that they are obligated to purchase pursuant to existing contracts and control could cause a sustained decrease in demand for oil & gas, which would have a material adverse effect on significantly disrupt our operations and adversely affect our financial condition. The various governmental global or national outbreak of an illness or other communicable disease, or any other public health crisis, such as COVID-19, may cause disruptions to our business and private responses to the pandemic also led to widespread, global supply chain disruptions. These supply chain disruptions have previously caused and operations, which may continue to include (i) shortages of employees, (ii) unavailability of contractors or again cause some of our suppliers to fail to deliver the quantities subcontractors, (iii) interruption of supplies from third parties upon which we need rely, (iv) restrictions recommended or fail imposed by government and health authorities, including quarantines, to deliver such supplies in a timely manner, address an outbreak and (v) restrictions that we and our contractors, subcontractors and our customers impose, including facility shutdowns, to ensure the safety of employees.

The extent to which COVID-19 or another future pandemic may adversely impact our results of operations, cash flows and financial condition depends on future developments, which are highly uncertain and unpredictable.

Growing our business could require significant amounts of financing that may not be available to us on acceptable terms, or at all.

We plan to fund capital expenditures for our growth initiatives with existing cash balances, future cash flows from operations, borrowings under revolving credit and securitization facilities, and cash provided from the issuance of debt or equity. At times, weakness in the energy sector in general and coal, in particular, has significantly impacted access to the debt and equity capital markets. Accordingly, our funding plans could be negatively impacted by constraints in the capital markets as well as numerous other factors, including higher than anticipated capital expenditures or lower than expected cash flow from operations. In addition, we could be unable to refinance our current debt obligations when they expire or obtain adequate funding prior to expiry because our lending counterparties may be unwilling or unable to meet our funding needs. Furthermore, additional growth projects and expansion opportunities could develop in the future that could also require significant amounts of financing that may not be available to us on acceptable terms or in the amounts we expect, or at all.

Various factors could adversely impact the debt and equity capital markets as well as our credit ratings or our ability to remain in compliance with the financial covenants under our then-current debt agreements, which in turn could have a material adverse effect on our financial condition, results of operations, and cash flows. If we are unable to finance our growth initiatives as expected, we could be required to seek alternative financing, the terms of which may not be attractive to us, or to revise or cancel our plans.

Our indebtedness could limit our ability to borrow additional funds, make distributions to unitholders, or capitalize on business opportunities.

We had long-term indebtedness of \$427.0 million \$347.6 million as of December 31, 2022 December 31, 2023. Our leverage may:

- adversely affect our ability to finance future operations and capital needs;
- limit our ability to pursue acquisitions and other business opportunities;
- make our results of operations more susceptible to adverse economic or operating conditions; and
- make it more difficult to self-insure for our workers' compensation obligations.

In addition, we have unused borrowing capacity under our revolving credit facility. Future borrowings, under our credit facilities or otherwise, could increase our leverage.

Our payments of principal and interest on any indebtedness will reduce the cash available for distribution on our units. We will be prohibited from making cash distributions:

- during an event of default under any of our indebtedness; or
- if after such distribution, we fail to meet a coverage test based on the ratio of our consolidated cash flow to our consolidated fixed charges.

Various limitations in our debt agreements may reduce our ability to incur additional indebtedness, engage in some transactions, and capitalize on business opportunities. Any subsequent refinancing of our current indebtedness or any new indebtedness could have similar or greater restrictions. Please see "Item 8. Financial Statements and Supplementary Data—Note 8 6 – Long-Term Debt" for further discussion.

We depend on the leadership and involvement of Joseph W. Craft III and other key personnel for the success of our business.

We depend on the leadership and involvement of Mr. Craft. Mr. Craft has been integral to our success, due in part to his ability to identify and develop internal growth projects and accretive acquisitions, make strategic decisions, and attract and retain key personnel. The loss of his leadership and involvement or the services of any members of our senior management team could have a material adverse effect on our business, financial condition, and results of operations.

We and our subsidiaries are subject to various legal proceedings, which could have a material adverse effect on our business.

We are party to a number of legal proceedings incident to our normal business activities. There is the potential that an individual matter or the aggregation of multiple matters could have an adverse effect on our cash flows, results of operations, or financial position. Please see "Item 3. Legal Proceedings" and "Item 8. Financial Statements and Supplementary Data—Note 23 21 – Commitments and Contingencies" for further discussion.

The stability and profitability of our operations could be adversely affected if our customers do not honor existing contracts or do not extend existing or enter into new long-term contracts for coal.

In 2022, 2023, we sold approximately 85.0% 93.4% of our coal sales tonnage under contracts having a term greater than one year, which we refer to as long-term sales contracts. These contracts have historically provided a relatively secure market for the production committed under the terms of the contracts. From time to time industry conditions could make it more difficult for us to enter into long-term sales contracts with our electric utility customers, and if supply exceeds demand in the coal industry, electric utilities may become less willing to lock in price or quantity commitments for an extended period of time. Accordingly, we may not be able to continue to obtain long-term sales contracts with reliable customers as existing contracts expire, which could subject a portion of our revenue stream to the increased volatility of the spot market.

Some of our long-term sales contracts contain provisions allowing for the renegotiation of prices and, in some instances, the termination of the contract or the suspension of purchases by customers.

Some of our long-term sales contracts contain provisions that allow the purchase price to be renegotiated at periodic intervals. These price reopener provisions may automatically set a new price based on the prevailing market price or, in

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some instances, require the parties to the contract to agree on a new price. Any adjustment or renegotiation leading to a significantly lower contract price could adversely affect our operating profit margins. Accordingly, long-term sales contracts may provide only limited protection during adverse market conditions. In some circumstances, the failure of the parties to agree on a price under a reopener provision can also lead to the early termination of a contract.

Several of our long-term sales contracts also contain provisions that allow the customer to suspend or terminate performance under the contract upon the occurrence or continuation of certain events that are beyond the customer's reasonable control. Such events could include labor disputes, mechanical malfunctions, and changes in government regulations, including changes in environmental regulations rendering the use of our coal inconsistent with the customer's environmental compliance strategies. Additionally, most of our long-term sales contracts contain provisions requiring us to deliver coal within stated ranges for specific coal characteristics. Failure to meet these specifications can result in economic penalties, rejection or suspension of shipments, or termination of the contracts. In the event of early termination of any of our long-term sales contracts, if we are unable to enter into new contracts on similar terms, our business, financial condition, and results of operations could be adversely affected.

We depend on a few customers for a significant portion of our revenues, and the loss of one or more significant customers could affect our ability to maintain the sales volume and price of the coal we produce.

In 2022, 2023, we derived more than 10% of our total revenues from each of Duke Energy, Louisville Gas and American Electric Company, Power and Tennessee Valley Authority. If we were to lose this or any of our significant customers without finding replacement customers willing to purchase an equivalent amount of coal on similar terms, or if these customers were to decrease the amounts of coal purchased or change the terms, including pricing terms, on which they buy coal from us, it could have a material adverse effect on our business, financial condition, and results of operations.

Our ability to collect payments from our customers could be impaired if their creditworthiness declines or if they fail to honor their contracts with us.

Our ability to receive payment for coal sold and delivered depends on the continued creditworthiness of our customers. If the creditworthiness of our customers declines significantly, our business could be adversely affected. In addition, if a customer refuses to accept shipments of our coal for which they have an existing contractual obligation, our revenues will decrease and we may have to reduce production at our mines until our customer's contractual obligations are honored.

Terrorist attacks or cyber incidents could result in information theft, data corruption, operational disruption, and/or financial loss.

Like most companies, we have become increasingly dependent upon digital technologies, including information systems, infrastructure, and cloud applications and services, to operate our businesses, process and record financial and operating data, communicate with our business partners, analyze mine and mining information, and estimate quantities of reserves and resources, as well as other activities related to our businesses. Strategic targets, such as energy-related assets, could be at greater risk of future terrorist or cyber-attacks than other

targets in the United States. Deliberate attacks on, or security breaches in, our systems or infrastructure, or the systems or infrastructure of third parties could lead to corruption or loss of our proprietary data and potentially sensitive data, delays in production or delivery, difficulty in completing and settling transactions, **misdirected wire transfers**, challenges in maintaining our books and records, environmental damage, communication interruptions, other operational disruptions, and third-party liability. Our insurance may not protect us against such occurrences. Consequently, it is possible that any of these occurrences, or a combination of them, could have a material adverse effect on our business, financial condition, results of operations, **cash flows** and **cash flows**, **reputation**. Further, as cyber incidents continue to evolve, we could be required to expend additional resources to continue to modify or enhance our protective measures or to investigate and remediate any vulnerability to cyber incidents.

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Although none of our employees are members of unions, our workforce may not remain union-free in the future.

None of our employees are represented under collective bargaining agreements. However, our workforce may not remain union-free in the future, and legislative, regulatory, or other governmental action could make it more difficult to remain union-free. If some or all of our currently union-free operations were to become unionized, it could adversely affect our productivity and increase the risk of work stoppages at our mining complexes. In addition, even if we remain union-free, our operations could still be adversely affected by work stoppages at unionized companies, particularly if union workers were to orchestrate boycotts against our operations.

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Risks Related to Our Industries

Prices for oil & gas, as well as coal, are volatile and can fluctuate widely based on a number of factors beyond our control. An extended decline in the prices of such commodities could negatively impact our results of operations.

Our results of operations are primarily dependent upon the prices of oil & gas and coal, as well as our ability to improve productivity and control costs. The prices for oil & gas and coal depend upon factors beyond our control, including:

- overall domestic and global economic conditions;
- **the adverse impact of the COVID-19 pandemic due to the reduction in demand;**
- the supply of and demand for domestic and foreign coal;
- the supply of and demand for oil & gas;
- weather conditions and patterns that affect demand for coal and oil & gas, or our ability to produce coal or the ability of operators to produce oil & gas from our mineral interests;
- supply chain and cost of raw materials for coal and oil & gas operations;
- **the adverse impact of pandemics, outbreaks and other public health events;**
- the proximity to and capacity of transportation facilities;
- competition from other coal suppliers;
- domestic and foreign governmental regulations and taxes;
- the price and availability of alternative fuels;
- the effect of worldwide energy consumption, including the impact of technological advances on energy consumption;

- international developments impacting the supply of coal;
- international developments impacting the supply of oil & gas; and
- the impact of domestic and foreign governmental laws and regulations.

Any adverse change in these factors could result in weaker demand and lower prices for our products. A substantial or extended decline in coal prices could materially and adversely affect us by decreasing our revenues to the extent we are not protected by the terms of existing coal supply agreements.

Competition within the coal industry could adversely affect our ability to sell coal. In addition, foreign currency fluctuations could adversely affect the competitiveness of our coal abroad.

We compete with other coal producers in various regions of the United States for domestic coal sales. In addition, we face competition from foreign and domestic producers that sell their coal in the international coal markets. The most important factors on which we compete are delivered price (i.e., the cost of coal delivered to the customer, including transportation costs, which are generally paid by our customers either directly or indirectly), coal quality characteristics, contract flexibility (e.g., volume optionality and multiple supply sources), and reliability of supply. Some competitors could have, among other things, larger financial and operating resources, lower per ton cost of production, or relationships with specific transportation providers. The competition among coal producers could impact our ability to retain or attract customers and could adversely impact our revenues and cash available for distribution.

We sell coal in the export thermal and metallurgical coal market, both of which are significantly affected by international demand and competition. Consolidation in the coal industry or current or future bankruptcy proceedings of coal competitors could adversely affect us. The prices of and demand for our coal could significantly decline, which could have a material adverse effect on our business, financial condition, results of operations, and cash flows, and could reduce our revenues and cash available for distribution.

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In addition, we face competition from foreign producers that sell their coal in the export market. Potential changes to international trade agreements, trade concessions, or other political and economic arrangements could benefit coal producers operating in countries other than the United States. We could be adversely impacted on the basis of price or other factors by foreign trade policies or other arrangements that benefit competitors. In addition, coal is sold internationally in United States dollars and, as a result, general economic conditions in foreign markets and changes in foreign currency exchange rates could provide our foreign competitors with a competitive advantage. If our competitors' currencies decline against the United States dollar or foreign purchasers' local currencies, those competitors could be able

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to offer lower prices for coal to those purchasers. Furthermore, if the currencies of overseas purchasers were to significantly decline in value in comparison to the United States dollar, those purchasers may seek decreased prices for the coal we sell. Consequently, currency fluctuations could adversely affect the competitiveness of our coal in international markets, which could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Changes in taxes or tariffs and other trade measures by the United States and foreign governments could adversely affect our results of operations, financial position, and cash flows.

We pay certain taxes and fees related to our operations. Congress or state legislatures may seek to increase these taxes and fees that relate specifically to the coal industry. We cannot predict further developments, and such increases could have a material adverse effect on our results of operations, financial position, and cash flows.

New tariffs and other trade measures could adversely affect our results of operations, financial position, and cash flows. In response to tariffs imposed by the United States, the European Union, Canada, Mexico, and China have imposed tariffs on United States goods and services. The new tariffs, along with any additional tariffs or trade restrictions that may be implemented by the United States or retaliatory trade measures or tariffs implemented by other countries, could result in reduced economic activity, increased costs in operating our business, reduced demand and changes in purchasing behaviors for thermal and metallurgical coal, limits on trade with the United States or other potentially adverse economic outcomes. Additionally, we sell coal into the export thermal and metallurgical markets. Accordingly, our international sales could also be impacted by the tariffs and other restrictions on trade between the United States and other countries. While tariffs and other retaliatory trade measures imposed by other countries on United States goods have not yet had a significant impact on our business or results of operations, we cannot predict further developments, and such existing or future tariffs could have a material adverse effect on our results of operations, financial position and cash flows and could reduce our revenues and cash available for distribution.

The Russian-Ukrainian conflict, Global geopolitical tensions have caused, and sanctions brought against Russia, have caused may cause in the future, significant market disruptions that may lead to increased volatility in the price of commodities, including oil & gas, coal, and other sources of energy.

The extent Volatility in coal and duration oil & gas prices has been and may continue to be heightened as a result of the military ongoing Russian-Ukrainian conflict, involving Russia and Ukraine, resulting sanctions and future market or supply disruptions continued hostilities in the region are impossible Middle East between Israel and Hamas and the potential impact to predict, but could be significant and may have a severe adverse effect on the region. global shipping caused by Houthi rebels in Yemen. Globally, various governments have banned imports from Russia including commodities such as oil & gas and coal. These events have caused volatility in the aforementioned commodity markets. Although we have not experienced any material adverse effect on our results of operations, financial condition or cash flows as a result of the war such conflicts or the resulting volatility, such volatility, may significantly affect prices for our coal and oil & gas or the cost of supplies and equipment, as well as the prices of competing sources of energy for our electric power plant customers.

The war, Global geopolitical conflicts, trade and monetary sanctions, as well as any escalation of the conflict and future developments, could significantly affect worldwide market prices and demand for our coal and oil & gas and cause turmoil in the capital markets and generally in the global financial system. Additionally, the geopolitical and macroeconomic consequences of the war such conflicts and any associated sanctions cannot be predicted but could severely impact the world economy. If any of these events occur, the resulting political instability and societal disruption could reduce overall demand for products, causing a reduction in our revenues or an increase in our costs and thereby materially and adversely affecting our results of operations.

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Changes in consumption patterns by utilities regarding the use of coal, including plans by utilities to shut down or move away from coal-fired generation, have affected our ability to sell the coal we produce and may do so in the future.

Our business is closely linked to the demand for electricity, and any changes in coal consumption by domestic or international electric power generators would likely impact our business over the long term. The domestic electric power sector accounts for the vast majority of the total domestic coal consumption. The amount of coal consumed by the domestic electric utility industry is affected primarily by the overall demand for electricity, environmental and other governmental regulations, and the price and availability of competing fuels for power plants such as nuclear, natural gas, and fuel oil as well as alternative sources of energy. Competition from natural gas-fired plants that are relatively

more efficient, less expensive to construct, and less difficult to permit than coal-fired plants has the most potential to displace a significant amount of coal-fired electric power generation in the near term, particularly from older, less efficient coal-fired powered generators.

Future environmental regulation of GHG emissions also could accelerate the use by utilities of fuels other than coal. In addition, federal and state mandates for increased use of electricity derived from renewable energy sources could affect demand for coal. Such mandates, combined with other incentives to use renewable energy sources such as tax credits, could make alternative fuel sources more competitive with coal. Further, far-reaching federal regulations promulgated by the EPA in the last several years, such as CSAPR and MATS, have led to the premature retirement of coal-fired generating units and a significant reduction in the amount of coal-fired generating capacity in the United States. A decrease in coal consumption by the domestic electric utility industry could adversely affect the demand for or the price of coal, which could negatively impact our results of operations and reduce our cash available for distribution.

Other factors, such as efficiency improvements associated with technologies powered by electricity have slowed electricity demand growth and could contribute to slower growth in the future. Further decreases in the demand for electricity, such as decreases that could be caused by a worsening of current economic conditions, could have a material adverse effect on the demand for coal and our business over the long term.

We, our customers, or the operators Operators of our oil & gas mineral interests could be subject to litigation related to climate change.

Increasing attention to climate change risk has also resulted in a recent trend of governmental investigations and private litigation by state and local governmental agencies as well as private plaintiffs in an effort to hold energy companies accountable for the alleged effects of climate change. Other public nuisance lawsuits have been brought in the past against power, coal, and oil & gas companies alleging that their operations are contributing to climate change. The plaintiffs in these suits sought various remedies, including punitive and compensatory damages and injunctive relief. While the U.S. Supreme Court held that federal common law provided no basis for public nuisance claims against the defendants in those cases, tort-type liabilities remain a possibility and a source of concern. Government entities in other states (including California and New York) have brought similar claims seeking to hold a wide variety of companies that produce fossil fuels liable for the alleged impacts of the GHG emissions attributable to those fuels. Those lawsuits allege damages as a result of climate change and the plaintiffs are seeking unspecified damages and abatement under various tort theories. Separately, litigation has been brought against certain fossil-fuel companies alleging that they have been aware of the adverse effects of climate change for some time but failed to adequately disclose such impacts to their investors or consumers. We have not been made a party to these other suits, but it is possible that we could be included in similar future lawsuits initiated by state and local governments as well as private claimants.

Litigation resulting from disputes with our customers could result in substantial costs, liabilities, and loss of revenues.

From time to time, we have disputes with our customers over the provisions of coal supply contracts relating to, among other things, coal pricing, quality, quantity, and the existence of specified conditions beyond our or our customers' control that suspend performance obligations under the particular contract. Disputes could occur in the future and we may not be able to resolve those disputes in a satisfactory manner, which could have a material adverse effect on our business, financial condition, and results of operations.

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Our profitability could decline due to unanticipated mine operating conditions and other events that are not within our control and that may not be fully covered under our insurance policies.

Our coal mining operations are influenced by changing conditions or events that can affect production levels and costs at particular mines for varying lengths of time and, as a result, can diminish our profitability. These conditions and events include, among others:

- mining and processing equipment failures and unexpected maintenance problems;
- unavailability of required equipment;

- prices for fuel, steel, explosives, and other supplies;
- fines and penalties incurred as a result of alleged violations of environmental and safety laws and regulations;
- variations in the thickness of the layer, or seam, of coal;
- amounts of overburden, partings, rock, and other natural materials;
- weather conditions, such as heavy rains, flooding, ice, and other natural events affecting operations, transportation, or customers;
- accidental mine water discharges and other geological conditions;
- fires;
- seismic activities, ground failures, rock bursts or structural cave-ins or slides;
- employee injuries or fatalities;
- labor-related interruptions;
- increased reclamation costs;
- inability to acquire, maintain or renew mining rights or permits in a timely manner, if at all;
- fluctuations in transportation costs and the availability or reliability of transportation; and
- unexpected operational interruptions due to other factors.

These conditions have the potential to significantly impact our operating results. Prolonged disruption of production at any of our mines would result in a decrease in our revenues and profitability, which could materially adversely impact our quarterly or annual results.

Effective **December 1, 2022** **October 1, 2023**, we renewed our **annual** property and casualty insurance **program**. **program through September 30, 2024**. Our property insurance was procured from our wholly owned captive insurance company, Wildcat **Insurance, LLC** ("**Wildcat Insurance**"). **Insurance**. Wildcat Insurance charged certain of our subsidiaries for the premiums on this program and in return purchased reinsurance for the program in the standard market. The maximum limit in the commercial property program is \$100.0 million per occurrence, excluding a \$1.5 million deductible for property damage, a 75 or 90 day waiting period for underground business interruption depending on the mining complex and an additional \$25.0 million overall aggregate deductible. **We retained a 7.25% participating interest in our current commercial property insurance program**. We can make no assurances that we will not experience significant insurance claims in the future that could have a material adverse effect on our business, financial condition, results of operations and ability to purchase property insurance in the future. Also, exposures exist for which no insurance may be available and for which we have not reserved. In addition, the insurance industry has been subject to efforts by environmental activists to restrict coverages available for fossil-fuel companies.

We could be unable to obtain and renew permits necessary for our coal mining operations, which could reduce our production, cash flow, and profitability.

Mining companies must obtain numerous governmental permits or approvals that impose strict conditions and obligations relating to various environmental and safety matters in connection with coal mining. The permitting rules are complex and can change over time. Regulatory authorities exercise considerable discretion in the timing and scope of permit issuance. The public has the right to comment on permit applications and otherwise participate in the permitting process, including through court intervention. Accordingly, permits required to conduct our operations may not be issued, maintained, or renewed, may not be issued or renewed in a timely fashion, or may involve requirements that restrict our ability to economically conduct our mining operations. Limitations on our ability to conduct our mining operations due to the inability to obtain or renew necessary permits or similar approvals could reduce our production, cash flow, and profitability. Please read "Item 1. Business—Environmental, Health and Safety Regulations—*Mining Permits and Approvals*."

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The EPA has begun reviewing permits required for the discharge of overburden from mining operations under Section 404 of the CWA. Various initiatives by the EPA regarding these permits have increased the time required to obtain and the costs of complying with such permits. In addition, the EPA previously exercised its "veto" power to withdraw or restrict the use of previously issued permits in connection with one of the largest surface mining operations in Appalachia. The EPA's action was ultimately upheld by a federal court. As a result of these developments, we could be unable to obtain or experience delays in securing, utilizing, or renewing Section 404 permits required for our operations, which could have an adverse effect on our results of operation and financial position. Please read "Item 1. Business—Environmental, Health and Safety Regulations—*Water Discharge*."

In addition, some of our permits could be subject to challenges from the public, which could result in additional costs or delays in the permitting process or even an inability to obtain permits, permit modifications, or permit renewals necessary for our operations.

Fluctuations in transportation costs and the availability or reliability of transportation could reduce revenues by causing us to reduce our production or by impairing our ability to supply coal to our customers.

Transportation costs represent a significant portion of the total cost of coal for our customers and, as a result, the cost of transportation is a critical factor in a customer's purchasing decision. Increases in transportation costs could make coal a less competitive source of energy or could make our coal production less competitive than coal produced from other sources. Disruption of transportation services due to weather-related problems, flooding, drought, accidents, mechanical difficulties, strikes, lockouts, bottlenecks, or other events could temporarily impair our ability to supply coal to our customers. Our transportation providers could face difficulties in the future that could impair our ability to supply coal to our customers, resulting in decreased revenues. If there are disruptions in the transportation services provided by our primary rail or barge carriers that transport our coal and we are unable to find alternative transportation providers to ship our coal, our business could be adversely affected.

Conversely, significant decreases in transportation costs could result in increased competition from coal producers in other parts of the country. For instance, difficulty in coordinating the many eastern coal loading facilities, the large number of small shipments, the steeper average grades of the terrain, and a more unionized workforce are all issues that combine to make coal shipments originating in the eastern United States inherently more expensive on a per-mile basis than coal shipments originating in the western United States. Historically, high coal transportation rates from the western coal-producing areas into certain eastern markets limited the use of western coal in those markets. Lower rail rates from the western coal-producing areas to markets served by eastern United States coal producers have created major competitive challenges for eastern coal producers. In the event of further reductions in transportation costs from western coal-producing areas, the increased competition with certain eastern coal markets could have a material adverse effect on our business, financial condition, and results of operations.

States in which our coal is transported by truck may modify or increase enforcement of their laws regarding weight limits or coal trucks on public roads. Such legislation and enforcement efforts could result in shipment delays and increased costs. An increase in transportation costs could have an adverse effect on our ability to increase or maintain production and could adversely affect revenues.

Political or financial instability, currency fluctuations, the outbreak of pandemics or other illnesses (such as the COVID-19 pandemic), labor unrest, transport capacity and costs, port security, weather conditions, natural disasters, or other events that could alter or suspend our operations, slow or disrupt port activities, or affect foreign trade are beyond our control and could materially disrupt our ability to participate in the export market for coal sales, which could adversely affect our sales and our results of operations.

Unexpected increases in raw material costs could significantly impair our operating profitability.

Our coal mining operations are affected by commodity prices. We use significant amounts of steel, petroleum products, and other raw materials in various pieces of mining equipment, supplies, and materials, including the roof bolts required by the room-and-pillar method of mining. Steel prices and the prices of scrap steel, natural gas, and coking coal consumed in the production of iron and steel fluctuate significantly and could change unexpectedly. Inflationary pressures have and could continue to lead to price increases affecting many of the components of our operating expenses such as fuel, steel, and maintenance expenses. There could be acts of nature or terrorist attacks or threats that could also impact the future

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the future costs of raw materials. Future volatility in the price of steel, petroleum products, or other raw materials will impact our operational expenses and could result in significant fluctuations in our profitability.

A shortage of skilled labor may make it difficult for us to maintain labor productivity and competitive costs and could adversely affect our profitability.

Efficient coal mining using modern techniques and equipment requires skilled laborers, preferably with at least one year of experience and proficiency in multiple mining tasks. In recent years, a shortage of experienced coal miners has caused us to include some inexperienced staff in the operation of certain mining units, which decreases our productivity and increases our costs. This shortage of experienced coal miners is the result of a significant percentage of experienced coal miners reaching retirement age, combined with the difficulty of retaining existing workers and attracting new workers to the coal industry. Thus, this shortage of skilled labor could continue over an extended period. If the shortage of experienced labor continues or worsens, it could have an adverse impact on our labor productivity and costs and our ability to expand production in the event there is an increase in the demand for our coal, which could adversely affect our profitability.

Disruptions in supply chains could significantly impair our operating profitability.

We are dependent upon vendors to supply mining equipment, safety equipment, supplies, and materials. If a vendor fails to deliver on its commitments, or if common carriers have difficulty providing capacity to meet demands for their services, we could experience reductions in our production or increased production costs, which could lead to reduced profitability and adversely affect our results of operations.

Inflationary pressures could significantly impair our operating profitability.

Any future inflationary or deflationary pressures could adversely affect the results of our operations. For example, at times our results have been significantly impacted by price increases affecting many of the components of our operating expenses such as fuel, steel, maintenance expense and labor. In addition to potential cost increases, inflation could cause a decline in global or regional economic conditions that reduce demand for our coal or oil & gas and could adversely affect our results of operations.

The unavailability of an adequate supply of coal mineral reserves and resources that can be mined at competitive costs could cause our profitability to decline.

Our profitability depends substantially on our ability to mine coal mineral reserves and resources that have the geological characteristics that enable them to be mined at competitive costs and to meet the quality needed by our customers. Because we deplete our reserves and resources as we mine coal, our future success and growth depend, in part, upon our ability to acquire additional coal mineral reserves and resources that are economically recoverable. Replacement reserves and resources may not be available when required or, if available, may not be mineable at costs comparable to those of the depleting mines. We may not be able to accurately assess the geological characteristics of any reserves or resources that we acquire, which could adversely affect our profitability and financial condition. Exhaustion of reserves and resources at particular mines also could have an adverse effect on our operating results that is disproportionate to the percentage of overall production represented by such mines. Our ability to obtain other reserves and resources in the future could be limited by restrictions under our existing or future debt agreements, competition from other coal companies for attractive properties, the lack of suitable acquisition candidates, or the inability to acquire coal properties on commercially reasonable terms.

The estimates of our coal mineral reserves and resources could prove inaccurate and could result in decreased profitability.

The estimates of our coal mineral reserves and resources could vary substantially from the actual amounts of coal we are able to economically recover. The reserve and resource data set forth in "Item 2. Properties—Coal Mineral Resources and Reserves" represent engineering estimates. All of the coal mineral reserves presented in this Annual Report on Form 10-K constitute proven and probable mineral reserves. There are numerous uncertainties inherent in estimating quantities of reserves and resources, including many factors beyond our control. Estimates of coal mineral reserves and

resources necessarily depend upon a number of variables and assumptions, any one of which could vary considerably from actual results. These factors and assumptions relate to:

- geological and mining conditions, which may not be fully identified by available exploration data and/or differ from our experiences in areas where we currently mine;
- the percentage of coal in the ground ultimately recoverable;
- historical production from the area compared with production from other producing areas;
- the assumed effects of regulation and taxes by governmental agencies;
- future improvements in mining technology; and
- assumptions concerning future coal prices, operating costs, capital expenditures, severance and excise taxes, and development and reclamation costs.

Each of the factors which impacts reserve and resource estimation may vary considerably from the assumptions used in making the estimation and, as a result, the estimates in this report may not accurately reflect our actual coal reserves and resources. Actual production, revenues and expenditures with respect to our coal reserves will likely vary from the assumptions used in these estimates, and these variances may be material. Government regulations and other pressures may result in the closure of coal-fired electric generating plants earlier than assumed. Such changes would reduce the economic viability of our mining operations and could have a material adverse impact on our operations and financial results.

Coal mining in certain areas in which we operate is more difficult and involves more regulatory constraints than mining in other areas of the United States, which could affect the mining operations and cost structures of these areas.

The geological characteristics of some of our coal mineral reserves, such as depth of overburden and coal seam thickness, make them difficult and costly to mine. As mines become depleted, replacement reserves may not be available when required or, if available, may not be mineable at costs comparable to those of the depleting mines. In addition, permitting, licensing, and other environmental and regulatory requirements associated with certain of our mining operations are more costly and time-consuming to satisfy. Subsidence issues are particularly important to our operations engaged in longwall mining. Failure to timely and economically secure subsidence rights or any associated mitigation agreements could materially affect our results by causing delays or changes in our mining plan. These factors could materially adversely affect the mining operations and cost structures of, and our customers' ability to use coal produced by, our mines.

Extensive environmental laws and regulations affect coal consumers and have corresponding effects on could affect the demand for coal as a fuel source.

Federal, state, and local laws and regulations extensively regulate the amount of sulfur dioxide, particulate matter, nitrogen oxides, mercury, and other compounds emitted into the air from coal-fired electric power plants, which are the ultimate consumers of much of our coal. These laws and regulations can require significant emission control expenditures for many coal-fired power plants, and various new and proposed laws and regulations could require further emission reductions and associated emission control expenditures. These laws and regulations could affect demand and prices for coal. There is also continuing pressure on federal and state regulators to impose limits on carbon dioxide emissions from electric power plants, particularly coal-fired power plants. Further, far-reaching federal regulations promulgated by the EPA in the last several years, such as CSAPR and MATS, have led to the premature retirement of coal-fired generating units and a significant reduction in the amount of coal-fired generating capacity in the United States. Please read "Item 1. Business—Environmental, Health and Safety Regulations—Air Emissions," "—GHG Emissions" and "—Hazardous Substances and Wastes."

Our coal mining operations are subject to extensive and costly laws and regulations, and such current and future laws and regulations could increase current operating costs or limit our ability to produce coal.

We are subject to numerous federal, state, and local laws and regulations affecting the coal mining industry, including laws and regulations pertaining to employee health and safety, permitting and licensing requirements, air and water quality standards, plant and wildlife protection, reclamation and restoration of mining properties after mining is completed, the discharge or release of materials into the environment, surface subsidence from underground mining, and the effects that mining has on groundwater quality and availability. Certain of these laws and regulations may impose strict liability without regard to fault or legality of the original conduct. Failure to comply with these laws and regulations may result in

the assessment of administrative, civil, and criminal penalties, the imposition of remedial liabilities, and the issuance of injunctions limiting or prohibiting the performance of operations. Complying with these laws and regulations could be costly and time-consuming and could delay the commencement or continuation of exploration or production operations. The possibility exists that new laws or regulations may be adopted, or that judicial interpretations or more stringent enforcement of existing laws and regulations may occur, which could materially affect our mining operations, cash flow, and profitability, either through direct impacts on our mining operations, or indirect impacts that discourage or limit our customers' use of coal. Please read "Item 1. Business—Environmental, Health and Safety Regulations."

Federal and state laws addressing mine safety practices impose stringent reporting requirements and civil and criminal penalties for violations. Federal and state regulatory agencies continue to interpret and implement these laws and propose new regulations and standards. Implementing and complying with these laws and regulations has increased and will continue to increase our operational expenses and have an adverse effect on our results of operation and financial position. For more information, please read "Item 1. Business—Environmental, Health and Safety Regulations—*Mine Health and Safety Laws*."

Oil & gas operations are subject to various governmental laws and regulations. Compliance with these laws and regulations can be burdensome and expensive for our operators, the Operators, and failure to comply could result in our operators the Operators incurring significant liabilities, either of which could impact our operators' the Operators' willingness to develop our interests.

Our operators' The Operators' operations on the properties in which we hold interests are subject to various federal, state, and local governmental regulations that may change from time to time in response to economic and political conditions. Matters subject to regulation include drilling operations, production and distribution activities, discharges or releases of pollutants or wastes, plugging and abandonment of wells, maintenance and decommissioning of other facilities, the spacing of wells, unitization and pooling of properties, and taxation. From time to time, regulatory agencies have imposed price controls and limitations on production by restricting the rate of flow of oil & gas wells below actual production capacity to conserve supplies of oil & gas. In addition, the production, handling, storage, and transportation of oil & gas, as well as the remediation, emission, and disposal of oil & gas wastes, by-products thereof, and other substances and materials produced or used in connection with oil & gas operations are subject to regulation under federal, state, and local laws and regulations primarily relating to the protection of worker health and safety, natural resources, and the environment. Failure to comply with these laws and regulations may result in the assessment of sanctions on our operators, the Operators, including administrative, civil, or criminal penalties, permit revocations, requirements for additional pollution controls, and injunctions limiting or prohibiting some or all of our operators' the Operators' operations on our properties. Moreover, these laws and regulations have generally imposed increasingly strict requirements related to water use and disposal, air pollution control, and waste management. Laws and regulations governing exploration and production may also affect production levels. Our operators' The Operators' must comply with federal and state laws and regulations governing conservation matters, including:

- provisions related to the unitization or pooling of the oil & gas properties;
- the establishment of maximum rates of production from wells;
- the spacing of wells;
- the plugging and abandonment of wells; and
- the removal of related production equipment.

Additionally, federal and state regulatory authorities may expand or alter applicable pipeline-safety laws and regulations, compliance with which could require increased capital costs for third-party oil & gas transporters. These transporters may attempt to pass on such costs to our operators, the Operators, which in turn could affect profitability on the properties in which we own mineral interests.

Our operators' The Operators' must also comply with laws and regulations prohibiting fraud and market manipulations in energy markets. To the extent the operators of our properties are shippers on interstate pipelines, they must comply with the tariffs of those pipelines and with federal policies related to the use of interstate capacity. Our operators' The Operators' may be required to make significant expenditures to comply with the governmental laws and regulations described above and may be subject to potential fines and penalties if they are found to have violated these laws and regulations. We believe the trend of more expansive and stricter environmental legislation and regulations will continue. These current laws and regulations and other potential regulations could increase the operating costs of our operators' the Operators' and delay production and could ultimately impact our operators' the Operators' ability and willingness to develop our properties.

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Federal and state legislative and regulatory initiatives relating to hydraulic fracturing could result in increased costs, additional operating restrictions or delays, and fewer potential drilling locations, which could adversely affect revenues from our mineral interests.

Oil & gas production on the properties in which we hold mineral interests utilizes hydraulic fracturing. Hydraulic fracturing is a common practice that is used to stimulate the production of hydrocarbons from tight formations, including shales. The process involves the injection of water, sand, and chemicals under pressure into formations to fracture the surrounding rock and stimulate production. The Federal Safe Drinking Water Act regulates the underground injection of substances through the **Underground Injection Control ("UIC") UIC** program. Hydraulic fracturing is generally exempt from regulation under the UIC program, and the hydraulic-fracturing process is typically regulated by state oil & gas commissions.

Several states where we own interests, including Texas and Oklahoma, have adopted regulations that could restrict or prohibit hydraulic fracturing in certain circumstances or require the disclosure of the composition of hydraulic-fracturing fluids. In addition to state laws, local land-use restrictions, such as city ordinances, may restrict or prohibit the performance of well drilling in general or hydraulic fracturing in particular. We cannot predict what additional state or local requirements may be imposed in the future on oil & gas operations in the states in which we own interests. In the event state, local, or municipal legal restrictions are adopted in areas where **our operators the Operators** conduct operations, **our operators the Operators** could incur substantial costs to comply with these requirements, which could be significant in nature, experience delays, or curtailment in the pursuit of exploration, development, or production activities and perhaps even be precluded from the drilling of wells.

There has been increasing public controversy regarding hydraulic fracturing about increased risks of induced seismicity, the use of fracturing fluids, impacts on drinking water supplies, use of water, and the potential for impacts to surface water, groundwater, and the environment generally. A number of lawsuits and enforcement actions have been initiated across the country implicating hydraulic-fracturing practices. If new laws or regulations are adopted that significantly restrict hydraulic fracturing, those laws could make it more difficult or costly for **our operators the Operators** to perform fracturing to stimulate production from tight formations. In addition, if hydraulic fracturing is further regulated at the federal or state level, fracturing activities on our properties could become subject to additional permitting and financial assurance requirements, more stringent construction specifications, increased monitoring, reporting and recordkeeping obligations, plugging and abandonment requirements, and also to attendant permitting delays and potential increases in costs. Legislative changes could cause operators to incur substantial compliance costs and adversely affect revenues from our mineral interests. At this time, it is not possible to estimate the impact on our business of newly enacted or potential federal or state legislation governing hydraulic fracturing.

Legislation or regulatory initiatives intended to address seismic activity could restrict **our operators the Operators** drilling and production activities, as well as their ability to dispose of produced water gathered from such activities, which could have a material adverse effect on our business.

State and federal regulatory agencies have recently focused on a possible connection between the hydraulic-fracturing related activities, particularly the underground injection of wastewater into disposal wells, and the increased occurrence of seismic activity, and regulatory agencies at all levels are continuing to study the possible linkage between oil & gas activity and induced seismicity.

In addition, a number of lawsuits have been filed in other states, including in Oklahoma, alleging that disposal well operations have caused damage to neighboring properties or otherwise violated state and federal rules regulating waste disposal. In response to these concerns, regulators in some states are seeking to impose additional requirements, including requirements in the permitting of produced water disposal wells or otherwise to assess the relationship between seismicity and the use of such wells. For example, both Texas and Oklahoma have imposed certain limits on the permitting or operation of disposal wells in areas with increased instances of induced seismic events. In September 2021, the **Texas Railroad Commission ("TRRC") TRRC** issued a notice to operators in the Midland area to reduce saltwater disposal well activities and provide certain data to the TRRC. Subsequently, the TRRC ordered the indefinite suspension of all deep oil & gas-produced water injection wells in the area, effective December 31, 2021. Relatedly, in March 2022, the TRRC began implementation of its Northern Culberson-Reeves Seismic Response Action Plan to address injection-induced seismicity with the goal to eliminate 3.5 magnitude or greater earthquakes no later than December 31, 2023. **In response to continued seismicity in the area, the TRRC issued a notice that it is suspending all disposal wells in the Northern Culberson-Reeves Seismic Response Area, effective January 12, 2024.**

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The adoption or implementation of any new laws or regulations that restrict **our operators'** **the Operators'** ability to use hydraulic fracturing or dispose of produced water gathered from drilling and production activities by limiting volumes, disposal rates, disposal well locations, or otherwise, or requiring **our operators** **the Operators** to shut down or limit the operation of disposal wells, could have a material adverse effect on our business, financial condition and results of operations.

Our coal operations, and the third-party operations related to our oil and gas mineral interests, are subject to a series of risks resulting from climate change.

Combustion of fossil fuels, such as the coal we produce and the oil & gas produced from our mineral interests, results in the emission of carbon dioxide into the atmosphere. Concerns about the environmental impacts of such emissions have resulted in a series of regulatory, political, litigation, and financial risks for our business. Global climate issues continue to attract public and scientific attention. Most scientists have concluded that increasing concentrations of GHGs in the Earth's atmosphere could produce climate changes that have significant physical effects, such as increased frequency and severity of storms, droughts and floods, and other climatic events. Increasing government attention is being paid to global climate issues and to emissions of GHGs, including emissions due to fossil fuels.

In the United States, no comprehensive climate change legislation has been implemented at the federal level. However, following the U.S. Supreme Court finding that GHG emissions constitute a pollutant under the CAA, the EPA has adopted regulations that, among other things, establish construction and operating permit reviews for GHG emissions from certain large stationary sources, require the monitoring and annual reporting of GHG emissions from certain sources in the United States, or constrain the emissions of powerplants (though such emissions restraints have been subject to challenge; for more information, see our regulatory disclosure titled "GHG emissions"). Additionally, **relating to our oil & gas mineral interests**, the U.S. Congress approved, and President Biden signed into law, a resolution under the Congressional Review Act to repeal September 2020 revisions to methane standards, effectively reinstating the more stringent 2016 standards. Furthermore, in **November 2021, December 2023**, EPA issued **a proposed rule** **its final methane rules**, known as **OOOOB and OOOOC**, that **if finalized, would establish** **established** new sources and first-time existing source standards of performance for methane and volatile organic compound emissions for oil & gas facilities. **Operators of affected facilities will have to comply with specific standards of performance to** **The final rules** include **leak detection using optical gas imaging and subsequent repair requirement, and reduction of emissions by 95% through capture and control systems**. In November 2022, EPA published a supplemental methane proposal which, among other items, **sets forth specific revisions strengthening the first** nationwide emissions guidelines for states to limit methane emissions from existing crude oil and natural gas **facilities, facilities and states have two years to prepare and submit their plants to impose methane emission controls on existing sources**. The **proposal rules** also **revises revise** requirements for fugitive emissions monitoring and repair as well as equipment leaks and the frequency of monitoring surveys and establishes a "super-emitter" response program to timely mitigate emissions events. **The proposal is currently subject to public comment and is expected to be finalized in 2023; however, it** It is likely that **it the final rule** will be subject to legal challenges. **Moreover, compliance with the new rules may effect the amount oil and gas companies owe under the Inflation Reduction Act, which amended the CAA to impose a first-time fee on the emission of methane from sources required to report their GHG emissions to the EPA. The methane emissions fee applies to excess methane emissions from certain facilities and starts at \$900 per metric ton of leaked methane in 2024 and increases to \$1,200 in 2025 and \$1,500 in 2026 and thereafter. Compliance with the EPA's new final rules would exempt an otherwise covered facility from the requirement to pay the methane fee.** We cannot predict the scope of any final methane regulatory requirements or the cost for **our operators** **the Operators** to comply with such requirements. However, given the long-term trend toward increasing regulation, future federal GHG regulations of the oil and gas industry remain a significant **possibility**. **possibility and may have an impact on drilling operations on our oil & gas mineral interests.**

Separately, various states and groups of states have adopted or are considering adopting legislation, regulations, or other regulatory initiatives that are focused on such areas as GHG cap-and-trade programs, carbon taxes, reporting and tracking programs, and restriction of emissions. Internationally, the Paris Agreement requires member states to submit non-binding, individually-determined emissions reduction targets. These commitments could further reduce demand and prices for fossil fuels. Although the United States had withdrawn from the Paris

Agreement, following President Biden's executive order in January 2021, the United States rejoined the Agreement and, in April 2021, established a goal of reducing economy-wide net GHG emissions 50-52% below levels by 2030. Additionally, at COP26 in Glasgow in November 2021, the United States and the European Union jointly announced the launch of a Global Methane Pledge committing to a collective goal of reducing global methane emissions by at least 30% from 2020 levels by 2030, including "all feasible reductions" in the energy sector. At COP27 in Sharm El-Sheik in November 2022, countries reiterated the agreements from COP26 and were called upon to accelerate efforts toward the phase out of inefficient fossil fuel subsidies. The United States also announced, in conjunction with the European Union and other partner countries, that it would develop standards for monitoring and reporting methane emissions to help create a market for low methane-intensity natural gas. Although no firm commitment or timeline to phase out or phase down all fossil fuels was made at COP27, there can be no guarantees that countries will not seek to implement such a phase out in the future. In December 2023, the United Arab Emirates hosted COP28 where parties agreed to transition "away from fossil fuels in energy systems in a just, orderly and equitable manner" and increase renewable energy capacity so as to achieve net zero by 2050, although no

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timeline for doing so was set. The full impact of these actions is uncertain at this time and it is unclear what additional initiatives may be adopted or implemented that may have adverse effects on us and our operators' the Operators' operations.

Governmental, scientific, and public concern over climate change has also resulted in increased political risks, including certain climate-related pledges made by certain candidates now in political office. In January 2021, President

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Biden issued an executive order that commits to substantial action on climate change, calling for, among other things, the increased use of zero-emissions vehicles by the federal government, the elimination of subsidies provided to the fossil-fuel industry, a doubling of electricity generated by offshore wind by 2030, and increased emphasis on climate-related risks across governmental agencies and economic sectors. Other actions that may be pursued include restrictive requirements on new pipeline infrastructure or fossil-fuel export facilities or the promulgation of a carbon tax or cap and trade program. Further, although Congress has not passed such legislation, almost half of the states have begun to address GHG emissions, primarily through the planned development of emissions inventories, regional GHG cap and trade programs, or the establishment of renewable energy requirements for utilities. Depending on the particular program, we, our customers, or operators of our mineral interests could be required to control GHG emissions or to purchase and surrender allowances for GHG emissions resulting from our operations. Litigation risks are also increasing. For more information, see our risk factor titled "We, our customers, or the operators Operators of our oil & gas mineral interests could be subject to litigation related to climate change."

Apart from governmental regulation, there are also increasing financial risks for fossil-fuel producers as stakeholders of fossil-fuel energy companies may elect in the future to shift some or all of their support into non-energy related sectors. Institutional lenders who provide financing to fossil-fuel energy companies also have become more attentive to sustainable lending practices and some of them may elect not to provide funding for fossil-fuel energy companies. For example, at COP26, the Glasgow Financial Alliance for Net Zero ("GFANZ") GFANZ announced that commitments from over 450 firms across 45 forty-five countries had resulted in over \$130 trillion in capital committed to net zero goals. The various sub-alliances of GFANZ generally require participants to set short-term, sector-specific targets to transition their financing, investing, and/or underwriting activities to net zero emissions by 2050. There is also a risk that financial institutions will be required to adopt policies that have the effect of reducing the funding provided to the fossil-fuel sector. In late 2020, For example, in October 2023, the Federal Reserve, announced it had joined the Network for Greening the Financial System ("NGFS"), a consortium of financial regulators

focused on addressing climate-related risks in the financial sector, and, in September 2022, announced that six Office of the U.S.' largest banks will participate. The Comptroller of the Currency and the Federal Deposit Insurance Corp. released a finalized set of principles guiding financial institutions with \$100 billion or more in a pilot climate scenario analysis to enhance assets on the ability management of firms and supervisors to measure and manage climate-related financial risk. The Federal Reserve released its pilot exercise in January 2023 which is designed to analyze the impact of both physical and transition risks related to associated with climate change on specific assets of the banks' portfolio. Although we cannot predict the effects of these actions, such limitation of investments in and financing, bonding, and insurance coverages for fossil-fuel energy companies could adversely affect our coal mining or oil & gas production activities.

Separately, the SEC released a proposed rule in March 2022 that would establish a framework for the reporting of climate risks, targets and metrics. A final rule is anticipated to be released in the second quarter of 2024. The SEC has also announced that it is scrutinizing existing climate-change related disclosures in public filings, increasing the potential for enforcement if the SEC were to allege that an issuer's existing climate disclosures are misleading, deceptive, or deficient. Such agency action could also increase the potential for private litigation. Relatedly, California has enacted new laws requiring additional disclosure with respect to certain climate-related risks and GHG emission reduction claims. Other states are considering similar laws. Non-compliance with these new laws may result in the imposition of substantial fines or penalties. Any new laws or regulations imposing more stringent requirements on our business related to the disclosure of climate related risks may result in reputation harms among certain stakeholders if they disagree with our approach to mitigating climate-related risks, increased compliance costs resulting from the development of any disclosures, and increased costs of and restrictions on access to capital to the extent we do not meet any climate-related expectations or requirements of financial institutions.

The adoption and implementation of new or more stringent international, federal, or state legislation, regulations, or other regulatory initiatives that impose more stringent standards for GHG emissions from fossil-fuel companies could result in increased costs of compliance or costs of consuming, and thereby reduce demand for coal and oil & gas, which could reduce the profitability of our interests. Additionally, political, litigation, and financial risks could result in either us or oil & gas operators restricting or canceling mining or oil & gas production activities, incurring liability for infrastructure damages as a result of climatic changes, or having an impaired ability to continue to operate economically. One or more of these developments, as well as concerted conservation and efficiency efforts that result in reduced electricity consumption, and consumer and corporate preferences for non-fossil-fuel sources, including alternative energy sources,

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could cause prices and sales of our coal and/or oil & gas to materially decline and could cause our costs to increase and adversely affect our revenues and results of operations.

Climate change may also result in various physical risks, such as the increased frequency or intensity of extreme weather events or changes in meteorological and hydrological patterns that could adversely impact our operations, as well as those of our operators, the Operators and their supply chain. Such physical risks may result in damage to our facilities or our operators' facilities or otherwise adversely impact operations which could decrease the production attributable to our mineral interests. We may not have insurance to cover these risks and the consequences for our or their operations could have a negative impact on the costs and revenues from operations.

Some of our operating subsidiaries lease a portion of the surface properties upon which their mining facilities are located.

Our operating subsidiaries do not, in all instances, own all of the surface properties upon which their mining facilities have been constructed. Certain of the operating companies have constructed and now operate all or some portion of their facilities on properties owned by third parties with whom our subsidiary has entered into a long-term lease. We have no reason to believe that there exists any risk of loss of these leasehold rights given the terms and provisions of the subject leases and the nature and identity of the third-party lessors; however, in the unlikely event of any loss of these leasehold

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rights, operations could be disrupted or otherwise adversely impacted as a result of increased costs associated with retaining the necessary land use.

Federal and state laws require bonds to secure our obligations related to statutory reclamation requirements and workers' compensation and black lung benefits. Our inability to acquire or failure to maintain surety bonds that are required by federal and state law would have a material adverse effect on us.

Federal and state laws require us to maintain bonds to secure our obligations to repair and return property to its approximate original state after it has been mined (often referred to as "reclaim" or "reclamation"), to pay federal and state workers' compensation and pneumoconiosis (or black lung) benefits, and to satisfy other miscellaneous obligations. These bonds provide assurance that we will perform our statutorily required obligations and are referred to as "surety" bonds. These bonds are typically renewable on a yearly basis. At **December 31, 2022** **December 31, 2023**, our total of such bonds was **\$244.4 million** **\$246.9 million**. The amount of surety bonding we are required to maintain may be increased by the governmental agencies holding the bond. **For example, federal and state regulators are considering making financial assurance requirements more stringent and costly with respect to self-insured coal workers' pneumoconiosis, mine closure and reclamation security amounts.**

We could have difficulty acquiring or maintaining surety bonds for a variety of reasons, including:

- substantial increases in the amount of bonding required;
- lack of availability, higher expense, or unreasonable terms of new surety bonds, including as a result of external pressures related to fossil-fuel companies;
- the ability of current and future surety bond issuers to increase required collateral, or limitations on the availability of collateral for surety bond issuers due to the terms of our credit agreements; and
- the exercise by third-party surety bondholders of their rights to refuse to renew the surety.

Failure to acquire or maintain the required bonds could subject us to fines and penalties, result in the loss of our mining permits, or imperil our ability to self-insure workers compensation and pneumoconiosis obligations, and could have a material adverse effect on us.

We depend on unaffiliated operators Operators for all of the exploration, development, and production of the oil & gas properties in which we own mineral interests.

Because we depend on **our unaffiliated** third-party operators for all of the exploration, development, and production of our oil & gas properties, we have little to no control over the operations related to our oil & gas properties. The operators of our properties are often not obligated to undertake any development activities. In the absence of a specific contractual obligation, any development and production activities will be subject to their sole discretion (subject, however, to certain implied obligations to develop imposed by state law). The success and timing of drilling and development activities on our oil & gas properties, and whether the operators elect to drill any additional wells on our acreage, depends on a number of factors that will be largely outside of our control, including:

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- the capital costs required for drilling activities by the operators of our oil & gas properties, which could be significantly more than anticipated;
- the ability of the operators of our properties to access capital;
- prevailing commodity prices;

- the availability of suitable drilling equipment, production and transportation infrastructure, and qualified operating personnel;
- the operators' expertise, operating efficiency, and financial resources;
- approval of other participants in drilling wells;
- the operators' expected return on investment in wells drilled on our acreage as compared to opportunities in other areas;
- the selection of technology;
- the selection of counterparties for the marketing and sale of production; and
- the rate of production of the reserves.

The **operators Operators** may elect not to undertake development activities or may undertake these activities in an unanticipated fashion, which could result in significant fluctuations in our oil & gas revenues.

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We have little to no control over the timing of future drilling with respect to our oil & gas mineral interests.

All of our oil & gas mineral interests may not ultimately be developed or produced by the operators of our properties. Recovery of undeveloped reserves requires significant capital expenditures and successful drilling operations, and the decision to pursue the development of an undeveloped drilling location will be made by the operator and not by us. We generally do not have access to the estimated costs of development of these reserves or the scheduled development plans of **our operators the Operators**. Our estimate of reserves assumes that substantial capital expenditures are required to develop the reserves. We cannot be certain that the estimated costs of the development of these reserves are accurate, that development will occur as scheduled or that the results of the development will be as estimated. Delays in the development of our reserves, increases in costs to drill and develop our reserves, or decreases in commodity prices will reduce the future net revenues of our estimated undeveloped reserves and could result in some projects becoming uneconomical. In addition, delays in the development of reserves could force us to reclassify certain of our proved undeveloped reserves as unproved reserves.

We could experience delays in the payment of royalties and be unable to replace **operators Operators** that do not make required royalty payments, and we may not be able to terminate our leases with defaulting lessees if any of the operators on those leases declare bankruptcy.

A failure on the part of the **operators Operators** of our properties to make royalty payments gives us the right to terminate the lease and enforce payment obligations under the lease. If we terminate any of our leases, we would seek a replacement operator. However, we might not be able to find a replacement operator and, if we did, we might not be able to enter into a new lease on favorable terms within a reasonable period of time. In addition, the outgoing operator could be subject to a proceeding under **Title 11 of the United States Bankruptcy Code**, (the **"Bankruptcy Code"**), in which case our right to enforce or terminate the lease for any defaults, including non-payment, could be substantially delayed or otherwise impaired. In general, in a proceeding under the Bankruptcy Code, the bankrupt operator would have substantial time to decide whether to ultimately reject or assume the lease, which could prevent the execution of a new lease or the assignment of the existing lease to another operator. In the event that the operator rejected the lease, our ability to collect amounts owed would be substantially delayed, and our ultimate recovery could be only a fraction of the amount owed or nothing. In addition, if we are able to enter into a new lease with a new operator, the replacement operator may not achieve the same levels of production or sell oil or natural gas at the same price as the operator it replaced.

If the operators of our oil & gas properties suspend our right to receive royalty payments due to title or other issues, our business, financial condition, and/or results of operations could be adversely affected.

Upon a change in ownership of mineral interests, and at regular intervals pursuant to routine audit procedures at each of **our operators the Operators** otherwise at its discretion, the operator of the underlying property has the right to investigate and verify the title and ownership of mineral interests with respect to the properties it operates. If any title or ownership issues are not resolved to its reasonable satisfaction in accordance with customary industry standards, the operator may suspend payment of the related royalty. If an operator of our properties is not

satisfied with the documentation we provide to validate our ownership, it may place our royalty payment in suspense until such issues are resolved, at which time we

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would receive in full payments that would have been made during the suspense period, without interest. Certain of ~~our operators~~ the Operators impose significant documentation requirements for title transfer and may keep royalty payments in suspense for significant periods of time. During the time that an operator puts our assets in pay suspense, we would not receive the applicable mineral or royalty payment owed to us from sales of the underlying oil or natural gas related to such mineral or royalty interest. If a significant amount of our royalty interests is placed in suspense, our results of operations could be reduced significantly.

Our estimated oil & gas reserves are based on many assumptions that could turn out to be inaccurate. Any material inaccuracies in these reserve estimates or underlying assumptions will materially affect the quantities and present value of our reserves.

Oil & gas reserve engineering is not an exact science and requires subjective estimates of underground accumulations of oil & gas and assumptions concerning future oil & gas prices, production levels, ultimate recoveries, and operating costs. As a result, estimated quantities of proved reserves and projections of future production rates could be incorrect. Our estimates of proved reserves and related valuations as of ~~December 31, 2022~~ December 31, 2023, were audited by ~~Netherland, Sewell & Associates, Inc. ("NSAI")~~, CGA, which conducted a detailed review of all of our properties at that time using the information provided by us. Over time, we may make material changes to reserve estimates taking into account the results of actual drilling, testing, and production. In addition, certain assumptions regarding future oil & gas prices, production levels, and

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operating costs could prove incorrect. A meaningful portion of our reserve estimates is made without the benefit of lengthy production history, which is less reliable than estimates based on lengthy production history. Any significant variance from these assumptions to actual figures could greatly affect our estimates of reserves and future cash generated from operations. Numerous changes over time to the assumptions on which our reserve estimates are based, as described above, often result in the actual quantities of oil & gas that are ultimately recovered being different from our reserve estimates.

Furthermore, the present value of future net cash flows from our proved reserves is not necessarily the same as the current market value of our estimated reserves. In accordance with rules established by the SEC and the ~~Financial Accounting Standards Board ("FASB")~~, FASB, we base the estimated discounted future net cash flows from our proved reserves on the twelve-month average oil & gas index prices, calculated as the unweighted arithmetic average for the first day-of-the-month price for each month, and costs in effect on the date of the estimate, holding the prices and costs constant throughout the life of the properties. Actual future prices and costs could differ materially from those used in the present value estimate, and future net present value estimates using then-current prices and costs could be significantly less than the current estimate. In addition, the 10% discount factor we use when calculating discounted future net cash flows may not be the most appropriate discount factor based on interest rates in effect from time to time and risks associated with us or the oil & gas industry in general. Please see "Item 2. Properties—Oil & Gas Reserves" for more information on our reserves.

Drilling for and producing oil & gas are high-risk activities with many uncertainties that could materially adversely affect our business, financial condition, and results of operations.

The drilling activities of the operators of our properties will be subject to many risks. For example, we will not be able to assure our unitholders that wells drilled by the operators of our properties will be productive. Drilling for oil & gas often involves unprofitable efforts, not only from dry wells but also from wells that are productive but do not produce sufficient oil or gas to return a profit at then realized prices after deducting drilling, operating, and other costs. The seismic data and other technologies used do not provide conclusive knowledge prior to drilling a well that oil or gas is present or that it can be produced economically. The costs of exploration, exploitation, and development activities are subject to numerous uncertainties beyond our control and increases in those costs can adversely affect the economics of a project. Further, **our operators' the Operators'** drilling and producing operations could be curtailed, delayed, canceled, or otherwise negatively impacted as a result of other factors, including:

- unusual or unexpected geological formations or earthquakes;
- loss of drilling fluid circulation;
- title problems;
- facility or equipment malfunctions;
- unexpected operational events;
- shortages or delivery delays of equipment and services;
- compliance with environmental and other governmental requirements; and
- adverse weather conditions.

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Any of these risks can cause substantial losses, including personal injury or loss of life, damage to or destruction of property, natural resources, and equipment, pollution, environmental contamination or loss of wells, and other regulatory penalties. In the event that planned operations, including the drilling of development wells, are delayed or canceled, or existing wells or development wells have lower than anticipated production due to one or more of the factors above or for any other reason, our financial condition, results of operations, and free cash flow could be materially adversely affected.

The marketability of oil & gas production is dependent upon transportation and other facilities, certain of which neither we nor the operators of our properties control. If these facilities are unavailable, **our operators' the Operators'** operations could be interrupted and our results of operations and cash available for distribution could be materially adversely affected.

The marketability of **our operators' the Operators'** oil & gas production will depend in part upon the availability, proximity, and capacity of transportation facilities, including gathering systems, trucks, and pipelines, owned by third parties. Neither we nor, in general, the operators of our properties control these third-party transportation facilities and **our operators' the Operators'** access to them may be limited or denied. Insufficient production from the wells on our acreage or a significant disruption in the availability of third-party transportation facilities or other production facilities could adversely impact **our operators' the Operators'** ability to deliver to market or produce oil & gas and thereby cause a significant interruption in **our operators' the Operators'** operations. If they are unable, for any sustained period, to implement acceptable delivery or transportation arrangements or encounter

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production-related difficulties, they may be required to shut-in or curtail production. In addition, the amount of oil & gas that can be produced and sold may be subject to curtailment in certain other circumstances outside of our or ~~our operators'~~ **the Operators'** control, such as pipeline interruptions due to maintenance, excessive pressure, the inability of downstream processing facilities to accept unprocessed gas, physical damage to the gathering system or transportation system or lack of contracted capacity on such systems. The curtailments arising from these and similar circumstances could last from a few days to several months. In many cases, we and ~~our operators~~ **the Operators** are provided with limited notice, if any, as to when these curtailments will arise and the duration of such curtailments. Any such shut-in or curtailment, or an inability to obtain favorable terms for delivery of the oil & gas produced from our acreage, could adversely affect our financial condition, results of operations, and cash available for distribution.

We do not currently enter into hedging arrangements with respect to commodity production from our properties, and we will be exposed to the impact of decreases in the price of such commodities.

We have not entered into hedging arrangements to establish, in advance, a price for the sale of the oil & gas or the coal produced from our properties, and we may not enter into such arrangements in the future. As a result, although we could realize the benefit of any short-term increase in the price, we will not be protected against decreases in the price or prolonged periods of low commodity prices, which could materially adversely affect our business, results of operation and cash available for distribution.

In the future, we may enter into hedging transactions with the intent of reducing volatility in our cash flows due to fluctuations in the price of oil & gas or coal. However, these hedging activities may not be as effective as we intend in reducing the volatility of our cash flows and, if entered into, are subject to the risks that the terms of the derivative instruments will be imperfect, a counterparty may not perform its obligations under a derivative contract, there could be a change in the expected differential between the underlying commodity price in the derivative instrument and the actual price received, our hedging policies and procedures may not be properly followed and the steps we take to monitor our derivative financial instruments may not detect and prevent violations of our risk management policies and procedures, particularly if deception or other intentional misconduct is involved. Further, we could be limited in receiving the full benefit of increases in commodity prices as a result of these hedging transactions. The occurrence of any of these risks could prevent us from realizing the benefit of a derivative contract.

Expansions and acquisitions involve a number of risks, any of which could cause us not to realize the anticipated benefits.

Since our formation and the acquisition of our predecessor in August 1999, we have expanded our coal operations by adding and developing mines in existing, adjacent, and neighboring properties. Similarly, the profitability of our business depends significantly upon acquisitions to grow our coal and oil & gas reserves, production, and free cash flow. Our future growth could be limited if we are unable to continue to make acquisitions in either our coal operations or our royalties

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segments, or if we are unable to successfully integrate the companies, businesses, or properties we acquire. We may not be successful in consummating any acquisitions and the consequences of undertaking these acquisitions are unknown.

Competition for acquisitions of coal and oil & gas mineral interests could increase the cost of, or cause us to refrain from, completing acquisitions. Our ability to complete acquisitions is dependent upon, among other things, our ability to obtain debt and equity financing under acceptable terms. In addition, these acquisitions could be in geographic regions in which we do not currently hold properties, which could subject us to additional and unfamiliar legal and regulatory requirements. No assurance can be given that we will be able to identify suitable acquisition opportunities, negotiate acceptable terms, obtain financing for acquisitions on acceptable terms, or successfully acquire identified targets.

The process of integrating acquired assets could involve unforeseen difficulties and could require a disproportionate amount of our managerial and financial resources. If we are unable to successfully integrate the companies, businesses, or properties we acquire, our

profitability could decline and we could experience a material adverse effect on our business, financial condition, or results of operations. Expansion and acquisition transactions involve various inherent risks, including:

- uncertainties in assessing the value, strengths, and potential profitability of expansion and acquisition opportunities;
- uncertainties in identifying the extent of all weaknesses, risks, contingent and other liabilities of, expansion and acquisition opportunities;

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- the ability to achieve identified operating and financial synergies anticipated to result from an expansion or an acquisition;
- problems that could arise from the integration of the new operations; and
- unanticipated changes in business, industry, or general economic conditions that affect the assumptions underlying our rationale for pursuing the expansion or acquisition opportunity.

Any one or more of these factors could cause us not to realize the benefits anticipated to result from an expansion or acquisition. Any expansion or acquisition opportunities we pursue could materially affect our liquidity and capital resources and could require us to incur indebtedness, seek equity capital, or both. Future expansions or acquisitions could result in us assuming more long-term liabilities relative to the value of the acquired assets than we have assumed in our previous expansions and/or acquisitions.

The integration of any expansions or acquisitions that we complete will be subject to substantial risks.

Even if we make expansions or acquisitions that we believe will increase our coal or mineral revenue, any expansion or acquisition involves potential risks, including, among other things:

- the validity of our assumptions about estimated proved reserves, future production, prices, revenues, capital expenditures, the operating expenses, and costs ~~our operators~~ the Operators would incur to develop the minerals;
- a decrease in our liquidity by using a significant portion of our cash generated from operations or borrowing capacity to finance acquisitions;
- a significant increase in our interest expense or financial leverage if we incur debt to finance acquisitions;
- the assumption of unknown liabilities, losses or costs for which we are not indemnified or for which any indemnity we receive is inadequate;
- mistaken assumptions about the overall cost of equity or debt;
- our ability to obtain satisfactory title to the assets we acquire;
- an inability to hire, train or retain qualified personnel to manage and operate our growing mineral assets; and
- the occurrence of other significant changes, such as impairment of properties, goodwill or other intangible assets, asset devaluation, or restructuring charges.

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We may not be able to effectively identify investment opportunities in the advancement of energy and related infrastructure on favorable terms, or at all, and failure to do so may limit our future growth.

Part of our strategy includes positioning ourselves as a reliable energy provider for the future by pursuing strategic investments that leverage our core competencies and relationships with electric utilities, industrial customers, and federal and state governments. This strategy

depends on our ability to successfully identify and evaluate investment opportunities. The number of opportunities may be limited, and we will compete with other investors for these limited opportunities, which could make them more expensive and the returns for our investments less attractive and possibly cause us to refrain from making them at all. Further, certain opportunities will depend on technological and other advancements that may not be within our control and may not come to fruition or be economically feasible in the near term, and we may fail to realize the anticipated benefit of our investments. Any new opportunities also may depend on the viability of new assets or businesses that are contingent on public policy mechanisms including investment tax credits, subsidies, renewable portfolio standards and carbon trading plans. These mechanisms have been implemented at the state and federal levels to support the development of renewable energy, demand-side, and other infrastructure technologies. The availability and continuation of public policy support mechanisms will drive a significant part of the economics and viability of investments generally, as well as our participation in them.

Our inability to obtain commercial insurance at acceptable rates or our failure to adequately reserve for self-insured exposures could increase our expenses and have a negative impact on our business.

We believe that commercial insurance coverage is prudent in certain areas of our business for risk management. Insurance costs could increase substantially in the future and could be affected by natural disasters, fear of terrorism, financial irregularities, cybersecurity breaches and other fraud at publicly-traded companies, intervention by the government, an increase in the number of claims received by the carriers, and a decrease in the number of insurance carriers. In addition, the carriers with which we hold our policies could go out of business or be otherwise unable to fulfill their contractual obligations or could disagree with our interpretation of the coverage or the amounts owed. In addition, for certain types or levels of risk, such as risks associated with certain natural disasters or terrorist attacks, we may

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determine that we cannot obtain commercial insurance at acceptable rates, if at all. Therefore, we may choose to forego or limit our purchase of relevant commercial insurance, choosing instead to self-insure one or more types or levels of risks. If we suffer a substantial loss that is not covered by commercial insurance or our self-insurance reserves, the loss and related expenses could harm our business and operating results. Also, exposures exist for which no insurance may be available and for which we have not reserved. In addition, environmental activists could try to hamper fossil-fuel companies by other means including pressuring insurance and surety companies into restricting access to certain needed coverages.

Tax Risks to Our Common Unitholders

Our tax treatment depends on our status as a partnership for U.S. federal income tax purposes, and our not being subject to a material amount of entity-level taxation. If the IRS were to treat us as a corporation for U.S. federal income tax purposes, or we become subject to entity-level taxation for state tax purposes, our cash available for distribution to you would be substantially reduced.

The anticipated after-tax benefit of an investment in our common units depends largely on our being treated as a partnership for U.S. federal income tax purposes.

Despite the fact that Even though we are organized as a limited partnership under Delaware law, we would be treated as a corporation for U.S. federal income tax purposes unless we satisfy a "qualifying income" requirement. Based on our current operations and current Treasury Regulations, we believe we satisfy the qualifying income requirement. However, we have not requested, and do not plan to request, a ruling from the IRS on this or any other matter affecting us. Failing to meet the qualifying income requirement or a change in current law could cause us to be treated as a corporation for U.S. federal income tax purposes or otherwise subject us to taxation as an entity.

If we were treated as a corporation for U.S. federal income tax purposes, we would pay U.S. federal income tax on our taxable income at the corporate tax rate, and would likely be liable for state income tax at varying rates. Distributions to our unitholders would generally be taxed again as corporate distributions, and no income, gains, losses, deductions, or credits would flow through to our unitholders. Because taxes would be imposed upon us as a corporation, our cash available

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for distribution to our unitholders would be substantially reduced. Therefore, our treatment as a corporation would result in a material reduction in the anticipated cash flow and after-tax return to our unitholders, likely causing a substantial reduction in the value of our common units.

At the state level, several states have been evaluating ways to subject partnerships to entity-level taxation through the imposition of state income, franchise, or other forms of taxation. If any state were to impose a tax upon us as an entity, the cash available for distribution to you would be reduced and the value of our units could be negatively impacted.

The tax treatment of publicly traded partnerships or an investment in our units could be subject to potential legislative, judicial or administrative changes or differing interpretations, possibly applied on a retroactive basis.

The present U.S. federal income tax treatment of publicly traded partnerships, including us, or an investment in our common units may be modified by administrative, legislative or judicial changes or differing interpretations at any time. Members of Congress have frequently proposed and considered substantive changes to the existing U.S. federal income tax laws that would affect publicly traded partnerships, including proposals that would eliminate our ability to qualify for partnership tax treatment. Recent proposals have provided for the expansion of the qualifying income exception for publicly traded partnerships in certain circumstances and other proposals have provided for the total elimination of the qualifying income exception upon which we rely for our partnership tax treatment. In addition, the Treasury Department has issued, and in the future may issue, regulations interpreting those laws that affect publicly traded partnerships. There can be no assurance that there will not be further changes to U.S. federal income tax laws or the Treasury Department's interpretation of the qualifying income rules in a manner that could impact our ability to qualify as a partnership in the future.

Any modification to the U.S. federal income tax laws and the interpretations thereof may or may not be applied retroactively and could make it more difficult or impossible for us to meet the exception for certain publicly traded partnerships to be treated as partnerships for U.S. federal income tax purposes. We are unable to predict whether any changes or other proposals will ultimately be enacted. Any similar or future legislative changes could negatively impact the value of an investment in our common units. You are urged to consult with your own tax advisor with respect to the

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status of regulatory or administrative developments and proposals and their potential effect on your investment in our common units.

If the IRS were to contest the U.S. federal income tax positions we take, it may adversely impact the market for our common units, and the costs of any such contest would reduce cash available for distribution to our unitholders.

We have not requested a ruling from the IRS with respect to our treatment as a partnership for U.S. federal income tax purposes. The IRS may adopt positions that differ from the positions that we take. It may be necessary to resort to administrative or court proceedings to sustain some or all of the positions we take. A court may not agree with some or all of the positions we take. Any contest with the IRS may materially and adversely impact the market for our common units and the price at which they trade. Moreover, the costs of any contest between us and the IRS will result in a reduction in our cash available for distribution to our unitholders and thus will be borne indirectly by our unitholders.

If the IRS makes audit adjustments to our income tax returns for tax years beginning after December 31, 2017, it (and some states) may assess and collect any taxes (including any applicable penalties and interest) resulting from such audit adjustments directly from us, in which case our cash available for distribution to our unitholders could be reduced and our current and former unitholders may be required to indemnify us for any taxes (including any applicable penalties and interest) resulting from such audit adjustments that were paid on such unitholders' behalf.

Pursuant to the Bipartisan Budget Act of 2015, for tax years beginning after December 31, 2017, if the IRS makes audit adjustments to our income tax returns, it (and some states) may assess and collect any taxes (including any applicable penalties and interest) resulting from such audit adjustments directly from us. To the extent possible under these rules, our general partner may elect to either pay the taxes (including any applicable penalties and interest) directly to the IRS or, if we are eligible, issue a revised information statement to each unitholder and former unitholder with respect to an audited and adjusted return. Although our general partner may elect to have our unitholders and former unitholders take such audit adjustment into account and pay any resulting taxes (including applicable penalties and interest) in accordance with their interests in us during the tax year under audit, there can be no assurance that such election will be practical, permissible or effective in all circumstances. As a result, our current unitholders may bear some or all of the tax liability resulting from such audit adjustment, even if such unitholders did not own units in us during the tax year under audit. If, as a result of

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any such audit adjustment, we are required to pay taxes, penalties and interest, our cash available for distribution to our unitholders might be substantially reduced and our current and former unitholders may be required to indemnify us for any taxes (including any applicable penalties and interest) resulting from such audit adjustments that were paid on such unitholders' behalf. These rules are not applicable for tax years beginning on or prior to December 31, 2017.

Our unitholders are required to pay taxes on their share of our income even if they do not receive any cash distributions from us.

Our unitholders are required to pay any U.S. federal income taxes and, in some cases, state and local income taxes, on their share of our taxable income whether or not they receive cash distributions from us. Our unitholders may not receive cash distributions from us equal to their share of our taxable income or even equal to the actual tax liability that results from that income.

Tax gain or loss on the disposition of our common units could be more or less than expected.

If a unitholder sells units, the unitholder will recognize a gain or loss equal to the difference between the amount realized and that unitholder's tax basis in those common units. Because distributions in excess of a unitholder's allocable share of our net taxable income decrease such unitholder's tax basis in its units, the amount, if any, of such prior excess distributions with respect to the units a unitholder sells will, in effect, become taxable income to a unitholder if it sells such units at a price greater than its tax basis in those units, even if the price such unitholder receives is less than its original cost. In addition, because the amount realized includes a unitholder's share of our nonrecourse liabilities, if a unitholder sells its units, a unitholder may incur a tax liability in excess of the amount of cash received from the sale.

A substantial portion of the amount realized from a unitholder's sale of our units, whether or not representing gain, may be taxed as ordinary income to such unitholder due to potential recapture items, including depreciation recapture. Thus, a unitholder may recognize both ordinary income and capital loss from the sale of units if the amount realized on a sale of such units is less than such unitholder's adjusted basis in the units. Net capital loss may only offset capital gains and, in the case of individuals, up to \$3,000 of ordinary income per year. In the taxable period in which a unitholder sells

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its units, such unitholder may recognize ordinary income from our allocations of income and gain to such unitholder prior to the sale and from recapture items that generally cannot be offset by any capital loss recognized upon the sale of units.

Unitholders may be subject to limitation on their ability to deduct interest expense incurred by us.

In general, we are entitled to a deduction for interest paid or accrued on indebtedness properly allocable to our trade or business during our taxable year. However, our deduction for "business interest" is limited to the sum of our business interest income and 30% of our "adjusted taxable income." For the purposes of this limitation, our adjusted taxable income is computed without regard to any business interest expense or business interest income. If our "business interest" is subject to limitation under these rules, our unitholders will be limited in their ability to deduct their share of any interest expense that has been allocated to them. As a result, unitholders may be subject to limitation on their ability to deduct interest expense incurred by us.

Tax-exempt entities face unique tax issues from owning our common units that may result in adverse tax consequences to them.

Investment in our common units by tax-exempt entities, such as employee benefit plans and individual retirement accounts (known as "IRAs") IRAs raises issues unique to them. For example, virtually all of our income allocated to organizations that are exempt from U.S. federal income tax, including IRAs and other retirement plans, will be unrelated business taxable income and will be taxable to them. Additionally, all or part of any gain recognized by such tax-exempt organization upon a sale or other disposition of our units may be unrelated business taxable income and may be taxable to them. Tax-exempt entities should consult a tax advisor before investing in our common units.

Non-U.S. unitholders will be subject to U.S. taxes and withholding with respect to their income and gain from owning our units.

Non-U.S. unitholders are generally taxed and subject to income tax filing requirements by the United States on income effectively connected with a U.S. trade or business. Income allocated to our unitholders and any gain from the sale of our units will generally be considered to be "effectively connected" with a U.S. trade or business. As a result, distributions to

a non-U.S. unitholder will be subject to withholding at the highest applicable effective tax rate and a non-U.S. unitholder who sells or otherwise disposes of a unit will also be subject to U.S. federal income tax on the gain realized from the sale or disposition of that unit. In addition to the withholding tax imposed on distributions of effectively connected income, distributions to a non-U.S. unitholder will also be subject to a 10% withholding tax on the amount of any distribution in excess of our cumulative net income. As we do not compute our cumulative net income for such purposes due to the complexity of the calculation and lack of clarity in how it would apply to us, we intend to treat all of our distributions as being in excess of our cumulative net income for such purposes and subject to such 10% withholding tax. Accordingly, distributions to a non-U.S. unitholder will be subject to a combined withholding tax rate equal to the sum of the highest applicable effective tax rate and 10%.

Moreover, the transferee of an interest in a partnership that is engaged in a U.S. trade or business is generally required to withhold 10% of the "amount realized" by the transferor unless the transferor certifies that it is not a foreign person. While the determination of a partner's "amount realized" generally includes any decrease of a partner's share of the partnership's liabilities, the Treasury regulations provide that the "amount realized" on a transfer of an interest in a publicly traded partnership, such as our common units, will generally be the amount of gross proceeds paid to the broker effecting the applicable transfer on behalf of the transferor, and thus will be determined without regard to any decrease in that partner's share of a publicly traded partnership's liabilities. For a transfer of interests in a publicly traded partnership that is effected through a broker on or after January 1, 2023, the obligation to withhold is imposed on the transferor's broker. Current and prospective non-U.S. unitholders should consult their tax advisors regarding the impact of these rules on an investment in our common units.

We treat each purchaser of our common units as having the same tax benefits without regard to the common units actually purchased. The IRS may challenge this treatment, which could adversely affect the value of our common units.

Because we cannot match transferors and transferees of common units, we have adopted certain methods for allocating depreciation and amortization deductions that may not conform to all aspects of existing Treasury Regulations. A successful IRS challenge to the use of these methods could adversely affect the amount of tax benefits available to our

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unitholders. It also could affect the timing of these tax benefits or the amount of gain from any sale of common units and could have a negative impact on the value of our units or result in audit adjustments to a unitholder's tax returns.

We generally prorate our items of income, gain, loss and deduction between transferors and transferees of our units each month based on the ownership of our units on the first day of each month, instead of on the basis of the date a particular unit is transferred. The IRS may challenge this treatment, which could change the allocation of items of income, gain, loss and deduction among our unitholders.

We generally prorate our items of income, gain, loss and deduction between transferors and transferees of our units each month based on the ownership of our units on the first day of each month, (the "Allocation Date"), instead of on the basis of the date a particular unit is transferred. Similarly, we generally allocate (i) certain deductions for depreciation of capital additions, (ii) gain or loss realized on a sale or other disposition of our assets, and (iii) in the discretion of the general partner, any other extraordinary item of income, gain, loss or deduction based on ownership on the Allocation Date. Treasury Regulations allow a similar monthly simplifying convention, but such regulations do not specifically authorize all aspects of our proration method. If the IRS were to challenge our proration method, we may be required to change the allocation of items of income, gain, loss and deduction among our unitholders.

A unitholder whose units are the subject of a securities loan (e.g., a loan to a "short seller" to cover a short sale of units) may be considered as having disposed of those units. If so, such unitholder would no longer be treated for tax purposes as a partner with respect to those units during the period of the loan and may recognize gain or loss from the disposition.

Because there are no specific rules governing the U.S. federal income tax consequence of loaning a partnership interest, a unitholder whose units are the subject of a securities loan may be considered as having disposed of the loaned units. In that case, the unitholder may no longer be treated for tax purposes as a partner with respect to those units during the period of the loan to the short seller and the unitholder may recognize gain or loss from such disposition. Moreover, during the period of the loan, any of our income, gain, loss or deduction with respect to those units may not be reportable by the unitholder and any cash distributions received by the unitholder as to those units could be fully taxable as ordinary income. Unitholders desiring to assure their status as partners and avoid the risk of gain recognition from a securities loan are urged

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to consult a tax advisor to determine whether it is advisable to modify any applicable brokerage account agreements to prohibit their brokers from borrowing their units.

Certain U.S. federal income tax deductions currently available with respect to coal mining and production may be eliminated as a result of future legislation.

In past years, members of the U.S. Congress have indicated a desire to eliminate certain key U.S. federal income tax provisions currently applicable to coal companies, including the percentage depletion allowance with respect to coal properties. Elimination of those provisions would not impact our financial statements or results of operations. However, elimination of such provisions could result in unfavorable tax consequences for our unitholders and, as a result, could negatively impact our unit price.

Our unitholders will likely be subject to state and local taxes and income tax return filing requirements in jurisdictions where they do not live as a result of investing in our common units.

In addition to U.S. federal income taxes, our unitholders may be subject to other taxes, such as state and local income taxes, unincorporated business taxes and estate, inheritance or intangible taxes that are imposed by the various jurisdictions in which we conduct business or own property now or in the future, even if they do not live in any of those jurisdictions. Our unitholders will likely be required to file state and local income tax returns and pay state and local income taxes in some or all of these various jurisdictions. Further, our unitholders may be subject to penalties for failure to comply with those requirements.

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We currently own assets and conduct business in multiple states that currently impose a personal income tax on individuals, corporations and other entities. As we make acquisitions or expand our business, we may own assets or conduct business in additional states that impose a personal income tax. It is our unitholders' responsibility to file all U.S. federal, foreign, state, and local tax returns and pay any taxes due in these jurisdictions. Unitholders should consult with their own tax advisors regarding the filing of such tax returns, the payment of such taxes, and the deductibility of any taxes paid.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 1C. CYBERSECURITY

Description of Processes for Assessing, Identifying, and Managing Cybersecurity Risks

We operate in an increasingly interconnected digital landscape and we recognize the importance of assessing, identifying, and managing material risks from cybersecurity threats. In the normal course of business, we may collect and store certain sensitive information, including proprietary and confidential business information, intellectual property, sensitive third-party information, employee information and personal information. We rely on information systems for the management of this information in addition to our management of business processes including inventory, payment of obligations, collection of cash, human capital management, financial tools and other processes and procedures. Our ability to manage our business effectively depends on the reliability and capacity of these systems. We seek to address these risks by safeguarding assets, data, and operations through the cybersecurity risk management processes described below:

Risk Assessment:

Regular assessments are conducted across our systems, networks, and data infrastructure to identify potential cybersecurity threats and vulnerabilities. These assessments include penetration testing, vulnerability scanning, and red teaming exercises conducted by third-party service providers, which help us to evaluate the likelihood and potential impact of cybersecurity incidents. Feedback from these assessments is incorporated into our systems and procedures through upgrades intended to further improve our security posture.

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Incident Identification and Response:

A monitoring and detection system has been implemented to help identify cybersecurity incidents. The IT Security Department is tasked with monitoring certain network activities, logs, and system behavior, leveraging threat detection technologies. In the event of any breach or cybersecurity incident, we have an incident response plan that is designed to follow industry best practices and aligns with legal and regulatory requirements. This plan is designed to provide for immediate action to contain the incident, mitigate the impact, and restore normal operations efficiently.

Cybersecurity Training and Awareness:

Cybersecurity awareness among our employees is promoted with regular training and awareness programs. Employees receive training on recognizing and reporting potential cybersecurity threats, best practices for data protection, and adhering to cybersecurity policies and procedures. Additionally, periodic simulated phishing exercises are conducted to enhance employee readiness in identifying and mitigating phishing attacks.

Access Controls:

Access control policies have been implemented to limit unauthorized access to sensitive information and we seek to maintain and monitor critical systems. Multi-factor authentication is used for remote access, use of privileged accounts and access to critical systems.

Encryption and Data Protection:

Encryption methods are used to protect sensitive data in transit and at rest. This includes the encryption of customer data, financial information, and other confidential data.

The above cybersecurity risk management processes are integrated into the Partnership's overall risk management program. Cybersecurity threats are understood to be dynamic and intersect with various other enterprise risks. As such, cybersecurity is considered as an important component of our enterprise-wide risk management approach. We have assembled a Cybersecurity Steering Committee comprised of IT management, cybersecurity specialists, and representatives of business management, including the CTO and internal legal counsel. The Cybersecurity Steering Committee reviews information security policies and cybersecurity risks in conjunction with other operational, financial, and strategic risks to ensure alignment with our business objectives. The Cybersecurity Steering Committee convenes regularly to review and monitor the Partnership's programs for the prevention, detection, mitigation, and remediation of cybersecurity incidents. The Cybersecurity Steering Committee receives reports on security incidents, threat intelligence, and vulnerability assessments from our IT Security Department.

The Cybersecurity Steering Committee regularly reports to the CFO through the CTO and reports annually on cybersecurity to the Audit Committee during a scheduled meeting. These reports include, as appropriate, updates on the current cybersecurity landscape, incident trends, and any significant developments that may impact the Partnership's security posture.

To enhance the effectiveness of our cybersecurity program, we periodically engage external assessors, consultants, and auditors. These third-party service providers conduct independent evaluations of our cybersecurity measures, helping to identify areas for improvement and adherence to industry standards and best practices.

Our IT Security Department recognizes that third-party service providers may introduce cybersecurity risks to our organization. In an effort to mitigate these risks, we have implemented a process designed to assess and oversee the cybersecurity practices of our vendors. Before engaging with any third-party cybersecurity service provider, we conduct due diligence to evaluate their cybersecurity capabilities. Additionally, we include cybersecurity requirements in our contracts with these providers, requiring them to adhere to certain cybersecurity standards and protocols.

Impact of Risks from Cybersecurity Threats

During 2023 and through the date of this Annual Report on Form 10-K, though the Partnership and our service providers may have experienced cybersecurity incidents, we are not aware of any cybersecurity threats, including as a

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result of any previous cybersecurity incidents, that have materially affected or are reasonably likely to materially affect the Partnership, including our business strategy, result of operations, or financial condition. However, we acknowledge that cybersecurity threats are continually evolving, and the possibility of future cybersecurity incidents remains. Our IT Security Department aims to monitor and assess these risks to maintain the security and continuity of our operations. Despite the implementation of our cybersecurity programs, our security measures cannot guarantee that a significant cyberattack will not occur. A successful attack on our IT systems could have significant consequences to our business. While we devote resources to our security measures to protect our systems and information, these measures cannot provide absolute security. Please see "Item 1A. Risk Factors" for additional information about the risks to our business associated with a breach or compromise to our information technology systems.

Board of Directors' Oversight of Risks from Cybersecurity Threats

The Board of Directors oversees risks from cybersecurity threats. Recognizing the importance of cybersecurity to the success and resilience of our business, the Board considers cybersecurity to be an important aspect of corporate governance. To facilitate effective oversight, the Audit Committee and the Board of Directors hold discussions with management, including the CTO on cybersecurity risks, incident trends, and the effectiveness of cybersecurity measures annually and as needed during both scheduled and special meetings. If new material cybersecurity risks arise, the Board of Directors and the Audit Committee are informed through regular discussions between the CFO and both the Chairman of the Board and the Audit Committee Chair. These discussions are then brought to the attention of the Board of Directors and Audit Committee at the next meeting.

Management's Role and Expertise

The CTO and the Cybersecurity Steering Committee are responsible for overseeing and executing our cybersecurity strategy, including the assessment and management of cybersecurity risks. The CTO reports directly to the CFO and maintains communication with the Audit Committee, the Board of Directors and the Cybersecurity Steering Committee with respect to information security and cybersecurity matters.

The CTO holds a Master of Business Administration from the University of Kentucky/University of Louisville's joint executive program and has an extensive background in information security, risk management, and incident response with over twenty years of varying information technology roles with increasing responsibility at both private and public companies. The CTO is supported by a dedicated team of cybersecurity professionals, each bringing diverse expertise in areas such as network security, data protection, and threat intelligence.

ITEM 2. PROPERTIES

Coal Mineral Resources and Reserves COAL MINERAL RESOURCES AND RESERVES

Overview of Coal Properties

Our coal properties are located in the Illinois Basin and the Appalachia Basin. Our Illinois Basin properties are located in western Kentucky, southern Illinois, and southern Indiana. Our Appalachian properties are located in eastern Kentucky, Maryland, western Pennsylvania, and northern West Virginia. Mining operations on our coal properties consist of underground mines that produce bituminous coal that is sold to customers principally for electric power generation (thermal) and the production of steel (metallurgical). In addition to our coal mining operations, we also hold coal mineral interests that we lease/sublease to our operations or hold for lease/sublease to our operations or others. For a detailed overview of our coal mining operations and our coal royalty activities, please see "Item 1. Business—Coal Mining Operations" and "Item 1. Business—Mineral Interest Activities", respectively.

Evaluation and Review of Coal Mineral Resources and Reserves

Numerous uncertainties are inherent in estimating coal mineral resources and reserves, and the estimates are subject to change as additional information becomes available or circumstances change. Significant factors and assumptions related to the uncertainty in estimating coal mineral reserves and resources include:

- geological and mining conditions, which may not be fully identified by available exploration data and/or differ from our experiences in areas where we currently mine;
- the percentage of coal in the ground ultimately recoverable;
- historical production from the area compared with production from other producing areas;
- the assumed effects of regulation and taxes by governmental agencies;
- future improvements in mining technology; and
- assumptions concerning future coal prices, operating costs, capital expenditures, severance and excise taxes, and development and reclamation costs.

Each of the factors which impacts reserve and resource estimation may vary considerably from the assumptions used in making the estimation and, as a result, the estimates in this report may not accurately reflect the actual coal reserves and resources. Actual production, revenues and expenditures with respect to the coal reserves will likely vary from the assumptions used in these estimates, and these variances may be material. Government regulations and other pressures may result in the closure of coal-fired electric generating plants earlier than assumed. Such changes would reduce the economic viability of our mining operations and could have a material adverse impact on our operations and financial results.

Under SEC rules, a mineral resource is a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for economic extraction. A mineral resource is a reasonable estimate of mineralization, taking into account relevant factors such as cut-off grade, likely mining dimensions, location or continuity that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable. A mineral reserve is an estimate of tonnage and grade or quality of indicated and measured mineral resources that, in the opinion of the qualified person, can be the basis of an economically viable project. More specifically, it is the economically mineable part of a measured or indicated mineral resource, which includes diluting materials and allowances for losses that may occur when the material is mined or extracted.

The coal mineral resource and reserve estimates included in this Annual Report on Form 10-K were prepared by an independent, qualified engineering firm, RESPEC Company, LLC ("RESPEC"), RESPEC. We provided RESPEC with property control, mine plans, production, revenue, costs, capital, and other information considered by RESPEC in making their estimates. As part of our internal controls, our geologists and engineers review the integrity, accuracy, and timeliness of the data provided to RESPEC that they considered in calculating their coal mineral resource and reserve estimates. We also review the geologic data, mining assumptions, and methodology used by RESPEC to estimate our coal mineral resources and reserves. Our geologists and engineers also met with RESPEC periodically during the year to discuss the assumptions and methods used in the coal mineral resource and reserve estimation process.

												(1)											
Illinois Basin																							
Dotiki (KY)		12,100	—	2.3	73.7	51.2	24.8	76.0	—	27.6	48.4	76.0	12,100	—	2.3	73.7	51.2	24.8	76.0	—	27.6		
Henderson/Union (KY)		11,450	—	3.2	517.6	175.4	284.0	459.4	61.4	74.9	445.9	520.8	11,450	—	3.0	409.7	127.3	227.9	355.2	57.5	74.0	3	
River View (KY)													11,450	—	—	0.3	—	—	—	0.3	—		
Sebree South (KY)		11,750	—	—	43.5	22.1	16.8	38.9	4.6	0.3	43.2	43.5	11,750	—	—	43.5	22.1	16.8	38.9	4.6	0.3		
Gibson South (IN)		11,500	—	—	0.3	—	—	—	0.3	—	0.3	0.3											
Hamilton County (IL)		11,650	5.1	33.8	400.4	188.1	240.0	428.1	11.2	32.5	406.8	439.3	11,650	5.1	33.8	405.8	191.2	242.3	433.5	11.2	32.8	4	
Region Total			5.1	39.3	1,035.5	436.8	565.6	1,002.4	77.5	135.3	944.6	1,079.9		5.1	39.1	933.0	391.8	511.8	903.6	73.6	134.7	8	
Appalachian Basin																							
Mountain View (WV)		13,200	—	0.4	6.3	2.1	4.4	6.5	0.2	1.8	4.9	6.7	13,200	—	0.4	8.3	4.1	4.4	8.5	0.2	1.8		
Tunnel Ridge (WV)		12,600	—	—	0.7	—	—	—	0.7	0.7	—	0.7	12,600	—	—	0.9	—	0.2	0.2	0.7	0.7		
Penn Ridge (PA)		12,500	—	—	78.0	21.9	53.2	75.1	2.9	78.0	—	78.0	12,500	—	—	78.0	21.9	53.2	75.1	2.9	78.0		
Region Total			—	0.4	85.0	24.0	57.6	81.6	3.8	80.5	4.9	85.4		—	0.4	87.2	26.0	57.8	83.8	3.8	80.5		
Total			5.1	39.7	1,120.5	460.8	623.2	1,084.0	81.3	215.8	949.5	1,165.3		5.1	39.5	1,020.2	417.8	569.6	987.4	77.4	215.2	8	
% of Total			0.4%	3.4%	96.2%	39.5%	53.5%	93.0%	7.0%	18.5%	81.5%	100.0%		0.5%	3.7%	95.8%	39.2%	53.5%	92.7%	7.3%	20.2%	7%	

(1) Combined resources are defined as measured plus indicated resources.

At **December 31, 2022** **December 31, 2023**, we had approximately **1.165 billion** **1.065 billion** tons of coal mineral resources. Tonnages are reported on a clean recoverable basis with average long-term pricing based on available third-party forecasts and historical pricing adjusted for quality at the end of **2022** **2023** in a range from approximately **\$62** **\$53** to **\$68** **\$59** per short ton in the Illinois Basin and from approximately **\$71** **\$62** to **\$98** **\$119** per short ton in the Appalachian Basin, which are the prices used by RESPEC to estimate the amount of coal mineral resources. Coal sales prices vary based on coal quality, access to transportation, and other factors at each location. All resources are classified as underground mineable in the exploration stage.

Coal Mineral Reserves

Reserves are assigned to our active operations and are (1) currently in production, (2) economically viable, and (3) meet the other requirements to be considered reserves as defined by the SEC.

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The following table sets forth coal mineral reserve information, exclusive of the coal mineral resources above, at **December 31, 2022** **December 31, 2023**, about our coal operations:

Reserves (tons in millions)	Heat									Heat										
	Content (Btus per pound)	Pounds SO2 per MMBtu			Classification		Ownership			Total	Content (Btus per pound)	Pounds SO2 per MMBtu			Classification		Ownership			Total
		<1.2	1.2-2.5	>2.5	Proven	Probable	Owned	Leased	<1.2			1.2-2.5	>2.5	Proven	Probable	Owned	Leased			

% of Total	1.8%	2.7%	95.4%	57.2%	42.8%	21.4%	78.6%	100.0%	1.6%	2.2%	96.2%	57.3%	42.7%	17.8%	82.2%	100.0%

On **December 31, 2022** **December 31, 2023**, we had approximately **580.7 million** **663.2 million** tons of coal mineral reserves. Tonnages are reported on a clean recoverable basis with average long-term pricing based on available third-party forecasts and historical pricing adjusted for quality at the end of **2022** **2023** in a range from approximately **\$62** **\$53** to **\$68** **\$59** per short ton in the Illinois Basin and from approximately **\$71** **\$62** to **\$98** **\$119** per short ton in the Appalachian Basin, which are the prices used by RESPEC to estimate the amount of coal mineral reserves. Coal sales prices vary based on coal quality, access to transportation, and other factors at each location. All reserves are classified as underground mineable in the **development or** production stage.

Mining Operations

The following table sets forth production and other data about our mining operations:

	Tons Produced						Tons Produced					
Operations	Location	2022	2021	2020	Transportation	Equipment	Location	2023	2022	2021	Transportation	Equ
	(in millions)											
Illinois Basin Operations							(in millions)					
Warrior	Kentucky	4.1	4.1	3.6	CSX, NS, PAL, truck, barge	CM	Kentucky	4.4	4.1	4.1	CSX, NS, PAL, truck, barge	CM
River View	Kentucky	10.2	9.9	9.4	Truck, barge	CM	Kentucky	9.9	10.2	9.9	Truck, barge	CM
Hamilton County	Illinois	4.7	4.9	2.6	CSX, EVW, NS, barge	LW, CM	Illinois	5.6	4.7	4.9	CSX, EVW, NS, barge	LW,
Gibson (South)	Indiana	5.3	3.3	2.3	CSX, NS, truck, barge	CM						
Gibson South							Indiana	5.3	5.3	3.3	CSX, NS, truck, barge	CM
Region												
Total												
Appalachian Basin Operations												
MC Mining/Excel	Kentucky	1.5	1.3	0.5	CSX, truck, barge	CM	Kentucky	1.2	1.5	1.3	CSX, truck, barge	CM
Mountain View	West Virginia	1.4	1.5	1.8	CSX, truck	LW, CM	West Virginia	0.8	1.4	1.5	CSX, truck	LW,
Tunnel Ridge	West Virginia	8.3	7.2	6.8	CSX, NS, barge	LW, CM	West Virginia	7.7	8.3	7.2	CSX, NS, barge	LW,
Region												
Total												
TOTAL												

CSX - CSX Railroad

EVW	- Evansville Western Railroad
NS	- Norfolk Southern Railroad
PAL	- Paducah & Louisville Railroad
CM	- Continuous Miner
LW	- Longwall

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Individual Property Disclosures

We consider the following properties to be material based on multiple factors including, but not limited to, the property's contribution to our overall business and financial condition. Please see [Coal Mineral Resources](#) and [Coal Mineral Reserves sections](#) above for information about the coal mineral resources and reserves held by these material properties. In addition to the following information, TRSs for these material properties with additional information are included as exhibits to this Annual Report on Form 10-K.

Henderson/Union Resources

The Henderson/Union Resources are located in Henderson and Union counties, Kentucky at 37°44'30"N, -87°46'07"W and we currently have control in over 1,600 tracts encompassing over 127,000 acres. The property is controlled through both fee ownership and leases of the coal. The coal mineral resources are controlled by Alliance Resource Properties. The base leases are with private owners and WKY CoalPlay or its subsidiaries, which are related parties. See "Item 8. Financial Statements and Supplementary Data—Note 22 20 – Related-Party Transactions" for more information about our WKY CoalPlay transactions. These base leases generally provide for a term that can be extended until exhaustion of the leased coal. Local infrastructure is as follows:

Major Roads: Interstates 69 and US-60,
Railroads: None,
Airport: Evansville Regional Airport (EVV),
Town: Morganfield,
Docks: River View, Hamilton 1, UC Processing, on the Ohio River,
Water: Local municipalities and mine sources,
Electricity: Kentucky Utilities (KU),
Personnel: Regional.

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Graphic

Description

The potential underground mine(s) would utilize room-and-pillar methods operating a heavy media, float/sink style preparation plant. Exploration continues as needed to fulfill possible permitting and development requirements. Multiple access points are available for development. Access is available from the active River View mine, complex, which began production in 2009. All equipment, facilities, infrastructure, and underground development are in good working order and maintained to industry standards. Access at the Hamilton and UC Coal, LLC sites are considered "brownfield" developments. Though some facilities and permitting are in place, significant upgrades to existing infrastructure and new construction would be needed to bring them into good working order that meets industry standards. The property associated with Henderson/Union has no book value as of December 31, 2022 December 31, 2023 but does have outstanding advanced royalties with WKY CoalPlay or its subsidiaries. See "Item 8. Financial Statements and Supplementary Data—Note 22 20 – Related-Party Transactions" for more information about advanced royalties that Henderson/Union has with WKY CoalPlay.

Though there is geographic overlap between the Henderson-Union Henderson/Union and River View properties, the resources and reserves of each are associated with different coal seams or, if in the same seam, are separated by existing mine works or geologic features into distinct areas. There is no overlap in the resource / reserve estimation.

History

The Henderson/Union property contains resources in four three coal seams, the West Kentucky No. 11 ("WKY11"), WKY11, the West Kentucky No. 9 ("WKY9"), the West Kentucky No. 7 ("WKY7"), WKY7, and the West Kentucky No. 6 ("WKY6"), WKY6. Island Creek Coal Company ("Island Creek") operated mines in the area and controlled a portion of the property. Under a joint venture, Texas Gas Service also controlled a large interest in the mineral rights. Lastly, Peabody Coal Corporation ("Peabody") and Patriot Coal Corporation ("Patriot") operated mines in the area and controlled a portion of the reserves. We consolidated control of the property through multiple transactions from 2005 through 2015. Island Creek operated the

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WKY7 or WKY6 seams. In general, all drilling has shown highly consistent coal seams of mineable thickness and quality for the high-sulfur thermal utility market.

Our credit facility is secured by, among other things, liens against certain Henderson/Union surface properties and coal leases. Documentation of such liens is of record in the Offices of the Henderson and Union County Clerks. Please read "Item 8. Financial Statements and Supplementary Data—Note 86 – Long-term Debt" for more information on our credit facility.

Geology and Reserves

Resources (1)		Quality, Washed, Dry Basis						% Recovery	Quality, Washed, Dry Basis						% Recovery
		Tons (millions)	Thickness (ft)	% Ash	% Sulfur	Btu	lbs. SO2	In-Seam	Tons (in millions)	Thickness (ft)	% Ash	% Sulfur	Btu	lbs. SO2	In-Seam
Henderson/Union															
Measured	Mineral														
Resources		175.4	4.72	8.14	2.99	13,231	4.52	87.14	127.3	4.68	7.72	2.88	13,327	4.32	85.48

Indicated	Mineral														
Resources		284.0	4.62	8.23	2.86	13,242	4.32	88.00	227.9	4.59	8.01	2.74	13,306	4.12	87.07
Combined	Mineral														
Resources		459.4	4.66	8.19	2.91	13,238	4.40	87.67	355.2	4.62	7.90	2.79	13,314	4.19	86.50
Inferred	Mineral														
Resources		61.4	4.48	8.14	2.59	13,327	3.88	89.67	57.5	4.46	7.97	2.56	13,350	3.84	90.42

(1) See updated TRS for Henderson/Union at Exhibit 96.1 to this Annual Report 10-K reflecting the material change to resources during 2023.

River View Complex

The River View complex is located in Union County, Kentucky at 37°45'37"N, -87°56'42"W and currently has approximately 54,250 93,200 underground acres permitted. The mine complex is composed of the River View and Henderson County mines along with shared preparation, loadout, and other ancillary facilities. The complex is controlled through both fee ownership and leases of the coal. The coal mineral reserves are leased or held for lease to the River View complex almost exclusively by Alliance Resource Properties. The River View complex either owns or controls the surface properties upon which its facilities are located including the preparation plant, refuse areas, mine offices, conveyor systems, shafts and slopes. The base leases are with private owners and generally provide for a term that can be extended until exhaustion of the leased coal. Local infrastructure is as follows:

- Major Roads: Interstates 69 and US-60,
- Railroads: None,
- Airport: Evansville Regional Airport (EVV),
- Town: Morganfield,
- Docks: River View on the Ohio River,
- Water: Uniontown Water Department Union and Henderson County water districts and mine sources,
- Electricity: Kentucky Utilities (KU),
- Personnel: Regional.



Graphic

Description

The underground mine is mines are currently in production using room-and-pillar methods utilizing a heavy media, float/sink style preparation plant. Exploration continues as needed to fulfill mining and permitting requirements. The mine complex began production in 2009. All equipment, facilities, infrastructure, and underground development are in good working order and maintained to industry standards. Total book value of the property and any associated plant and equipment for the River View Complex as of December 31, 2022 December 31, 2023 was \$229.0 million \$312.7 million.

Though there is geographic overlap between the River View complex and the Henderson-Union Henderson/Union properties, the reserves and resources of each are associated with different coal seams or, if in the same seam, are separated by existing mine works or geologic features into distinct areas. There is no overlap in the resource / reserve estimation.

History

Island Creek operated mines in the area and controlled a portion of the property. Under a joint venture, Texas Gas Service also controlled a large interest in the mineral rights. Lastly, Peabody and Patriot operated mines in the area and controlled a smaller portion of the reserves. We consolidated control of the property through multiple transactions from 2005 through 2015. Island Creek operated the Ohio #11 and Uniontown #9 mines to the west of River View. Island Creek also operated the Hamilton #1 and #2 mines to the southwest. Peabody and later Patriot operated the Camp complex mines and Highland mines adjacent to the southeast and east complex. Both the WKY9 and WKY11 seams were mined at these locations. In general, all drilling has shown highly consistent coal seams of mineable thickness and quality for the high-sulfur thermal utility market.

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Encumbrances

River View Complex Yearly Reserve Reconciliation		(in millions)
Tons as of	December 31, 2021 December 31, 2022	214.6 204.7
Production		(10.2) (9.9)
Mineral Acquisition / Deletion (1)		0.7 115.2
Normal Course Adjustments		(0.4) 0.4
Tons as of	December 31, 2022 December 31, 2023	204.7 310.4

(1) See updated TRS for River View complex at Exhibit 96.2 to this Annual Report on Form 10-K reflecting the material change to reserves for 2023.

Normal course adjustments are associated with numerous slight changes in the geologic model.

Hamilton Mine

Hamilton, a longwall mine located in Hamilton County, Illinois at 38°10'12"N, -88°36'47"W, currently has approximately 10,500 23,000 underground acres and 1,300 surface acres permitted. The mine property is controlled through both fee ownership and leases of the coal. The coal mineral reserves and resources are leased or held for lease to Hamilton by Alliance WOR Properties, LLC ("Alliance WOR Properties"), a subsidiary of Alliance Resource Properties. Hamilton either owns or controls the surface properties upon which its facilities are located including the preparation plant, refuse areas, mine offices, conveyor systems, shafts and slopes. Hamilton (or Alliance WOR Properties) currently holds rights to over 67,000 gross acres of coal mineral reserves and resources and subsidence rights, and 1,400 acres of surface properties. The underlying base coal leases are with private owners and are comprised of a large number of leases originally taken by AMAX Coal Company and Old Ben Coal Company ("Old Ben") in the mid to late 1970's and early, 1980's (the "Old Ben Leases"), leases acquired by Consolidation Coal Company in the late 1980's (the "Consol Leases"), and subsequent leases

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Consolidation Coal Company in the late 1980's, and subsequent leases taken directly by White Oak Resources, LLC or affiliated companies and/or Alliance WOR Properties. Local infrastructure is as follows:

- Major Roads: Interstates 64,
- Railroads: CSX and EVW,
- Airport: Evansville Regional Airport (EVV),
- Towns: McLeansboro and Mt. Vernon,
- Docks: Mount Vernon on the Ohio River,
- Water: Hamilton County Water District and mine sources,
- Electricity: Wayne-White Electric Co-op (WWEC),
- Personnel: Regional.



Graphic

Description

The underground mine is currently in production using longwall and room-and-pillar methods utilizing a heavy media, float/sink style preparation plant. Exploration continues as needed to fulfill mining and permitting requirements. The mine began production in 2014. All equipment, facilities, infrastructure, and underground development are in good working order and maintained to industry standards. Total book value of the property and any associated plant and equipment for Hamilton as of **December 31, 2022** **December 31, 2023** was **\$336.3 million** **\$332.4 million**.

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History

There were no previous operations on the Hamilton reserves property prior to our predecessor, White Oak Resources LLC, who began construction of the mine in 2011. In general, all drilling has shown highly consistent coal seams of mineable thickness and quality for the high-sulfur thermal utility market for the Herrin and Springfield seams.

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Encumbrances

Our credit facility is secured by, among other things, liens against certain Hamilton surface properties, coal leases and owned coal. Documentation of such liens is of record in the Office of the Hamilton County Clerk. Please read "Item 8. Financial Statements and Supplementary Data—Note 8.6 – Long-term Debt" for more information on our credit facility.

The Consol Leases Certain leases originally acquired by Consolidation Coal Company are encumbered by an overriding royalty payable to Sustainable Conservation, Inc. ("Sustainable") in the amount of the greater of \$0.25 per ton or 0.75% of the average sales realization price received per ton, which sums can be credited against approximately \$481,000 previously paid to Sustainable Conservation, Inc. for the assignment of the Consol Leases; these leases.

The Illinois Department of Natural Resources, Land Reclamation Division is responsible for review and issuance of all permits relative to coal mining and reclamation activities, and financial assurance of comprehensive environmental protection performance standards related to surface and underground coal mining operations. In addition to state mining and reclamation laws, operators must comply with various federal laws relevant to mining. All applicable permits for underground mining, coal preparation and related facilities and other incidental activities have been obtained and remain in good standing.

Geology and Reserves

Hamilton extracts coal underground from the Herrin (Illinois No.6) seam with depths ranging from 900 to 1100 feet across the reserve. The table below summarizes mineral reserves as of December 31, 2022 December 31, 2023 using a cut off thickness of 4.00 feet:

Reserves		Quality, Washed, Dry Basis						% Recovery	Quality, Washed, Dry Basis						% Recovery
		Tons (in millions)	Thickness (ft)	% Ash	% Sulfur	Btu	lbs. SO2	In-Seam	Tons (in millions)	Thickness (ft)	% Ash	% Sulfur	Btu	lbs. SO2	In-Seam

Tons as of December 31, 2021 December 31, 2022	128.5	125.9
Production	(4.7)	(5.6)
Mineral Acquisition / Deletion	2.3	4.1
Mine Plan Adjustment	(1.8)	(4.9)
Normal Course Adjustments	1.6	0.3
Tons as of December 31, 2022 December 31, 2023	125.9	119.8

Normal course adjustments are associated with numerous slight changes in the geologic model.

Gibson South Mine

Gibson South is located in Gibson County, Indiana at 38°18'22"N, 87°42'30"W and currently has approximately 23,350 underground acres permitted. The mine property is controlled through both fee ownership and leases of the coal. **Gibson South holds rights to over 21,000 gross acres of coal.** Leases generally have an initial term with automatic extensions for as long as mining operations are conducted within a described area. Local infrastructure is as follows:

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Major Roads: Interstates 69 and 64,
Railroads: CSX and NS,
Airport: Evansville Regional Airport (EVV),
Town: Princeton,
Docks: Mount Vernon on the Ohio River,

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Water: Gibson Water, Inc. and well water,
Electricity: Western Indiana Energy REMC,
Personnel: Regional.



Graphic

Description

The underground mine is currently in production using room-and-pillar methods utilizing a heavy media, float/sink style preparation plant. Exploration continues as needed to fulfill mining and permitting requirements. The mine began production in 2014. All equipment, facilities, infrastructure, and underground development are in good working order and maintained to industry standards. Total book value of the property and any associated plant and equipment for Gibson South as of **December 31, 2022** **December 31, 2023** was **\$118.0 million** **\$117.0 million**.

History

In November 1997, pursuant to (a) Assignment of Underground Coal Leases, (b) Partial Assignment of Underground Coal Leases and (c) Special Corporate Warranty Deed, Old Ben conveyed to MAPCO Land & Development Corporation various coal leases and fee coal interests within a large property boundary located in Gibson County, Indiana. MAPCO Land & Development Corporation changed its name to MAPCO Coal Land & Development Corporation, and MAPCO Coal Land & Development Corporation merged into Alliance Properties LLC ("Alliance Properties") effective August 4, 1999.

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After the original Old Ben acquisition, Alliance Properties and Gibson **County Coal** continued to acquire additional coal leases and fee coal interests in the area. In addition, beginning in or around 2006, the leases originally acquired from Old Ben began to expire by their terms, and Alliance Properties/Gibson **County Coal** began a program of either amending the expiring leases or entering into new, direct leases with the coal owners. Alliance Properties merged into Gibson **County Coal** on February 19, 2018.

Probable Mineral Reserves	9.4	5.48	8.01	2.42	13,335	3.62	93.22	9.6	5.33	8.15	2.51	13,322	3.77	92.82
Total Mineral Reserves	49.0	5.95	7.21	2.04	13,467	3.03	94.79	45.2	5.81	7.34	2.11	13,444	3.14	94.37

Resources associated with Gibson South are included in the Coal Mineral Resources table above.

The Gibson South mine had 52.6 million 49.0 million tons of coal mineral reserves at the end of 2021. 2022. The year over year reconciliation is as follows:

Gibson South Yearly Reserve Reconciliation		(in millions)
Tons as of December 31, 2021	December 31, 2022	52.6 49.0
Production		(5.3)
Mineral Acquisition / Deletion		1.5
Normal Course Adjustments	Tons as of December 31, 2023	0.2
Tons as of December 31, 2022		49.0 45.2

Normal course adjustments are associated with numerous slight changes in the geologic model.

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Tunnel Ridge Mine

Tunnel Ridge, located at 40°09'17" N, -80°39'26"W, is an underground longwall mine in the Pittsburgh No. 8 seam of coal, and currently has approximately 20,890 22,345 underground acres permitted. The mine property is controlled through both fee ownership and leases of the coal. The coal mined and to be mined by Tunnel Ridge is leased from the Joseph W. Craft III Foundation, the Kathleen S. Craft Foundation, Alliance Resource Properties and third parties. Please read "Item 8. Financial Statements and Supplemental Data - Note 22 20 – Related-Party Transactions" for additional information on related-party leases. Tunnel Ridge either owns or controls the surface properties upon which its facilities are located, including the preparation plant, refuse areas, mine offices, conveyor systems, shafts and slopes. Local infrastructure is as follows:

Major Roads: Interstate 70,
Railroads: None,
Airport: Pittsburgh International Airport (PIT),
Town: Wheeling,
Docks: Tunnel Ridge on the Ohio River,
Water: Municipal water districts and mine sources,
Electricity: American Electric Power (AEP), West Penn Power (WPP)
Personnel: Regional.



Graphic

Description

The underground mine is currently in production using longwall and room-and-pillar methods utilizing a heavy media, float/sink style preparation plant. Exploration continues as needed to fulfill mining and permitting requirements. The mine began production in 2010. All equipment, facilities, infrastructure, and underground development are in good

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working order and maintained to industry standards. Total book value of the property and any associated plant and equipment for Tunnel Ridge as of **December 31, 2022** **December 31, 2023** was **\$271.2 million** **\$301.7 million**.

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History

Valley Camp Coal Company operated mines on the property prior to Tunnel Ridge's operations. In general, all drilling has shown a highly consistent coal seam of mineable thickness and quality for the high-sulfur thermal utility market.

Encumbrances

Resources associated with Tunnel Ridge are included in the Coal Mineral Resources table above.

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The Tunnel Ridge mine had 53.7 million 120.0 million tons of coal mineral reserves at the end of 2021, 2022. The year over year reconciliation is as follows:

Tunnel Ridge Yearly Reserve Reconciliation		(in millions)
Tons as of December 31, 2021	December 31, 2022	53.7 120.0
Production		(8.3) (7.7)
Mineral Acquisition / Deletion (1)		71.0 (1.2)
Mine Plan Adjustment		2.2 6.8
Normal Course Adjustments		1.4 0.3
Tons as of December 31, 2022	December 31, 2023	120.0 118.2
(1) See updated TRS for Tunnel Ridge at Exhibit 96.5 to this Annual Report on Form 10-K reflecting the material change to reserves during 2022.		

OIL & GAS RESERVES

Summary of Oil & Gas Reserves

Our mineral interests are primarily located in three basins, which are also our areas of focus for future development. These include the Permian (Delaware and Midland), Anadarko (SCOOP/STACK) and Williston (Bakken) Basins. At December 31, 2022 December 31, 2023, we had approximately 45,157 49,794 developed and undeveloped net acres held at a weighted average royalty of 17.0%. Our net acres standardized to 1/8th royalty equates to approximately 61,400 67,745 net royalty acres, including approximately 3,968 3,969 net royalty acres owned through our equity interest in AllDale III.

The following table presents our estimated net proved oil & gas reserves, including our share of reserves owned through attributable to our equity interest in AllDale III, as of December 31, 2022 December 31, 2023 based on the reserve report prepared by our internal engineering team. team and reserve information provided by AllDale III. The reserve report has and reserve information have been prepared in accordance with the rules and regulations of the SEC. All of our proved reserves included in the reserve report are located in the continental United States.

	As of December 31, 2022				As of December 31, 2023			
	Crude Oil (MBbl)	Natural Gas (MMcf)	Natural Gas Liquids (MBbl)	Total (MBOE) (2)	Crude Oil (MBbl)	Natural Gas (MMcf)	Natural Gas Liquids (MBbl)	Total (MBOE) (2)
Estimated proved developed reserves	6,976	37,882	4,388	17,678	7,754	45,684	5,485	20,854
Estimated proved undeveloped reserves	1,362	5,155	697	2,918	1,599	5,839	868	3,440

Total estimated proved reserves									
(1)	8,338	43,037	5,085	20,596	9,353	51,523	6,353	24,294	

(1) Proved reserves of approximately 1,736 1,780 MBOE were attributable to noncontrolling interests as of December 31, 2022 December 31, 2023.

(2) Natural gas reserve volumes are converted to BOE based on a 6:1 ratio: 6 Mcf of natural gas converts to one BOE.

Estimates of reserves as of December 31, 2022 December 31, 2023 were prepared using product prices equal to the unweighted arithmetic average of the first-day-of-the-month market price for each month in the period from January through December 2022 2023. The average realized product prices weighted by production over the remaining lives of the properties are \$92.50/\$77.61/Bbl for oil, \$5.43/\$1.55/Mcf of natural gas and \$35.87/\$22.63 per barrel of NGL. These prices are adjusted for energy content, associated average differential and transportation deducts by producing area to arrive at the net realized prices by product. For 2022 2023, NGL prices averaged approximately 41% 33% of the posted oil prices during the course of the year with an additional \$2.35/\$3.18/Bbl deducted for transportation costs.

The following table summarizes our changes in proved undeveloped reserves (in MBOE):

Beginning balance, January 1, 2022 January 1, 2023*	2,618 3,795
Acquisitions of proved undeveloped reserves	100 38
Transfers of PUDs to estimated proved developed	(1,159) (1,448)
Extensions and discoveries	1,359 2,462
Revisions of previous estimates	(1,407)
Ending balance, December 31, 2022 December 31, 2023	2,918 3,440

* Recast to reflect the JC Resources Acquisition as if we, rather than JC Resources, acquired the mineral interests in 2019. Please see "Item 8. Financial Statement and Supplemental Data—Note 1 – Organization and Presentation and Note 3 – Acquisitions" for more information.

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As a mineral interest owner we have no transparency into or control over our operators' the Operators' investments and operational progress to convert PUDs to proved developed producing reserves. We do not incur any capital expenditures or lease operating expenses in connection with the development of our PUDs, which costs are borne entirely by our operators, the Operators. As a result, during the year ended December 31, 2022 December 31, 2023, we did not have any expenditures to convert PUDs to proved developed producing reserves. PUDs that have not been developed within two years of permitting are reviewed and removed from proved reserves as necessary. As of December 31, 2022 December 31, 2023, approximately 14.17% 14.16% of our total proved reserves were classified as PUDs.

Evaluation and Review of Reserves

Numerous uncertainties are inherent in estimating reserve volumes and values, and the estimates are subject to change as additional information becomes available. The reserves actually recovered and the timing of production of the reserves may vary significantly from the original estimates.

Under SEC rules, proved reserves are those quantities of oil & gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible—from a given date forward, from known reservoirs and under existing economic conditions, operating methods and government regulations—prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the

estimation. If deterministic methods are used, the SEC has defined reasonable certainty for proved reserves as a "high degree of confidence that the quantities will be recovered." All of our proved reserves as of December 31, 2022 December 31, 2023 were estimated using a deterministic method. The estimation of reserves involves two distinct determinations. The first determination results in the estimation of the quantities of recoverable oil & gas and the second determination results in the estimation of the uncertainty associated with those estimated quantities in accordance with the definitions established under SEC rules. The process of estimating the quantities of recoverable oil & gas reserves relies on the use of certain generally accepted analytical procedures. These analytical procedures fall into three broad categories or methods:

- (1) performance-based methods,
- (2) volumetric-based methods and
- (3) analogy.

These methods may be used singularly or in combination by the reserve evaluator in the process of estimating the quantities of reserves. The proved reserves for our properties were estimated by performance methods, analogy or a combination of both methods. Performance methods include, but may not be limited to, decline curve analysis, which utilized extrapolations of available historical production data. The analogy method was used where there were inadequate historical performance data to establish a definitive trend and where the use of production performance data as a basis for the reserve estimates was considered to be inappropriate.

To estimate economically recoverable proved reserves and related future net cash flows, our engineering team considered many factors and assumptions, including the use of reservoir parameters derived from geological, geophysical and engineering data which cannot be measured directly, economic criteria based on current costs and the SEC pricing requirements and forecasts of future production rates. To establish reasonable certainty with respect to our estimated proved reserves, the technologies and economic data used in the estimation of our proved reserves included production and well test data, downhole completion information, geologic data, electrical logs, and radioactivity logs.

Our 2022 Excluding our share of proved reserves held by AllDale III, our 2023 year-end estimate of proved reserves were prepared by our internal engineering team. Our engineering team works to ensure the integrity, accuracy, and timeliness of the data used to calculate our estimated proved reserves. Approximately 95% of our total 2022 year end Our proved reserve resource estimates were audited by NSAI, CGA. Our engineering team met with NSAI CGA periodically during the period covered by the above referenced reserve report to discuss the assumptions and methods used in the reserve estimation process. Our engineering team provided historical information to NSAI CGA for our properties, such as oil & gas production, well test data, and realized commodity prices. Our engineering team also provided ownership interest information with respect to our properties. Our internal petroleum engineer, primarily responsible for overseeing the petroleum reserves preparation, has over 20 years of engineering and operations experience in the oil & gas sector and a Bachelor of Science in Petroleum Engineering.

The preparation of our proved reserve estimates are completed in accordance with our internal control procedures. These procedures, which are intended to ensure reliability of reserve estimations, include the following:

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- review and verification of historical data, which is based on actual production as reported by our operators; the Operators;
- verification of property ownership by our land department;
- review of all our reported proved reserves semi-annually including the review of all significant reserve changes and proved undeveloped reserves additions by our internal petroleum engineer;
- internally prepared reserve estimates compared to reserves audit by NSAI, CGA;
- review of changes in reserves semi-annually by our internal petroleum engineer and by senior management; and
- no employee's compensation is tied to the amount of reserves booked.

NSAI, CGA, an independent third-party petroleum engineering firm, does not own an interest in any of our properties and is not employed on a contingent basis. When compared on a well-by-well basis, some of our estimates are greater and some are less than the NSAI CGA estimates. NSAI CGA is satisfied with our methods and procedures used to prepare the December 31, 2022 December 31, 2023 reserve estimates and future revenue, and noted nothing of an unusual nature that would cause NSAI CGA to take exception with the estimates, in the aggregate, prepared by us. NSAI's CGA's audit report with the respect to our proved reserve estimates as of December 31, 2022 December 31, 2023 is included as an exhibit to this Annual Report on Form 10-K.

NSAI CGA was founded in 1961 and performs consulting petroleum engineering services under Texas Board of Professional Engineers Registration No. F-2699, F-693. Within NSAI, CGA, the technical persons person primarily responsible for auditing the estimates meet meets or exceed the education, training, and experience requirements set forth in the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers; both are Engineers and is proficient in judiciously applying industry-standard practices to engineering and geoscience evaluations as well as applying SEC and other industry reserves definitions and guidelines.

Acreage Concentration

Our mineral interests, which include both proved reserves discussed above and unproved reserves, are primarily located in three basins, which are also our areas of focus for future operator development. These include the Permian (Delaware and Midland), Anadarko (SCOOP/STACK) and Williston (Bakken) Basins. Below is a chart reflecting our gross, net mineral and net royalty acreage associated with our mineral interests in each of our primary basins as of December 31, 2022 December 31, 2023.

Basin	Developed Acreage			Undeveloped Acreage			Developed Acreage			Undeveloped Ac	
	Gross	Net Mineral	Net Royalty	Gross	Net Mineral	Net Royalty	Gross	Net Mineral	Net Royalty	Gross	Net Mineral
Permian Basin	296,336	8,208	10,724	538,434	14,913	20,053	378,510	11,114	14,894	517,804	15,204
Anadarko Basin	150,007	5,494	7,849	287,130	10,517	15,007	179,993	6,489	9,199	295,884	10,667
Williston Basin	130,054	2,083	2,724	96,962	1,553	2,044	153,772	2,541	3,363	84,118	1,390
Other	25,200	918	1,152	40,337	1,470	1,823	28,174	1,027	1,296	37,363	1,362
Total	601,597	16,703	22,449	962,863	28,453	38,927	740,449	21,171	28,752	935,169	28,623

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Oil & Gas Production Prices and Production Costs

For the year ended December 31, 2022 December 31, 2023, 43.9% 45.5% of our production and 66.1% 79.4% of our oil & gas revenues were related to oil production and sales, respectively. The following table sets forth information regarding production of oil & gas including our equity investment in AllDale III and certain price and cost information for each of the periods indicated:

	Year Ended December 31,			Year Ended December 31,		
	2022	2021	2020	2023	2022*	2021*
Production:						
Oil (MBbls)	1,017	825	948	1,462	1,104	929
Natural gas (MMcf)	4,838	3,490	3,635	6,161	5,226	3,881

Natural gas liquids (MBbls)	496	357	337	726	541	402
BOE (MBbls)	2,319	1,764	1,892	3,215	2,516	1,978
Average Realized Prices:						
Oil (per Bbl)	\$ 94.73	\$ 66.84	\$ 39.04	\$ 77.40	\$ 94.76	\$ 66.19
Natural gas (per Mcf)	\$ 6.28	\$ 3.85	\$ 1.52	\$ 2.03	\$ 6.29	\$ 3.86
Natural gas liquids (per Bbl)	\$ 38.27	\$ 28.51	\$ 9.08	\$ 23.15	\$ 38.53	\$ 28.58
BOE (MBbls)	\$ 62.82	\$ 44.65	\$ 24.10	\$ 44.32	\$ 62.94	\$ 44.47
Unit cost per BOE:						
Production and ad valorem taxes	\$ 5.50	\$ 4.46	\$ 2.64	\$ 4.37	\$ 5.61	\$ 4.54

* Recast to reflect the JC Resources Acquisition as if we, rather than JC Resources, acquired the mineral interests in 2019. Please see "Item 8. Financial Statement and Supplemental Data—Note 1 – Organization and Presentation and Note 3 – Acquisitions" for more information.

Productive Wells

As of **December 31, 2022** **December 31, 2023**, **8,203** **10,795** gross productive horizontal wells and **5,746** **5,769** gross productive vertical wells were located on the acreage in which we have a mineral interest. Of our productive horizontal wells, **1,175** **992** are considered natural gas wells, while the remaining **7,028** **9,803** primarily produce oil. Productive wells consist of producing wells and wells capable of production, including natural gas wells awaiting pipeline connections to commence deliveries and oil wells awaiting connection to production facilities. We do not own any material working interests in any wells. Accordingly, we do not own any net wells.

Drilling Results

As a holder of mineral interests, we generally are not provided with information as to whether any wells drilled on the acreage associated with our mineral interests are classified as exploratory or as developmental wells. We are not aware of any dry holes drilled on the acreage associated with our mineral interests during the relevant period.

ITEM 3. LEGAL PROCEEDINGS

From time to time, we are party to litigation matters incidental to the conduct of our business. It is the opinion of management that the ultimate resolution of our pending litigation matters will not have a material adverse effect on our financial condition, results of operation or liquidity. However, we cannot assure you that disputes or litigation will not arise or that we will be able to resolve any such future disputes or litigation in a satisfactory manner. The information under "General Litigation" and "Other" in "Item 8. Financial Statements and Supplementary Data—Note 23 21 – Commitments and Contingencies" is incorporated herein by this reference.

Litigation was initiated in November 2019 in the U.S. District Court for the Western District of Kentucky (*Branson v. Webster County Coal, LLC et al.*) against certain of our subsidiaries in which the plaintiffs allege violations of the Fair Labor Standards Act and **Kentucky Wage and Hour Act state law** due to alleged failure to compensate for time "donning" and "doffing" equipment and to account for certain bonuses in the calculation of overtime rates and pay. **The plaintiffs seek class and collective action certification.** A similar lawsuit was initiated in March 2020 in the U.S. District Court for the Eastern District of Kentucky (*Brewer v. Alliance Coal, LLC, et al.*). **Collectively, the plaintiffs of these two lawsuits allege damages ranging from approximately \$22.2 million to \$143.7 million.** Subsequently, four additional lawsuits making similar allegations were initiated against certain of our subsidiaries: filed March 4, 2021 in the Circuit Court for Hopkins County, Kentucky (*Johnson v. Hopkins County Coal, LLC, et al.*); filed April 6, 2021 in the U.S. District Court for the Northern District of West Virginia (*Rettig v. Mettiki Coal WV, LLC, et al.*); filed April 9, 2021 in the U.S. District Court for the Southern District of Illinois (*Cates v. Hamilton County Coal, LLC, et al.*); and filed April 13, 2021 in the U.S. District Court for the Southern District of Indiana (*Prater v. Gibson County Coal, LLC, et al.*). **The plaintiffs in these cases seek class and collective action certification, which we oppose, and the courts have not yet made**

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cases definitive final rulings on these issues. The plaintiffs seek to recover alleged compensatory, liquidated and/or exemplary damages for the alleged underpayment, and costs and fees that potentially may be recoverable under applicable law. We believe our ultimate exposure, if any, will not be material to our results of operations or financial position; however, if our current belief as to the merit of the claims made in these lawsuits are without merit and we are defending is not upheld, it is reasonably possible that the litigation vigorously. We do not believe this litigation will have ultimate resolution of these matters could result in a potential loss that may be material adverse effect on to our business, financial position, or results of operations.

ITEM 4. MINE SAFETY DISCLOSURES

Information concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K (17 CFR 229.104) is included in Exhibit 95.1 to this Annual Report on Form 10-K.

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PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED UNITHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

The common units representing limited partners' interests are listed on the NASDAQ Global Select Market under the symbol "ARLP." The common units began trading on August 20, 1999. There were approximately 37,516 53,108 record holders of common units at December 31, 2022 December 31, 2023.

Available cash with respect to each quarter may, at the discretion of our general partner, be distributed to the limited partners as of a record date selected by the general partner. "Available cash," as defined in our partnership agreement, generally means, with respect to any quarter, all cash on hand at the end of each quarter, plus working capital borrowings after the end of the quarter, less cash reserves in the amount necessary or appropriate in the reasonable discretion of our general partner to (a) provide for the proper conduct of our business, (b) comply with applicable law or any debt instrument or other agreement of ours or any of our affiliates, and (c) provide funds for distributions to unitholders for any one or more of the next four quarters.

Equity Compensation Plans

The information relating to our equity compensation plans required by Item 5 is incorporated by reference to such information as set forth in "Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Unitholder Matters" contained herein.

Unit Repurchase Program

On May 31, 2018, ARLP announced that the Board of Directors approved the establishment of a unit repurchase program authorizing ARLP to repurchase up to \$100 million of its outstanding limited partner common units. In January 2023, the Board of Directors authorized a \$93.5 million increase to the unit purchase program, which had \$6.5 million of available capacity at the time. The unit repurchase program is intended to enhance ARLP's ability to achieve its goal of creating long-term value for its unitholders and provides another means, along with quarterly cash distributions, of returning cash to unitholders. The program has no time limit and ARLP may repurchase units from time to time in the open market or other privately negotiated transactions. The unit repurchase program authorization does not obligate ARLP to repurchase any dollar amount or number of units, and repurchases may be commenced or suspended from time to time without prior notice.

During the three months ended December 31, 2022 December 31, 2023, we did not repurchase and retire any units. Since the inception of the unit repurchase program, we have repurchased and retired 5,460,639 6,390,446 units at an average unit price of \$17.12 \$17.67 for an

aggregate purchase price of \$93.5 million \$112.9 million. The remaining authorized amount for unit repurchases under this program was \$6.5 million \$80.6 million at December 31, 2022 December 31, 2023.

In January 2023, the Board of Directors authorized a \$93.5 million increase to the unit repurchase program. As a result, we are authorized to repurchase up to a total of \$100.0 million of ARLP's limited partner common units. As of February 24, 2023, we have repurchased and retired 856,629 units at an average unit price of \$21.15 for an aggregate purchase price of \$18.1 million since we increased the amount authorized under the unit repurchase program.

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ITEM 6. [Reserved]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

General

The following discussion of our financial condition and results of operations should be read in conjunction with the historical financial statements and notes thereto included in "Item 8. Financial Statements and Supplementary Data" where you can find more detailed information in "Note 1 – Organization and Presentation" and "Note 2 – Summary of Significant Accounting Policies" regarding the basis of presentation supporting the following financial information.

Executive Overview

Organization

We are a diversified natural resource company that generates operating and royalty income from the production and marketing of coal to major domestic utilities, industrial users and international utilities and industrial users customers, as well as royalty income from oil & gas mineral interests located in strategic producing regions across the United States. In addition, we continue to position ourselves as a reliable energy provider for the future as we pursue opportunities that support the advancement of energy and related infrastructure. We intend to pursue strategic investments that leverage our core competencies and relationships with electric utilities, industrial customers, and federal and state governments.

We are currently the second largest coal producer in the eastern United States with seven operating underground mining complexes near many of the major eastern utility generating plants and on major coal hauling railroads in Illinois, Indiana, Kentucky, Maryland, Pennsylvania, and West Virginia, as well as a coal-loading terminal in Indiana. Two of our mines also have loading facilities located on the Ohio River.

In addition to our mining operations, Alliance Resource Properties owns or leases substantially all of our coal mineral resources and the majority of our coal mineral reserves and resources in the Illinois and Appalachia Basins that are (a) leased to our internal mining complexes or (b) near other internal and external coal mining operations. The oil & gas mineral operations but not yet leased.

We currently own minerals interests we own are in approximately 67,700 net royalty acres in premier oil & gas producing regions of the United States, primarily in the Permian (Delaware and Midland), Anadarko (SCOOP/STACK) and Williston (Bakken) basins. Our investments in energy and infrastructure consist of a variety of businesses such as electric vehicle charging stations and electric motors, in addition to private equity investments in renewable energy, the electrification of our economy or the efficient use of energy.

Our mining operations are located near many of the major eastern utility generating plants and on major coal hauling railroads in the eastern United States. Our River View and Tunnel Ridge mines and Mt. Vernon transloading facility are located on the Ohio River. As of December 31, 2022, we had approximately 580.7 million tons of proven and probable coal mineral reserves and 1.17 billion tons of measured, indicated and inferred coal mineral resources in Illinois, Indiana, Kentucky, Maryland, Pennsylvania, and West Virginia. Substantially, all of our measured, indicated and inferred coal mineral resources and 464.8 million tons of these coal mineral reserves are owned or leased by Alliance Resource Properties, our land holding company. We believe we control adequate reserves to implement our currently contemplated mining plans. Please see "Item 1. Business—Coal Mining Operations" in our Annual Report on Form 10-K for the year ended December 31, 2022 for further discussion of our mines.

We currently own minerals interests in approximately 61,400 net royalty acres which provide basins providing us with diversified exposure to industry-leading operators consistent with our general strategy to grow our oil & gas mineral interest business. We market our mineral interests for lease to operators and generate royalty income from leasing and development of those mineral interests. As of December 31, 2022, we had 20,596 MBOE of proved oil & gas reserves.

On September 9, 2022, we acquired approximately 394 oil & gas net royalty acres in the Delaware Basin from Belvedere. On October 26, 2022, we acquired approximately 3,928 oil & gas net royalty acres in the Midland and Delaware Basins from Jase. See "Item 8. Financial Statements and Supplementary Data—Note 3 – Acquisitions" for more information about the Belvedere and Jase Acquisitions.

On January 27, 2023, we entered into a one-year collaborative agreement with a third party effective January 1, 2023, committing up to \$35.0 million for the acquisition of oil & gas mineral interests in the Midland and Delaware basins.

On February 22, 2023, we acquired approximately 2,682 oil & gas net royalty acres in the Delaware Basin from JC Resources, a related-party entity owned by Mr. Craft.

We have invested \$66.1 million in energy and infrastructure opportunities including our investments in Francis, Infinitum, NGP ET IV, and Ascend which are in the advancement businesses of, respectively, electric vehicle charging stations, electric motor manufacturing, private equity investments in renewable energy, the electrification of our economy or the efficient use of energy, and related infrastructure opportunities including Francis, Infinitum, the manufacturing and NGP ETP IV, and as recycling of December 31, 2022 have a remaining commitment of \$20.9 million to

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NGP ETP IV. See "Item 8. Financial Statements and Supplementary Data – Note 14 – Investments" sustainable, engineered battery materials for additional information on Francis, Infinitum and NGP ETP IV. electric vehicles.

Our results of operations could be impacted by variability in coal sales prices in addition to prices for items that are used in coal production such as steel, electricity and other supplies, unforeseen geologic conditions or mining and processing equipment failures and unexpected maintenance problems, by the availability or reliability of transportation for coal shipments and by other supply chain shortage issues or disruptions. Moreover, the mining regulatory environment in which we operate has grown increasingly stringent as a result of federal and state legislative and regulatory initiatives. Additionally, our results of operations could be impacted by our ability to obtain and renew permits necessary for our operations, secure or acquire coal mineral reserves and resources, or find replacement buyers for coal under contracts with comparable terms to existing contracts. As outlined in Please see "Item 1. Business—Environmental, Health, Business and Safety Regulations", a variety of measures taken by regulatory agencies Item 2. Properties" in the United States and abroad in response to the perceived threat from climate change attributed to GHG emissions could substantially increase compliance costs for us and our customers and reduce demand for fossil fuels including coal which could materially and adversely impact our results of operations.

We are dependent Annual Report on third-party operators Form 10-K for the exploration, development and production year ended December 31, 2023 for a more detailed discussion of our oil & gas mineral interests; therefore, the success and timing of drilling and development of our oil & gas mineral interests depend on a number of factors outside our control. Some of those factors include the operators'

capital costs for drilling, development and production activities, the operators' ability to access capital, the operators' selection of counterparties for the marketing and sale of production and oil & gas prices in general, among others. The operations on the properties in which we hold oil & gas mineral interests are also subject to various governmental laws and regulations. Compliance with these laws and regulations could be burdensome or expensive for these operators and could result in the operators incurring significant liabilities, either of which could delay production and may ultimately impact the operators' ability and willingness to develop the properties in which we hold oil & gas mineral interests, businesses.

For additional information regarding some of the risks and uncertainties that affect our business and the industries in which we operate, see "Item 1A. Risk Factors".

Our principal expenses related to the production of coal are labor and benefits, equipment, materials and supplies, maintenance, royalties and excise taxes in addition to the capital required to maintain our current levels of production. We employ a totally union-free workforce. Many of the benefits of our union-free workforce are related to higher productivity and are not necessarily reflected in our direct costs. In addition, transportation costs, which are mostly borne by our customers, may be substantial and are often the determining factor in a coal consumer's contracting decision. The principal expenses related to our oil & gas minerals interests business are production and ad valorem taxes. For our coal royalty interests business, the principal expenses are royalty expenses and production and ad valorem taxes.

Our primary business strategy is to create sustainable, capital-efficient growth in available cash to maximize unitholder returns by:

- expanding our operations by adding and developing mines and coal mineral reserves and resources in existing, adjacent or neighboring properties;
- extending the lives of our current mining operations through the acquisition and development of coal mineral reserves and resources using our existing infrastructure;
- continuing to make productivity improvements to remain a low-cost producer in each region in which we operate;
- strengthening our position with existing and future customers by offering a broad range of coal qualities, transportation alternatives and customized services;
- developing strategic relationships to take advantage of opportunities within the coal and oil & gas industries and in other industries inside and outside of the Maser Limited Partnership sector;
- continuing to make investments in oil & gas mineral interests and coal royalty interests in various geographic locations within producing basins in the continental United States; and
- continuing to identify and make strategic investments in the advancement of energy and related infrastructure opportunities to leverage our core competencies.

As of **December 31, 2022** **December 31, 2023**, we had four reportable segments: Illinois Basin Coal Operations, Appalachia Coal Operations, Oil & Gas Royalties and Coal Royalties. We also have an "all other" category referred to as Other, Corporate and Elimination. Our two **Coal Operations** **coal operations** reportable segments correspond to major coal producing regions in the eastern United States with similar economic characteristics including coal quality, geology, coal marketing opportunities, mining

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and transportation methods and regulatory issues. Our Oil & Gas Royalties reportable segment includes our oil & gas mineral interests. Our Coal Royalties reportable segment includes coal mineral reserves and resources owned or leased by Alliance Resource **Properties, which are either a) leased to our mining complexes or (b) near our coal mining operations but not yet leased. Properties.**

- The Illinois Basin Coal Operations reportable segment includes (a) the Gibson **County Coal** mining complex, (b) the Warrior mining complex, (c) the River View mining complex and (d) the Hamilton mining complex. The segment also includes our Mt. Vernon coal-loading terminal in Indiana which operates on the Ohio River, **Mid-America Carbonates, LLC ("MAC")** **MAC** and other support services, and our **non-operating** **idled or closed** mining complexes.

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- The Appalachia Coal Operations reportable segment includes (a) the Mettiki mining complex, (b) the Tunnel Ridge mining complex and (c) the MC Mining mining complex.
- The Oil & Gas Royalties reportable segment includes oil & gas mineral interests held by AR Midland and AllDale I & II and includes Alliance Minerals' Minerals as well as our equity method investment interests in AllDale III.
- The Coal Royalties reportable segment includes substantially all of our coal mineral resources and the majority of our coal mineral reserves and resources owned or leased by Alliance Resource Properties that are (a) leased to certain of our mining complexes in both the Illinois Basin Coal Operations and Appalachia Coal Operations reportable segments or (b) located near our operations and external mining operations. Properties. Approximately two-thirds 60% of the coal sold by our Coal Operations' coal operations' mines is was leased from our Coal Royalties entities.
- Other, Corporate and Elimination includes marketing and administrative activities, the Matrix Group, our investments in Francis, Infinitum, NGP ET IV and NGP ETP IV (see "Item 8. Financial Statements and Supplementary Data—Note 14 – Investments"), Ascend, Wildcat Insurance, which assists the ARLP Partnership with its insurance requirements, AROP Funding LLC and Alliance Resource Finance Corporation (both discussed in "Item 8. Financial Statements and Supplementary Data—Data – Note 8 6 – Long-Term Debt") and other miscellaneous activities. The eliminations included in Other, Corporate and Elimination primarily represent the intercompany coal royalty transactions described above between our Coal Royalties reportable segment and our coal operations' mines.

Oil & Gas Acquisitions

During 2023, through the JC Resources and Skyland Acquisitions and other ground game acquisitions, we acquired approximately 6,443 oil & gas net royalty acres in the Delaware, Anadarko and Williston basins. These acquisitions enhanced our ownership position in these basins and furthered our business strategy to grow our Oil & Gas Royalties segment through accretive acquisitions. See "Item 8. Financial Statements and Supplementary Data – Note 3 – Acquisitions" for more information.

Growth Investments and Opportunities

During 2023, we invested \$49.6 million in Infinitum and Ascend. This brings our total investment in Francis, Infinitum, NGP ET IV and Ascend to \$119.1 million with a remaining commitment of \$18.4 million to NGP ET IV. See "Item 8. Financial Statements and Supplementary Data – Note 12 – Equity Investments" for additional information on Francis, Infinitum, NGP ET IV and Ascend.

Risks and Uncertainties

We face a variety of risks and uncertainties that management considers in the operation and planning of our businesses, which could affect our financial position and results of operations. For additional information regarding our risks and uncertainties that affect our business and the industries in which we operate, see "Item 1A. Risk Factors".

Business Strategy

Our primary business strategy is to create sustainable, capital-efficient growth in available cash to maximize unitholder returns by:

- expanding our coal operations by adding and developing mines and coal mineral reserves and resources in existing, adjacent or neighboring properties;
- extending the lives of our current mining operations through the acquisition and development of coal mineral reserves and resources using our existing infrastructure;
- continuing to make productivity improvements to remain a low-cost coal producer in each region in which we operate;
- strengthening our position with existing and future customers by offering a broad range of coal qualities, transportation alternatives and customized services;
- developing strategic relationships to take advantage of opportunities within the coal and oil & gas industries and in other industries inside and outside of the Master Limited Partnership sector;
- continuing to make investments in oil & gas mineral interests in various geographic locations within producing basins in the continental United States;

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- strengthen and expand our technology company, Matrix Group, as we continue to develop and market industrial, mining and technology products and services worldwide; and
- continuing to identify and make strategic investments in the advancement of energy and related infrastructure opportunities to leverage our core competencies and build platforms for future lines of business with long-term growth and cash flow generation.

How We Evaluate Our Performance

Our management uses a variety of financial and operational measurements to analyze our performance. Primary measurements include the following: (1) raw and saleable tons produced per unit shift; (2) coal sales price per ton; (3) (2) BOE sold; (4) (3) price per BOE; (5) (4) coal royalty tons sold; (6) (5) coal royalty revenue per ton; (7) (6) Segment Adjusted EBITDA Expense per ton; (8) (7) EBITDA; and (9) (8) Segment Adjusted EBITDA.

Raw and Saleable Tons Produced per Unit Shift. We review raw and saleable tons produced per unit shift as part of our operational analysis to measure the productivity of our operating segments, which is significantly influenced by mining conditions and the efficiency of our preparation plants. Our discussion of mining conditions and preparation plant costs are found below under "—Analysis of Historical Results of Operations" and therefore provides implicit analysis of raw and saleable tons produced per unit shift.

Coal Sales Price per Ton. Ton

We define coal sales price per ton as total coal sales divided by tons sold. We review coal sales price per ton to evaluate marketing efforts and for market demand and trend analysis.

Oil & gas BOE sold.

We monitor and analyze our BOE sales volumes from the various basins that comprise our portfolio of mineral interests. We also regularly compare projected volumes to actual volumes reported and investigate unexpected variances.

Price per BOE. BOE

We define price per BOE as total oil & gas royalties divided by BOE produced. We review price per BOE to evaluate performance against budget and for trend analysis.

Coal Royalty Tons sold.

We monitor and analyze our coal royalty sales volumes from our various mining subsidiaries for coal leased by Alliance Resource Properties for consistency with our Coal Operations coal operations segments and for trend analysis.

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Coal Royalty Revenue per Ton. Ton

We define coal royalty revenue per ton as total coal royalties divided by royalty tons sold. We review coal royalty revenue per ton to evaluate consistency with our Coal Operations coal operations segments and for trend analysis.

Segment Adjusted EBITDA Expense per Ton. Ton

We define Segment Adjusted EBITDA Expense per ton (a non-GAAP financial measure) as the sum of operating expenses, coal purchases and other expense divided by total tons sold. We review Segment Adjusted EBITDA Expense per ton for cost trends.

EBITDA. EBITDA

We define EBITDA (a non-GAAP financial measure) as net income attributable to ARLP before net interest expense, income taxes and depreciation, depletion and amortization. EBITDA is used as a supplemental financial measure by our management and by external users of our financial statements such as investors, commercial banks, research analysts and others. We believe that the presentation of EBITDA provides useful information to investors regarding our performance and results of operations because EBITDA, when used in conjunction with related Generally Accepted Accounting Principles ("GAAP") GAAP financial measures, (i) provides additional information about our core operating performance and ability to generate and distribute cash flow, (ii) provides investors with the financial analytical framework upon which we base financial, operational, compensation and planning decisions and (iii) presents a measurement that investors, rating agencies and debt holders have indicated is useful in assessing us and our results of operations.

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Segment Adjusted EBITDA. EBITDA

We define Segment Adjusted EBITDA (a non-GAAP financial measure) as net income attributable to ARLP before net interest expense, income taxes, depreciation, depletion and amortization and general and administrative expense. Management therefore is able to focus solely on the evaluation of segment operating profitability as it relates to our revenues and operating expenses, which are primarily controlled by our segments.

Analysis of Historical Results of Operations – 2023 Compared with 2022

Consolidated Information

2022 Compared with 2021 Total Revenues

Total revenues increased 53.3% 6.1% to a record \$2.41 billion \$2.57 billion in 2023 compared to \$2.42 billion in 2022 primarily due to higher coal sales revenues.

Total operating expenses

Total operating expenses increased to \$1.89 billion in 2023 compared to \$1.72 billion in 2022 due primarily to the sale of higher cost purchased coal and increased per ton costs on certain expense items discussed in more detail below.

Net income attributable to ARLP

Increased revenues and lower income tax expense more than offset higher total operating expenses in 2023, resulting in record net income attributable to ARLP of \$630.1 million, or \$4.81 per basic and diluted limited partner unit for 2023, compared to \$586.2 million, or \$4.39

per basic and diluted limited partner unit, for 2022.

Coal sales

Coal sales increased \$108.0 million or 5.1% to \$2.21 billion for 2023 from \$2.10 billion for 2022. The increase reflects the benefit of higher average coal sales prices, which contributed \$175.7 million in additional coal sales, partially offset by lower tons sold, which reduced coal sales by \$67.7 million. Higher price realizations in domestic markets drove coal sales prices higher by 8.6% in 2023 to \$64.17 per ton sold, compared to \$59.07 per ton sold during 2022.

Coal - Segment Adjusted EBITDA Expense

Beginning in 2023, we redefined Coal - Segment Adjusted EBITDA Expense to reflect the activity of Alliance Coal, which is the holding company for our coal mining operations. We have retrospectively adjusted Coal - Segment Adjusted EBITDA Expense in prior periods to be on the same basis.

Segment Adjusted EBITDA Expense for our coal operations increased 8.8% to \$1.39 billion, as a result of higher per ton costs. On a per ton basis, Segment Adjusted EBITDA Expense for our coal operations increased 12.4% to \$40.38 per ton sold in 2023 compared to \$35.91 per ton in 2022, primarily due to certain cost increases, which are discussed below by category:

- Labor and benefit expenses per ton produced, excluding workers' compensation, increased 14.6% to \$12.20 per ton in 2023 from \$10.65 per ton in 2022. The increase of \$1.55 per ton was primarily due to higher incentive benefits and direct labor costs at several mines.
- Material and supplies expenses per ton produced increased 2.6% to \$14.02 per ton in 2023 from \$13.67 per ton in 2022. The increase of \$0.35 per ton produced primarily reflects increases of \$0.13 per ton for safety related materials and supplies, \$0.11 per ton for various preparation plant expenses and \$0.09 per ton for ventilation related expenses, partially offset by a decrease of \$0.12 per ton for environmental and reclamation expenses other than longwall subsidence.
- Maintenance expenses per ton produced increased 27.6% to \$4.62 per ton in 2023 from \$3.62 per ton in 2022. The increase of \$1.00 per ton produced was primarily as a result of inflationary cost pressures.

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- Production taxes and royalty expenses per ton incurred as a percentage of coal sales prices and volumes increased \$0.64 per produced ton sold in 2023 compared to 2022 primarily as a result of higher price realizations and higher federal black lung excise tax as a result of the tax rate increasing effective October 1, 2022, partially offset by a favorable mix of tons sold mined in states without severance taxes.
- Outside coal purchases increased \$36.0 million in 2023 as a result of increased sales from purchased coal to meet contractual commitments at our Mettiki longwall operation which experienced challenging geological conditions that delayed development of a new district. Purchased coal generally costs more on a per ton basis than our produced coal.

For a definition of Segment Adjusted EBITDA Expense and related reconciliation to its comparable GAAP financial measure, please see below under "—Reconciliation of Non-GAAP Financial Measures."

Oil & gas royalties

Oil & gas royalty revenues decreased to \$137.8 million in 2023 compared to \$151.1 million for 2022. The decrease of \$13.3 million was primarily due to lower average sales price per BOE, which decreased by 29.4%, partially offset by higher BOE volumes.

Other revenues

Other revenues principally comprised Matrix Design sales, Mt. Vernon transloading revenues, oil & gas lease bonus revenues, and other miscellaneous sales and revenue activities. Other revenues increased to \$76.5 million in 2023 from \$52.8 million in 2022. The increase of \$23.7 million was primarily due to increased sales of mining technology products by our Matrix Design subsidiary.

Income tax expense

Income tax expense decreased to \$8.3 million for 2023 compared to \$54.0 million for 2022 primarily as a result of our recognition of a one-time non-cash income tax charge of \$37.3 million during 2022 in connection with the Tax Election.

Transportation revenues and expenses

Transportation revenues and expenses were \$142.3 million and \$113.9 million for 2023 and 2022, respectively. The increase of \$28.4 million was primarily attributable to increased average third-party transportation rates in 2023 and increased coal shipments for which we arrange third-party transportation. Transportation revenues are recognized when title to the coal passes to the customer and recognized in an amount equal to the corresponding transportation expenses.

Segment Adjusted EBITDA

Our 2023 Segment Adjusted EBITDA decreased \$20.4 million, or 2.0%, to \$1.01 billion from 2022 Segment Adjusted EBITDA of \$1.03 billion primarily as a result of higher operating expenses and outside coal purchases, partially offset by increased revenues.

For a definition of Segment Adjusted EBITDA and related reconciliation to its comparable GAAP financial measure, please see below under "—Reconciliation of Non-GAAP Financial Measures."

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Segment Information

	Year Ended December 31,			
	2023	2022 (1)	Increase (Decrease)	
	(in thousands)			
Segment Adjusted EBITDA				
Illinois Basin Coal Operations	\$ 514,118	\$ 420,684	\$ 93,434	22.2 %
Appalachia Coal Operations	330,723	426,402	(95,679)	(22.4)%
Oil & Gas Royalties	121,508	143,179	(21,671)	(15.1)%
Coal Royalties	41,163	38,809	2,354	6.1 %
Other, Corporate and Elimination (2)	4,661	3,495	1,166	33.4 %
Total Segment Adjusted EBITDA (3)	<u>\$ 1,012,173</u>	<u>\$ 1,032,569</u>	<u>\$ (20,396)</u>	(2.0)%
Coal - Tons sold				
Illinois Basin Coal Operations	24,724	24,110	614	2.5 %
Appalachia Coal Operations	9,718	11,479	(1,761)	(15.3)%
Total tons sold	<u>34,442</u>	<u>35,589</u>	<u>(1,147)</u>	(3.2)%
Coal sales				

Illinois Basin Coal Operations	\$ 1,364,901	\$ 1,219,943	\$ 144,958	11.9 %
Appalachia Coal Operations	845,309	882,286	(36,977)	(4.2)%
Total coal sales	<u>\$ 2,210,210</u>	<u>\$ 2,102,229</u>	<u>\$ 107,981</u>	5.1 %
Other revenues				
Illinois Basin Coal Operations	\$ 10,505	\$ 6,822	\$ 3,683	54.0 %
Appalachia Coal Operations	1,885	1,481	404	27.3 %
Oil & Gas Royalties	3,774	3,837	(63)	(1.6)%
Coal Royalties	42	56	(14)	(25.0)%
Other, Corporate and Elimination	60,244	40,622	19,622	48.3 %
Total other revenues	<u>\$ 76,450</u>	<u>\$ 52,818</u>	<u>\$ 23,632</u>	44.7 %
Segment Adjusted EBITDA Expense				
Illinois Basin Coal Operations	\$ 861,288	\$ 806,080	\$ 55,208	6.8 %
Appalachia Coal Operations	516,471	464,029	52,442	11.3 %
Oil & Gas Royalties	16,532	15,395	1,137	7.4 %
Coal Royalties	24,451	21,871	2,580	11.8 %
Other, Corporate and Elimination (2)	(14,024)	(23,497)	9,473	40.3 %
Total Segment Adjusted EBITDA Expense (3)	<u>\$ 1,404,718</u>	<u>\$ 1,283,878</u>	<u>\$ 120,840</u>	9.4 %
Oil & Gas Royalties				
Volume - BOE (4)	3,105	2,405	700	29.1 %
Oil & gas royalties	\$ 137,751	\$ 151,060	\$ (13,309)	(8.8)%
Coal Royalties				
Volume - Tons sold (5)	\$ 20,186	21,780	\$ (1,594)	(7.3)%
Intercompany coal royalties	65,572	\$ 60,624	4,948	8.2 %

(1) Recast for the JC Resources Acquisition. For more information, please read "Item 8. Financial Statements and Supplementary Data—Note 1 – Organization and Presentation."

(2) Other, Corporate and Elimination includes the elimination of intercompany coal royalty revenues and expenses between our Coal Royalties Segment and our coal operations segments in addition to the expenses for the other miscellaneous activities included in this category.

(3) For definitions of Segment Adjusted EBITDA and Segment Adjusted EBITDA Expense and related reconciliations to their respective comparable GAAP financial measures, please see below under "— Reconciliation of Non-GAAP Financial Measures."

(4) BOE for natural gas is calculated on a 6:1 basis (6,000 cubic feet of natural gas to one barrel).

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(5) Represents tons sold by our coal operations segments associated with coal reserves leased from our Coal Royalties Segment.

Illinois Basin Coal Operations – Segment Adjusted EBITDA increased 22.2% to \$514.1 million in 2023 from \$420.7 million in 2022. The increase of \$93.4 million was primarily attributable to higher coal sales, which increased 11.9% to \$1.36 billion in 2023 from \$1.22 billion in 2022, partially offset by increased operating expenses. The increase in coal sales reflects higher coal sales price per ton, which increased by 9.1% compared to 2022 reflecting increased domestic prices, and increased tons sold, which rose 2.5% in 2023 as a result of increased sales volumes at the Warrior, Hamilton and Gibson South mines. Segment Adjusted EBITDA Expense increased 6.8% to \$861.3 million in 2023 from \$806.1 million in 2022 primarily as a result of increased sales volumes and higher operating expenses per ton. Segment Adjusted EBITDA Expense per ton increased 4.2% or \$1.41 per ton sold to \$34.84 from \$33.43 per ton sold in 2022 primarily as a result of inflationary pressures on numerous expense items, including labor-related expenses and maintenance costs, and increased sales-related expenses due to higher price realizations, partially offset by lower expenses at our Hamilton mine, that experienced an unexpected outage during 2022.

Appalachia Coal Operations – Segment Adjusted EBITDA decreased 22.4% to \$330.7 million for 2023 from \$426.2 million in 2022. The decrease of \$95.5 million was primarily attributable to increased operating expenses and lower coal sales volumes. Coal sales volumes decreased 15.3% compared to 2022 as a result of lower production across the region due to lock outages, customer plant maintenance, reduced operating units at MC Mining, challenging geologic conditions that delayed development of a new district at our Mettiki longwall operation and increased longwall move days at our Tunnel Ridge mine. Coal sales prices increased by 13.2% compared to 2022 primarily due to increased domestic price realizations in the region. Segment Adjusted EBITDA Expense increased 11.3% to \$516.5 million in 2023 from \$464.0 million in 2022 due to higher per ton operating expenses, partially offset by lower volumes. Segment Adjusted EBITDA Expense per ton increased 31.5% to \$53.15 compared to \$40.42 per ton sold in 2022, as a result of lower volumes previously discussed, purchased coal and inflationary pressures on certain expense items, most notably labor-related expenses and materials and maintenance costs, and increased sales-related expenses due to higher price realizations.

Oil & Gas Royalties – Segment Adjusted EBITDA decreased to \$121.5 million for 2023 from \$143.2 million in 2022. The decrease of \$21.7 million was primarily due to lower average sales price per BOE, which decreased 29.4% to \$44.37 per BOE, partially offset by increased volumes in 2023, which increased by 29.1%. Higher BOE volumes during 2023 resulted from increased drilling and completion activities on our properties and additional volumes from oil & gas mineral interest acquisitions.

Coal Royalties – Segment Adjusted EBITDA increased 6.1% to \$41.2 million for 2023 from \$38.8 million in 2022. The \$2.4 million increase was a result of higher average royalty rates per ton, partially offset by reduced royalty tons sold.

Analysis of Historical Results of Operations – 2022 Compared with 2021

Consolidated Information

Total Revenues

Total revenues increased 53.2% to a record \$2.42 billion in 2022 compared to \$1.57 billion \$1.58 billion in 2021 primarily due to substantial increases in prices and volumes from coal operations and royalties and oil & gas royalties.

Total operating expenses

Total operating expenses increased to \$1.75 billion in 2022 compared to \$1.35 billion \$1.36 billion in 2021 due primarily to increased coal sales volumes and ongoing inflationary cost pressures.

Net income attributable to ARLP

Higher revenues, partially offset by increased total operating expenses and income tax expense, led to significantly higher net income attributable to ARLP, which rose 224.0% 220.7% to a record \$577.2 million \$586.2 million for 2022, or \$4.39 per basic and diluted limited partner unit, compared to \$178.2 million \$182.8 million, or \$1.36 per basic and diluted limited partner unit, for 2021.

	Year Ended December 31,		Year Ended December 31,	
	2022	2021	2022	2021
	(in thousands)		(per ton/BOE sold)	
Coal - Tons sold	35,589	32,268	N/A	N/A
Coal - Tons produced	35,477	32,207	N/A	N/A
Coal - Coal sales	\$ 2,102,229	\$ 1,386,923	\$ 59.07	\$ 42.98
Coal - Segment Adjusted EBITDA Expense (1) (2)	\$ 1,307,236	\$ 975,839	\$ 36.73	\$ 30.24
Oil & Gas Royalties - BOE sold	2,208	1,663	N/A	N/A
Oil & Gas Royalties - Royalties (3)	\$ 138,402	\$ 74,988	\$ 62.70	\$ 45.08
Coal Royalties - Tons sold	21,780	20,247	N/A	N/A
Coal Royalties - Intercompany royalties	\$ 60,624	\$ 51,402	\$ 2.78	\$ 2.54

(1) For a definition of Segment Adjusted EBITDA Expense and related reconciliation to its comparable GAAP financial measure, please see below under "—Reconciliation of GAAP 'Operating Expenses' to non-GAAP 'Segment Adjusted EBITDA Expense.'"

- (2) Coal - Segment Adjusted EBITDA Expense is defined as consolidated Segment Adjusted EBITDA Expense excluding expenses of our Oil & Gas Royalties segment and is adjusted for intercompany transactions with our Coal Royalties segment.
- (3) Average sales price per BOE is defined as oil & gas royalty revenues excluding lease bonus revenue divided by total BOE sold.

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Coal sales

Coal sales. Coal sales increased \$715.3 million or 51.6% to \$2.10 billion for 2022 from \$1.39 billion for 2021. The increase was attributable to a price variance of \$572.6 million due to higher average coal sales prices and a volume variance

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of \$142.7 million resulting from increased tons sold. Coal sales price realizations increased by 37.4% in 2022 to a record \$59.07 per ton sold, compared to \$42.98 per ton sold during 2021, due to favorable market conditions. Improved coal demand in both the domestic and export markets during 2022 drove coal sales volumes higher by 10.3% to 35.6 million tons sold compared to 32.3 million tons sold in 2021.

Coal - Segment Adjusted EBITDA Expense.

Segment Adjusted EBITDA Expense for our coal operations increased 34.0% 33.2% to \$1.31 billion \$1.28 billion, as a result of higher coal sales volumes and inflationary cost pressures. On a per ton basis, Segment Adjusted EBITDA Expense for our coal operations increased 21.5% 20.8% to \$36.73 \$35.91 per ton sold in 2022 compared to \$30.24 \$29.73 per ton in 2021, primarily due to certain cost increases, which are discussed below by category:

- Labor and benefit expenses per ton produced, excluding workers' compensation, increased 14.9% 14.6% to \$10.95 \$10.65 per ton in 2022 from \$9.53 \$9.29 per ton in 2021. The increase of \$1.42 \$1.36 per ton was primarily due to higher labor costs at several mines.
- Material and supplies expenses per ton produced increased 34.3% 32.8% to \$14.10 \$13.67 per ton in 2022 from \$10.50 \$10.29 per ton in 2021. The increase of \$3.60 \$3.38 per ton produced primarily reflects inflationary cost pressures including increases of \$1.11 per ton for roof support, \$0.47 per ton for ventilation related expenses, \$0.47 \$0.43 per ton for power and fuel, \$0.39 per ton for contract labor used in the mining process, \$0.37 per ton for various preparation plant expenses and \$0.26 per ton for environmental and reclamation expenses other than longwall subsidence.
- Maintenance expenses per ton produced increased 31.4% 30.7% to \$3.64 \$3.62 per ton in 2022 from \$2.77 per ton in 2021. The increase of \$0.87 \$0.85 per ton produced was primarily as a result of inflationary cost pressures.
- Production taxes and royalty expenses per ton incurred as a percentage of coal sales prices and volumes increased \$0.68 per produced ton sold in 2022 compared to 2021 primarily as a result of higher price realizations, partially offset by a temporary decrease in the federal black lung excise tax, from January 1, 2022 to September 30, 2022, a favorable mix of tons sold mined in states with severance taxes and decreased excise taxes per ton resulting from a greater mix of export shipments.

Oil & gas royalties.

Oil & gas royalty revenues increased to \$138.4 million \$151.1 million in 2022 compared to \$75.0 million \$84.2 million for 2021. The increase of \$63.4 million \$66.9 million was primarily due to significantly higher sales price realizations per BOE and volumes in 2022.

Other revenues:

Other revenues principally comprised Matrix Design sales, Mt. Vernon transloading revenues and other miscellaneous sales and revenue activities. Other revenues increased to \$52.0 million \$52.8 million in 2022 from \$38.5 million in 2021. The increase of \$13.5 million \$14.3 million was primarily due to increased sales of mining technology products by our Matrix Design subsidiary.

Income tax expense. expense

Income tax expense increased to \$54.0 million for 2022 compared to \$0.4 million for 2021 as a result of Alliance Minerals' election during 2022 to be treated as a taxable entity for federal and state income tax purposes. We recognized a one-time non-cash income tax charge of \$37.3 million and income tax expense of \$17.5 million during 2022 related to Alliance Minerals. Please read "Item 8. Financial Statements and Supplementary Data—Note 9 7 – Income Taxes."

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Transportation revenues and expenses:

Transportation revenues and expenses were \$113.9 million and \$69.6 million for 2022 and 2021, respectively. The increase of \$44.3 million was primarily attributable to increased average third-party transportation rates in 2022 and increased coal shipments for which we arrange third-party transportation. Transportation revenues are recognized when title to the coal passes to the customer and recognized in an amount equal to the corresponding transportation expenses.

Segment Adjusted EBITDA

Our 2022 Segment Adjusted EBITDA increased \$475.2 million, or 85.2%, to \$1.03 billion from 2021 Segment Adjusted EBITDA of \$557.4 million primarily as a result of increased revenues, partially offset by higher operating expenses.

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Segment Information. Our 2022 Segment Adjusted EBITDA increased \$471.3 million, or 85.8%, to \$1.02 billion from 2021 Segment Adjusted EBITDA of \$549.3 million. Segment Adjusted EBITDA, tons sold, coal sales, other revenues, Segment Adjusted EBITDA Expense, oil & gas royalties, BOE volume, coal royalties and coal royalties tons sold by segment are as follows:

Year Ended December 31,			Year Ended December 31,		
2022	2021	Increase (Decrease)	2022 (1)	2021 (1)	Increase (Decrease)

Total Segment Adjusted									
EBITDA Expense (3)						\$ 1,283,878	\$ 953,757	\$ 330,121	34.6 %
Oil & Gas Royalties									
Volume - BOE (3)	2,208	1,663	545	32.8 %					
Volume - BOE (4)						2,405	1,877	528	28.1 %
Oil & gas royalties	\$ 138,402	\$ 74,988	\$ 63,414	84.6 %	\$ 151,060	\$ 84,183	\$ 66,877		79.4 %
Coal Royalties									
Volume - Tons sold (4)	\$ 21,780	20,247	\$ 1,533	7.6 %					
Volume - Tons sold (5)						21,780	20,247	1,533	7.6 %
Intercompany coal royalties	60,624	\$ 51,402	9,222	17.9 %	\$ 60,624	\$ 51,402	\$ 9,222		17.9 %

- (1) Recast for the JC Resources Acquisition. For more information, please read "Item 8. Financial Statements and Supplementary Data—Note 1 – Organization and Presentation."
- (2) Other, Corporate and Elimination includes the elimination of intercompany coal royalty revenues and expenses between our Coal Royalties Segment and our Coal Operations Segments coal operations segments in addition to the expenses for the other miscellaneous activities included in this category.
- (2) For definitions of Segment Adjusted EBITDA and Segment Adjusted EBITDA Expense and related reconciliations to their respective comparable GAAP financial measures, please see below under "—Reconciliation of GAAP 'net income' to non-GAAP 'Segment Adjusted EBITDA' and reconciliation of GAAP 'Operating Expenses' to non-GAAP 'Segment Adjusted EBITDA Expense, Non-GAAP Financial Measures.'"

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- (3) BOE for natural gas is calculated on a 6:1 basis (6,000 cubic feet of natural gas to one barrel).

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- (4) Represents tons sold by our Coal Operations Segments coal operations segments associated with coal mineral reserves leased from our Coal Royalties Segment.

Illinois Basin Coal Operations – Segment Adjusted EBITDA increased 58.6% to \$420.7 million in 2022 from \$265.3 million in 2021. The increase of \$155.4 million was primarily attributable to higher coal sales, which increased 39.6% to \$1.22 billion in 2022 from \$873.9 million in 2021, partially offset by increased operating expenses. The increase in coal sales reflects higher coal sales price per ton, which increased by 28.9% compared to 2021 due to increased domestic prices and significantly higher export prices and increased tons sold, which rose 8.3% in 2022 as a result of increased sales volumes primarily at our Gibson South mine. Segment Adjusted EBITDA Expense increased 31.4% to \$806.1 million in 2022 from \$613.3 million in 2021 primarily as a result of increased sales volumes and higher expenses per ton. Segment Adjusted EBITDA Expense per ton increased 21.3% or \$5.88 per ton sold to \$33.43 from \$27.55 per ton sold in 2021 primarily as a result of inflationary pressures on numerous expense items, including labor-related expenses and supply and maintenance costs, increased sales-related expenses due to higher price realizations, reduced recoveries across the region and lost production due to an unexpected outage caused by a thermal event which lasted approximately four weeks in addition to increased longwall move days at our Hamilton mine during 2022. There were no injuries and no damages to equipment as a result of the thermal event at Hamilton, and mining operations returned to normal production levels in December 2022.

Appalachia Coal Operations – Segment Adjusted EBITDA increased 147.0% to \$426.4 million for 2022 from \$172.6 million in 2021. The increase of \$253.8 million was primarily attributable to higher coal sales, which increased 72.0% to \$882.3 million in 2022 from \$513.0 million in 2021, due to increased prices and volumes. Coal sales prices increased by 49.9% compared to 2021 primarily due to substantially higher export price realizations and increased domestic pricing in the region. Coal sales volumes increased 14.7% compared to 2021 as a result of higher sales volumes from our Tunnel Ridge and MC Mining operations. Segment Adjusted EBITDA Expense increased 34.8% to \$464.0 million in 2022 from \$344.3 million in 2021 due to increased sales volumes and per ton expenses. Segment Adjusted EBITDA Expense per ton increased 17.4% to \$40.42 compared to \$34.42 per ton sold in 2021, as a result of inflationary pressures on numerous expense items, including labor-related expenses and supply and maintenance costs, increased sales-related expenses due to higher price realizations, reduced recoveries at our Mettiki and MC Mining operations and increased longwall move days at our Tunnel Ridge and Mettiki mines during 2022.

Oil & Gas Royalties – Segment Adjusted EBITDA increased to ~~\$131.2 million~~ ~~\$143.2 million~~ for 2022 from ~~\$68.8 million~~ ~~\$76.9 million~~ in 2021. The increase of ~~\$62.4 million~~ ~~\$66.3 million~~ was primarily due to higher sales price realizations, which increased ~~39.1%~~ ~~40.1%~~ to ~~\$62.70~~ ~~\$62.83~~ per BOE, and increased volumes in 2022. Volumes increased by ~~32.8%~~ ~~28.1%~~ to ~~2.2 million~~ ~~2.4 million~~ BOE sold in 2022 compared to ~~1.7 million~~ ~~1.9 million~~ BOE sold in 2021 as a result of increased drilling and completion activities and additional volumes from oil & gas mineral interest acquisitions completed during 2022.

Coal Royalties – Segment Adjusted EBITDA increased 16.9% to \$38.8 million for 2022 from \$33.2 million in 2021. The increase of \$5.6 million was a result of increased royalty tons sold and higher average royalty rates per ton.

2021 Compared with 2020

For discussion and analysis of 2021 compared to 2020, please refer to "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of our Annual Report on Form 10-K for the year ended December 31, 2021, which was filed with the SEC on February 25, 2022 and amended on August 26, 2022, and is incorporated by reference herein.

Reconciliation of GAAP "net income" to non-GAAP "Segment Adjusted EBITDA" and reconciliation of GAAP "Operating Expenses" to non-GAAP "Segment Adjusted EBITDA Expense" ~~Non-GAAP Financial Measures~~

Segment Adjusted EBITDA (a non-GAAP financial measure) is defined as net income attributable to ARLP before net interest expense, income taxes, depreciation, depletion and amortization and general and administrative expenses. Segment Adjusted EBITDA is a key component of consolidated EBITDA, which is used as a supplemental financial measure by management and by external users of our financial statements such as investors, commercial banks, research analysts and others. We believe that the presentation of EBITDA provides useful information to investors regarding our performance and results of operations because EBITDA, when used in conjunction with related GAAP financial measures, (i) provides additional information about our core operating performance and ability to generate and distribute cash flow, (ii) provides investors with the financial analytical framework upon which we base financial, operational, compensation

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and planning decisions and (iii) presents a measurement that investors, rating agencies and debt holders have indicated is useful in assessing us and our results of operations.

Segment Adjusted EBITDA is also used as a supplemental financial measure by our management for reasons similar to those stated in the previous explanation of EBITDA. In addition, the exclusion of corporate general and administrative expenses from consolidated Segment Adjusted EBITDA allows management to focus solely on the evaluation of segment operating profitability as it relates to our revenues and operating expenses, which are primarily controlled by our segments.

	Year Ended December 31,		Year Ended December 31,		
	2022	2021	2023	2022	2021
	(in thousands)		(in thousands)		
Net income	\$ 579,148	\$ 178,755	\$ 636,170	\$ 588,158	\$ 183,369
Noncontrolling interest	(1,958)	(598)	(6,052)	(1,958)	(598)
Net income attributable to ARLP	\$ 577,190	\$ 178,157	\$ 630,118	\$ 586,200	\$ 182,771
General and administrative	80,334	70,160	79,096	80,425	70,275
Depreciation, depletion and amortization	273,759	261,377	267,982	276,670	264,794
Interest expense, net	35,297	39,141	26,697	35,296	39,141
Income tax expense	53,978	417	8,280	53,978	417
Consolidated Segment Adjusted EBITDA	\$ 1,020,558	\$ 549,252	\$ 1,012,173	\$ 1,032,569	\$ 557,398

The following is a reconciliation of operating expenses, the most comparable GAAP financial measure, to consolidated Segment Adjusted EBITDA Expense:

[illegible]

	(in thousands)				
Operating expenses (excluding depreciation, depletion and amortization)	\$ 1,286,635	\$ 943,257	\$ 1,368,787	\$ 1,288,082	\$ 944,419
Outside coal purchases	151	6,372	36,149	151	6,372
Other expense (income)	(4,353)	3,020	(218)	(4,355)	2,966
Segment Adjusted EBITDA Expense	\$ 1,282,433	\$ 952,649	\$ 1,404,718	\$ 1,283,878	\$ 953,757

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Ongoing Acquisition Activities

Consistent with our business strategy, from time to time we engage in discussions with potential sellers regarding our possible acquisitions of certain assets and/or companies of the sellers. For more information on acquisitions, please read "Item 8. Financial Statements and Supplementary Data—Note 1 – Organization and Presentation," "Presentation" and "—Note 3 – Acquisitions" and "—Note 26 – Subsequent Events" of this Annual Report on Form 10-K.

Liquidity and Capital Resources

Liquidity

We have historically satisfied our working capital requirements and funded our capital expenditures, investments, contractual obligations and debt service obligations with cash generated from operations, cash provided by the issuance of debt or equity, borrowings under credit and securitization facilities and other financing transactions. We believe that existing cash balances, future cash flows from operations and investments, borrowings under credit facilities and cash provided from the issuance of debt or equity will be sufficient to meet our working capital requirements, capital expenditures and additional investments, debt payments, contractual obligations, commitments and distribution payments. Nevertheless, our ability to satisfy our working capital requirements and additional investments, to satisfy our contractual obligations, to fund planned capital expenditures, to service our debt obligations or to pay distributions will depend upon our future operating performance and access to and cost of financing sources, which will be affected by prevailing economic conditions generally, and in both the coal and oil & gas industries specifically, as well as other financial and business factors, some of which are beyond our control. Based on our recent operating cash flow results, current cash position, anticipated future cash flows and sources of financing that we expect to have available, we anticipate being in compliance with the covenants of the Credit Agreement and expect to have sufficient liquidity to fund our operations and growth strategies. However, to the extent operating cash flow or access to and cost of financing sources are materially different than expected, future covenant compliance or liquidity may be adversely affected. Please see "Item 1A. Risk Factors."

Oil & Gas Acquisitions —

During 2022, 2023, through the Belvedere JC Resources and Jase Skyland Acquisitions and other ground game acquisitions we acquired approximately 4,322 6,443 oil & gas net royalty acres in the Permian Basin Anadarko, Williston and Delaware Basins for an aggregate purchase price of \$92.6 million \$110.9 million. We funded these acquisitions with cash on hand.

On January 27, 2023, we entered into a one-year collaborative agreement with a third party effective January 1, 2023, committing up to \$35.0 million for the acquisition of oil & gas mineral interests in the Midland and Delaware basins. We plan to fund our commitment with cash on hand or cash generated from operations.

On February 22, 2023, we acquired approximately 2,682 oil & gas net royalty acres in the Delaware Basin from JC Resources, a related-party entity owned by Mr. Craft, for \$72.3 million, which was funded with cash on hand.

For additional information about our acquisitions of oil & gas assets, and the collaborative agreement, please see "Business — Oil & Gas Acquisitions."

New Venture Growth Investments — and Opportunities

During 2022, 2023, we made strategic investments of \$49.6 million in Infinium and Ascend with cash on hand. These investments in attractive opportunities that support are aligned with our strategy of furthering the advancement development of energy and related infrastructure including investments and investing in attractive opportunities that leverage our core competencies and build platforms for future lines of \$20 million in Francis, \$42 million in Infinium business with long-term growth and cash flow generation. Also, as of December 31, 2022, December 31, 2023, \$4.1 million (of we have funded \$6.6 million of a \$25 million commitment) commitment in NGP ETP IV, ET IV with cash on hand. For additional information about our energy and infrastructure investments, please see "Business — New Venture Investments, Growth Investments and Opportunities."

Unit Repurchase Program — In May 2018, the Board of Directors approved the establishment of a unit repurchase program authorizing us to repurchase up to \$100 million of ARLP common units. The program has no time limit and we may repurchase units from time to time in the open market or in other privately negotiated transactions. The unit repurchase program authorization does not obligate us to repurchase any dollar amount or number of units. Since inception through December 31, 2022, we had purchased units for a total of \$93.5 million under the program. During the year ended December 31, 2022, we did not repurchase and retire any units.

In January 2023, the Board of Directors authorized a \$93.5 million increase to the unit repurchase program. As a result, we are were authorized to repurchase up to a total of \$100.0 million of ARLP's limited partner common units. During the year ended December 31, 2023, we repurchased and retired 929,842 units at an average price of \$20.90 for an aggregate purchase price of \$19.4 million, leaving \$80.6 million authorized. Please read "Item 5. Market for Registrant's Common Equity, Related Unitholder Matters and Issuer Purchases of Equity Securities" for more information on the unit repurchase program.

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Revolving Credit Facility —

On January 13, 2023, Alliance Coal entered into a the Credit Agreement (the "Credit Agreement") with various financial institutions. The Credit Agreement provides for a \$425 million revolving credit facility, which includes a sublimit of \$15.0 million for swingline

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borrowings and permits the issuance of letters of credit of up to the full amount of \$425 million (the "Revolving Credit Facility"), and for a term loan in an aggregate principal amount of \$75 million (the "Term Loan"). The Credit Agreement matures on March 9, 2027, at which time the aggregate outstanding principal amount of all Revolving Credit Facility advances and all Term Loan advances are required to be repaid in full. The Credit Agreement will instead mature on January 30, 2025, if on that date our Senior Notes are still outstanding and Alliance Coal does not have liquidity of at least \$200 million. Interest is payable quarterly, with principal of the Term Loan due in quarterly installments equal to 6.25% of the original principal amount of the Term Loan beginning with the quarter ending June 30, 2023 and the balance payable at maturity. The Revolving Credit Facility replaces the \$459.5 million revolving credit facility ("Replaced Credit Facility"), which included a sublimit of \$125

million for the issuance of letters of credit and a sublimit of \$15.0 million for swingline borrowings, extended to the Intermediate Partnership under its Fifth Amended and Restated Credit Agreement, dated as of March 9, 2020 that would have expired on March 9, 2024. The Credit Agreement is guaranteed by ARLP and certain of its subsidiaries, including the Intermediate Partnership and most of the direct and indirect subsidiaries of Alliance Coal (the "Subsidiary Guarantors"), Coal. The Credit Agreement also is secured by substantially all of the assets of the Subsidiary Guarantors and Alliance Coal. For additional information on the Credit Agreement, please see "Item 8. Financial Statements and Supplementary Data—Note 8 6 – Long-Term Debt," "Debt".

Securitization Facility

In January 2024, we extended the term of our Securitization Facility to January 2025 and increased the borrowing availability under the facility to \$90.0 million. For additional information on the Securitization Facility please read "Item 8. Financial Statements and Supplementary Data—Note 6 – Long-Term Debt".

Mine Development Project

In 2022, we began development of River View's Mine No. 2 the Henderson County mine which continued through 2023 and continued in 2023 into 2024. We have deployed capital of \$69.3 million through 2023 and currently anticipate deploying capital of approximately \$42.0 million in 2023 and \$24.0 million \$36.5 million in 2024 to complete the project. We have funded our capital expenditures and expect to fund our remaining capital expenditures for the project with cash from operations or borrowings under our credit facilities. We anticipate the new mine will enable us to access an additional 109.5 million clean recoverable tons of coal.

Cash Flows

Cash provided by operating activities was \$791.8 million \$830.6 million for 2022 2023 compared to \$425.2 million \$802.3 million for 2021, 2022. The increase in cash provided by operating activities was primarily due to an increase increases in net income adjusted for non-cash items and favorable working capital changes primarily related to trade receivables. These increases were partially offset by unfavorable working capital changes primarily related to trade receivables, inventories, as well as miscellaneous other changes.

Net cash used in investing activities was \$559.7 million for 2023 compared to \$403.3 million for 2022 compared to \$142.7 million for 2021, 2022. The increase in cash used in investing activities was primarily attributable to an increase increases in capital expenditures, purchases acquisitions of equity securities, oil & gas reserves including the JC Resources and Skyland Acquisitions, and changes in accounts payable and accrued liabilities. These increases were partially offset by payments for the Belvedere and Jase Acquisitions, in 2022 and contributions to equity method investments partially offset by payments for the Boulders Acquisition in 2021, 2022. See "Item 8. Financial Statements and Supplementary Data—Note 3 – Acquisitions" for more information on the Boulders, Belvedere, Jase, JC Resources and Jase Skyland Acquisitions.

Net cash used in financing activities was \$214.9 million \$507.1 million for 2022 2023 compared to \$215.7 million \$225.4 million for 2021, 2022. The decrease increase in cash used in financing activities was primarily attributable to reduced increased cash distributions paid to unitholders, increased net borrowings payments on long-term debt, purchases of units under our unit repurchase program, debt issuance costs, and payments on equipment financings, for purchase of units and on the revolving credit and securitization facilities, mostly offset by increased distributions tax withholdings related to partners, settlements under deferred compensation plans.

Cash Requirements

We currently estimate our 2023 2024 annual cash requirements, including capital expenditures, scheduled payments on long-term debt, lease obligations, asset retirement obligation costs and workers' compensation and pneumoconiosis, to be in a range of \$757.0 million \$728.0 million to \$807.0 million \$778.0 million. Management anticipates having sufficient cash flow to meet 2023 2024 cash requirements with our December 31, 2022 December 31, 2023 cash and cash equivalents of \$296.0 million \$59.8 million and cash flows from operations, or borrowings under revolving credit and securitization facilities or other sources of financing that we expect to have available if necessary. We currently project average estimated annual maintenance capital expenditures over the next five years of approximately \$7.05 \$7.76 per ton produced. For additional information on our future cash requirements other than capital expenditures, please see "Item 8. Financial Statements and Supplementary Data—Note 8 6 – Long-Term Debt," "—Note 10 8 – Leases," "—Note 17 15 – Employee Benefit Plans," "—Note 20 18 – Asset Retirement Obligations," "—Note 21 19 – Accrued Workers' Compensation and Pneumoconiosis Benefits" and "—Note 23 21 – Commitments and Contingencies." We will

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continue to have significant cash requirements over the long term, which may require us to incur debt or seek additional equity capital. The availability and cost of additional capital will depend upon prevailing market conditions, the market price of our common units and several other factors over which we have limited control, as well as our financial condition and results of operations.

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We use a combination of surety bonds and letters of credit to secure our financial obligations for reclamation, workers' compensation and other obligations as follows as of **December 31, 2022** **December 31, 2023**:

	Workers'				Workers'			
	Reclamation	Compensation			Reclamation	Compensation		
	Obligation	Obligation	Other	Total	Obligation	Obligation	Other	Total
	(in millions)							

for which no insurance may be available and for which we have not reserved. In addition, the insurance industry has been subject to efforts by environmental activists to restrict coverages available for fossil-fuel companies.

Debt Obligations

See "Item 8. Financial Statements and Supplementary Data—Note 8.6 – Long-Term Debt" for a discussion of our debt obligations.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition, results of operations, liquidity and capital resources is based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of our consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts and disclosures in the consolidated financial statements. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances. We discuss these estimates and judgments with the **audit committee of the Board of Directors ("Audit Committee")** periodically. Actual results may differ from these estimates. We have provided a description of all significant accounting policies in the notes to our consolidated financial statements. The following critical accounting policies are materially impacted by judgments, assumptions and estimates used in the preparation of our consolidated financial statements:

Business Combinations and Goodwill

We account for business acquisitions using the purchase method of accounting. See "Item 8. Financial Statements and Supplementary Data—Note 3 – Acquisitions" for more information on the Belvedere, **Jase** and **Jase Skyland** Acquisitions. Assets acquired and liabilities assumed are recorded at their estimated fair values at the acquisition date. The excess of purchase price over fair value of net assets acquired, if any, is recorded as goodwill. Given the time it takes to obtain pertinent information to finalize the acquired business' balance sheet, it may be several quarters before we are able to finalize those initial fair value estimates. Accordingly, it is not uncommon for the initial estimates to be subsequently revised. The results of operations of acquired businesses are included in the consolidated financial statements from the acquisition date.

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For the Belvedere, **Jase** and **Jase Skyland** Acquisitions, we determined a fair value for the acquired mineral interests using an income approach consisting of discounted cash flow models. The assumptions used in the discounted cash flow models included estimated production, projected cash flows, forward oil & gas prices and risk adjusted discount rates.

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The only indefinite-lived intangible that the Partnership currently has is goodwill. Goodwill is not amortized, but subject to annual reviews for impairment at the reporting unit level. Goodwill is assessed for impairment more frequently if events or changes in circumstances indicate that it is more likely than not that goodwill is impaired. The reporting unit or units used to evaluate and measure goodwill for impairment are

determined primarily from the manner in which the business is managed or operated. A reporting unit is an operating segment or a component that is one level below an operating segment.

The Partnership computes the fair value of its reporting units primarily using the income approach (discounted cash flow analysis). The computations require management to make significant estimates. Critical estimates are used as part of these evaluations include, among other things, the discount rate applied to future earnings reflecting a weighted average cost of capital rate, and projected coal price assumptions. Our estimate of the forward coal sales price curve and future sales volumes are critical assumptions used in our discounted cash flow analysis.

A discounted cash flow analysis requires us to make various judgmental assumptions about sales, operating margins, capital expenditures, working capital and commodity sales prices. Assumptions about sales, operating margins, capital expenditures and commodity sales prices are based on our budgets, business plans, economic projections, and anticipated future cash flows. In determining the fair value of our reporting units, we are required to make significant judgments and estimates regarding the impact of anticipated economic factors on our business. The forecast assumptions used in our assessments make certain assumptions about future pricing, volumes and expected maintenance capital expenditures. Assumptions are also made for a "normalized" perpetual growth rate for periods beyond the long range financial forecast period.

During the first quarter of 2020, we considered whether an interim test of our consolidated goodwill of \$136.4 million was necessary. Our consolidated goodwill included \$132.0 million recorded in conjunction with our acquisition of the Hamilton mine on July 31, 2015. We assessed certain events and changes in circumstances, including a) adverse industry and market developments, including the impact of the COVID-19 pandemic, b) our response to these developments, including temporarily ceasing production at several mines, including our Hamilton mine and c) our actual performance during the quarter. After consideration of these events and changes in circumstances, we performed an interim test of the goodwill associated with Hamilton comparing Hamilton's carrying amount to its fair value.

We estimated the fair value of Hamilton using a discounted cash flow model. The assumptions used in the discounted cash flow model considered market conditions at the time of the assessment and our estimate of the mine's performance in future years based on the information available to us. The fair value of Hamilton was determined to be below its carrying amount (including goodwill) by more than the recorded balance of goodwill associated with the mine. Accordingly, we recognized an impairment charge of \$132.0 million consisting of the total carrying amount of goodwill associated with Hamilton. This impairment charge reduced our consolidated goodwill balance to \$4.4 million. During the first quarter of 2020, we also performed tests on our goodwill balance associated with MAC using a discounted cash flow model and concluded no impairment was necessary. There were no impairments of goodwill during 2022 or 2021.

Our estimates of fair value are sensitive to changes in variables, certain of which relate to broader macroeconomic conditions outside our control. As a result, actual performance in the near and longer-term could be different from these expectations and assumptions. This could be caused by events such as strategic decisions made in response to economic and competitive conditions and the impact of economic factors, such as over production in coal and low prices of natural gas or elevated energy prices due to geopolitical impacts such as Russia's invasion of Ukraine. In addition, some of the inherent estimates and assumptions used in determining fair value of the reporting units are outside the control of management, including interest rates, cost of capital and our credit ratings. While we believe we have made reasonable estimates and assumptions to calculate the fair value of the reporting units and other intangible assets, it is possible a material change could occur. See "Item 8. Financial Statements and Supplementary Data—Note 5 – Goodwill Impairment."

Oil & Gas Reserve Values

Estimated oil & gas reserves and estimated market prices for oil & gas are a significant part of our depletion calculations, impairment analyses, and other estimates. Following are examples of how these estimates affect financial results:

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- an increase (decrease) in estimated proved oil & gas reserves can reduce (increase) our units of production depreciation, depletion and amortization rates; and

- changes in oil & gas reserves and estimated market prices both impact projected future cash flows from our mineral interests. This in turn can impact our periodic impairment analysis.

The process of estimating oil & gas reserves is very complex, requiring significant judgment in the evaluation of all available geological, geophysical, engineering and economic data. After being estimated internally, our proved reserves estimates are compared to proved reserves that are audited by independent experts in connection with our required year-end reporting. The data may change substantially over time as a result of numerous factors, including the historical 12 month average price, additional development cost and activity, evolving production history and a continual reassessment of the viability of production under changing economic conditions. As a result, material revisions to existing reserve estimates could occur from time to time. Such changes could trigger an impairment of our oil & gas mineral interests and have an impact on our depreciation, depletion and amortization expense prospectively.

Estimates of future commodity prices utilized in our impairment analyses consider market information including published forward oil & gas prices. The forecasted price information used in our impairment analyses is consistent with that generally used in evaluating third party third-party operator drilling decisions and our expected acquisition plans, if any. Prices for future periods will impact the production economics underlying oil & gas reserve estimates. In addition, changes in the price of oil & gas also impact certain costs associated with our expected underlying production and future capital costs. The prices of oil & gas are volatile and change from period to period, thus are expected to impact our estimates. Significant unfavorable changes in the estimated future commodity prices could result in an impairment of our oil & gas mineral interests.

Workers' Compensation and Pneumoconiosis (Black Lung) Benefits

We provide income replacement and medical treatment for work-related traumatic injury claims as required by applicable state laws. We generally provide for these claims through self-insurance programs. Workers' compensation laws also compensate survivors of workers who suffer employment related deaths. Our liability for traumatic injury claims is the estimated present value of current workers' compensation benefits, based on our actuary estimates. Our actuarial calculations are based on a blend of actuarial projection methods and numerous assumptions including claim development patterns, mortality, medical costs and interest rates. See "Item 8. Financial Statements and Supplementary Data—Note 21 19 – Accrued Workers' Compensation and Pneumoconiosis Benefits" for additional discussion. We had accrued liabilities for workers' compensation of \$49.5 million \$48.0 million and \$53.4 million \$49.5 million for these costs at December 31, 2022 December 31, 2023 and 2021, 2022, respectively. A one-percentage-point reduction in the discount rate would have increased operating expense by approximately \$2.6 million \$2.4 million at December 31, 2022 December 31, 2023. We limit our exposure to traumatic injury claims by purchasing a high deductible insurance policy that starts paying benefits after deductibles for a particular claim year have been met. Our receivables for traumatic injury claims under this policy as of December 31, 2022 December 31, 2023 and 2021 are 2022 were \$4.1 million and \$5.7 million, respectively.

Coal mining companies are subject to Federal Coal Mine Health and Safety Act of 1969, as amended, FMSHA and various state statutes for the payment of medical and disability benefits to eligible recipients related to coal worker's pneumoconiosis, or black lung. We provide for these claims through self-insurance programs. Our pneumoconiosis benefits liability is calculated using the service cost method based on the actuarial present value of the estimated pneumoconiosis benefits obligation. Our actuarial calculations are based on numerous assumptions including disability incidence, medical costs, mortality, death benefits, dependents and discount rates. We had accrued liabilities of \$104.3 million \$132.4 million and \$111.3 million \$104.3 million for the pneumoconiosis benefits at December 31, 2022 December 31, 2023 and 2021, 2022, respectively. A one-percentage-point reduction in the discount rate would have increased the expense recognized for the year ended December 31, 2022 December 31, 2023 by approximately \$3.0 million \$1.4 million. Under the service cost method used to

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estimate our pneumoconiosis benefits liability, actuarial gains or losses attributable to changes in actuarial assumptions, such as the discount rate, are amortized over the remaining service period of active miners.

The discount rate for workers' compensation and pneumoconiosis is derived by applying the Financial Times Stock Exchange Pension Discount Curve to the projected liability payout. Other assumptions, such as claim development patterns, mortality, disability incidence and medical costs, are based on standard actuarial tables adjusted for our actual historical experiences whenever possible. We review all actuarial assumptions periodically for reasonableness and consistency and update such factors when underlying assumptions, such as discount rates, change or when sustained changes in our historical experiences indicate a shift in our trend assumptions are warranted.

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Impairment of Long-Lived Assets

In addition to oil & gas reserves discussed above in the *Oil & Gas Reserve Values* section, we review the carrying value of long-lived assets and certain identifiable intangibles whenever events or changes in circumstances indicate that the carrying amount may not be recoverable based on estimated undiscounted future cash flows. Long-lived assets and certain intangibles are not reviewed for impairment unless an impairment indicator is noted. Several examples of impairment indicators include:

- A significant decrease in the market price of a long-lived asset;
- A significant adverse change in the extent or manner in which a long-lived asset is being used or in its physical condition;
- A significant adverse change in legal factors or in the business climate that could affect the value of a long-lived asset, including an adverse action of assessment by a regulator;
- An accumulation of costs significantly in excess of the amount originally expected for the acquisition or construction of a long-lived asset;
- A current-period operating or cash flow loss combined with a history of operating or cash flow losses or a projection or forecast that demonstrates continuing losses associated with the use of a long-lived asset; or
- A current expectation that, more likely than not, a long-lived asset will be sold or otherwise disposed of significantly before the end of its previously estimated useful life. The term more likely than not refers to a level of likelihood that is more than 50 percent.

The above factors are not all inclusive, and management must continually evaluate whether other factors are present that would indicate a long-lived asset may be impaired. If there is an indication that the carrying amount of an asset may not be recovered, we compare our estimate of undiscounted future cash flows attributable to the asset to the carrying value of the asset. Individual assets are grouped for impairment review purposes based on the lowest level for which there is identifiable cash flows that are largely independent of the cash flows of other groups of assets, generally on a by-mine basis. Assumptions about sales, operating margins, capital expenditures and sales prices are based on our budgets, business plans, economic projections, and anticipated future cash flows. If the carrying value of an asset exceeds the future undiscounted cash flows expected from the asset, the amount of impairment is measured by the difference between the carrying value and the fair value of the asset. The fair value of impaired assets is typically determined based on various factors, including the present values of expected future cash flows using a risk adjusted discount rate, the marketability of coal properties and the estimated fair value of assets that could be sold or used at other operations. We recorded an asset impairment of \$25.0 million in 2020. See "Item 8. Financial Statements and Supplementary Data—Note 4 – Long-Lived Asset Impairments".

Asset Retirement Obligations

SMCRA and similar state statutes require that mined property be restored in accordance with specified standards and an approved reclamation plan. A liability is recorded for the estimated cost of future mine asset retirement and closing procedures on a present value basis when incurred or acquired and a corresponding amount is capitalized by increasing the carrying amount of the related long-lived asset. Those costs relate to permanently sealing portals at underground mines and to reclaiming the final pits and support surface acreage for both our underground mines and past surface mines. Examples of these types of costs, common to both types of mining, include, but are not limited to, removing or covering refuse piles and settling ponds, water treatment obligations, and dismantling preparation plants, other facilities and roadway infrastructure. Accrued liabilities of \$149.8 million \$150.4 million and \$131.1 million \$149.8 million for these costs are recorded at December 31, 2022 December 31, 2023 and 2021, 2022, respectively. See "Item 8. Financial Statements and Supplementary Data—Note 2018 – Asset Retirement Obligations" for additional information. The liability for asset retirement and closing procedures is sensitive to

changes in cost estimates, estimated mine lives and timing of post-mine reclamation activities. As changes in estimates occur (such as mine plan revisions, changes in estimated costs or changes in timing of the performance of reclamation activities), the revisions to the obligation and asset are recognized at the appropriate credit-adjusted, risk-free interest rate.

Accounting for asset retirement obligations also requires depreciation of the capitalized asset retirement cost and accretion of the asset retirement obligation over time. Depreciation is generally determined on a units-of-production basis and accretion is generally recognized over the life of the producing assets.

On at least an annual basis, we review our entire asset retirement obligation liability and make necessary adjustments for permit changes approved by state authorities, changes in the timing of reclamation activities, and revisions to cost

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estimates and productivity assumptions, to reflect current experience. Adjustments to the liability associated with these assumptions resulted in a decrease of \$1.5 million for the year ended December 31, 2023. Adjustments to the liability associated with these assumptions resulted in an increase of \$17.4 million for the year ended December 31, 2022. There were no material adjustments to the liability associated with these assumptions for the year ended December 31, 2021.

While the precise amount of these future costs cannot be determined with certainty, we have estimated the costs and timing of future asset retirement obligations escalated for inflation, then discounted and recorded at the present value of those estimates. Discounting resulted in reducing the accrual for asset retirement obligations by \$116.2 million and \$110.4 million at December 31, 2023 and \$98.3 million at December 31, 2022 and 2021. 2022. We estimate that the aggregate undiscounted cost of final mine closure is approximately \$266.6 million and \$260.2 million at December 31, 2023 and \$229.4 million at December 31, 2022 and 2021, 2022, respectively. If our assumptions differ from actual experiences, or if changes in the regulatory environment occur, our actual cash expenditures and costs that we incur could be materially different than currently estimated.

Shelf Registration Statement

In February 2022, we filed with the SEC a universal shelf registration statement which allowed allows us to issue from time to time an indeterminate amount of debt or equity securities ("2022 Registration Statement"). securities. As of February 24, 2023 February 23, 2024, we had not utilized issued any amounts available debt or equity under the 2022 Registration Statement.

Related-Party Transactions

See "Item 8. Financial Statements and Supplementary Data—Note 22 20 – Related-Party Transactions" for a discussion of our related-party transactions.

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Accruals of Other Liabilities

We had accruals for other liabilities, including current obligations, totaling \$398.4 million and \$395.3 million at December 31, 2023 and \$318.9 million at December 31, 2022 and 2021, 2022, respectively. These accruals were chiefly comprised of workers' compensation benefits, pneumoconiosis benefits, and costs associated with asset retirement obligations. These obligations are self-insured except for certain excess insurance coverage for workers' compensation. The accruals of these items were based on estimates of future expenditures based on current legislation, related regulations and other developments. Thus, from time to time, our results of operations may be significantly affected by changes to these liabilities. Please see "Item 8. Financial Statements and Supplementary Data—Note 20 18 – Asset Retirement Obligations" and "—Note 21 19 – Accrued Workers' Compensation and Pneumoconiosis Benefits."

Inflation

Any future inflationary or deflationary pressures could adversely affect the results of our operations. For example, during 2022 our results were significantly impacted by price increases affecting many of the components of our operating expenses such as fuel, steel, maintenance expense and labor. Please see above under "— Analysis of Historical Results of Operations" and "Item 1A. Risk Factors."

New Accounting Standards

See "Item 8. Financial Statements and Supplementary Data—Note 2 – Summary of Significant Accounting Policies" for a discussion of new accounting standards.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Commodity Price Risk

We have significant long-term sales contracts as evidenced by approximately 85.0% 93.4% of our sales tonnage being sold under long-term sales contracts in 2022. Most 2023. Many of the long-term sales contracts are subject to price adjustment provisions, which periodically permit an increase or decrease in the contract price, typically to reflect changes in specified indices or changes in production costs resulting from regulatory changes, or both. For additional discussion of coal supply agreements, please see "Item 1. Business—Coal Marketing and Sales" and "Item 8. Financial Statements and Supplementary Data—Note 24 22 – Concentration of Credit Risk and Major Customers." Our initial 2023 2024 guidance includes 34.7 million 32.5 million priced and committed tons for delivery in 2023, 2024.

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Our results of operations are highly dependent upon the prices we receive for our coal, oil and natural gas. Regarding coal, the short-term sales contracts favored by some of our coal customers leave us more exposed to risks of declining coal price periods. Also, a significant decline in oil & gas prices would have a significant impact on our oil & gas royalty revenues. We experienced this during 2020 as lower sales price realizations, caused by lower global energy demand during the COVID-19 pandemic and actions of major oil producing countries, had a significant impact on our royalty revenues.

We have exposure to coal and oil & gas sales prices and price risk for supplies that are used directly or indirectly in the normal course of coal and oil & gas production such as steel, electricity and other supplies. We manage our risk for these items through strategic sourcing contracts for normal quantities required by our operations. Historically, we have not utilized any commodity price-hedges or other derivatives related to either our sales price or supply cost risks but may do so in the future.

Credit Risk

In 2022, 2023, approximately 82.4% 80.9% of our tons sold were purchased by U.S. electric utilities and 12.5% 15.7% were sold into the international markets through brokered transactions. Therefore, our credit risk is primarily with domestic electric power generators and reputable global brokerage firms. Our policy is to independently evaluate each customer's creditworthiness prior to entering into transactions

and to constantly monitor outstanding accounts receivable. When deemed appropriate by our credit management department, we will take steps to reduce our credit exposure to customers that do not meet our credit standards or whose credit has deteriorated. These steps may include obtaining letters of credit or cash collateral, requiring prepayments for shipments or establishing customer trust accounts held for our benefit in the event of a failure to pay. Such credit risks from customers may impact the borrowing capacity of our Securitization Facility. See "Item 8. Financial Statements and Supplementary Data—Note 86 – Long-Term Debt" for more information on our Securitization Facility.

Exchange Rate Risk

Almost all The vast majority of our transactions are denominated in United States dollars, and as a result, we do not have material exposure to currency exchange-rate risks. However, because coal is sold internationally in United States dollars, general economic conditions in foreign markets and changes in foreign currency exchange rates may provide our foreign

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competitors with a competitive advantage. If our competitors' currencies decline against the United States dollar or against foreign purchasers' local currencies, those competitors may be able to offer lower prices for coal to these purchasers. Furthermore, if the currencies of overseas purchasers were to significantly decline in value in comparison to the United States dollar, those purchasers may seek decreased prices for the coal we sell to them. Consequently, currency fluctuations could adversely affect the competitiveness of our coal in international markets.

Interest Rate Risk

Borrowings under the Revolving Credit Facility, Term Loan and Securitization Facility as well as borrowings under the Replaced Credit Facility until it was terminated, are at variable rates and, as a result, we have interest rate exposure on any amounts drawn under these facilities. exposure. Historically, our earnings have not been materially affected by changes in interest rates and we have not utilized interest rate derivative instruments related to our outstanding debt. We had \$60.9 million in borrowings under Term Loan at December 31, 2023. We did not have any outstanding borrowings on either the Replaced Revolving Credit Facility or the Securitization Facility at December 31, 2022 December 31, 2023. A one percentage point increase in the interest rates related to the Term Loan would result in an annualized increase in interest expense of \$0.6 million, based on borrowing levels at December 31, 2023. With respect to our fixed-rate borrowings, we had \$400.0 million \$284.6 million in borrowings under our Senior Notes and \$27.0 million \$2.0 million in borrowings under our equipment financings at December 31, 2022 December 31, 2023. A one percentage point increase in interest rates would result in a decrease of approximately \$9.0 million \$3.7 million in the estimated fair value of these borrowings.

The table below provides information about our market sensitive financial instruments and constitutes a "forward-looking statement." The fair values of long-term debt are estimated using discounted cash flow analyses, based on our incremental borrowing rates for similar types of borrowing arrangements as of December 31, 2022 December 31, 2023 and 2021, 2022.

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The carrying amounts and fair values of financial instruments are as follows:

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors of Alliance Resource Management GP, LLC and
Unitholders of Alliance Resource Partners, L.P.

Opinion on the financial statements

We have audited the accompanying consolidated balance sheets of Alliance Resource Partners, L.P. (a Delaware limited partnership) and subsidiaries (the "Partnership") as of **December 31, 2022** **December 31, 2023** and **2021, 2022**, the related consolidated statements of **operations, income**, comprehensive income, **(loss)**, cash flows and partners' capital for each of the **two three** years in the period ended **December 31, 2022** **December 31, 2023**, and the related notes and financial statement schedule included under Item 15(a)(2) (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Partnership as of **December 31, 2022** **December 31, 2023** and **2021, 2022**, and the results of its operations and its cash flows for each of the **two three** years in the period ended **December 31, 2022** **December 31, 2023**, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Partnership's internal control over financial reporting as of **December 31, 2022** **December 31, 2023**, based on criteria established in the 2013 *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"), and our report dated **February 24, 2023** **February 23, 2024** expressed an unqualified opinion.

Basis for opinion

These financial statements are the responsibility of the Partnership's management. Our responsibility is to express an opinion on the Partnership's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Partnership in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical audit matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Valuation of workers' compensation and pneumoconiosis benefit obligations

As described further in Note **21 19** to the financial statements, the Partnership provides income replacement and medical treatment for work-related traumatic injury claims and compensation to survivors of workers who suffer employment-related deaths. The Partnership is also liable to pay benefits for black lung disease (or pneumoconiosis) to eligible employees and former employees and their dependents. As of **December 31, 2022** **December 31, 2023**, the Partnership's aggregate workers' compensation and pneumoconiosis benefit obligations were approximately **\$154 million** **\$180 million**. We identified valuation of workers' compensation and pneumoconiosis benefit obligations as a critical audit matter.

The principal considerations for our determination that the valuation of workers' compensation and pneumoconiosis benefit obligations is a critical audit matter are the high level of estimation uncertainty related to determining the frequency and severity of these types of claims, as well as the inherent subjectivity in management's judgment in estimating eligible benefits and the total cost to settle or dispose of these claims. Workers' compensation and pneumoconiosis benefit obligations are determined using actuarial projection methods and numerous assumptions including claim development

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patterns, costs, and mortality. The estimates rely on the assumption that historical claim patterns are an accurate representation for future claims.

Our audit procedures related to the valuation of workers' compensation and pneumoconiosis benefit obligations included the following, among others.

- We tested the design and operating effectiveness of controls relating to the workers' compensation and pneumoconiosis benefit obligations process including testing controls over management's review of actuarial specialists' liability calculations and the completeness and accuracy of the underlying data.
- We tested management's process for determining the worker's compensation and pneumoconiosis benefit obligation accruals, including evaluating the reasonableness of the methods and significant assumptions used in the calculations with the assistance of actuarial specialists.
- We tested the claims data used in the actuarial calculations by inspecting source documents to test key attributes of the claims data.
- We compared claim development patterns and cost assumptions used in the actuarial calculations for consistency with historical experience and current trends.
- We compared the mortality tables used in the actuarial calculations to publicly available information.

/s/ GRANT THORNTON LLP

We have served as the Partnership's auditor since 2021.

Tulsa, Oklahoma
February 24, 2023

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors of Alliance Resource Management GP, LLC
and the Partners of Alliance Resource Partners, L.P.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheet of Alliance Resource Partners, L.P. and subsidiaries (the Partnership) as of December 31, 2020, the related consolidated statement of operations, comprehensive income (loss), cash flows and partners' capital for the year then ended, and the related notes and financial statement schedule listed in the Index at Item 15(a)(2) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Partnership at December 31, 2020, and the results of its operations and its cash flows for the year then ended, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Partnership's management. Our responsibility is to express an opinion on the Partnership's financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Partnership in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audit included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We served as the Partnership's auditor from 2011 to 2021.

Tulsa, Oklahoma

February 23, 2021, except for Note 25, as to which the date is February 25, 2022 2024

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ALLIANCE RESOURCE PARTNERS, L.P. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

DECEMBER 31, 2022 2023 AND 2021 2022

(In thousands, except unit data)

	December 31,	
	2022	2021
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 296,023	\$ 122,403
Trade receivables	238,610	129,531
Other receivables	8,601	680
Inventories, net	77,326	60,302
Advance royalties	7,556	4,958
Prepaid expenses and other assets	26,675	21,354
Total current assets	654,791	339,228
PROPERTY, PLANT AND EQUIPMENT:		
Property, plant and equipment, at cost	3,857,390	3,608,347
Less accumulated depreciation, depletion and amortization	(2,040,468)	(1,909,669)
Total property, plant and equipment, net	1,816,922	1,698,678
OTHER ASSETS:		
Advance royalties	67,713	63,524
Equity method investments	49,371	26,325

OTHER ASSETS:		
Advance royalties	71,125	67,713
Equity method investments	46,503	49,371
Equity securities	92,541	42,000
Operating lease right-of-use assets	16,569	14,950
Other long-term assets	22,904	15,726
Total other assets	249,642	189,760
TOTAL ASSETS	\$ 2,788,426	\$ 2,728,021
LIABILITIES AND PARTNERS' CAPITAL		
CURRENT LIABILITIES:		
Accounts payable	\$ 108,269	\$ 95,122
Accrued taxes other than income taxes	21,007	22,967
Accrued payroll and related expenses	29,884	39,623
Accrued interest	3,558	5,000
Workers' compensation and pneumoconiosis benefits	15,913	14,099
Other current liabilities	28,498	53,790
Current maturities, long-term debt, net	20,338	24,970
Total current liabilities	227,467	255,571
LONG-TERM LIABILITIES:		
Long-term debt, excluding current maturities, net	316,821	397,203
Pneumoconiosis benefits	127,249	100,089
Accrued pension benefit	8,618	12,553
Workers' compensation	37,257	39,551
Asset retirement obligations	146,925	142,254
Long-term operating lease obligations	13,661	12,132
Deferred income tax liabilities	33,450	35,814
Other liabilities	18,381	24,828
Total long-term liabilities	702,362	764,424
Total liabilities	929,829	1,019,995
COMMITMENTS AND CONTINGENCIES - (Note 21)		
PARTNERS' CAPITAL:		
ARLP Partners' Capital:		
Limited Partners - Common Unitholders 127,125,437 and 127,195,219 units outstanding, respectively	1,896,027	1,656,025
General Partner's interest	—	66,548
Accumulated other comprehensive loss	(61,525)	(41,054)
Total ARLP Partners' Capital	1,834,502	1,681,519
Noncontrolling interest	24,095	26,507
Total Partners' Capital	1,858,597	1,708,026
TOTAL LIABILITIES AND PARTNERS' CAPITAL	\$ 2,788,426	\$ 2,728,021

*Recast as discussed in Note 1 – Organization and Presentation.

See notes to consolidated financial statements.

CONSOLIDATED STATEMENTS OF **OPERATIONS INCOME**
FOR THE YEARS ENDED DECEMBER 31, **2023**, **2022**, **2021** AND **2020** **2021**

(In thousands, except unit and per unit data)

	Year Ended December 31,		
	2022	2021	2020
SALES AND OPERATING REVENUES:			
Coal sales	\$ 2,102,229	\$ 1,386,923	\$ 1,232,272
Oil & gas royalties	138,402	74,988	42,912
Transportation revenues	113,860	69,607	21,129
Other revenues	52,020	38,458	31,816
Total revenues	2,406,511	1,569,976	1,328,129
EXPENSES:			
Operating expenses (excluding depreciation, depletion and amortization)	1,286,635	943,257	859,656
Transportation expenses	113,860	69,607	21,129
Outside coal purchases	151	6,372	—
General and administrative	80,334	70,160	59,806
Depreciation, depletion and amortization	273,759	261,377	313,387
Settlement gain	(6,664)	—	—
Asset impairments	—	—	24,977
Goodwill impairment	—	—	132,026
Total operating expenses	1,748,075	1,350,773	1,410,981
INCOME (LOSS) FROM OPERATIONS	658,436	219,203	(82,852)
Interest expense (net of interest capitalized of \$922, \$396 and \$1,325, respectively)	(37,332)	(39,229)	(45,613)
Interest income	2,035	88	135
Equity method investment income	5,634	2,130	907
Other income (expense)	4,353	(3,020)	(1,593)
INCOME (LOSS) BEFORE INCOME TAXES	633,126	179,172	(129,016)
INCOME TAX EXPENSE	53,978	417	35
NET INCOME (LOSS)	579,148	178,755	(129,051)
LESS: NET INCOME ATTRIBUTABLE TO NONCONTROLLING INTEREST	(1,958)	(598)	(169)
NET INCOME (LOSS) ATTRIBUTABLE TO ARLP	\$ 577,190	\$ 178,157	\$ (129,220)
EARNINGS PER LIMITED PARTNER UNIT - BASIC AND DILUTED	\$ 4.39	\$ 1.36	\$ (1.02)
WEIGHTED-AVERAGE NUMBER OF UNITS OUTSTANDING – BASIC AND DILUTED	127,195,219	127,195,219	127,164,659
	Year Ended December 31,		
	2023	2022*	2021*
SALES AND OPERATING REVENUES:			
Coal sales	\$ 2,210,210	\$ 2,102,229	\$ 1,386,923
Oil & gas royalties	137,751	151,060	84,183
Transportation revenues	142,290	113,860	69,607
Other revenues	76,450	52,818	38,517

Total revenues	2,566,701	2,419,967	1,579,230
EXPENSES:			
Operating expenses (excluding depreciation, depletion and amortization)	1,368,787	1,288,082	944,419
Transportation expenses	142,290	113,860	69,607
Outside coal purchases	36,149	151	6,372
General and administrative	79,096	80,425	70,275
Depreciation, depletion and amortization	267,982	276,670	264,794
Settlement gain	—	(6,664)	—
Total operating expenses	1,894,304	1,752,524	1,355,467
INCOME FROM OPERATIONS	672,397	667,443	223,763
Interest expense (net of interest capitalized of \$6,706, \$922 and \$396, respectively)	(36,091)	(37,331)	(39,229)
Interest income	9,394	2,035	88
Equity method investment income (loss)	(1,468)	5,634	2,130
Other income (expense)	218	4,355	(2,966)
INCOME BEFORE INCOME TAXES	644,450	642,136	183,786
INCOME TAX EXPENSE	8,280	53,978	417
NET INCOME	636,170	588,158	183,369
LESS: NET INCOME ATTRIBUTABLE TO NONCONTROLLING INTEREST	(6,052)	(1,958)	(598)
NET INCOME ATTRIBUTABLE TO ARLP	<u>\$ 630,118</u>	<u>\$ 586,200</u>	<u>\$ 182,771</u>
NET INCOME ATTRIBUTABLE TO ARLP			
GENERAL PARTNER	<u>\$ 1,384</u>	<u>\$ 9,010</u>	<u>\$ 4,614</u>
LIMITED PARTNERS	<u>\$ 628,734</u>	<u>\$ 577,190</u>	<u>\$ 178,157</u>
EARNINGS PER LIMITED PARTNER UNIT - BASIC AND DILUTED	<u>\$ 4.81</u>	<u>\$ 4.39</u>	<u>\$ 1.36</u>
WEIGHTED-AVERAGE NUMBER OF UNITS OUTSTANDING – BASIC AND DILUTED	<u>127,180,312</u>	<u>127,195,219</u>	<u>127,195,219</u>

*Recast as discussed in Note 1 – Organization and Presentation.

See notes to consolidated financial statements.

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ALLIANCE RESOURCE PARTNERS, L.P. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
FOR THE YEARS ENDED DECEMBER 31, 2023, 2022 2021 AND 2020 2021

(In thousands)

	Year Ended December 31,			Year Ended December 31,		
	2022	2021	2020	2023	2022*	2021*
NET INCOME (LOSS)	\$ 579,148	\$ 178,755	\$ (129,051)			
NET INCOME				\$636,170	\$588,158	\$183,369
OTHER COMPREHENSIVE INCOME (LOSS):						
Defined benefit pension plan						
Amortization of prior service cost (1)	186	186	186	186	186	186
Net actuarial gain (loss)	10,148	14,921	(5,522)			
Net actuarial gain				2,894	10,148	14,921
Amortization of net actuarial loss (1)	1,963	4,327	4,128	682	1,963	4,327
Total defined benefit pension plan adjustments	12,297	19,434	(1,208)	3,762	12,297	19,434
Pneumoconiosis benefits						
Net actuarial gain (loss)	9,840	(161)	(7,787)	(25,615)	9,840	(161)
Amortization of net actuarial loss (gain) (1)	1,038	4,172	(686)			
Amortization of net actuarial loss (1)				1,382	1,038	4,172
Total pneumoconiosis benefits adjustments	10,878	4,011	(8,473)	(24,233)	10,878	4,011
OTHER COMPREHENSIVE INCOME (LOSS)	23,175	23,445	(9,681)	(20,471)	23,175	23,445
COMPREHENSIVE INCOME (LOSS)	602,323	202,200	(138,732)			
COMPREHENSIVE INCOME				615,699	611,333	206,814
Less: Comprehensive income attributable to noncontrolling interest	(1,958)	(598)	(169)	(6,052)	(1,958)	(598)
COMPREHENSIVE INCOME (LOSS) ATTRIBUTABLE TO ARLP	\$ 600,365	\$ 201,602	\$ (138,901)			
COMPREHENSIVE INCOME ATTRIBUTABLE TO ARLP				\$609,647	\$609,375	\$206,216

(1) Amortization of prior service cost and actuarial gain or loss is included in the computation of net periodic benefit cost (see Notes 17 15 and 21 19 for additional details).

*Recast as discussed in Note 1 – Organization and Presentation.

See notes to consolidated financial statements.

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ALLIANCE RESOURCE PARTNERS, L.P. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED DECEMBER 31, 2023, 2022 2021 AND 2020 2021

(In thousands)

	Year Ended December 31,		
	2022	2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net income (loss)	\$ 579,148	\$ 178,755	\$ (129,051)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation, depletion and amortization	273,759	261,377	313,387
Non-cash compensation expense	11,029	5,709	3,345
Equity investment income	(5,634)	(2,130)	(907)
Distributions from equity method investments	5,634	2,130	907
Net gain on sale of property, plant and equipment	(3,665)	(6,592)	(5,850)
Asset impairment	—	—	24,977
Goodwill impairment	—	—	132,026
Change in deferred income tax	34,775	349	112
Other	5,677	3,970	13,909
Changes in operating assets and liabilities:			
Trade receivables	(107,510)	(24,952)	56,172
Other receivables	(7,921)	3,109	(3,225)
Inventories, net	(20,138)	(4,673)	30,522
Prepaid expenses and other assets	(9,179)	211	(2,514)
Advance royalties	(6,787)	(7,523)	(7,690)
Accounts payable	14,580	19,481	(24,282)
Accrued taxes other than income taxes	5,180	(7,267)	9,286
Accrued payroll and related benefits	2,818	8,281	(8,051)
Pneumoconiosis benefits	3,849	6,832	2,340
Workers' compensation	(3,996)	(1,292)	1,355
Other	20,193	(10,573)	(6,123)
Total net adjustments	212,664	246,447	529,696
Net cash provided by operating activities	791,812	425,202	400,645
CASH FLOWS FROM INVESTING ACTIVITIES:			
Property, plant and equipment:			
Capital expenditures	(286,394)	(122,984)	(121,101)
Change in accounts payable and accrued liabilities	35,956	2,594	(8,773)
Proceeds from sale of property, plant and equipment	7,468	7,719	3,762
Contributions to equity method investments	(24,087)	—	—
Purchase of equity securities	(42,000)	—	—
Payments for acquisitions of businesses	(92,618)	—	—
Oil & gas reserve acquisition	—	(30,960)	—
Other	(1,663)	943	988
Net cash used in investing activities	(403,338)	(142,688)	(125,124)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Borrowings under securitization facility	27,500	35,000	46,100
Payments under securitization facility	(27,500)	(90,900)	(64,000)
Proceeds from equipment financings	—	—	14,705
Payments on equipment financings	(16,071)	(17,299)	(14,805)
Borrowings under revolving credit facilities	—	15,000	70,000
Payments under revolving credit facilities	—	(102,500)	(237,500)
Borrowings from line of credit	—	5,340	—
Payment on line of credit	—	(5,340)	—
Payments on finance lease obligations	(840)	(766)	(8,368)
Cash settlement of grants under deferred compensation plan	—	—	(2,490)
Distributions paid to Partners	(196,347)	(52,158)	(51,753)

Other	(1,596)	(2,062)	(8,318)
Net cash used in financing activities	(214,854)	(215,685)	(256,429)
NET CHANGE IN CASH AND CASH EQUIVALENTS	173,620	66,829	19,092
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	122,403	55,574	36,482
CASH AND CASH EQUIVALENTS AT END OF PERIOD	\$ 296,023	\$ 122,403	\$ 55,574

	Year Ended December 31,		
	2023	2022*	2021*

CASH FLOWS FROM OPERATING ACTIVITIES:			
Net income	\$ 636,170	\$ 588,158	\$ 183,369
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation, depletion and amortization	267,982	276,670	264,794
Non-cash compensation expense	12,864	11,029	5,709
Coal inventory adjustment to market	33,296	364	70
Equity method investment loss (income)	1,468	(5,634)	(2,130)
Distributions from equity method investments	2,567	5,634	2,130
Net gain on sale of property, plant and equipment	(3,230)	(3,665)	(6,592)
Change in deferred income tax	(8,973)	34,775	349
Other	11,259	5,313	3,900
Changes in operating assets and liabilities:			
Trade receivables	(41,210)	(108,893)	(25,931)
Other receivables	(1,077)	(7,921)	3,109
Inventories, net	(78,004)	(20,138)	(4,673)
Prepaid expenses and other assets	(2,940)	(9,179)	211
Advance royalties	(3,636)	(6,787)	(7,523)
Accounts payable	17,842	14,580	19,481
Accrued taxes other than income taxes	(1,960)	5,180	(7,267)
Accrued payroll and related benefits	(9,739)	2,818	8,281
Pneumoconiosis benefits	3,924	3,849	6,832
Workers' compensation	(1,477)	(3,996)	(1,292)
Other	(4,484)	20,192	(10,654)
Total net adjustments	194,472	214,191	248,804
Net cash provided by operating activities	830,642	802,349	432,173
CASH FLOWS FROM INVESTING ACTIVITIES:			
Property, plant and equipment:			
Capital expenditures	(379,338)	(286,394)	(122,984)
Change in accounts payable and accrued liabilities	(29,695)	35,956	2,594
Proceeds from sale of property, plant and equipment	3,710	7,468	7,719
Contributions to equity method investments	(2,518)	(24,087)	—
Purchase of equity securities	(49,560)	(42,000)	—
JC Resources acquisition	(64,999)	—	—
Oil & gas reserve business combinations	(14,459)	(92,618)	—
Oil & gas reserve asset acquisitions	(24,225)	—	(30,960)
Other	1,351	(1,663)	943
Net cash used in investing activities	(559,733)	(403,338)	(142,688)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Borrowings under securitization facility	—	27,500	35,000
Payments under securitization facility	—	(27,500)	(90,900)
Payments on equipment financings	(24,970)	(16,071)	(17,299)
Borrowings under revolving credit facilities	—	—	15,000
Payments under revolving credit facilities	—	—	(102,500)

Borrowings from line of credit	—	—	5,340
Payment on line of credit	—	—	(5,340)
Borrowing under long-term debt	75,000	—	—
Payments on long-term debt	(129,455)	—	—
Payment of debt issuance costs	(12,376)	—	(113)
Payments for purchases of units under unit repurchase program	(19,432)	—	—
Payments for tax withholdings related to settlements under deferred compensation plans	(10,334)	—	(1,090)
Excess purchase price over the contributed basis from JC Resources acquisition	(7,251)	—	—
Cash retained by JC Resources in acquisition	(2,933)	(10,537)	(6,971)
Distributions paid to Partners	(364,579)	(196,347)	(52,158)
Other	(10,789)	(2,436)	(1,625)
Net cash used in financing activities	(507,119)	(225,391)	(222,656)
NET CHANGE IN CASH AND CASH EQUIVALENTS	(236,210)	173,620	66,829
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	296,023	122,403	55,574
CASH AND CASH EQUIVALENTS AT END OF PERIOD	\$ 59,813	\$ 296,023	\$ 122,403

*Recast as discussed in Note 1 – Organization and Presentation.

See notes to consolidated financial statements.

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ALLIANCE RESOURCE PARTNERS, L.P. AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF PARTNERS' CAPITAL

FOR THE YEARS ENDED DECEMBER 31, 2023, 2022 2021 AND 2020 2021

(In thousands, except unit data)

	Number of Limited Partner Units	Limited Partners' Capital	Accumulated Other Comprehensive Income (Loss)	Noncontrolling Interest	Total Partners' Capital
Balance at January 1, 2020	126,915,597	\$ 1,331,482	\$ (77,993)	\$ 11,935	\$ 1,265,424
Comprehensive income (loss):					
Net income (loss)	—	(129,220)	—	169	(129,051)
Actuarially determined long-term liability adjustments	—	—	(9,681)	—	(9,681)
Total comprehensive loss					(138,732)
Settlement of deferred compensation plans	279,622	(3,800)	—	—	(3,800)
Common unit-based compensation	—	3,345	—	—	3,345
Distributions on deferred common unit-based compensation	—	(986)	—	—	(986)
Distributions from consolidated company to noncontrolling interest	—	—	—	(728)	(728)
Distributions to Partners	—	(50,767)	—	—	(50,767)
Other	—	(1,489)	—	—	(1,489)
Balance at December 31, 2020	127,195,219	1,148,565	(87,674)	11,376	1,072,267
Comprehensive income:					
Net income	—	178,157	—	598	178,755
Actuarially determined long-term liability adjustments	—	—	23,445	—	23,445
Total comprehensive income					202,200
Settlement of deferred compensation plans	—	(1,090)	—	—	(1,090)

Common unit-based compensation	—	5,709	—	—	5,709
Distributions on deferred common unit-based compensation	—	(1,280)	—	—	(1,280)
Distributions from consolidated company to noncontrolling interest	—	—	—	(859)	(859)
Distributions to Partners	—	(50,878)	—	—	(50,878)
Balance at December 31, 2021	127,195,219	1,279,183	(64,229)	11,115	1,226,069
Comprehensive income:					
Net income	—	577,190	—	1,958	579,148
Actuarially determined long-term liability adjustments	—	—	23,175	—	23,175
Total comprehensive income					602,323
Common unit-based compensation	—	11,029	—	—	11,029
Distributions on deferred common unit-based compensation	—	(5,553)	—	—	(5,553)
Distributions from consolidated company to noncontrolling interest	—	—	—	(1,596)	(1,596)
Profits interest adjustment for noncontrolling interest	—	(15,030)	—	15,030	—
Distributions to Partners	—	(190,794)	—	—	(190,794)
Balance at December 31, 2022	127,195,219	\$ 1,656,025	\$ (41,054)	\$ 26,507	\$ 1,641,478

	Number of			Accumulated		
	Limited	Limited	General	Other		
	Partner	Partners'	Partner's	Comprehensive	Noncontrolling	Total Partners'
	Units	Capital	Capital *	Income (Loss)	Interest	Capital *
Balance at January 1, 2021	127,195,219	\$ 1,148,565	\$ 70,432	\$ (87,674)	\$ 11,376	\$ 1,142,699
Comprehensive income:						
Net income	—	178,157	4,614	—	598	183,369
Actuarially determined long-term liability adjustments	—	—	—	23,445	—	23,445
Total comprehensive income						206,814
Settlement of deferred common unit- based compensation plans	—	(1,090)	—	—	—	(1,090)
Common unit-based compensation	—	5,709	—	—	—	5,709
Distributions on deferred common unit-based compensation	—	(1,280)	—	—	—	(1,280)
Distributions from consolidated company to noncontrolling interest	—	—	—	—	(859)	(859)
Cash retained by JC Resources in acquisition - See Note 1	—	—	(6,971)	—	—	(6,971)
Distributions to Partners	—	(50,878)	—	—	—	(50,878)
Balance at December 31, 2021	127,195,219	1,279,183	68,075	(64,229)	11,115	1,294,144
Comprehensive income:						
Net income	—	577,190	9,010	—	1,958	588,158
Actuarially determined long-term liability adjustments	—	—	—	23,175	—	23,175
Total comprehensive income						611,333
Common unit-based compensation	—	11,029	—	—	—	11,029
Distributions on deferred common unit-based compensation	—	(5,553)	—	—	—	(5,553)
Distributions from consolidated company to noncontrolling interest	—	—	—	—	(1,596)	(1,596)
Profits interest adjustment for noncontrolling interest	—	(15,030)	—	—	15,030	—
Cash retained by JC Resources in acquisition - See Note 1	—	—	(10,537)	—	—	(10,537)
Distributions to Partners	—	(190,794)	—	—	—	(190,794)
Balance at December 31, 2022	127,195,219	1,656,025	66,548	(41,054)	26,507	1,708,026
Comprehensive income:						
Net income	—	628,734	1,384	—	6,052	636,170
Actuarially determined long-term liability adjustments	—	—	—	(20,471)	—	(20,471)
Total comprehensive income						615,699
Settlement of deferred common unit- based compensation plans	860,060	(10,334)	—	—	—	(10,334)
Purchase of units under unit repurchase program	(929,842)	(19,432)	—	—	—	(19,432)
Common unit-based compensation	—	12,864	—	—	—	12,864

Distributions on deferred common unit-based compensation	—	(8,530)	—	—	—	(8,530)
Distributions from consolidated company to noncontrolling interest	—	—	—	—	(8,464)	(8,464)
JC Resources acquisition - See Note 1	—	(7,251)	(64,999)	—	—	(72,250)
Cash retained by JC Resources in acquisition - See Note 1	—	—	(2,933)	—	—	(2,933)
Distributions to Partners	—	(356,049)	—	—	—	(356,049)
Balance at December 31, 2023	127,125,437	\$ 1,896,027	\$ —	\$ (61,525)	\$ 24,095	\$ 1,858,597

*Recast as discussed in Note 1 – Organization and Presentation.

See notes to consolidated financial statements.

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ALLIANCE RESOURCE PARTNERS, L.P. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

FOR THE YEARS ENDED DECEMBER 31, 2023, 2022 2021 AND 2020 2021

1. ORGANIZATION AND PRESENTATION

Significant Relationships Referenced in Notes to Consolidated Financial Statements

- References to "we," "us," "our" or "ARLP Partnership" mean the business and operations of Alliance Resource Partners, L.P., the parent company, as well as its consolidated subsidiaries.
- References to "ARLP" mean Alliance Resource Partners, L.P., individually as the parent company, and not on a consolidated basis.
- References to "MGP" mean Alliance Resource Management GP, LLC, ARLP's general partner.
- References to "Mr. Craft" mean Joseph W. Craft III, the Chairman, President and Chief Executive Officer of MGP.
- References to "Intermediate Partnership" mean Alliance Resource Operating Partners, L.P., the intermediate partnership of Alliance Resource Partners, L.P.
- References to "Alliance Coal" mean Alliance Coal, LLC, an indirect wholly owned subsidiary, subsidiary of ARLP.
- References to "Alliance Minerals" mean Alliance Minerals, LLC, an indirect wholly owned subsidiary, subsidiary of ARLP.
- References to "Alliance Resource Properties" mean Alliance Resource Properties, LLC, an indirect wholly owned subsidiary, subsidiary of ARLP.

Organization

ARLP is a Delaware limited partnership listed on the NASDAQ Global Select Market under the ticker symbol "ARLP." ARLP was formed in May 1999 and completed its initial public offering on August 19, 1999 when it acquired substantially all of the coal production and marketing assets of Alliance Resource Holdings, Inc., a Delaware corporation ("ARH"), and its subsidiaries. We are managed by our general partner, MGP, a Delaware limited liability company, which holds a non-economic general partner interest in ARLP. Alliance GP, LLC ("AGP"), which is indirectly wholly owned by Mr. Craft, is the direct owner of MGP.

Oil & Gas Acquisitions

Boulders

On October 13, 2021, we acquired approximately 1,480 oil & gas net royalty acres in the Delaware Basin from Boulders Royalty Corp. ("Boulders") for a purchase price of \$31.0 million (the "Boulders Acquisition").

Belvedere

On September 9, 2022, we acquired approximately 394 oil & gas net royalty acres in the Delaware Basin from Belvedere Operating, LLC ("Belvedere") for a purchase price of \$11.4 million (the "Belvedere Acquisition").

Jase

On October 26, 2022, we acquired approximately 3,928 oil & gas net royalty acres in the Midland and Delaware Basins from Jase Minerals, LP ("Jase") for a purchase price of \$81.2 million (the "Jase Acquisition").

JC Resources

On February 22, 2023, we acquired approximately 2,682 oil & gas net royalty acres in the Delaware Basin from JC Resources LP ("JC Resources"), an entity owned by Mr. Craft, for \$72.3 million, which was funded with cash on hand ("JC Resources Acquisition"). Because JC Resources is owned by Mr. Craft, the JC Resources Acquisition is accounted for as a reorganization of entities under common control, whereby the assets and liabilities acquired from JC Resources are combined with the ARLP Partnership at their historical amounts for all periods presented. Recasting for the JC Resources Acquisition increased revenues by \$13.5 million and \$9.3 million for the years ended December 31, 2022 and

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2021, respectively, and increased income from operations, net income and comprehensive income by \$9.0 million and \$4.6 million for the years ended December 31, 2022 and 2021, respectively. We did not recast historical earnings per limited partner unit as pre-acquisition earnings from the JC Resources Acquisition were allocated to our general partner.

Skyland

On December 7, 2023, we acquired approximately 2,372 oil & gas net royalty acres in the Anadarko, Williston and Delaware Basins from Skyland Minerals, L.P. ("Skyland") and Haymaker Minerals & Royalties II, LLC ("Haymaker") for a purchase price of \$14.5 million which was funded with cash on hand ("Skyland Acquisition").

The Boulders, Belvedere, Jase, JC Resources and JaseSkyland Acquisitions enhanced our ownership position in the Permian Basin various basins and furthered our business strategy to grow our Oil & Gas Royalties segment through accretive acquisitions. See Note 3 – Acquisitions for more information. We now hold approximately 61,400 67,700 net royalty acres in premier oil & gas resource plays including previous acquisitions and our investment in AllDale Minerals III, LP ("AllDale III").

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Change in Tax Status

On March 15, 2022, Alliance Minerals changed its federal income tax status from a pass-through entity to a taxable entity via a "check the box" election (the "Tax Election"), which became effective January 1, 2022. This election for Alliance Minerals is anticipated to reduce the total income tax burden on our oil & gas royalties, as Alliance Minerals will pay entity-level taxes at corporate tax rates which are anticipated to be favorable to our unitholders. For more information on the Tax Election please see Note 9 – Income Taxes. **Growth Investments and Opportunities**

New Venture Investments

Francis

Francis

On April 5, 2022, we made a invested \$20 million convertible note investment in Francis Renewable Energy, LLC ("Francis"), in the form of a convertible note. Our convertible note matured on April 1, 2023 and was converted into a preferred equity interest in Francis. Francis currently is active in the installation, management and operation of metered-for-fee, public-access electric vehicle ("EV") charging stations. Francis also develops and constructs EV charging stations for third-party customers. Our investment in Francis furthers our business strategy to develop strategic relationships and invest in attractive opportunities. For more information on this investment, please see Note 13.11 – Variable Interest Entities.

Infinitem

On April 29, 2022, During 2022, we purchased \$32.6 million \$42.0 million of Series D Preferred Stock in Infinitem Electric, Inc. ("Infinitem"), a Texas-based startup developer and manufacturer of electric motors featuring printed circuit board stators which have the potential to result in motors that are smaller, lighter, quieter, more efficient and capable of operating at a fraction of the carbon footprint of conventional electric motors. On November 2, 2022 September 8, 2023, we purchased an additional \$9.4 million \$24.6 million of Series E Preferred Stock ("Series E Preferred Stock" and, together with the "Series D Preferred Stock," the "Infinitem Preferred Stock") in Infinitem. The preferred stock Infinitem Preferred Stock provides for non-cumulative dividends when and if declared by Infinitem's board of directors. Each share of Infinitem Preferred Stock is convertible, at any time, at our option, into shares of common stock of Infinitem. Our investment in Infinitem furthers our business strategy to develop strategic relationships and invest in attractive opportunities. For more information on this investment, please see Note 14.12 – Equity Investments.

NGP ETP ET IV

On June 2, 2022, we committed to purchase \$25.0 million of limited partner interests in NGP ETP IV, Energy Transition, L.P. ("NGP ETP ET IV"), a private equity fund sponsored by NGP Energy Capital Management, LLC ("NGP"). NGP ETP ET IV focuses on investments that are part of the global transition toward a lower carbon economy by partnering with top-tier management teams and investing growth equity in companies that drive or enable the growth of renewable energy, the electrification of our economy or the efficient use of energy. For more information on this investment, please see Note 13.11 – Variable Interest Entities.

Ascend

On August 22, 2023, we purchased \$25.0 million of Series D Preferred Stock (the "Ascend Preferred Stock") in Ascend Elements, Inc. ("Ascend"), a U.S.-based manufacturer and recycler of sustainable, engineered battery materials for electric vehicles. The Ascend Preferred Stock provides for non-cumulative dividends when and if declared by Ascend's board of directors. Each share is convertible, at any time, at our option, into shares of common stock of Ascend. For more information on this investment please see Note 12 – Equity Investments.

The Francis, Infinitem, NGP ET IV and Ascend investments further our business strategy to pursue opportunities that support the advancement of energy and related infrastructure and leverage our core competencies and build platforms for future lines of business with long-term growth and cash flow generation.

Change in Tax Status

On March 15, 2022, Alliance Minerals changed its federal income tax status from a pass-through entity to a taxable entity via a "check the box" election (the "Tax Election"), which became effective January 1, 2022. This election for Alliance Minerals reduced the total income tax burden on our oil & gas royalties, as Alliance Minerals now pays entity-level taxes at corporate tax rates which are favorable to our unitholders. For more information on the Tax Election please see Note 7 – Income Taxes.

Presentation

The consolidated financial statements include the accounts and operations of the ARLP Partnership and present our financial position as of December 31, 2022, December 31, 2023 and 2021, 2022, and results of our operations, comprehensive income, cash flows and changes in partners' capital for each of the three years in the period ended December 31, 2022, December 31, 2023. All of our intercompany transactions and accounts have been eliminated. Certain immaterial amounts in the prior year have been reclassified to conform to the current year presentation.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Consolidation—The consolidated financial statements present the consolidated financial position, results of operations and cash flows of ARLP, the Intermediate Partnership, Alliance Coal and other directly and indirectly wholly- and majority-owned subsidiaries of ARLP. All intercompany transactions and accounts have been eliminated.

Variable Interest Entity ("VIE")

VIEs are primarily entities that lack sufficient equity to finance their activities without additional financial support from other parties or whose equity holders, as a group, lack one or more of the following characteristics: (a) direct or indirect ability to make decisions, (b) obligation to absorb expected losses or (c) right to receive expected residual returns. A VIE must be evaluated quantitatively and qualitatively to determine the primary beneficiary, which is the reporting entity that has (a) the power to direct activities of a VIE that most significantly

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impact the VIE's economic performance and (b) the obligation to absorb losses of the VIE that could potentially be significant to the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE. The primary beneficiary is required to consolidate the VIE for financial reporting purposes.

To determine a VIE's primary beneficiary, we perform a qualitative assessment to determine which party, if any, has the power to direct activities of the VIE and the obligation to absorb losses and/or receive its benefits. This assessment involves identifying the activities that most significantly impact the VIE's economic performance and determine whether it, or another party, has the power to direct those activities. When evaluating whether we are the primary beneficiary of a VIE, we perform a qualitative analysis that considers the design of the VIE, the nature of our involvement and the variable interests held by other parties. See Note 13 – Variable Interest Entities for further information.

Business Combinations

A business consists of inputs and processes applied to those inputs that have the ability to contribute to the creation of outputs. We account for the acquisition of a business as a business combination, where we record the assets acquired, including identified intangible assets and liabilities assumed at their fair value, which in many instances involves estimates based on third-party valuations, such as appraisals, or internal valuations based on discounted cash flow analyses or other valuation techniques. However, if substantially all the fair value of the

assets acquired is concentrated in a single identifiable asset or a group of similar identifiable assets with the same risk profile, the acquisition is accounted for as an asset acquisition and recorded at cost.

Estimates

The preparation of consolidated financial statements in conformity with generally accepted accounting principles of the United States ("GAAP") requires management to make estimates and assumptions that affect the reported amounts and disclosures in the consolidated financial statements. Actual results could differ from those estimates. Significant estimates and assumptions include:

- Impairment assessments of investments, property, plant and equipment, and goodwill;
- Asset retirement obligations;
- Pension valuation variables;
- Workers' compensation and pneumoconiosis valuation variables;
- Acquisition related purchase price allocations;
- Life of mine assumptions;

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- Oil & gas reserve quantities and carrying amounts; and
- Determination of oil & gas revenue accruals

These significant estimates and assumptions are discussed throughout these notes to the consolidated financial statements. Fair Value Measurements

Fair Value Measurements—We apply fair value measurements to certain assets and liabilities. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the measurement date. Fair value is based on assumptions that market participants would use when pricing an asset or liability, including assumptions about risk and risks inherent in valuation techniques and inputs to valuations. Fair value measurements assume that the transaction occurs in the principal market for the asset or liability or, in the absence of a principal market, the most advantageous market for the asset or liability (the market for which the reporting entity would be able to maximize the amount received or minimize the amount paid). Valuation techniques used in our fair value measurements are based on observable and unobservable inputs. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect our own market assumptions.

We use the following fair value hierarchy, which prioritizes the inputs to valuation techniques used to measure fair value into three broad levels:

- Level 1 – Quoted prices for identical assets and liabilities in active markets that we have the ability to access at the measurement date.
- Level 2 – Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model derived valuations whose inputs are observable or whose significant value drivers are observable.
- Level 3 – Unobservable inputs for the asset or liability including situations where there is little, if any, market activity for the asset or liability.

The fair value hierarchy gives the highest priority to quoted prices in active markets (Level 1) and the lowest priority to unobservable data (Level 3). In some cases, the inputs used to measure fair value might fall into different levels of the fair value hierarchy. The lowest level input that is significant to a fair value measurement determines the applicable level in the fair value hierarchy. Assessing the significance of a particular input to the fair value measurement requires judgment, considering factors specific to the asset or liability. Significant fair value measurements are used in our significant estimates and are discussed throughout these notes.

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Cash and Cash Equivalents

Cash and cash equivalents include cash on hand and on deposit, including highly liquid investments with maturities of three months or less. At times the ARLP Partnership maintains deposits in federally insured financial institutions in excess of stated federally insured limits. Management monitors the credit ratings and concentration of risk with these financial institutions on a continuing basis to safeguard cash deposits. Based on this monitoring and other diligence, including discussions with representatives of the financial institutions, we have no reason to believe that any of the financial institutions in which we have deposits in excess of stated federally insured limits are facing financial difficulties, defaults or limited liquidity situations that would cause us to be unable to access our deposits.

Cash Management

The cash flows from operating activities section of our consolidated statements of cash flows reflects immaterial adjustments an adjustment for \$6.7 million representing book overdrafts, overdrafts at December 31, 2023. We did not have material book overdrafts at December 31, 2022, 2021 and 2020, 2021.

Inventories

Coal inventories are stated at the lower of cost or net realizable value on a first-in, first-out basis. Supply inventories are stated at an average cost basis, less a reserve for obsolete and surplus items.

Business Combinations—For acquisitions accounted for as a business combination, we record the assets acquired, including identified intangible assets and liabilities assumed at their fair value, which in many instances involves estimates based on third-party valuations, such as appraisals, or internal valuations based on discounted cash flow analyses or other valuation techniques. 110

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Advance Royalties

Goodwill—Goodwill represents Rights to coal mineral leases are often acquired and/or maintained through advance royalty payments. Where royalty payments represent prepayments recoupable against future production, they are recorded as an asset, with amounts expected to be recouped within one year classified as a current asset. As mining occurs on these leases, the excess royalty prepayments are charged to operating expenses. We assess the recoverability of cost over the fair value of net assets of acquired businesses. Goodwill is not amortized, but instead is evaluated for impairment periodically. We evaluate goodwill for impairment annually or more often if events or circumstances indicate that goodwill might royalty prepayments based on estimated future production. Royalty prepayments estimated to be impaired. The reporting unit or units used to evaluate nonrecoverable are expensed. Our advance royalties are summarized as follows:

December 31,	
2023	2022
(in thousands)	

Advance royalties, affiliates (see Note 20 – Related-Party Transactions)	\$	64,599	\$	60,608
Advance royalties, third-parties		14,306		14,661
Total advance royalties	\$	78,905	\$	75,269

Property, Plant and Equipment—measure goodwill for impairment are determined primarily from the manner in which the business is managed or operated. A reporting unit is an operating segment or a component that is one level below an operating segment. During 2020, we recognized an impairment charge of \$132.0 million consisting of the total carrying amount of goodwill allocated to our Hamilton County Coal, LLC ("Hamilton") reporting unit. See Note 5 – Goodwill Impairment for more information. There were no impairments of goodwill during 2022 or 2021. **Equipment**

Property, Plant and Equipment—Expenditures which extend the useful lives of existing plant and equipment assets are capitalized. Interest costs associated with major asset additions are capitalized during the construction period. Maintenance and repairs that do not extend the useful life or increase productivity of the asset are charged to operating expense as incurred. Exploration expenditures are charged to operating expense as incurred, including costs related to drilling and study costs incurred to convert or upgrade mineral resources to reserves. Land, machinery and equipment under finance lease agreements are capitalized and amortized over the useful lives of the assets given that in each case, ownership transfers at the end of the lease term. Preparation plants, processing Processing facilities and mineral rights, assuming current production estimates, are depreciated or depleted using the units-of-production method over a range from 1 to 26 years. method. Mining equipment and other plant and equipment assets are depreciated principally using the straight-line method over the estimated useful lives of the assets, ranging from 1 to 26 years, limited by the remaining estimated life of each mine. Depreciable lives for buildings, Buildings, office equipment and improvements range from 1 to 26 years. are amortized straight line over their estimated useful lives. Gains or losses arising from retirements are included in operating expenses. Depletion of coal mineral rights is provided on the basis of tonnage mined in relation to estimated recoverable tonnage, which equals estimated proven and probable coal mineral reserves. Therefore, our coal mineral rights are depleted based on only proven and probable coal mineral reserves. See Oil & Gas Reserve Quantities and Carrying Amounts below for a discussion of our accounting policies for oil & gas properties.

Mine Development Costs

Mine development costs are capitalized until production, other than production incidental to the mine development process, commences and are amortized on a units of production method based on the estimated proven and probable coal mineral reserves. Mine development costs represent costs incurred in establishing access to coal mineral reserves and include costs associated with sinking or driving shafts and underground drifts, permanent excavations, roads and tunnels. The end of the development phase and the beginning of the production phase takes place when construction of the mine for economic extraction is substantially complete. Coal extracted during the development phase is incidental to the mine's production capacity and is not considered to shift the mine into the production phase.

Leases—We lease buildings and equipment under operating lease agreements that provide for the payment of minimum rentals. We also have noncancelable lease agreements with third parties for land and equipment under finance lease obligations. Some of our arrangements within these agreements have both lease and non-lease components, which are generally accounted for separately. We have elected a practical expedient to account for lease and non-lease components as a single lease component for leases of buildings and office equipment. Our leases have approximate lease terms of 1 to 26 years, some of which include automatic renewals up to ten years, which are likely to be exercised and some of which include options to terminate the lease within one year. We also hold numerous mineral reserve leases with both related parties as well as third parties, none of which are accounted for as an operating lease or as a finance lease.

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We review each agreement to determine if an arrangement within the agreement contains a lease at the inception of an arrangement. Once an arrangement is determined to contain an operating or finance lease with a term greater than 12 months, we recognize a lease liability for the obligation to make lease payments and a right-of-use asset for the right to use the underlying asset for the lease term based on the

present value of lease payments over the lease term. The lease term includes all noncancelable periods defined in the lease as well as periods covered by options to extend the lease that we are reasonably certain to exercise. As an implicit borrowing rate cannot be determined under most of our leases, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments.

Expenses related to leases determined to be operating leases will be recognized on a straight-line basis over the lease term including any reasonably assured renewal periods, while those determined to be finance leases will be recognized following a front-loaded expense profile in which interest and amortization are presented separately in the income statement. The determination of whether a lease is accounted for as a finance lease or an operating lease requires management to make estimates primarily about the fair value of the asset and its estimated economic useful life.

Long-Lived Asset Impairment—We review the carrying value of long-lived assets and certain identifiable intangibles whenever events or changes in circumstances indicate that the carrying amount may not be recoverable based on estimated undiscounted future cash flows. To the extent the carrying amount is not recoverable, the amount of impairment is measured by the difference between the carrying value and the fair value of the asset (See Note 4 – Long-Lived Asset Impairments).

Oil & Gas Reserve Quantities and Carrying Amounts

We are wholly dependent on third-party operators to explore, develop, produce and operate the properties associated with our mineral interests. We follow the successful efforts method of accounting for our oil & gas mineral interests. Under this method, costs to acquire mineral interests in oil & gas properties are capitalized when incurred. The costs of mineral interests in unproved properties are capitalized pending the results of exploration and leasing efforts by operators. As mineral interests in unproved properties are determined to be proved, the related costs are transferred to proved oil & gas properties.

Mineral interests in oil & gas properties are grouped using a reasonable aggregation of properties with a common geological structural feature or stratigraphic condition, which we may also refer to as a depletable group. Mineral interests in proved oil & gas properties are depleted based on the units-of-production method. Proved reserves are quantities of oil & gas that can be estimated with reasonable certainty to be recoverable in the future from a given date forward, from known reservoirs, under existing economic conditions, operating methods, and government regulations. Proved developed

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resources are the quantities expected to be recovered through our operators' the Operators' existing wells with existing equipment, infrastructure and operating methods.

We evaluate impairment of our oil & gas mineral interests in proved properties whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. This evaluation is performed on a depletable group basis. We compare the undiscounted projected future cash flows expected in connection with a depletable group to its unamortized carrying amount to determine recoverability. When the carrying amount of a depletable group exceeds its estimated undiscounted future cash flows, the carrying amount is written down to its fair value, which is measured as the present value of the projected future cash flows of such properties. The factors used to determine fair value include estimates of proved reserves, future commodity prices, timing of future production, future expenditures, and a risk-adjusted discount rate.

Our oil & gas mineral interests in unproved properties are also assessed for impairment periodically but at least annually when facts and circumstances indicate that the unproved property will not be transferred to proved properties. Impairment of individual unproved properties whose acquisition costs are relatively significant are assessed on a property-by-property basis, and an impairment loss is recognized if we determine that the unproved property will not be transferred to proved properties. Impairment of unproved properties whose acquisition costs are not individually significant are assessed on a group basis. Any amount of loss to be recognized and the amount of a valuation allowance needed to provide for impairment of those properties is determined by amortizing those properties in the aggregate on the basis of historical

experience and other relevant information, such as the relative proportion of such properties on which proved reserves have been found in the past.

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Upon the sale of a complete depletable group, the book value thereof, less proceeds or salvage value, are charged to income. Upon the sale or retirement of an aggregation of interests which make up less than a complete depletable group, the proceeds are credited to accumulated depreciation, depletion and amortization, unless doing so would significantly alter the depreciation, depletion and amortization rate of the depletable group, in which case a gain or loss would be recorded.

Intangibles—Intangibles subject to amortization include customer contracts acquired from other parties and mining permits. Intangibles other than customer contracts are amortized on a straight-line basis over their useful life. Intangibles for customer contracts are amortized on a per unit basis over the terms of the contracts. Amortization expense attributable to intangibles was \$1.2 million, \$3.8 million and \$4.9 million for the years ending December 31, 2022, 2021 and 2020, respectively. Our intangibles are included in *Prepaid expenses and other assets* and *Other long-term assets* on our consolidated balance sheets at December 31, 2022 and 2021. Our intangibles are summarized as follows: **Equity Investments**

	December 31, 2022			December 31, 2021		
	Original Cost	Accumulated Amortization	Intangibles, Net	Original Cost	Accumulated Amortization	Intangibles, Net
	(in thousands)					
Customer contracts and other	10,623	(10,623)	—	10,623	(9,504)	1,119
Mining permits	1,500	(472)	1,028	1,500	(418)	1,082
Total	\$ 12,123	\$ (11,095)	\$ 1,028	\$ 12,123	\$ (9,922)	\$ 2,201

Amortization expense attributable to intangible assets is estimated as follows:

Year Ended December 31,	(in thousands)
2023	\$ 54
2024	54
2025	54
2026	54
2027	54
Thereafter	758

Investments—Our investments and ownership interests in equity securities without readily determinable fair values in entities in which we do not have a controlling financial interest or significant influence are accounted for using a measurement alternative other than fair value which is historical cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for identical or similar investments of the same entity. Distributions received on those investments are recorded as income unless those distributions are considered a return on investment, in which case the historical cost is reduced. We account for our ownership interests in Infinitum and Ascend as equity securities without readily determinable fair values. See Note 14.12 – Equity Investments for further discussion of this investment. these investments.

Our investments and ownership interests in entities in which we do not have a controlling financial interest are accounted for under the equity method of accounting if we have the ability to exercise significant influence over the entity. Investments accounted for under the equity

method are initially recorded at cost, and the difference between the basis of our investment and the underlying equity in the net assets of the joint venture at the investment date, if any, is amortized over the lives of the related assets that gave rise to the difference.

In the event our ownership requires a disproportionate sharing of income or loss, we use the hypothetical liquidation at book value ("HLBV") method to determine the appropriate allocation of income or loss. Under the HLBV method, income or loss of the investee is allocated based on hypothetical amounts that each investor would be entitled to receive if the net assets held were liquidated at book value at the end of each period, adjusted for any contributions made and distributions received during the period.

We hold equity method investments in AllDale III, Francis and NGP ETP ET IV. See Note 13 11 – Variable Interest Entities and Note 14 12 – Equity Investments for further discussion of our equity method investments.

We review our investments for impairment whenever events or changes in circumstances indicate a loss in the value of the investment may be other-than-temporary.

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Advance Royalties—Rights to coal mineral leases are often acquired and/or maintained through advance royalty payments. Where royalty payments represent prepayments recoupable against future production, they are recorded as an asset, with amounts expected to be recouped within one year classified as a current asset. As mining occurs on these leases, the royalty prepayments are charged to operating expenses. We assess the recoverability of royalty prepayments based on estimated future production. Royalty prepayments estimated to be nonrecoverable are expensed. Our Advance royalties are summarized as follows: **Leases**

	December 31,	
	2022	2021
	(in thousands)	
Advance royalties, affiliates (see Note 22 – Related-Party Transactions)	\$ 60,608	\$ 55,613
Advance royalties, third-parties	14,661	12,869
Total advance royalties	<u>\$ 75,269</u>	<u>\$ 68,482</u>

We lease buildings and equipment under operating lease agreements that provide for the payment of minimum rentals. We also have noncancelable lease agreements with third parties for land and equipment under finance lease obligations. Some of our arrangements within these agreements have both lease and non-lease components, which are generally accounted for separately. We have elected a practical expedient to account for lease and non-lease components as a single lease component for leases of buildings and office equipment. Our leases have approximate lease terms of 1 to 19 years, some of which include automatic renewals up to ten years, which are likely to be exercised and some of which include options to terminate the lease within one year. We also hold numerous mineral reserve leases with both related parties as well as third parties, none of which are accounted for as an operating lease or as a finance lease.

We review each agreement to determine if an arrangement within the agreement contains a lease at the inception of an arrangement. Once an arrangement is determined to contain an operating or finance lease with a term greater than 12 months, we recognize a lease liability for the obligation to make lease payments and a right-of-use asset for the right to use the underlying asset for the lease term based on the present value of lease payments over the lease term. The lease term includes all noncancelable periods defined in the lease as well as periods covered by options to extend the lease that we are reasonably certain to exercise. As an implicit borrowing rate cannot be determined under most of our leases, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments.

Expenses related to leases determined to be operating leases will be recognized on a straight-line basis over the lease term including any reasonably assured renewal periods, while those determined to be finance leases will be recognized following a front-loaded expense profile in which interest and amortization are presented separately in the income statement. The determination of whether a lease is accounted for as a finance lease or an operating lease requires management to make estimates primarily about the fair value of the asset and its estimated economic useful life.

Common Unit-Based Compensation

We maintain the Long-Term Incentive Plan ("LTIP") for certain key employees and executive officers. Pursuant to the LTIP, unit awards of non-vested "phantom" or notional units, also referred to as "restricted units," may be granted, which, upon satisfaction of time and performance-based vesting requirements, entitle the LTIP participant to receive ARLP common units. Certain awards may also contain a minimum-value guarantee payable in ARLP common units or cash that would be paid regardless of whether or not the awards vest, as long as service requirements are met. Annual grant levels, vesting provisions and minimum-value guarantees of restricted units for designated participants are recommended by Mr. Craft, subject to review and approval by the compensation committee of our general partner ("Compensation Committee"). The vesting of all restricted units is subject to the satisfaction of certain financial tests. If it is not probable that the financial tests will be achieved for a particular grant of restricted units, any previously expensed amounts for that grant are reversed, and no future expense will be recognized for that grant. Assuming the financial tests are met, restricted units issued to LTIP participants generally cliff vest on January 1st of the third year following the issuance of such restricted units. We expect to settle restricted unit grants by issuing ARLP common units, except for the portion of the restricted units that will satisfy our tax withholding obligations. We account for forfeitures of non-vested restricted unit grants as they occur. As provided under the distribution equivalent rights ("DERs") provisions of the LTIP and the terms of the restricted unit awards, all currently outstanding non-vested restricted units include contingent rights to receive quarterly distributions in cash or, at the discretion of the Compensation Committee, phantom units in lieu of cash credited to a bookkeeping account with a value equal to the cash distributions we make to unitholders during the vesting period. If it is not probable the financial tests for a particular grant of restricted units will be met, any previously paid DER amounts for that grant are reversed from Partners' Capital and recorded as compensation expense and any future DERs, for that grant, if any, will be recognized as compensation expense when paid.

We have utilized the Supplemental Executive Retirement Plan ("SERP") to provide deferred compensation benefits for certain executive officers. All allocations made to participants under the SERP have been made in the form of "phantom" ARLP units. We intend to settle any distributions from the SERP in the form of ARLP common units. The SERP has been administered by the Compensation Committee.

Our directors participate in the MGP Amended and Restated Deferred Compensation Plan for Directors ("Directors' Deferred Compensation Plan"). Pursuant to the Directors' Deferred Compensation Plan, for amounts deferred either automatically or at the election of the director, a notional account is established and credited with notional common units

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of ARLP, described in the Directors' Deferred Compensation Plan as "phantom" units. We intend to settle any distributions from the Directors' Deferred Compensation Plan in the form of ARLP common units.

For both the SERP and Directors' Deferred Compensation Plan, when quarterly cash distributions are made with respect to ARLP common units, an amount equal to such quarterly distribution is credited to each participant's notional account as additional phantom units and recorded as compensation expense. All grants of phantom units under the SERP and Directors' Deferred Compensation Plan vest immediately.

On December 14, 2023, the Compensation Committee and the Board of Directors approved the termination of the SERP and Directors' Deferred Compensation Plan, and authorized distribution of accounts on December 15, 2024 or as soon thereafter as practical. The accounts will continue to accrue benefits in accordance with plan terms until distributed.

The fair value of restricted common unit grants under the LTIP, SERP and the Directors' Deferred Compensation Plan are determined on the grant date of the award and recognized as compensation expense on a pro rata basis for LTIP and SERP awards, as appropriate, over the

requisite service period. Compensation expense is fully recognized on the grant date for quarterly distributions credited to SERP accounts and Directors' Deferred Compensation Plan awards. The corresponding liability is classified as equity and included in limited partners' capital in the consolidated financial statements.

Workers' Compensation and Pneumoconiosis (Black Lung) Benefits

We are liable for workers' compensation benefits for traumatic injuries and benefits for black lung disease (or pneumoconiosis). Both traumatic claims and pneumoconiosis benefits are covered through our self-insured programs.

We provide income replacement and medical treatment for work-related traumatic injury claims as required by applicable state laws. Workers' compensation laws also compensate survivors of workers who suffer employment related deaths. Our liability for traumatic injury claims is the estimated present value of current workers' compensation benefits, based on our actuarial estimates. Our actuarial calculations are based on a blend of actuarial projection methods and numerous assumptions including claim development patterns, mortality, medical costs and interest rates.

Our pneumoconiosis benefits liability is calculated using the service cost method based on the actuarial present value of the estimated pneumoconiosis obligation. Our actuarial calculations are based on numerous assumptions including claim development patterns, medical costs and mortality. Actuarial gains or losses are amortized over the remaining service period of active miners.

Pension Benefits

The funded status of our pension benefit plan is recognized separately in our consolidated balance sheets as either an asset or liability. The funded status is the difference between the fair value of plan assets and the plan's benefit obligation. Pension obligations and net periodic benefit costs are actuarially determined and impacted by various assumptions and estimates including expected return on assets, discount rates, mortality assumptions, employee turnover rates and retirement dates. We evaluate our assumptions periodically and make adjustments to these assumptions and the recorded liability as necessary.

The discount rate is determined for our pension benefit plan based on an approach specific to our plan. The year end discount rate is determined considering a yield curve comprised of high-quality corporate bonds and the timing of the expected benefit cash flows.

The expected long-term rate of return on plan assets is determined based on broad equity and bond indices, the investment goals and objectives, the target investment allocation and on the average annual total return for each asset class.

Unrecognized actuarial gains and losses and unrecognized prior service costs and credits are deferred and recorded in accumulated other comprehensive loss until amortized as a component of net periodic benefit cost. Unrecognized actuarial gains and losses in excess of 10% of the greater of the benefit obligation or the market-related value of plan assets are amortized over the participants' average remaining future years of service.

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Asset Retirement Obligations

Our coal mining operations are governed by various state statutes and the Federal Surface Mining Control and Reclamation Act of 1977, which establish reclamation and mine closing standards. These regulations require, among other things, restoration of property in accordance with specified standards and an approved reclamation plan. We record a liability for the fair value of the estimated cost of future mine asset retirement and closing procedures, escalated for inflation then discounted, on a present value basis in the period incurred or acquired and a corresponding amount is capitalized by increasing the carrying amount of the related long-lived asset. Those costs relate to permanently sealing portals at underground mines and to reclaiming the final pits and support surface acreage for both our underground mines and past

surface mines. Examples of these types of costs, common to both types of mining, include, but are not limited to, removing or covering refuse piles and settling ponds, water treatment obligations, and dismantling preparation plants, other facilities and roadway infrastructure. Accounting for asset retirement obligations also requires depreciation of the capitalized asset retirement cost and accretion of the asset retirement obligation over time. Depreciation is generally determined on a units-of-production basis and accretion is generally recognized over the life of the producing assets. As changes in estimates occur (such as mine plan revisions, changes in estimated costs or changes in anticipated timing of reclamation activities), the revisions to the obligation and asset are recognized at the appropriate credit-adjusted, risk-free interest rate. Federal and state laws require bonds to secure our obligations to reclaim lands used for mining and are typically renewed on an annual basis.

See Note 20 – Asset Retirement Obligations for more information.

Pension Benefits—The funded status of our pension benefit plan is recognized separately in our consolidated balance sheets as either an asset or liability. The funded status is the difference between the fair value of plan assets and the plan's benefit obligation. Pension obligations and net periodic benefit costs are actuarially determined and impacted by various assumptions and estimates including expected return on assets, discount rates, mortality assumptions, employee turnover rates and retirement dates. We evaluate our assumptions periodically and make adjustments to these assumptions and the recorded liability as necessary (See Note 17 – Employee Benefit Plans).

Coal Revenue Recognition

The discount rate is determined for our pension benefit plan based on an approach specific to our plan. The year end discount rate is determined considering a yield curve comprised of high-quality corporate bonds and the timing of the expected benefit cash flows.

The expected long-term rate of return on plan assets is determined based on broad equity and bond indices, the investment goals and objectives, the target investment allocation and on the average annual total return for each asset class.

Unrecognized actuarial gains and losses and unrecognized prior service costs and credits are deferred and recorded in accumulated other comprehensive loss until amortized as a component of net periodic benefit cost. Unrecognized actuarial gains and losses in excess of 10% of the greater of the benefit obligation or the market-related value of plan assets are amortized over the participants' average remaining future years of service.

Workers' Compensation and Pneumoconiosis (Black Lung) Benefits—We are liable for workers' compensation benefits for traumatic injuries and benefits for black lung disease (or pneumoconiosis). Both traumatic claims and pneumoconiosis benefits are covered through our self-insured programs. In addition, certain of our mine operating entities are liable under state statutes and the Federal Coal Mine Health and Safety Act of 1969, as amended, to pay pneumoconiosis benefits to eligible employees and former employees and their dependents.

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We provide income replacement and medical treatment for work-related traumatic injury claims as required by applicable state laws. Workers' compensation laws also compensate survivors of workers who suffer employment related deaths. Our liability for traumatic injury claims is the estimated present value of current workers' compensation benefits, based on our actuarial estimates. Our actuarial calculations are based on a blend of actuarial projection methods and numerous assumptions including claim development patterns, mortality, medical costs and interest rates.

Our pneumoconiosis benefits liability is calculated using the service cost method based on the actuarial present value of the estimated pneumoconiosis obligation. Our actuarial calculations are based on numerous assumptions including claim development patterns, medical costs and mortality. Actuarial gains or losses are amortized over the remaining service period of active miners. See Note 21 – Accrued Workers' Compensation and Pneumoconiosis Benefits for more information on Workers' Compensation and Pneumoconiosis Benefits.

Coal Revenue Recognition—Revenues from coal supply contracts with customers, which primarily relate to sales of thermal coal, are recognized at the point in time when control of the coal passes to the customer. We have determined that each ton of coal represents a separate and distinct performance obligation. Our coal supply contracts and other revenue contracts vary in length from short-term to long-term

sales contracts and do not typically have significant financing components. Transportation revenues represent the fulfillment costs incurred for the services provided to customers through third-party carriers and for which we are directly reimbursed. Other revenues primarily consist of transloading fees, administrative service revenues from our affiliates, mine safety services and products, other coal contract fees and other handling and service fees. Performance obligations under these contracts are typically satisfied upon transfer of control of the goods or services to our customer which is determined by the contract and could be upon shipment or upon delivery.

The estimated transaction price from each of our contracts is based on the total amount of consideration we expect to be entitled to under the contract. Included in the transaction price for certain coal supply contracts is the impact of variable consideration, including quality price adjustments, handling services, government imposition claims, per ton price fluctuations based on certain coal sales price indices and anticipated payments in lieu of shipments. We have constrained the expected value of variable consideration in our estimation of transaction price and only included this consideration to the extent that it is probable that a significant revenue reversal will not occur. The estimated transaction price for each contract is allocated to our performance obligations based on relative standalone selling prices determined at contract inception. Variable consideration is allocated to a specific part of the contract in many instances, such as if the variable consideration is based on production activities for coal delivered during a certain period or the outcome of a customer's ability to accept coal shipments over a certain period.

Contract assets are recorded as trade receivables and reported separately in our consolidated balance sheet from other contract assets as title passes to the customer and our right to consideration becomes unconditional. Payments for coal shipments are typically due within two to four weeks of performance. We typically do not have material contract assets that are stated separately from trade receivables as our performance obligations are satisfied as control of the goods or services passes to the customer thereby granting us an unconditional right to receive consideration. Contract liabilities relate to consideration received in advance of the satisfaction of our performance obligations. Contract liabilities are recognized as revenue at the point in time when control of the good or service passes to the customer.

Oil & Gas Revenue Recognition

Oil & gas royalty revenues are recognized at the point in time when control of the product is transferred to the purchaser by the lessee and collectability of the sales price is reasonably assured. Oil & gas are priced on the delivery date based on prevailing market prices with certain adjustments related to oil quality and physical location. The royalty we receive is tied to a market index, with certain adjustments based on, among other factors, whether a well connects to a gathering or transmission line, quality and heat content of the product, and prevailing supply and demand conditions.

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We also periodically earn revenue from lease bonuses. We recognize lease bonus revenue when we execute a lease of our mineral interests to exploration and production companies. A lease agreement represents our contract with an operator, which is generally an exploration and production company. The contract will (a) generally transfer the rights to any oil or gas discovered, (b) grant us a right to a specified royalty interest from the operator, and (c) require the operator to commence drilling and complete operations within a specified time period. Control of the minerals transfers to the operator when the lease agreement is executed. At the time we execute the lease agreement, we expect to receive the lease bonus

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payment within a reasonable time, though in no case more than one year, such that we do not adjust the expected amount of consideration for the effects of any significant financing component.

As a non-operator, we have limited visibility into the timing of when new wells start producing. In addition, production statements may not be received for 30 to 90 days or more after the date production is delivered. As a result, we are required to estimate the amount of production delivered to the purchaser and the price that will be received for the sale of the product. The expected sales volumes and prices from our properties are estimated and recorded within the *Trade receivables* line item in our consolidated balance sheets. The difference between our estimates and the actual amounts received for oil & gas royalty revenue are immaterial and recorded in the month that payment is received from the third-party purchaser unless new production information is received prior to the payment allowing us to update the estimate recorded.

Common Unit-Based Compensation—We have the Long-Term Incentive Plan ("LTIP") for certain employees and officers of MGP and its affiliates who perform services for us. As part of the LTIP, unit awards of non-vested "phantom" or notional units, also referred to as "restricted units", may be granted which upon satisfaction of time and performance-based vesting requirements, entitle the LTIP participant to receive ARLP common units. Certain awards may also contain a minimum-value guarantee payable in ARLP common units or cash that would be paid regardless of whether or not the awards vest, as long as service requirements are met. Annual grant levels, vesting provisions and minimum-value guarantees of restricted units for designated participants are recommended by Mr. Craft, subject to review and approval of the compensation committee of our general partner ("Compensation Committee"). Vesting of all restricted units outstanding is subject to the satisfaction of certain financial tests. If it is not probable the financial tests for a particular grant of restricted units will be met, any previously expensed amounts for that grant are reversed and no future expense will be recognized for that grant. Assuming the financial tests are met, grants of restricted units issued to LTIP participants are generally expected to cliff vest on January 1st of the third year following issuance of the grants. We expect to settle restricted unit grants by delivery of newly-issued ARLP common units, except for the portion of the grants that will satisfy employee tax withholding obligations of LTIP participants. We account for forfeitures of non-vested LTIP restricted unit grants as they occur. As provided under the distribution equivalent rights ("DERs") provisions of the LTIP and the terms of the LTIP restricted unit awards, all non-vested restricted units include contingent rights to receive quarterly distributions in cash or, at the discretion of the Compensation Committee, phantom units in lieu of cash credited to a bookkeeping account with value equal to the cash distributions we make to unitholders during the vesting period. If it is not probable the financial tests for a particular grant of restricted units will be met, any previously paid DER amounts for that grant are reversed from Partners' Capital and recorded as compensation expense and any future DERs, for that grant, if any, will be recognized as compensation expense when paid.**Income Taxes**

We utilize the Supplemental Executive Retirement Plan ("SERP") to provide deferred compensation benefits for certain officers and key employees. All allocations made to participants under the SERP are made in the form of "phantom" ARLP units and SERP distributions will be settled in the form of ARLP common units. The SERP is administered by the Compensation Committee.

Our directors participate in the MGP Amended and Restated Deferred Compensation Plan for Directors ("Directors' Deferred Compensation Plan"). Pursuant to the Directors' Deferred Compensation Plan, for amounts deferred either automatically or at the election of the director, a notional account is established and credited with notional common units of ARLP, described in the Directors' Deferred Compensation Plan as "phantom" units. Distributions from the Directors' Deferred Compensation Plan will be settled in the form of ARLP common units.

For both the SERP and Directors' Deferred Compensation Plan, when quarterly cash distributions are made with respect to ARLP common units, an amount equal to such quarterly distribution is credited to each participant's notional account as additional phantom units. All grants of phantom units under the SERP and Directors' Deferred Compensation Plan vest immediately.

The fair value of restricted common unit grants under the LTIP, SERP and the Directors' Deferred Compensation Plan are determined on the grant date of the award and recognized as compensation expense on a pro rata basis for LTIP and SERP awards, as appropriate, over the requisite service period. Compensation expense is fully recognized on the grant date for quarterly distributions credited to SERP accounts and Directors' Deferred Compensation Plan awards. The corresponding liability is classified as equity and included in limited partners' capital in the consolidated financial statements (See Note 18 – Common Unit-Based Compensation Plans).

Income Taxes—We are not a taxable entity for federal or state income tax purposes; the tax effect of our activities accrues to our unitholders. Although publicly traded partnerships as a general rule are taxed as corporations, we qualify for an exemption because at least 90% of our income consists of qualifying income, as defined in Section 7704(c) of the Internal Revenue Code. Net income for financial statement purposes may differ significantly from taxable income reportable to unitholders as a result of differences between the tax basis and financial reporting basis of assets and liabilities and the taxable income allocation requirements under our partnership agreement. Individual unitholders have different investment bases depending upon the timing and price of acquisition of their partnership units. Furthermore, each unitholder's tax accounting, which is partially dependent upon the unitholder's tax position, differs from the accounting followed in our consolidated financial statements. Accordingly, the aggregate difference in the basis of our net assets for financial and tax reporting purposes cannot be readily determined because information regarding each unitholder's tax attributes in our partnership is not available to us.

Our subsidiary Alliance Minerals within our Oil & Gas Royalties segment and certain other subsidiaries within our Other, Corporate and Elimination category are subject to federal and state income taxes. We use the liability method of accounting for income taxes, under which deferred tax assets and liabilities are recognized for the future tax consequences of (i) temporary differences between the financial statement carrying amounts and the tax basis of existing assets and liabilities and (ii) operating losses and tax credit carryforwards. Deferred income tax assets and liabilities are based on enacted rates applicable to the future period when those temporary differences are expected to be recovered or settled. The effect of a change in tax status or a change in tax rates on deferred tax assets and liabilities is recognized in the period the change in status is elected or rate change is enacted. A valuation allowance is provided for deferred tax assets when it is more likely than not the deferred tax assets will not be realized.

New Accounting Standards Issued and Not Yet Adopted

In November 2021, 2023, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2021-10, *Government Assistance* 2023-07, *Segment Reporting (Topic 832) 280: Improvements to Reportable Segment Disclosures by Business Entities about Government Assistance* ("ASU 2021-10" 2023-07"). ASU 2021-10 increases 2023-07 primarily requires enhanced disclosures about significant segment expenses regularly provided to the transparency chief operating decision maker ("CODM"), the amount and composition of government assistance including other segment items, and the disclosure of (1) the types of assistance, (2) an entity's accounting for the assistance, title and (3) the effect position of the assistance on an entity's financial statements. CODM. ASU 2021-10 2023-07 is effective for fiscal years beginning after December 15, 2021 December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024 with early adoption permitted. We are currently evaluating the impact of adopting ASU 2023-07, but do not expect it to have a material effect on our consolidated financial statements.

In December 2023, the FASB issued ASU 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures* ("ASU 2023-09"). ASU 2023-09 primarily requires enhanced disclosures to (1) disclose specific categories in the rate reconciliation, (2) disclose the amount of income taxes paid and expensed disaggregated by federal, state, and foreign taxes, with further disaggregation by individual jurisdictions if certain criteria are met, and (3) disclose income

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(loss) from continuing operations before income tax (benefit) disaggregated between domestic and foreign. ASU 2023-09 is effective for fiscal years beginning after December 15, 2024, with early adoption permitted. The adoption We are currently evaluating the impact of adopting ASU 2021-10 did 2023-09, but do not expect it to have a material impact effect on our consolidated financial statements.

3. ACQUISITIONS

Boulders

On October 13, 2021, we acquired approximately 1,480 oil & gas net royalty acres in the Delaware Basin from Boulders for a purchase price of \$31.0 million, which was funded with cash on hand. This acquisition gives us increased exposure to a prolific area of the Delaware Basin and is within close proximity to reserves acquired in previous acquisitions. The acreage acquired in the Boulders Acquisition was mostly undeveloped. Because more than 90% of the mineral interests acquired in the acquisition represent undeveloped properties **with a similar risk profile**, including proved undeveloped, we have determined that the Boulders Acquisition should be accounted for as an asset acquisition. **We have allocated**

The following table summarizes the purchase price **to allocation of the assets acquired reserves as follows:** in the Boulders Acquisition:

	(in thousands)
Mineral interests in proved properties	\$ 12,542
Mineral interests in unproved properties	18,418
	<u>\$ 30,960</u>

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[Belvedere](#)

On September 9, 2022 (the "Belvedere Acquisition Date"), we acquired approximately 394 oil & gas net royalty acres in the Delaware Basin from Belvedere for a cash purchase price of \$11.4 million, which was funded with cash on hand. This acquisition gives us additional exposure to a productive area of the Delaware Basin and is within close proximity to reserves that we currently own. Because the mineral interests acquired in the Belvedere Acquisition include royalty interests in both developed properties and undeveloped properties **with different risk profiles**, we have determined that the acquisition should be accounted for as a business combination and the underlying assets should be recorded at fair value as of the Belvedere Acquisition Date on our consolidated balance sheet.

The following table summarizes the fair value allocation of assets acquired as of the Belvedere Acquisition Date:

	(in thousands)
Mineral interests in proved properties	\$ 7,724
Mineral interests in unproved properties	3,667
	<u>\$ 11,391</u>

The fair value of the mineral interests was determined using an income approach consisting of a discounted cash flow model. The assumptions used in the discounted cash flow model included estimated production, projected cash flows, forward oil & gas prices and risk adjusted discount rates. Certain assumptions used are not observable in active markets; therefore, the fair value measurements represent Level 3 fair value measurements.

The amounts of revenue and earnings from the mineral interests acquired in the Belvedere Acquisition included in our consolidated statements of **operations since income from** the Belvedere Acquisition Date **through December 31, 2022** are as follows:

Year Ended
December 31,
2022
(in thousands)

	(in thousands)
Mineral interests in proved properties	\$ 35,918
Mineral interests in unproved properties	43,740
Receivables	1,569
Net assets acquired	\$ 81,227

The fair value of the mineral interests was determined using an income approach consisting of a discounted cash flow model. The assumptions used in the discounted cash flow model included estimated production, projected cash flows, forward oil & gas prices and risk adjusted discount rates. The fair value of the receivables was determined using estimated production during the period between the Jase Acquisition Date and the effective date of the agreement and observable sales prices during the period. Certain assumptions used are not observable in active markets; therefore, the fair value measurements represent Level 3 fair value measurements.

The amounts of revenue and earnings from the mineral interests acquired in the Jase Acquisition included in our consolidated statements of operations since income from the Jase Acquisition Date through December 31, 2022 are as follows:

	Year Ended December 31, 2022 (in thousands)
Revenue	\$ 1,689
Net income	854

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The following represents our supplemental pro forma consolidated revenues and net income for the years ended December 31, 2022 and 2021 as if the mineral interests acquired in the Jase Acquisition had been included in our consolidated results since January 1, 2021. These amounts have been calculated after applying our accounting policies.

	Year Ended December 31, 2022 2021 (in thousands) (unaudited)		Year Ended December 31, 2022 2021 (in thousands) (unaudited)	
Revenues	\$ 2,417,278	\$ 1,579,660	\$ 2,430,734	\$ 1,588,914
Net income	587,749	186,151	596,759	190,765

JC Resources

On February 22, 2023, we completed the JC Resources Acquisition, which gives us increased exposure to a prolific area of the Delaware Basin that is within close proximity to reserves that we currently own. This acquisition was approved by the conflicts committee of MGP's board of directors, which is comprised entirely of independent directors. Because JC Resources is under common control with us, we recorded the acquisition at JC Resources' carrying value for each period presented. The carrying value of the mineral interests as well as related receivables and payables at February 22, 2023 was \$65.0 million inclusive of \$25.4 million and \$37.8 million of mineral interests in proved and unproved properties, respectively. The JC Resources Acquisition increased revenues included in our consolidated statements of income by \$10.6 million for the year ended December 31, 2023.

4. LONG-LIVED ASSET IMPAIRMENTS

During the year ended December 31, 2020Acquisition Agreement

On January 27, 2023, we entered into a one-year collaborative agreement with a third party, effective January 1, 2023, committing up to \$35.0 million for the acquisition of oil & gas mineral interests in the Midland and Delaware Basins. Under the agreement, the third party assists us in the identification, evaluation, and acquisition of target oil & gas mineral interests. In exchange for these services, the third party receives a participation share, partially funded by the third party, and is paid a periodic management fee. As of December 31, 2023, we have purchased \$6.5 million and \$6.7 million of oil & gas mineral interests in proved and unproved properties, respectively, pursuant to this agreement. Management fees paid under this agreement have been immaterial. On February 19, 2024, we renewed this agreement for an additional one-year term, committing up to \$25.0 million.

Skyland Acquisition

On December 7, 2023 (the "Skyland Acquisition Date"), we acquired approximately 2,372 oil & gas net royalty acres in the Anadarko, Williston and Delaware Basins from Skyland and Haymaker for a cash purchase price of \$14.5 million which was funded with cash on hand. This acquisition further enhanced our ownership position in these basins. Because the mineral interests acquired in the Skyland Acquisition include royalty interests in both developed properties and undeveloped properties with different risk profiles, we have determined that the acquisition should be accounted for as a business combination and the underlying assets should be recorded \$23.5 million at fair value as of non-cash asset impairment charges in the Skyland Acquisition Date on our Illinois Basin Coal Operations segment due to sealing our idled Gibson North mine, resulting in its permanent closure, and a decrease in consolidated balance sheet.

The following table summarizes the fair value allocation of certain mining equipment at our idled operations and greenfield coal mineral resources assets acquired as a result of weakened coal market conditions including the impact of the COVID-19 pandemic. During the same period, we also recorded an asset impairment charge of \$1.5 million in our Coal Royalties segment due to a decrease in the fair value of greenfield coal mineral resources held by Alliance Resource Properties near our coal mining operations in the Illinois Basin. See Note 25 – Segment Information for more information about our segments. Skyland Acquisition Date:

	(in thousands)
Mineral interests in proved properties	\$ 8,694
Mineral interests in unproved properties	5,765
Net assets acquired	<u>\$ 14,459</u>

The fair values value of the impaired assets were mineral interests was determined using a market approach, which represents Level 3 fair value measurements under the fair value hierarchy. The fair value analysis used assumptions regarding the marketability of certain mining and coal mineral reserve and resource assets near our Illinois Basin coal mining operations.

See Note 2 – Summary of Significant Accounting Policies – Long-Lived Asset Impairment for more information on our accounting policy for asset impairments.

5. GOODWILL IMPAIRMENT

During the first quarter of 2020, we considered whether an interim test of our consolidated goodwill of \$136.4 million was necessary. Our consolidated goodwill included \$132.0 million recorded in our Illinois Basin Coal Operations segment in conjunction with our acquisition of the Hamilton mine on July 31, 2015. We assessed certain events and changes in circumstances, including (a) adverse industry and market developments, including the impact of the COVID-19 pandemic, (b) our response to these developments, including temporarily ceasing production at several mines, including our Hamilton mine and (c) our actual performance during the quarter. After consideration of these events and changes in circumstances, we performed an interim test of the goodwill associated with Hamilton comparing Hamilton's carrying amount to its fair value.

We estimated the fair value of Hamilton using an income approach utilizing consisting of a discounted cash flow model. The assumptions used in the discounted cash flow model included estimated production, forward coal prices, operating expenses, capital expenditures and a weighted average cost of capital. Our forecasts of future projected cash flows, considered market conditions at the time of the assessment forward oil & gas prices and our estimate of the mine's performance in future years based on the information available to us. Key risk adjusted discount rates. Certain assumptions used in our valuation were are not observable in active markets; therefore, the fair value measurements represent Level 3 fair value measurements.

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The fair value amounts of Hamilton was determined revenue and earnings from the mineral interests acquired in the Skyland Acquisition included in our consolidated statements of income from the Skyland Acquisition Date through December 31, 2023 are immaterial.

The following represents our supplemental pro forma consolidated revenues and net income for the years ended December 31, 2023 and 2022 as if the mineral interests acquired in the Skyland Acquisition had been included in our consolidated results since January 1, 2022. These amounts have been calculated after applying our accounting policies.

	Year Ended December 31,	
	2023	2022
	(in thousands)	
	(unaudited)	
Revenues	\$ 2,568,516	\$ 2,423,313
Net income	637,757	591,140

Miscellaneous Acquisitions

In addition to be below its carrying amount (including goodwill) by more than the recorded balance acquisitions discussed above, we purchased \$6.8 million and \$4.3 million of goodwill associated with oil & gas mineral interests in proved and unproved properties, respectively, during the mine. Accordingly, we recognized an impairment charge of \$132.0 million consisting of year ended December 31, 2023 and \$1.3 million and \$0.4 million in proved and unproved properties, respectively, during the total carrying amount of goodwill associated with Hamilton. year ended December 31, 2022.

6.4. INVENTORIES

Inventories consist of the following:

	December 31,		December 31,	
	2022	2021	2023	2022
	(in thousands)			
				(in thousands)
Coal	\$ 23,553	\$ 24,845	\$ 56,549	\$23,553
Supplies (net of reserve for obsolescence of \$6,601 and \$5,554, respectively)	53,773	35,457		
Supplies (net of reserve for obsolescence of \$8,167 and \$6,601, respectively)			71,007	53,773
Total inventories, net	\$ 77,326	\$ 60,302	\$127,556	\$77,326

See Note 2 – Summary The table above includes lower of Significant Accounting Policies for more information on cost or net realizable value adjustments of \$33.3 million. These adjustments are a result of lower coal sale prices and higher cost per ton primarily due to the impact of Mettiki's longwall being idle most of the second half of 2023 due to delayed development of a new longwall district, Hamilton experiencing disruptions in production due to a longwall move, and continuing development of the Henderson County mine at our accounting policy for inventories. River View complex.

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7.5. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment consist of the following:

[illegible]

Mining equipment and processing facilities	\$ 1,927,603	\$ 1,896,470	\$ 1,989,541	\$ 1,927,603
Land and coal mineral rights	499,950	458,440	504,736	499,950
Oil & gas mineral interests	740,635	647,864	853,350	814,667
Buildings, office equipment, improvements and other miscellaneous equipment	300,436	282,902	310,876	300,436
Construction, mine development and other projects in progress	99,042	44,217	184,895	99,042
Mine development costs	289,724	278,454	329,146	289,724
Property, plant and equipment, at cost	3,857,390	3,608,347	4,172,544	3,931,422
Less accumulated depreciation, depletion and amortization	(2,040,468)	(1,909,669)	(2,149,881)	(2,050,754)
Total property, plant and equipment, net	\$ 1,816,922	\$ 1,698,678	\$ 2,022,663	\$ 1,880,668

All of our property, plant and equipment have depreciable lives of 1 to 20 years. Depreciation, depletion and amortization expense related to property, plant and equipment was \$270.9 million \$276.4 million, \$256.9 million \$273.8 million and \$297.0 million \$260.3 million for the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, respectively.

At December 31, 2022 December 31, 2023 and 2021, 2022, land and coal mineral rights above include \$29.9 million \$13.4 million and \$37.4 million \$29.9 million, respectively, of carrying value associated with coal mineral reserves and resources attributable to properties where we or a third party to which we lease coal mineral reserves and resources are not currently engaged in mining operations or leasing to third parties, and therefore, the coal mineral reserves are not currently being depleted. We believe that the carrying value of these coal mineral reserves will be recovered.

At December 31, 2022 December 31, 2023 and 2021, 2022, our oil & gas mineral interests noted in the table above includes include the carrying value of our unproved oil & gas mineral interests totaling \$383.6 million \$411.6 million and \$355.1 million \$422.7 million, respectively. As discussed in Note 2 – Summary of Significant Accounting Policies, we We generally do not record depletion expense for our unproved oil & gas mineral interests; however, we do review for impairment as needed throughout the year.

During 2023, we incurred \$44.4 million in mine development costs, primarily related to Tunnel Ridge and the Henderson County mine at River View Coal, LLC ("River View"). During 2022, we incurred \$11.3 million in mine development costs, primarily related to Hamilton and River View Coal, LLC ("River View") mine. During 2021, we did not incur material mine development costs. All past capitalized mine development costs are associated with other mines that shifted to the production phase in past years and we are amortizing these costs accordingly. We believe that the carrying value of the past development costs will be recovered.

See Note 2 – Summary of Significant Accounting Policies for more information on our accounting policy for property, plant and equipment.

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8.6. LONG-TERM DEBT

Long-term debt consists of the following:

Principal				Unamortized Discount and Debt Issuance Costs			
December 31,				December 31,			
2022	2021	2022	2021	2023	2022	2023	2022
(in thousands)							

Credit Facility. Facility

On January 13, 2023, Alliance Coal, as borrower, entered into a Credit Agreement (the "Credit Agreement") with various financial institutions. The Credit Agreement provides for a \$425 million revolving credit facility, which includes a sublimit of \$15.0 million for swingline borrowings and permits the issuance of letters of credit up to the full amount of \$425 million (the "Revolving Credit Facility"), and for a term loan in an aggregate principal amount of \$75 million (the "Term Loan"). The Credit Agreement matures on March 9, 2027, at which time the aggregate outstanding principal amount of all Revolving Credit Facility advances and all Term Loan advances are required to be repaid in full. The Credit Agreement will instead mature on January 30, 2025, if on that date our Senior Notes, as discussed below, are still outstanding and Alliance Coal does not have liquidity of at least \$200 million. Interest is payable quarterly, with principal of the Term Loan due in quarterly installments equal to 6.25% of the original principal amount of the Term Loan beginning with the quarter ending June 30, 2023 and the balance payable at maturity. The Revolving Credit Facility replaces the \$459.5 million revolving credit facility ("Replaced Credit Facility"), which included a sublimit of \$125 million for the issuance of letters of credit and a sublimit of \$15.0 million for swingline borrowings, extended to the Intermediate Partnership under its Fifth Amended and Restated Credit Agreement, dated as of March 9, 2020. We incurred debt issuance costs during the year ended December 31, 2023 of \$12.4 million in connection with the Credit Agreement. These debt issuance costs are deferred and amortized as a component of interest expense over the term of the Revolving Credit Facility.

The Revolving Credit Facility is underwritten by a syndicate of eighteen financial institutions and the obligations of the lenders are individual obligations, which means the failure of one or more lenders to be able to fund its obligation does not relieve the remaining lenders from funding their obligations. Based on our diligence, including discussions with representatives of certain of these financial institutions, as of December 31, 2023 we have no reason to believe that the banks within our syndicate are facing financial difficulties, defaults or limited liquidity.

situations that would have expired on March 9, 2024, cause them to be unable to fund their obligations under the Credit Agreement. However, should any of the banks in our syndicate experience conditions in the future that limit their ability to fund their obligations, the amount available under the Revolving Credit Facility could be reduced.

The Credit Agreement is guaranteed by ARLP and certain of its subsidiaries, including the Intermediate Partnership and most of the direct and indirect subsidiaries of Alliance Coal (the "Subsidiary Guarantors"). The Credit Agreement also is secured by substantially all of the assets of the Subsidiary Guarantors and Alliance Coal. Borrowings under the Credit Agreement bear interest, at our option, at either (i) an adjusted one-month, three-month or six-month term rate based on the secured overnight financing rate published by the Federal Reserve Bank of New York, plus the applicable margin or (ii) the base rate plus the applicable margin. The base rate is the highest of (i) the Overnight Bank Funding Rate plus 0.50%, (ii) the Administrative Agent's prime rate, and (iii) the Daily Simple Secured Overnight Financing Rate plus 100 basis points. The applicable margin for borrowings under the Credit Agreement are determined by reference to the Consolidated Debt to Consolidated Cash Flow Ratio. For borrowings under the Replaced Credit Facility bore interest, at our option, at either (i) Term Loan, we elected the base three-month term rate, at the greater of three benchmarks or (ii) a Eurodollar Rate, plus margins. The Eurodollar Rate, with applicable margin, under the Replaced Credit Facility which was 6.74% 8.50% as of December 31, 2022 December 31, 2023. At December 31, 2022 December 31, 2023, we had \$41.1 million \$41.0 million of letters of credit outstanding with \$418.4 million \$384.0 million available for borrowing under the Replaced Revolving Credit Facility. We incurred an annual

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commitment fee of 0.35% 0.50% on the undrawn portion of the Replaced Revolving Credit Facility. We utilize the Credit Agreement, as appropriate, for working capital requirements, capital expenditures and investments, scheduled debt payments and distribution payments.

The Credit Agreement contains various restrictions affecting Alliance Coal and its subsidiaries, including, among other things, restrictions on incurrence of additional indebtedness and liens, sale of assets, investments, mergers and consolidations and transactions with affiliates. In each case, these restrictions are subject to various exceptions. In addition, the restrictions apply to the payment of cash distributions by Alliance Coal to the Intermediate Partnership if such payment distribution would result in exceeding a certain minimum fixed charge coverage ratio (as determined in the Credit Agreement) or in Alliance Coal having liquidity of less than \$200 million. The Credit Agreement requires us to maintain (a) a debt of Alliance Coal to cash flow ratio of not more than 1.5 to 1.0, (b) a consolidated debt of Alliance Coal and the Intermediate Partnership to cash flow ratio of not more than 2.5 to 1.0 and (c) an interest coverage ratio of not less than 3.0 to 1.0, in each case, during the four most recently ended fiscal quarters. The Replaced Credit Facility was subject debt of Alliance Coal to similar restrictions on the Intermediate Partnership. The Replaced Credit Facility required cash flow ratio, consolidated debt of Alliance Coal and the Intermediate Partnership to maintain (a) a debt to cash flow ratio, of not more than 2.5 and interest coverage ratio were 0.08 to 1.0, (b) a cash flow to interest expense ratio of not less than 3.0 0.46 to 1.0 and (c) a first lien debt to cash flow ratio of not more than 1.5 to 1.0, in each case,

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during the four most recently ended fiscal quarters. The debt to cash flow ratio, cash flow to interest expense ratio and first lien debt to cash flow ratio were 0.52 to 1.0, 21.76 to 1.0 and 0.03 63.86 to 1.0, respectively, for the trailing twelve months ended December 31, 2022 December 31, 2023. We remained were in compliance with the covenants of the Replaced Credit Facility Agreement as of December 31, 2022 December 31, 2023 and anticipate remaining in compliance with the covenants of the new Credit Agreement. We utilize the Credit Agreement, as appropriate, for working capital requirements, capital expenditures and investments, scheduled debt payments and distribution payments. covenants.

Net restricted assets, as defined by the Securities and Exchange Commission, refers to the amount of our consolidated subsidiaries' net assets for which the ability to transfer funds to ARLP in the form of cash dividends, loans, advances, or transfers is restricted. As a result of the restrictions contained in the **Replaced** Credit Facility and its associated compliance ratios, the amount of our net restricted assets at **December 31, 2022** **December 31, 2023** was **\$537.3 million** **\$797.2 million**.

Senior Notes. Notes

On April 24, 2017, the Intermediate Partnership and Alliance Resource Finance Corporation ("**Alliance Finance**") (as co-issuer), a wholly owned subsidiary of the Intermediate Partnership ("**Alliance Finance**"), issued an aggregate principal amount of \$400.0 million of senior unsecured notes due 2025 ("Senior Notes") in a private placement to qualified institutional buyers. The Senior Notes have a term of eight years, maturing on May 1, 2025 (**the "Term"**) and accrue interest at an annual rate of 7.5%. Interest is payable semi-annually in arrears on each May 1 and November 1. The indenture governing the Senior Notes contains customary terms, events of default and covenants relating to, among other things, the incurrence of debt, the payment of distributions or similar restricted payments, undertaking transactions with affiliates and limitations on asset sales. **During the year ended December 31, 2023, we repurchased or redeemed \$115.4 million of our Senior Notes.** The **issuers gain on extinguishment** of the Senior Notes **may redeem all or a part of the notes at any time at redemption prices set forth in the indenture governing the Senior Notes.** **is immaterial.**

Accounts Receivable Securitization.

Certain direct and indirect wholly owned subsidiaries of our Intermediate Partnership **are were** party to a \$60.0 million accounts receivable securitization facility ("Securitization Facility"). Under the Securitization Facility, certain subsidiaries sell certain trade receivables on an ongoing basis to our Intermediate Partnership, which then sells the trade receivables to AROP Funding, LLC ("AROP Funding"), a wholly owned bankruptcy-remote special purpose subsidiary of our Intermediate Partnership, which in turn borrows on a revolving basis up to \$60.0 million secured by the trade receivables. After the sale, Alliance Coal, as servicer of the assets, collects the receivables on behalf of AROP Funding. The Securitization Facility bears interest based on a short-term bank yield index. On **December 31, 2022** **December 31, 2023**, we had \$11.7 million of letters of credit outstanding with \$48.3 million available for borrowing under the Securitization Facility. The agreement governing the Securitization Facility contains customary terms and conditions, including limitations with regards to certain customer credit ratings. In January **2023, 2024**, we extended the term of the Securitization Facility to January **2024, 2025** and **increased the borrowing availability under the facility to \$90.0 million.** The Securitization Facility was previously scheduled to mature in January **2023, 2024**. At **December 31, 2022** **December 31, 2023**, we did not have any outstanding borrowings under the Securitization Facility.

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[May 2019 Equipment Financing. On May 17, 2019, the Intermediate Partnership entered into an equipment financing arrangement accounted for as debt, wherein the Intermediate Partnership received \\$10.0 million in exchange for conveying its interest in certain equipment owned indirectly by the Intermediate Partnership and entering into a master lease agreement for that equipment \(the "May 2019 Equipment Financing"\). The May 2019 Equipment Financing contained customary terms and events Table of default and provided for thirty-six monthly payments with an implicit interest rate of 6.25%. The May 2019 Equipment Financing matured on May 1, 2022 and the equipment reverted back to the Intermediate Partnership. Contents](#)

November 2019 Equipment Financing. Financing

On November 6, 2019, the Intermediate Partnership entered into an equipment financing arrangement accounted for as debt, wherein the Intermediate Partnership received \$53.1 million in exchange for conveying its interest in certain equipment owned indirectly by the Intermediate Partnership and entering into a master lease agreement for that equipment (the "November 2019 Equipment Financing"). The November 2019 Equipment Financing **contains contained** customary terms and events of default and an implicit interest rate of 4.75%, **providing for a four year term with forty-seven monthly payments of \$1.0 million and a balloon payment of \$11.6 million upon maturity** **matured** on November 6, 2023. Upon maturity, the equipment **will revert back** **reverted** to the Intermediate Partnership.

June 2020 Equipment **Financing. Financing**

On June 5, 2020, the Intermediate Partnership entered into an equipment financing arrangement accounted for as debt, wherein the Intermediate Partnership received \$14.7 million in exchange for conveying its interest in certain equipment owned indirectly by the Intermediate Partnership and entering into a master lease agreement for that equipment (the "June 2020 Equipment Financing"). The June 2020 Equipment Financing contains customary terms and events of default and provides for forty-eight monthly payments with an implicit interest rate of 6.1%, maturing on June 5, 2024. Upon maturity, the equipment will revert **back** to the Intermediate Partnership.

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Other. Other

We also have an agreement with a bank to provide additional letters of credit in an amount of \$5.0 million to maintain surety bonds to secure certain asset retirement obligations and our obligations for workers' compensation benefits. At **December 31, 2022** **December 31, 2023**, we had \$5.0 million in letters of credit outstanding under this agreement.

Aggregate maturities of long-term debt are payable as follows:

Year Ended December 31,	(in thousands)	(in thousands)
2023	\$ 24,970	
2024	2,039	\$ 20,789
2025	400,000	303,357
2026		18,750
2027		4,688
	\$ 427,009	\$ 347,584

9.7. INCOME TAXES

Components of income tax expense are as follows:

Year Ended December 31,			Year Ended December 31,		
2022	2021	2020	2023	2022	2021

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Our 2019 through 2020 tax years remain open to examination by tax authorities. We have been notified by the Internal Revenue Service that authorities, and lower-tier partnership income tax returns for the tax years ended December 31, 2020 have been selected for audit, and 2021 are being audited by the Internal Revenue Service.

10.8. LEASES

The components of lease expense were as follows:

	December 31,			December 31,		
	2022	2021	2020	2023	2022	2021
	(in thousands)			(in thousands)		
Finance lease cost:						
Amortization of right-of-use assets	\$ 597	\$ 597	\$ 704	\$ 96	\$ 597	\$ 597
Interest on lease liabilities	73	147	377	27	73	147
Operating lease cost	274	2,404	3,873	3,572	2,884	2,404
Short-term lease cost	—	200	84	—	—	200
Variable lease cost	1,665	1,306	1,375	1,680	1,665	1,306
Total lease cost	\$ 2,609	\$ 4,654	\$ 6,413	\$5,375	\$5,219	\$4,654

Rental expense was \$5.1 million, \$5.7 million, \$3.3 million, \$5.1 million and \$5.2 million, \$3.3 million for the years ended December 31, 2022, December 31, 2023, 2021, 2022 and 2020, 2021 respectively.

Supplemental cash flow information related to leases was as follows:

	December 31,			December 31,		
	2022	2021	2020	2023	2022	2021

	Operating leases		Finance leases		Operating leases	Finance leases
	(in thousands)					
2023	\$	3,253	\$	140		
					(in thousands)	
2024		2,918	140	\$	3,437	\$ 140
2025		1,734	140		2,403	140
2026		1,106	140		1,923	140
2027		1,112	140		1,930	140
2028					1,646	—
Thereafter		11,901	—		12,122	—
Total lease payments		22,024	700		23,461	560
Less imputed interest		(7,100)	(82)		(6,869)	(55)
Total	\$	14,924	\$ 618	\$	16,592	\$ 505

The current portion of our operating and finance lease obligations are included in *Other current liabilities* line item in our consolidated balance sheets. The long-term portion of our finance lease obligation is included in the *Other liabilities* line item in our consolidated balance sheets.

11.9. FAIR VALUE MEASUREMENTS

The following table summarizes our fair value measurements within the hierarchy not included elsewhere in these notes:

	December 31, 2022			December 31, 2021		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
	(in thousands)					
Long-term debt	\$ —	\$ 424,420	\$ —	\$ —	\$ 457,758	\$ —
Total	\$ —	\$ 424,420	\$ —	\$ —	\$ 457,758	\$ —

See Note 2 – Summary of Significant Accounting Policies – Fair Value Measurements for more information regarding fair value hierarchy levels.

	December 31, 2023			December 31, 2022		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
	(in thousands)					
Long-term debt	\$ —	\$ 347,116	\$ —	\$ —	\$ 424,420	\$ —

The carrying amounts for cash equivalents, accounts receivable, accounts payable, accrued and other liabilities, approximate fair value due to the short maturity of those instruments.

The estimated fair value of our long-term debt, including current maturities, is based on interest rates that we believe are currently available to us in active markets for issuance of debt with similar terms and remaining maturities (See maturities. See Note 8.6 – Long-Term Debt). The fair value of debt, which is based Debt for additional information on these interest rates, is classified as a Level 2 measurement under the fair value hierarchy. our long-term debt.

12.10. PARTNERS' CAPITAL**Distributions**

Our available cash that is not used for unit repurchases may, at the discretion of our general partner, be distributed within 45 days after the end of each quarter to unitholders of record. Available cash is generally defined in the partnership agreement as all cash and cash equivalents on hand at the end of each quarter less reserves established by MGP in its reasonable discretion for future cash requirements. These reserves are retained to provide for the conduct of our business, the payment of debt principal and interest and to provide funds for future distributions. The following table summarizes the quarterly per unit distribution paid during each quarter of 2020 2021 through 2022: 2023:

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	Year Ended December 31,			Year Ended December 31,		
	2022	2021	2020	2023	2022	2021
First Quarter	\$ 0.250	\$ —	\$ 0.400	\$0.700	\$0.250	\$ —
Second Quarter	\$ 0.350	\$ 0.100	\$ —	\$0.700	\$0.350	\$0.100
Third Quarter	\$ 0.400	\$ 0.100	\$ —	\$0.700	\$0.400	\$0.100
Fourth Quarter	\$ 0.500	\$ 0.200	\$ —	\$0.700	\$0.500	\$0.200

On January 27, 2023 January 26, 2024, we declared a quarterly distribution of \$0.70 per unit, totaling approximately \$89.0 million, on all our common units outstanding, which was paid on February 14, 2023, February 14, 2024 to all unitholders of record on February 7, 2023 February 7, 2024.

Unit Repurchase Program

In May 2018, January 2023, the board of directors of our general partner ("Board of Directors") approved MGP authorized a \$93.5 million increase to the establishment of a unit repurchase program, authorizing us which had \$6.5 million of available capacity as of December 31, 2022. As a result, we were authorized to repurchase and retire up to \$100 million a total of \$100.0 million of ARLP common units. The program has no time limit and we may repurchase units from time to time in the open market or in other privately negotiated transactions. The unit repurchase program authorization does not obligate us to repurchase any dollar amount or number of units. No unit repurchases were made during During the year ended December 31, 2022. December 31, 2023, we repurchased and retired 929,842 units at an average unit price of \$20.90 for an aggregate purchase price of \$19.4 million, leaving \$80.6 million remaining under the current authorization. Since inception of the unit repurchase program, we have repurchased and retired 5,460,639 6,390,446 units at an average unit price of \$17.12 \$17.67 for an aggregate purchase price of \$93.5 million \$112.9 million.

In January 2023, the Board of Directors authorized a \$93.5 million increase to the unit repurchase program, which had \$6.5 million of available capacity as of December 31, 2022. As a result, we are authorized to repurchase up to a total of \$100.0 million of ARLP common units. As of February 24, 2023, we have repurchased and retired 856,629 units at an average unit price of \$21.15 for an aggregate purchase price of \$18.1 million since we increased the amount authorized under the unit repurchase program.

Other

Other

The noncontrolling interest in our consolidated balance sheets represents Bluegrass Minerals Management, LLC's ("Bluegrass Minerals") ownership interest in Cavalier Minerals JV, LLC ("Cavalier Minerals"). Our accumulated other comprehensive loss consists of unrecognized actuarial gains and losses as well as unrecognized prior service costs related to our pension and pneumoconiosis benefits. See Note 13.11 – Variable Interest Entities, Note 17 –Employee 15 – Employee Benefit Plans and Note 21.19 – Accrued Workers' Compensation and Pneumoconiosis Benefits for further information.

13.11. VARIABLE INTEREST ENTITIES

AllDale I & II and Cavalier Minerals

On November 10, 2014, We own the general partner interests and, including the limited partner interests we hold through our subsidiary, Alliance Minerals, and Bluegrass Minerals entered into a limited liability company agreement (the "Cavalier Agreement") to create ownership in Cavalier Minerals, which was formed to indirectly acquire oil & gas mineral approximately 97% of the limited partner interests through its ownership in AllDale I & II. Alliance As the general partner of AllDale I & II, we are entitled to receive 20.0% of all distributions from AllDale I & II with the remaining 80.0% allocated to limited partners based upon ownership percentages.

Cavalier Minerals owns approximately 72% of the limited partner interests in AllDale I & II. We own the managing member interest and a 96% member interest in Cavalier Minerals, and Minerals. Bluegrass Minerals owns a 4% member interest in Cavalier Minerals and a profits interest which entitles it to receive distributions equal to 25% of all distributions (including in liquidation) after all members have recovered their investment. Distributions with respect All members have recovered their investment and Bluegrass Minerals began receiving its profits interest distributions in late 2022.

We have concluded that AllDale I, AllDale II and Cavalier Minerals are VIEs which we consolidate as the primary beneficiary because we have the power to direct the activities that most significantly impact the economic performance of AllDale I, AllDale II and Cavalier Minerals in addition to having substantial equity ownership.

Our share of Cavalier Minerals' investment in AllDale I & II is eliminated in consolidation and Bluegrass Minerals' investment in Cavalier Minerals is accounted for as noncontrolling ownership interest in our consolidated balance sheets. Additionally, earnings attributable to Bluegrass Minerals' profits Minerals are recognized as noncontrolling interest are offset by all distributions received by Bluegrass Minerals from in our consolidated statements of income.

The following table presents the former general partners carrying amounts and classification of AllDale I & II. Bluegrass Minerals' profits interest distributions began II's assets and liabilities included in late 2022. We hold the managing member interest in Cavalier Minerals. Total contributions to and cumulative distributions from Cavalier Minerals are as follows: our consolidated balance sheets:

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	Alliance Minerals	Bluegrass Minerals
	(in thousands)	
Contributions	\$ 143,112	\$ 5,963
Distributions	146,484	6,179
	December 31,	
	2023	2022
Assets (liabilities):	(in thousands)	

Cash and cash equivalents	\$	4,690	\$	4,698
Trade receivables		16,058		13,933
Total property, plant and equipment, net		389,767		406,135
Accounts payable		(175)		(257)
Due to affiliates		—		(24)
Accrued taxes other than income taxes		(958)		(206)

We have concluded that Cavalier Minerals is a VIE which we consolidate as the primary beneficiary because we are the managing member and a substantial equity owner in Cavalier Minerals. Bluegrass Minerals' equity ownership of Cavalier Minerals is accounted for as noncontrolling ownership interest in our consolidated balance sheets. In addition, earnings attributable to Bluegrass Minerals are recognized as noncontrolling interest in our consolidated statements of operations. **AllDale III**

AllDale III

In February 2017, owns oil & gas mineral interests in areas around the oil & gas mineral interests we own. Alliance Minerals committed to directly invest \$30.0 million in AllDale III, which was created for similar investment purposes as AllDale I & II. Alliance Minerals completed funding of this commitment in 2018. Alliance Minerals owns a 13.9% limited partner interest in AllDale III. Alliance Minerals' investment in AllDale III is 13.9%.

The AllDale III Partnership Agreement includes subject to a 25% profits interest for the general partner that is subject to a return hurdle equal to the greater of 125% of cumulative capital contributions and a 10% internal rate of return, and following an 80/20 "catch-up" provision for the general partner.

Since We have concluded that AllDale III is a VIE that we do not consolidate because we are not the primary beneficiary and AllDale III is structured as a limited partnership with the limited partners 1) (1) not having the ability to remove the general partner and 2) (2) not participating significantly in the operational decisions, we concluded that AllDale III is a VIE. decisions. We are not the primary beneficiary of AllDale III as because we do not have the power to direct the activities that most significantly impact AllDale III's economic performance. We account for our ownership interest in the income or loss of AllDale III as an equity method investment. We record equity income or loss based on AllDale III's distribution structure. See Note 14 12 – Equity Investments for more information. information about the accounting for our investment in AllDale III.

Francis

On April 5, 2022, we invested \$20 million in Francis, in the form of a convertible note with a maturity date of April 1, 2023. note. Our convertible note represents an ownership matured on April 1, 2023 and was converted into a preferred equity interest in Francis upon conversion. We have Francis. Prior to conversion, we had determined the note more closely represents represented equity as opposed to debt. Therefore, we will account accounted for the convertible note as an equity contribution even though we will did not participate in Francis' earnings or losses and will were not be eligible to receive distributions until during the note converts, term of the note. Subsequent to the conversion on April 1, 2023, we participate in earnings and losses and are eligible to receive distributions. As of December 31, 2023, we held approximately 17.0% of Francis' equity.

We have concluded that Francis is a VIE as that we do not consolidate because we are not the primary beneficiary and Francis' management structure is similar to a limited partnership with the non-managing members (i) not having the ability to remove the managing member and (ii) not participating significantly in the operational decisions. We are not the primary beneficiary of Francis as because we do not have the power to direct the activities that most significantly impact Francis's economic performance. We account for our ownership interest in the income or loss of Francis as an equity method investment. We record equity income or loss based on Francis' distribution structure. See Note 14 12 – Equity Investments for more information. information about the accounting for our investment in Francis.

NGP ETP ET IV

On June 2, 2022, we committed to purchase \$25.0 million of limited partner interests in NGP ETP ET IV, a private equity fund sponsored by NGP and focused on investments that are part of the global transition toward a lower carbon economy. We funded \$4.1 million during the year ended December 31, 2022. Our final ownership percentage This commitment represents a 3.6% interest in NGP ETP IV is not yet known. ET IV. As of December 31, 2023, we have funded \$6.6 million of this commitment.

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See Note 2 – Summary of Significant Accounting Policies for more information on our accounting policy for variable interest entities.

AllDale III

	Year Ended December 31,			Year Ended December 31,		
	2022	2021	2020	2023	2022	2021
	(in thousands)					
				(in thousands)		
Beginning balance	\$ 26,325	\$ 27,268	\$ 28,529	\$25,284	\$26,325	\$27,268
Equity method investment income	5,634	2,130	907	2,567	5,634	2,130
Distributions received	(6,675)	(3,073)	(1,895)	(3,918)	(6,675)	(3,073)
Other	—	—	(273)			
Ending balance	\$ 25,284	\$ 26,325	\$ 27,268	\$23,933	\$25,284	\$26,325

As discussed in Note 13 – Variable Interest Entities, we We account for our ownership interest in the income or loss of Francis as an equity method investment. Prior to the conversion of our convertible note, we did not participate in Francis' earnings or losses; however, upon conversion on April 1, 2023 we began participating. As a development stage company, Francis depends primarily on capital contributions to meet its operating and debt obligations. We currently believe that the carrying value of our investment is recoverable; however, if Francis is unable to raise sufficient funds to continue its operations and meet its debt obligations, it could have an adverse effect on our investment. The changes in our equity method investment in Francis for the year ended December 31, 2022 were as follows:

determinable fair value. **It Absent an observable price change, it** is not practicable to estimate the fair value of our investment in Infinitem because of the lack of a quoted market price for our ownership interests. Therefore, we use a measurement alternative other than fair value to account for our investment. **There have been no**

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Ascend

On August 22, 2023, we purchased \$25.0 million of Ascend Preferred Stock in Ascend, a U.S.-based manufacturer and recycler of sustainable, engineered battery materials for electric vehicles. The Ascend Preferred Stock provides for non-cumulative dividends when and if declared by Ascend's board of directors. Each share is convertible, at any time, at our option, into shares of common stock of Ascend. We account for our ownership interest in Ascend as an equity investment without a readily determinable fair value adjustments in our investment in Infinitem subsequent value. Absent an observable price change, it is not practicable to our purchases. During the period we have not observed any price changes that have occurred to identical or similar securities sold by Infinitem that would indicate an adjustment to estimate the fair value of our investment is warranted. The changes in Ascend because of the lack of a quoted market price for our investment in Infinitem ownership interests. Therefore, we use a measurement alternative other than fair value to account for the year ended December 31, 2022 were as follows:

	Year Ended December
	31,
	2022
	(in thousands)
Beginning balance	\$ —
Contributions	42,000
Ending balance	\$ 42,000

See Note 2 – Summary of Significant Accounting Policies for more information on our accounting policy for investments. investment.

15.13. REVENUE FROM CONTRACTS WITH CUSTOMERS

The following table illustrates the disaggregation of our revenues by type, including a reconciliation to our segment presentation as presented in Note 25.23 – Segment Information.

	Coal Operations		Royalties		Other, Corporate and		Coal Operations		Royalties		C
	Illinois				Corporate and		Illinois				
	Basin	Appalachia	Oil & Gas	Coal	Elimination	Consolidated	Basin	Appalachia	Oil & Gas	Coal	

The following table illustrates the projected revenue for all current coal supply contracts allocated to performance obligations that are unsatisfied or partially unsatisfied as of **December 31, 2022** **December 31, 2023** and disaggregated by segment and contract duration.

	2026 and					2027 and				
	2023	2024	2025	Thereafter	Total	2024	2025	2026	Thereafter	Total
(in thousands)										

(1) Diluted EPU gives effect to all potentially dilutive common units outstanding during the period using the treasury stock method. Diluted EPU excludes all potentially dilutive units calculated under the treasury stock method if their effect is anti-dilutive. For the years ended **December 31, 2022**, **December 31, 2023**, **2021** and **2020**, the combined total of LTIP, SERP and Directors' Deferred Compensation Plan units of **2,922,384**, **3,540,385**, **1,967,672** and **773,664**, respectively, were considered anti-dilutive under the treasury stock method.

Defined Contribution Plans

All regular full-time employees are eligible to participate in a defined contribution profit sharing and savings plan ("PSSP") that we sponsor. PSSP participants may elect to make voluntary contributions to this plan up to a specified amount of their compensation. We make matching contributions based on a percent of an employee's eligible compensation and also make an additional non-matching contribution. Our contribution expense for the PSSP was approximately \$19.4 million \$21.8 million, \$17.7 million \$19.4 million and \$16.1 million \$17.7 million for the years ended December 31, 2022 December 31, 2023, 2022 and 2021, and 2020, respectively.

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Defined Benefit Plan

Eligible employees and former employees of certain of our mining operations participate in a defined benefit plan (the "Pension Plan") that we sponsor. The Pension Plan is closed to new applicants. Participants in the Pension Plan are no longer receiving benefit accruals for service. The benefit formula for the Pension Plan is a fixed-dollar unit based on years of service.

The following sets forth changes in benefit obligations and plan assets for the years ended December 31, 2022 December 31, 2023 and 2021 2022 and the funded status of the Pension Plan reconciled with the amounts reported in our consolidated financial statements:

	December 31,	
	2022	2021
	(dollars in thousands)	
Change in benefit obligations:		
Benefit obligations at beginning of year	\$ 139,566	\$ 147,934
Interest cost	3,749	3,438
Actuarial gain	(32,996)	(6,406)
Benefits paid	(5,637)	(5,400)
Benefit obligations at end of year	104,682	139,566
Change in plan assets:		
Fair value of plan assets at beginning of year	113,976	100,969
Employer contribution	—	3,312
Actual return on plan assets	(16,210)	15,095
Benefits paid	(5,637)	(5,400)
Fair value of plan assets at end of year	92,129	113,976
Funded status at the end of year	\$ (12,553)	\$ (25,590)
Amounts recognized in balance sheet:		
Non-current liability	\$ (12,553)	\$ (25,590)
Amounts recognized in accumulated other comprehensive income consists of:		
Prior service cost	\$ (382)	\$ (568)
Net actuarial loss	(15,160)	(27,271)
	\$ (15,542)	\$ (27,839)
Weighted-average assumption to determine benefit obligations as of December 31,		
Discount rate	5.10%	2.73%

Weighted-average assumptions used to determine net periodic benefit cost for the year ended December 31,

Discount rate	2.73%	2.37%
Expected return on plan assets	6.00%	6.50%

The actuarial gain components of the change in benefit obligations in 2022 and 2021 were primarily attributable to an increase in the discount rate compared to the prior year end.

	December 31,	
	2023	2022
	(dollars in thousands)	
Change in benefit obligations:		
Benefit obligations at beginning of year	\$ 104,682	\$ 139,566
Interest cost	5,180	3,749
Actuarial loss (gain)	2,446	(32,996)
Benefits paid	(6,438)	(5,637)
Benefit obligations at end of year	105,870	104,682
Change in plan assets:		
Fair value of plan assets at beginning of year	92,129	113,976
Actual return on plan assets	11,561	(16,210)
Benefits paid	(6,438)	(5,637)
Fair value of plan assets at end of year	97,252	92,129
Funded status at the end of year	\$ (8,618)	\$ (12,553)
Amounts recognized in balance sheet:		
Non-current liability	\$ (8,618)	\$ (12,553)
Amounts recognized in accumulated other comprehensive income consists of:		
Prior service cost	\$ (196)	\$ (382)
Net actuarial loss	(11,584)	(15,160)
	\$ (11,780)	\$ (15,542)
Weighted-average assumption to determine benefit obligations as of December 31,		
Discount rate	4.90%	5.10%
Weighted-average assumptions used to determine net periodic benefit cost for the year ended December 31,		
Discount rate	5.10%	2.73%
Expected return on plan assets	7.00%	6.00%

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The actuarial loss component of the change in benefit obligations in 2023 was primarily attributable to a decrease in the discount rate compared to the prior year end. The actuarial gain component of the change in benefit obligations in 2022 was primarily attributable to an increase in the discount rate compared to the prior year end.

As of December 31, 2022	December 31, 2023	Asset allocation assumption
Equity securities	60%	75%
Fixed income securities	35%	
Real estate	5%	25%
		100%

[illegible]

	Year Ended December 31,		Year Ended December 31,	
	2022	2021	2023	2022
	(in thousands)		(in thousands)	
Other changes in plan assets and benefit obligation recognized in accumulated other comprehensive loss:				
Net actuarial gain	\$ 10,148	\$ 14,921	\$ 2,894	\$ 10,148
Reversal of amortization item:				

Prior service cost	186	186	186	186
Net actuarial loss	1,963	4,327	682	1,963
Total recognized in accumulated other comprehensive loss	12,297	19,434	3,762	12,297
Net periodic benefit cost (credit)	740	(1,371)		
Net periodic benefit cost			172	740
Total recognized in net periodic benefit cost and accumulated other comprehensive loss	\$ 13,037	\$ 18,063	\$ 3,934	\$ 13,037

Estimated future benefit payments as of **December 31, 2022** **December 31, 2023** are as follows:

Year Ended December 31,	(in thousands)	(in thousands)
2023	\$ 6,239	
2024	6,416	\$ 6,331
2025	6,605	6,490
2026	6,816	6,688
2027	6,907	6,820
2028-2032	35,293	
2028		6,899
2029-2033		35,204
	\$ 68,276	\$ 68,432

As a result **134**

[Table of certain pension plan contribution relief provided by the American Rescue Plan Act enacted in March 2021.](#) [we Contents](#)

We do not expect to make **material** contributions to the Pension Plan during **2023.** **2024.**

The Compensation Committee has appointed an investment manager with full investment authority with respect to Pension Plan investments subject to investment guidelines and compliance with Employee Retirement Income Security Act of 1974 or other applicable laws. The investment manager employs an asset allocation strategy through investment in certain investment types such as equity securities and fixed income securities. The asset allocation process provides that the total portfolio allocation will be adjusted as the funded ratio of the plan changes and market conditions warrant, consistent with managing risks in accordance with plan objectives and time horizon. As the funded ratio improves, more assets may be allocated to the core fixed income portfolio to reduce volatility. The objective of the allocation policy is to achieve an average annual return greater than the actuarial discount rate over the specified time horizon. General asset allocation guidelines at December 31, 2023 are as follows:

	Percentage of Total Portfolio	
	Minimum	Maximum
Equity securities	50%	85%
Fixed income securities	15%	50%

Equity securities include domestic and international common stocks, convertible notes and bonds, convertible preferred stocks, American Depositary Receipts of non-U.S. companies and Real Estate Investment Trusts. Fixed income securities include debt securities issued by the federal government as well as state and local governments, banker's acceptances, repurchase agreements, asset-backed securities, collateralized mortgage-backed securities, corporate debt securities, inflation-index bonds and structured notes.

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The Compensation Committee has appointed an investment manager with full investment authority with respect to Pension Plan investments subject to investment guidelines and compliance with Employee Retirement Income Security Act of 1974 or other applicable laws. The investment manager employs a series of asset allocation strategy phases to glide the portfolio risk commensurate with both plan characteristics and market conditions. The objective of the allocation policy is to reach and maintain fully funded status. The total portfolio allocation will be adjusted as the funded ratio of the Pension Plan changes and market conditions warrant. Total account performance is reviewed at least annually, using a dynamic benchmark approach to track investment performance. General asset allocation guidelines at December 31, 2022 are as follows:

	Percentage of Total Portfolio	
	Minimum	Maximum
Equity securities	35%	80%
Fixed income securities	15%	65%
Convertible securities	0%	10%
Alternatives	0%	20%

Equity securities include domestic equity securities, developed international equity securities, emerging markets equity securities and real estate investment trust. Fixed income securities include domestic and international investment grade fixed income securities, high yield securities and emerging markets fixed income securities. Futures may also be utilized within the equity securities and fixed income securities asset allocation. Alternatives may include individual securities, exchange traded notes, exchange traded commodities and underlying funds providing exposure to market neutral strategies, long/short strategies, direct real estate and commodities.

The following information discloses the fair values of our Pension Plan assets by asset category:

		December 31,										
		2023				2022						
		Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total			
		2022	2021									
		(in thousands)										

(in thousands)																				
Cash and cash equivalents (a)	\$	5,422	\$	4,426	\$	1,665	\$	—	\$	—	\$	1,665	\$	5,422	\$	—	\$	—	\$	5,422
Equity investments - Individual securities (a):																				
Consumer discretionary					2,605	—	—	2,605	—	—	—	—								
Consumer durables					2,088	—	—	2,088	—	—	—	—								
Energy					952	—	—	952	—	—	—	—								
Financials					4,852	—	—	4,852	—	—	—	—								
Health Care					4,296	—	—	4,296	—	—	—	—								
Industrials & materials					4,507	—	—	4,507	—	—	—	—								
Information technology & communication					8,102	—	—	8,102	—	—	—	—								
Fixed income investments - Individual securities (b):																				
Preferred stocks non-convertible					37	—	—	37	—	—	—	—								
Equity investments - Mutual funds (c):																				
Mid-cap stock funds					11,847	—	—	11,847	—	—	—	—								
Small-cap stock funds					4,007	—	—	4,007	—	—	—	—								
International stock funds					7,849	—	—	7,849	—	—	—	—								
Equity investments - Exchange traded funds (d):																				
Large-cap blend - S&P 500 index					18,044	—	—	18,044	—	—	—	—								
International - Developed markets					3,138	—	—	3,138	—	—	—	—								
International - Emerging markets					1,894	—	—	1,894	—	—	—	—								
Accrued income (e)					—	29	—	29	—	—	—	—								
					\$75,883	\$	29	\$	—	\$75,912	\$5,422	\$	—	\$	—	\$	—	\$	5,422	
Commingled investment funds measured at net asset value (b):																				
Equities - Global					—			24,868												
Commingled investment funds measured at net asset value (f):																				
Equities - United States					36,259			41,140				—								36,259
Equities - United States futures					(697)			(2,055)				—								(697)
Equities - International developed markets					14,214			16,382				—								14,214
Equities - International developed markets futures					(1,693)			(16,260)				—								(1,693)
Equities - International emerging markets					782			(3,363)				—								782
Equities - International emerging markets futures					3,289			7,024				—								3,289
Fixed income - Investment grade					13,856			27,095				21,340								13,856
Fixed income - High yield					156			177				—								156
Fixed income - Futures					8,590			(689)				—								8,590
Alternatives					11,951			15,231				—								11,951
Total					\$	92,129	\$	113,976				\$97,252								\$92,129

(a) Cash Equity investments - Individual securities include investments in publicly traded common stock and cash equivalents represents American Depositary Receipts. Publicly traded common stocks are traded on a Level 1 fair value measurement. See Note 2 – Summary national securities exchange and investments in common stocks are valued using quoted market prices multiplied by the number of Significant Accounting Policies – Fair Value Measurements for more information regarding the definitions of fair value hierarchy levels. shares owned. American Depositary Receipts are negotiable securities issued by a bank representing shares in a foreign company and traded on a national securities exchange.

- (b) Fixed income investments - Individual securities include investments in preferred stock that are traded on a national securities exchange and valued using quoted market prices multiplied by the number of shares owned.
- (c) Equity investments - Mutual funds are valued daily in actively traded markets. For purposes of calculating the value, portfolio securities and other assets for which market quotes are readily available are valued at market value. Investments initially valued in currencies other than the U.S. dollars are converted to the U.S. dollar using exchange rates obtained from pricing services.
- (d) Equity investments – Exchange traded funds are funds that own financial assets and trade on exchanges, generally tracking a specific index. Investments in exchange traded funds are valued using a market approach based on the quoted market prices.
- (e) Accrued income represents dividends or interest declared, but not received, on equity securities owned at December 31, 2023.

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- (f) Investments measured at fair value using the net asset value per share (or its equivalent) have not been classified within the fair value hierarchy. The fair values of all commingled investment funds are determined based on the net asset values per unit of each of the funds. The net asset values per unit represent the aggregate value of the fund's assets at fair value less liabilities, divided by the number of units outstanding.

See Note 2 – Summary of Significant Accounting Policies for more information on our accounting policy for pension benefits.

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18.16. COMMON UNIT-BASED COMPENSATION PLANS

Long-Term Incentive Plan

A summary of non-vested LTIP grants of restricted units is as follows:

	Weighted average grant date fair value			Weighted average grant date fair value per		
	Number of units	per unit	Intrinsic value (in thousands)	Number of units	unit	Intrinsic value (in thousands)
Non-vested grants at January 1, 2020	1,603,378	\$ 20.39	\$ 17,349			
Non-vested grants at January 1, 2021				1,430,489	\$ 5.02	\$ 6,409
Granted (1)				1,818,190	6.03	
Forfeited				(118,204)	5.48	
Non-vested grants at December 31, 2021				3,130,475	5.59	39,569
Granted (1)				769,907	14.65	

Forfeited			(203,249)	6.93	
Non-vested grants at December 31, 2022			3,697,133	7.40	75,126
Granted (1)	1,430,489	5.02	450,125	21.54	
Vested (2)	(919,524)	21.70	(1,291,330)	5.02	
Grants canceled (3)	(675,302)	18.62			
Forfeited	(8,552)	20.16	(145,584)	6.86	
Non-vested grants at December 31, 2020	1,430,489	5.02	6,409		
Granted (4)	1,818,190	6.03			
Forfeited	(118,204)	5.48			
Non-vested grants at December 31, 2021	3,130,475	5.59	39,569		
Granted (4)	769,907	14.65			
Forfeited	(203,249)	6.93			
Non-vested grants at December 31, 2022	3,697,133	7.40	75,126		
Non-vested grants at December 31, 2023			2,710,344	10.91	57,405

- (1) In December 2020, we modified the vesting requirements for certain restricted Restricted units that we granted in February 2020 which were determined to be improbable of vesting under the original vesting requirements (the "2020 Grants"). The new vesting requirements make it probable the modified restricted units will vest. Also in December 2020, an additional 578,114 restricted units under these modified vesting requirements were granted. The grant date fair value reflects the modification date fair value for those awards that were modified.
- (2) In February 2020, we issued 279,622 unrestricted common units to LTIP participants as a result of satisfying the vesting requirements for 424,486 restricted units that were granted in 2017. The remaining vested units were settled in cash to satisfy tax withholding obligations of the LTIP participants. In December 2020, we accelerated the vesting requirements for 495,038 restricted units that were granted in 2018 (the "2018 Grants") and settled these restricted units in cash.
- (3) In December 2020, 675,302 restricted units that were granted in 2019 (the "2019 Grants") were canceled since it was determined that the vesting requirements for these restricted units were not probable of being satisfied.
- (4) The restricted units granted during 2021 and 2022 have certain minimum-value guarantees per unit, regardless of whether or not the awards vest.
- (2) During the year ended December 31, 2023, we issued 860,060 unrestricted common units to the LTIP participants. The remaining vested units were settled in cash to satisfy our tax withholding obligations.

For the years ended December 31, 2022, December 31, 2023, 2021, 2022 and 2020, 2021, our LTIP expense for grants of restricted units was \$9.4 million \$10.4 million, \$5.4 million \$9.4 million and \$8.1 million \$5.4 million, respectively. LTIP expense for grants of restricted units for the year ended December 31, 2020 includes the impact of the reversal of the 2019 Grants, the modification of the 2020 Grants and incremental compensation cost associated with the cash settlement of the 2018 Grants. The cash settlement of the 2018 Grants was the first time we have settled restricted units in cash and we currently do not expect to do so again in the future. The cash settlement of the 2018 Grants resulted in \$5.4 million in incremental compensation cost. The 2019 Grants were determined to be not probable of vesting therefore \$4.8 million of cumulative previously recognized expense was reversed in 2020, offset in part by related DERs for the 2019 Grants previously recorded to equity and then expensed in 2020. The 2020 Grants were determined to be improbable of vesting therefore the Compensation Committee modified the awards to change the vesting requirement, which made the grants probable of vesting, and granted additional restricted units under these modified vesting requirements as previously discussed. As a result, the grant date fair value of the modified awards was changed to reflect the modification date fair value of the awards resulting in a net reduction in LTIP expense of \$1.0 million for the year ended December 31, 2020.

The total obligation associated with LTIP grants of restricted units as of December 31, 2022, December 31, 2023 and 2021, 2022 was \$16.0 million \$19.5 million and \$6.7 million \$16.0 million, respectively, and is included in the partners' capital Limited partners-common unitholders line item in our consolidated balance sheets. As of December 31, 2022, December 31, 2023, there was \$11.4 million \$10.0 million in total unrecognized

compensation expense related to the non-vested LTIP restricted unit grants that are expected to vest. That expense is expected to be recognized over a weighted-average period of 0.81.4 years.

On January 27, 2023 January 24, 2024, the Compensation Committee authorized additional grants of 462,225 440,470 restricted units, of which 447,225 425,470 units were granted. These restricted units have certain minimum-value guarantees, regardless of whether or not the awards vest.

Supplemental Executive Retirement Plan and Directors' Deferred Compensation Plan

A summary of SERP and Directors' Deferred Compensation Plan activity is as follows:

	Weighted average grant date fair value			Weighted average grant date fair value per		
	Number of units	per unit	Intrinsic value	Number of units	unit	Intrinsic value
			(in thousands)			(in thousands)
Phantom units outstanding as of January 1, 2020	631,365	\$ 25.48	\$ 6,831			
Phantom units outstanding as of January 1, 2021				760,630	\$ 22.04	\$ 3,408
Granted	129,265	5.25		46,638	9.45	
Phantom units outstanding as of December 31, 2020	760,630	22.04	3,408			
Granted	46,638	9.45				
Issued (1)	(138,570)	25.86				
Settled (1)				(138,570)	25.86	
Phantom units outstanding as of December 31, 2021	668,698	20.37	8,452	668,698	20.37	8,452
Granted	73,842	19.44		73,842	19.44	
Phantom units outstanding as of December 31, 2022	742,540	20.28	15,088	742,540	20.28	15,088
Granted				118,737	20.46	
Settled (1)				(49,331)	20.27	
Phantom units outstanding as of December 31, 2023				811,946	20.44	17,197

Total SERP and Directors' Deferred Compensation Plan expense was \$1.4 million \$2.4 million, \$0.4 million \$1.4 million and \$0.7 million \$0.4 million for the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, respectively. As of December 31, 2022 December 31, 2023 and 2021, 2022, the total obligation associated with the SERP and Directors' Deferred Compensation Plan was \$15.1 million \$16.6 million and \$13.5 million \$15.1 million, respectively, and is included in the partners' capital *Limited partners-common unitholders* line item in our consolidated balance sheets.

19.17. SUPPLEMENTAL CASH FLOW INFORMATION134 138

20.18. ASSET RETIREMENT OBLIGATIONS

The following table presents the activity affecting the asset retirement and mine closing liability:

	Year Ended December 31,		Year Ended December 31,	
	2022	2021	2023	2022
	(in thousands)		(in thousands)	
Beginning balance	\$ 131,099	\$ 127,898	\$ 149,813	\$ 131,099
Accretion expense	3,731	3,688	4,433	3,731
Payments	(2,445)	(1,383)	(2,317)	(2,445)
Allocation of liability associated with mine development and change in assumptions	17,428	896	(1,486)	17,428
Ending balance	\$ 149,813	\$ 131,099	\$ 150,443	\$ 149,813

For the year ended December 31, 2023, the allocation of liability associated with mine development and change in assumptions decreased by \$1.5 million. The decrease was largely attributable to lower cost assumptions.

For the year ended December 31, 2022, the allocation of liability associated with mine development and change in assumptions increased by \$17.4 million. The increase was largely attributable to higher cost assumptions as well as the expansion of refuse disposal facilities at certain mines.

For the year ended December 31, 2021, the allocation of liability associated with mine development and change in assumptions was immaterial.

The impact of discounting our estimated cash flows resulted in reducing the accrual for asset retirement obligations by \$116.2 million and \$110.4 million at December 31, 2023 and \$98.3 million at December 31, 2022 and 2021, 2022, respectively. Estimated payments of asset retirement obligations as of December 31, 2022 December 31, 2023 are as follows:

Year Ended December 31,	(in thousands)	(in thousands)
2023	\$ 7,559	
2024	4,936	\$ 3,518
2025	1,935	5,557
2026	1,569	4,063
2027	3,182	7,038
2028		4,291
Thereafter	241,065	242,134
Aggregate undiscounted asset retirement obligations	260,246	266,601
Effect of discounting	(110,433)	
Less: effect of discounting		(116,158)
Total asset retirement obligations	149,813	150,443
Less: current portion	(7,559)	(3,518)
Non-current asset retirement obligations	\$ 142,254	\$ 146,925

As of December 31, 2022 December 31, 2023 and 2021, 2022, we had approximately \$174.3 million \$173.5 million and \$173.9 million \$174.3 million, respectively, in surety bonds outstanding to secure the performance of our reclamation obligations.

See Note 2 – Summary of Significant Accounting Policies for more information on our accounting policy for asset retirement obligations.

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21.19. ACCRUED WORKERS' COMPENSATION AND PNEUMOCONIOSIS BENEFITS

The following is a reconciliation of the changes in workers' compensation liability (including current and long-term liability balances):

	December 31,		December 31,	
	2022	2021	2023	2022
Beginning balance	\$ 53,448	\$ 54,739	\$ 49,452	\$ 53,448
Changes in accruals	7,384	5,168	12,155	7,384
Payments	(12,708)	(10,725)	(14,438)	(12,708)
Interest accretion	1,147	926	2,202	1,147
Valuation loss	181	3,340		
Valuation loss (gain)			(1,396)	181
Ending balance	\$ 49,452	\$ 53,448	\$ 47,975	\$ 49,452

The discount rate used to calculate the estimated present value of future obligations for workers' compensation was 4.66% and 4.87% at December 31, 2023 and 2.41% at December 31, 2022 and 2021, 2022, respectively.

The valuation gain in 2023 was primarily attributable to a favorable change in claims development partially offset by a decrease in the discount rate used to calculate the estimated present value of the future obligations. The valuation loss in 2022 was primarily attributable to an increase in the discount rate used to calculate the estimated present value of the future obligations being partially offset by unfavorable changes in claims development. The 2021 valuation loss was primarily attributable to unfavorable changes in claims development partially offset by an increase in the discount rate used to calculate the estimated present value of future obligations.

As of December 31, 2022 December 31, 2023 and 2021, 2022, we had \$99.8 million \$99.4 million and \$100.4 million \$99.8 million, respectively, in surety bonds and letters of credit outstanding to secure workers' compensation obligations.

We limit our exposure to traumatic injury claims by purchasing a high deductible insurance policy that starts paying benefits after deductibles for the particular claim year have been met. Our workers' compensation liability above is presented on a gross basis and does not include our expected receivables on our insurance policy. Our receivables for traumatic injury claims under this policy as of December 31, 2022 December 31, 2023 and 2021 are 2022 were \$4.1 million and \$5.7 million, respectively. Our receivables are included in Other long-term assets on our consolidated balance sheets.

The following is a reconciliation of the changes in pneumoconiosis benefit obligations:

	December 31,		December 31,	
	2022	2021	2023	2022

	(in thousands)		(in thousands)			
Benefit obligations at beginning of year	\$	111,316	\$	108,496	\$104,287	\$111,316
Service cost		3,798		4,021	2,698	3,798
Interest cost		2,991		2,545	4,951	2,991
Actuarial loss (gain)		(9,840)		161	25,615	(9,840)
Benefits and expenses paid		(3,978)		(3,907)	(5,107)	(3,978)
Benefit obligations at end of year	\$	104,287	\$	111,316	\$132,444	\$104,287

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The following is a reconciliation of the changes in the pneumoconiosis benefit obligation recognized in accumulated other comprehensive loss:

	Year Ended December 31,			Year Ended December 31,		
	2022	2021	2020	2023	2022	2021
	(in thousands)					

The discount rate used to calculate the estimated present value of future obligations for pneumoconiosis benefits was 5.0% 4.81%, 5.0% and 2.73% at December 31, 2023, 2022 and 2.38% at December 31, 2021, and 2020, respectively.

	Year Ended December 31,			Year Ended December 31,		
	2022	2021	2020	2023	2022	2021
	(in thousands)					

				(in thousands)		
Amount	recognized	in	accumulated	other		
comprehensive loss consists of:						
Net actuarial loss				\$ 25,510	\$ 36,388	\$ 40,399
				\$49,745	\$25,510	\$36,388

The actuarial loss component of the change in benefit obligations in 2023 was primarily attributable to a) unfavorable changes in the discount rate, b) unfavorable demographics in the at-risk population, c) unfavorable black lung claims experience, d) unfavorable assumption changes regarding future average medical benefits, and e) unfavorable assumption changes related to Federal and State benefit levels. The actuarial gain component of the change in benefit obligations in 2022 was primarily attributable to favorable assumption changes in the discount rate and demographics in the at-risk population. These components were offset in part by a) unfavorable black lung claims experience, b) unfavorable assumption changes regarding future average medical benefits and legal expense levels, and c) unfavorable assumption changes related to Federal and State benefit levels. The actuarial loss component of the change in benefit obligations in 2021 was primarily attributable to unfavorable assumption changes regarding future medical and legal expense levels. These components were offset in part by a) an increase in the discount rate used to calculate the estimated present value of the future obligations and b) favorable black lung claims experience and other demographic changes in the at-risk population.

Summarized below is information about the amounts recognized in the accompanying consolidated balance sheets for pneumoconiosis and workers' compensation benefits:

	December 31,		December 31,	
	2022	2021	2023	2022
	(in thousands)		(in thousands)	
Workers' compensation claims	\$ 49,452	\$ 53,448	\$ 47,975	\$ 49,452
Pneumoconiosis benefit claims	104,287	111,316	132,444	104,287
Total obligations	153,739	164,764	180,419	153,739
Less current portion	(14,099)	(12,293)	(15,913)	(14,099)
Non-current obligations	\$ 139,640	\$ 152,471	\$ 164,506	\$ 139,640

Both the pneumoconiosis benefit and workers' compensation obligations were unfunded at December 31, 2022, December 31, 2023 and 2021, 2022.

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The pneumoconiosis benefit and workers' compensation expense consists of the following components:

Year Ended December 31,	Year Ended December 31,

The following table summarizes advanced royalties outstanding and related payments and recoupments under our affiliate coal lease agreements:

	Craft Foundations	WKY CoalPlay					Total	Craft Foundations	WKY CoalPlay					Total		
		Towhead	Webster	Henderson	WKY				Towhead	Webster	Henderson	WKY				
		Coal	Coal	Coal	CoalPlay				Coal	Coal	Coal	CoalPlay				
		Henderson			Henderson				Henderson			Henderson				
		& Union		Webster	Henderson	& Union			& Union		Webster	Henderson	& Union			
		Counties,		County,	Counties,				Counties,		County,	Counties,			Counties,	
		KY	KY	County, KY	KY					KY	KY	County, KY	KY			
Acquired	Acquired	Acquired	Acquired	Acquired		Acquired	Acquired	Acquired	Acquired	Acquired		Acquired				
	December	December	December	February												
2005	2014	2014	2014	2015		2005	2014	2014	2014	2015						
(in thousands)						(in thousands)										
As of January 1, 2020	\$ 1,500	\$ 16,603	\$ —	\$ 12,607	\$ 10,506	\$41,216										
Payments	3,000	3,597	2,568	2,522	2,132	13,819										
Recoupment	(3,000)	(1,022)	—	—	(56)	(4,078)										
Unrecoupable	—	—	(2,568)	—	—	(2,568)										
As of December 31, 2020	1,500	19,178	—	15,129	12,582	48,389										
As of January 1, 2021							\$ 1,500	\$ 19,178	\$ —	\$ 15,129	\$ 12,582	\$48,389				
Payments	3,000	3,597	2,568	2,521	2,131	13,817	3,000	3,597	2,568	2,521	2,131	13,817				
Recoupment	(3,000)	(1,025)	—	—	—	(4,025)	(3,000)	(1,025)	—	—	—	(4,025)				
Unrecoupable	—	—	(2,568)	—	—	(2,568)	—	—	(2,568)	—	—	(2,568)				
As of December 31, 2021	1,500	21,750	—	17,650	14,713	55,613	1,500	21,750	—	17,650	14,713	55,613				
Payments	3,000	3,597	—	2,522	2,131	11,250	3,000	3,597	—	2,522	2,131	11,250				
Recoupment	(3,000)	(3,255)	—	—	—	(6,255)	(3,000)	(3,255)	—	—	—	(6,255)				
Unrecoupable	—	—	—	—	—	—	—	—	—	—	—	—				
As of December 31, 2022	\$ 1,500	\$ 22,092	\$ —	\$ 20,172	\$ 16,844	\$60,608	1,500	22,092	—	20,172	16,844	60,608				
Payments							3,000	3,597	—	2,521	2,131	11,249				
Recoupment							(3,000)	(4,258)	—	—	—	(7,258)				
Unrecoupable							—	—	—	—	—	—				
As of December 31, 2023							\$ 1,500	\$ 21,431	\$ —	\$ 22,693	\$ 18,975	\$64,599				

Craft Foundations

In January 2005, we acquired Tunnel Ridge from ARH. In connection with this acquisition, we assumed a coal lease with Alliance Resource GP, LLC, an entity indirectly wholly owned by Mr. Craft and Kathleen S. Craft until it was dissolved in December 2020. In December 2018, the property subject to the lease was transferred to the Joseph W. Craft III Foundation and the Kathleen S. Craft Foundation, which each hold an undivided one-half interest (the "Craft Foundations"). Under the terms of the lease, Tunnel Ridge is required to pay an annual minimum royalty of \$3.0 million. The lease expires the earlier of January 1, 2033 or upon the exhaustion of the mineable and merchantable leased coal. Tunnel Ridge incurred \$12.3 million \$12.1 million, \$5.8 million \$12.3 million and \$6.1 million \$5.8 million in earned royalties in 2023, 2022 and 2021 and 2020 respectively.

Tunnel Ridge has a surface land lease with an annual payment of \$0.2 million, payable in January of each year with the Craft Foundations.

WKY CoalPlay

In February 2015, WKY CoalPlay, LLC ("WKY CoalPlay") entered into a coal lease agreement with Alliance Resource Properties regarding coal mineral resources located in Henderson and Union Counties, Kentucky. The lease has an initial term of 20 years and provides for earned royalty payments to WKY CoalPlay of 4.0% of the coal sales price and annual minimum royalty payments of \$2.1 million. All annual minimum royalty payments are recoupable from future earned royalties.

In December 2014, WKY CoalPlay's subsidiaries, Towhead Coal Reserves, LLC and Henderson Coal Reserves, LLC entered into coal lease agreements with Alliance Resource Properties. The leases have initial terms of 20 years and provide for earned royalty payments of 4.0% of the coal sales price and annual minimum royalty payments of \$3.6 million and \$2.5 million, respectively. All annual minimum royalty payments under each agreement are recoupable from future earned royalties payable under that agreement.

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In December 2014, WKY CoalPlay's subsidiary, Webster Coal Reserves, LLC entered into a coal lease agreement with Alliance Resource Properties. The lease had a term of 7 years and provided for earned royalty payments of 4.0% of the coal sales price and annual minimum royalty payments of \$2.6 million. This lease expired in December 2021.

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Cavalier Minerals— As discussed in Note 13 – Variable Interest Entities, through our subsidiaries, we hold a non-economic managing member interest and a 96% non-managing member interest in Cavalier Minerals and, Bluegrass Minerals, a third party, holds a 4% non-managing member interest and a 25% profits interest. See Note 14 – Investments for information on payments made and distributions received by Cavalier Minerals.

23.21. COMMITMENTS AND CONTINGENCIES

Commitments

We lease buildings and equipment under operating lease agreements that provide for the payment of both minimum and contingent rentals. We also have noncancelable coal mineral reserve and resource leases as discussed in Note 22.20 – Related-Party Transactions.

Contractual Commitments

In connection with planned capital projects, we have contractual commitments of approximately \$147.7 million \$201.9 million at December 31, 2022 December 31, 2023. As of December 31, 2022 December 31, 2023, we had no \$22.3 million in commitments to purchase coal from external production sources in 2022 2024 and thereafter.

General Litigation

Certain of our subsidiaries are party to litigation that has been initiated against certain of our subsidiaries in which the plaintiffs allege violations of the Fair Labor Standards Act and state law due to alleged failure to compensate for time "donning" and "doffing" equipment and to account for certain bonuses in the calculation of overtime rates and pay. The plaintiffs seek class and collective action certification. certification, which we oppose, and the courts have not yet made definitive final rulings on those issues. We cannot reasonably estimate a range of potential exposure at this time. We believe the plaintiffs' claims are without merit and our ultimate exposure, if any, will not be material to our results of operations or financial position and we are defending the litigation vigorously. However, position; however, if our current belief that as to the

merit of the claims are without merit is not upheld, it is reasonably possible that the ultimate resolution of these matters could result in a potential loss that may be material to our results of operations.

We also have various other lawsuits, claims and regulatory proceedings incidental to our business that are pending against the ARLP Partnership. We record an accrual for a potential loss related to these matters when, in management's opinion, such loss is probable and reasonably estimable. Based on known facts and circumstances, we believe the ultimate outcome of these outstanding lawsuits, claims and regulatory proceedings will not have a material adverse effect on our financial condition, results of operations or liquidity. However, if the results of these matters are different from management's current expectations, and in amounts greater than our accruals, such matters could have a material adverse effect on our business and operations.

Other

Effective December 1, 2022 October 1, 2023, we renewed our property and casualty insurance program through October 1, 2023 September 30, 2024. Our property insurance was procured from our wholly owned captive insurance company, Wildcat Insurance, LLC ("Wildcat Insurance"). Wildcat Insurance charged certain of our subsidiaries for the premiums on this program and in return purchased reinsurance for the program in the standard market. The maximum limit in the commercial property program is \$100.0 million per occurrence, excluding a \$1.5 million deductible for property damage, a 75 or 90 day waiting period for underground business interruption depending on the mining complex and an additional \$25.0 million overall aggregate deductible. We retained a 7.25% participating interest in our current commercial property insurance program. We can make no assurances that we will not experience significant insurance claims in the future that could have a material adverse effect on our business, financial condition, results of operations and ability to purchase property insurance in the future. Also, exposures exist for which no insurance may be available and for which we have not reserved. In addition, the insurance industry has been subject to efforts by environmental activists to restrict coverages available for fossil-fuel companies.

24.22. CONCENTRATION OF CREDIT RISK AND MAJOR CUSTOMERS

The international coal market has been a part of our business with indirect sales to end-users in Europe, Africa, Asia, North America and South America. Our sales into the international coal market are considered exports and are made through brokered transactions. During the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, export tons represented approximately 12.5% 15.7%, 12.5% and 3.3% 12.5% of tons sold, respectively.

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Because title to our export shipments typically transfers to our brokerage customers at a point that does not necessarily reflect the end-usage point, we attribute export tons to the country with the end-usage point, if known. No individual country was attributed greater than 10% of total domestic and export tons sold during the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021.

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We have significant long-term coal supply agreements, some of which contain prospective price adjustment provisions designed to reflect changes in market conditions, labor and other production costs and, in the infrequent circumstance when the coal is sold other than free on

board the mine, changes in transportation rates. A major customer is defined as a customer from which we derive at least ten percent of our total revenues, including transportation revenues. Total revenues from major customers are as follows:

	Segment	Year Ended December 31,			Segment	Year Ended December 31,		
		2022	2021	2020		2023	2022	2021
		(in thousands)						

Coal Royalties reportable segment includes coal mineral reserves and resources owned or leased by Alliance Resource Properties that are (a) leased to certain of our mining complexes in both the Illinois Basin Coal Operations and Appalachia Coal Operations reportable segments or (b) located near our operations and external mining operations. Approximately two-thirds of the coal sold by our Coal Operations' mines is leased from our Coal Royalties entities.

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Other, Corporate and Elimination includes marketing and administrative activities, Matrix Design Group, LLC, its subsidiaries, and Alliance Design Group, LLC (collectively referred to as the "Matrix Group"), our investments in Francis, Infinitum, NGP ET IV and NGP ETP IV Ascend (see Note 14.12 – Equity Investments), Wildcat Insurance, which assists the ARLP Partnership with its insurance requirements, AROP Funding and Alliance Finance (both discussed in Note 8.6 – Long-Term Debt) and other miscellaneous activities. The eliminations included in Other, Corporate and Elimination primarily represent the intercompany coal royalty transactions described above between our Coal Royalties reportable segment and our coal operations' mines.

Reportable segment results are presented below.

Coal Operations		Royalties		Other,	
Illinois				Corporate and	
Basin	Appalachia	Oil & Gas	Coal	Elimination	Consolidated
(in thousands)					

(in thousands)												
Year Ended December 31, 2023												
Revenues - Outside (1)								\$1,481,556	\$ 883,334	\$141,525	\$ 42	\$ 60,244 \$ 2,566,
Revenues - Intercompany								—	—	—	65,572	(65,572)
Total revenues (1)								1,481,556	883,334	141,525	65,614	(5,328) 2,566,
Segment Adjusted EBITDA												
Expense (2)								861,288	516,471	16,532	24,451	(14,024) 1,404,
Segment Adjusted EBITDA (3)								514,118	330,723	121,508	41,163	4,661 1,012,
Total assets								966,102	488,427	781,184	315,592	237,121 2,788,
Capital expenditures (4)								257,885	116,217	—	400	4,836 379,
Year Ended December 31, 2022												
Revenues - Outside	\$1,296,305	\$ 928,087	\$141,441	\$ 56	\$ 40,622	\$ 2,406,511						
Revenues - Outside (1)								\$1,296,305	\$ 928,087	\$154,897	\$ 56	\$ 40,622 \$ 2,419,
Revenues - Intercompany	—	—	—	60,624	(60,624)	—		—	—	—	60,624	(60,624)
Total revenues (1)	1,296,305	928,087	141,441	60,680	(20,002)	2,406,511		1,296,305	928,087	154,897	60,680	(20,002) 2,419,
Segment Adjusted EBITDA												
Expense (2)	806,080	464,029	13,950	21,871	(23,497)	1,282,433		806,080	464,029	15,395	21,871	(23,497) 1,283,
Segment Adjusted EBITDA (3)	420,684	426,402	131,168	38,809	3,495	1,020,558		420,684	426,402	143,179	38,809	3,495 1,032,
Total assets	779,018	431,913	711,917	321,587	417,038	2,661,473		779,018	431,913	778,465	321,587	417,038 2,728,
Capital expenditures (4)	158,624	76,603	—	38,276	12,891	286,394		158,624	76,603	—	38,276	12,891 286,
Year Ended December 31, 2021												
Revenues - Outside	\$ 919,597	\$ 545,539	\$ 77,185	\$ 69	\$ 27,586	\$ 1,569,976						
Revenues - Outside (1)								\$ 919,597	\$ 545,539	\$ 86,439	\$ 69	\$ 27,586 \$ 1,579,
Revenues - Intercompany	—	—	—	51,402	(51,402)	—		—	—	—	51,402	(51,402)
Total revenues (1)	919,597	545,539	77,185	51,471	(23,816)	1,569,976		919,597	545,539	86,439	51,471	(23,816) 1,579,
Segment Adjusted EBITDA												
Expense (2)	613,303	344,332	9,943	18,269	(33,198)	952,649		613,303	344,332	11,051	18,269	(33,198) 953,
Segment Adjusted EBITDA (3)	265,292	172,601	68,774	33,202	9,383	549,252		265,292	172,601	76,920	33,202	9,383 557,
Total assets	676,091	420,144	630,627	285,943	146,601	2,159,406		676,091	420,144	698,702	285,943	146,601 2,227,
Capital expenditures (4)	60,166	47,577	—	45	15,196	122,984		60,166	47,577	—	45	15,196 122,
Year Ended December 31, 2020												
Revenues - Outside	\$ 769,957	\$ 500,330	\$ 43,141	\$ 105	\$ 14,596	\$ 1,328,129						
Revenues - Intercompany	—	—	—	42,112	(42,112)	—						
Total revenues (1)	769,957	500,330	43,141	42,217	(27,516)	1,328,129						
Segment Adjusted EBITDA												
Expense (2)	543,264	320,656	4,106	18,249	(25,026)	861,249						
Segment Adjusted EBITDA (3)	213,876	171,362	39,773	23,968	(2,490)	446,489						
Total assets	738,315	440,815	613,916	288,525	84,445	2,166,016						
Capital expenditures	48,636	70,960	—	12	1,493	121,101						

(1) Revenues included in the Other, Corporate and Elimination column are attributable to intercompany eliminations, which are primarily intercompany coal royalties eliminations, outside revenues at the Matrix Group and other outside miscellaneous sales and revenue activities.

	Year Ended December 31,		
	2023	2022	2021
	(in thousands)		
Net income	\$ 636,170	\$ 588,158	\$ 183,369
Noncontrolling interest	(6,052)	(1,958)	(598)
Net income attributable to ARLP	\$ 630,118	\$ 586,200	\$ 182,771
General and administrative	79,096	80,425	70,275
Depreciation, depletion and amortization	267,982	276,670	264,794
Interest expense, net	26,697	35,296	39,141
Income tax expense	8,280	53,978	417
Consolidated Segment Adjusted EBITDA	\$ 1,012,173	\$ 1,032,569	\$ 557,398

(4) Capital Expenditures expenditures shown exclude the Belvedere Acquisition on September 9, 2022 \$110.9 million, Jase Acquisition on October 26, 2022 \$92.6 million and the Boulders Acquisition on October 13, 2021. (Note \$31.0 million paid for oil & gas acquisitions in 2023, 2022 and 2021, respectively. See Note 3 – Acquisitions). Acquisitions for more information.

26. SUBSEQUENT EVENTS

Acquisition Agreement

On January 27, 2023, we entered into a one-year collaborative agreement with a third party, effective January 1, 2023, committing up to \$35.0 million for the acquisition of oil & gas mineral interests in the Midland and Delaware basins. Under the agreement, the third party will assist us in the identification, evaluation, and acquisition of target oil & gas mineral interests. In exchange for these services, the third party will receive a participation share, partially funded by the third party, and will be paid a periodic management fee.

JC Resources

On February 22, 2023, we acquired approximately 2,682 oil & gas net royalty acres in the Delaware Basin from JC Resources LP ("JC Resources"), a related-party entity owned by Mr. Craft, for \$72.3 million, which was funded with cash on hand.

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SUPPLEMENTAL OIL & GAS RESERVE INFORMATION (UNAUDITED)

These All periods presented in these supplemental oil & gas reserve information disclosures are required for periods have been recast to reflect the JC Resources Acquisition as if we, rather than JC Resources, acquired the mineral interests in which a company has significant oil & gas producing activities. A company is considered 2019. For more information with respect to have significant oil & gas producing activities if any of its revenues, results of operations or assets from oil & gas producing activities exceed 10% of the JC Resources Acquisition please see Note – 1 Organization and Presentation and Note – 3 Acquisition in our consolidated revenues, results of operations or assets for the year being measured. financial statements.

Geographical Area of Operation

All of our proved oil & gas reserves are located within the continental United States with the majority concentrated in Texas, Oklahoma, New Mexico and North Dakota. The following supplemental disclosures about our proved oil & gas reserves including costs incurred, capitalized cost, results of operations and cash flows are presented on a consolidated basis.

Costs incurred in oil & gas property acquisitions are presented below:

Property acquisition costs for 2023 primarily include the Skyland Acquisition and other ground game acquisitions. Property acquisition costs for 2022 primarily include the Belvedere and Jase Acquisitions. Property acquisition costs for 2021 are related to the Boulders Acquisition. See Note 3 – Acquisitions in our consolidated financial statements for more information regarding these acquisitions.

Aggregate capitalized costs related to oil & gas activities with applicable accumulated depreciation, depletion, and amortization are presented below:

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	(in thousands)			(in thousands)		
Consolidated activities						
Oil & gas royalties	\$ 138,402	\$ 74,988	\$ 42,912	\$137,751	\$151,060	\$ 84,183
Other revenues	3,039	2,197	229	3,774	3,837	2,256
Production costs and severance taxes	(11,845)	(7,396)	(4,611)	(13,423)	(13,200)	(8,511)
Depreciation, depletion and amortization	(27,123)	(22,267)	(25,376)	(36,865)	(30,034)	(25,684)
Income tax expense	(54,842)	—	—	(14,568)	(54,842)	—
Total results of oil & gas activities	<u>\$ 47,631</u>	<u>\$ 47,522</u>	<u>\$ 13,154</u>	<u>\$ 76,669</u>	<u>\$ 56,821</u>	<u>\$ 52,244</u>
Our share of an equity method investee						
Oil & gas royalties	\$ 7,292	\$ 3,788	\$ 2,674	\$ 4,719	\$ 7,292	\$ 3,788
Other revenues	37	66	22	102	37	66
Production costs and severance taxes	(916)	(472)	(374)	(638)	(916)	(472)
Depreciation, depletion and amortization	(897)	(787)	(748)	(1,142)	(897)	(787)
Total results of oil & gas activities	<u>\$ 5,516</u>	<u>\$ 2,595</u>	<u>\$ 1,574</u>	<u>\$ 3,041</u>	<u>\$ 5,516</u>	<u>\$ 2,595</u>

Oil & Gas Reserves

Proved oil & gas reserve estimates as of December 31, 2022 were prepared by our internal engineering team and 95% of those reserves were audited by Netherland, Sewell & Associates, Inc., independent petroleum engineers. Proved reserves are estimated under existing economic and operating conditions based on the 12-month unweighted average of the first-of-the-month prices.

Due to the inherent uncertainties and the limited nature of reservoir data, such estimates are subject to change as additional information becomes available. The reserves actually recovered and the timing of production of these reserves may be substantially different from the original estimate. Revisions result primarily from new information obtained from development drilling and production history and from changes in economic factors.

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The net proved developed and undeveloped oil & gas reserves quantities of the mineral interests attributable to us are summarized below:

	Crude Oil (MBbl)	Natural Gas (MMcf)	Natural Gas Liquids (MBbl)	Total (MBOE)	Crude Oil (MBbl)	Natural Gas (MMcf)	Natural Gas Liquids (MBbl)	Total (MBOE)
<i>Consolidated activities</i>								
As of January 1, 2020	6,824	28,629	2,582	14,177				
Revisions of previous estimates	(194)	2,679	343	596				
Extensions and discoveries	1,095	3,039	347	1,949				
Production	(905)	(3,301)	(337)	(1,792)				

Sales of minerals in place	(18)	(29)	(3)	(26)				
As of December 31, 2020 (1)	6,802	31,017	2,932	14,904				
As of January 1, 2021					7,517	34,055	3,340	16,533
Purchases of minerals in place	287	2,149	332	977	287	2,149	332	977
Revisions of previous estimates	(403)	(90)	197	(221)	(404)	132	177	(205)
Extensions and discoveries	629	159	335	991	677	621	387	1,168
Production	(794)	(3,069)	(357)	(1,663)	(898)	(3,460)	(402)	(1,877)
As of December 31, 2021 (1)	6,521	30,166	3,439	14,988	7,179	33,497	3,834	16,596
Purchases of minerals in place	859	3,619	497	1,960	859	3,619	497	1,960
Revisions of previous estimates	(53)	4,542	626	1,330	(24)	4,686	668	1,425
Extensions and discoveries	1,636	6,676	807	3,555	2,060	8,334	1,018	4,466
Production	(974)	(4,425)	(496)	(2,208)	(1,061)	(4,814)	(541)	(2,404)
As of December 31, 2022 (1)	7,989	40,578	4,873	19,625	9,013	45,322	5,476	22,043
Purchases of minerals in place					361	2,421	142	907
Revisions of previous estimates					(175)	2,177	559	748
Extensions and discoveries								2,649
Production					1,252	4,460	654	
As of December 31, 2023 (1)					(1,418)	(5,759)	(726)	(3,105)
As of December 31, 2023 (1)					9,033	48,621	6,105	23,242

(1) Proved reserves of approximately 1,780 MBOE, 1,736 MBOE, 1,285 MBOE and 972 1,285 MBOE were attributable to noncontrolling interests, as of December 31, 2022, December 31, 2023, 2021, 2022 and 2020, 2021, respectively.

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	Crude Oil (MBbl)	Natural Gas (MMcf)	Natural Gas Liquids (MBbl)	Total (MBOE)	Crude Oil (MBbl)	Natural Gas (MMcf)	Natural Gas Liquids (MBbl)	Total (MBOE)
<i>Our share of an equity method investee</i>								
As of January 1, 2020	325	1,926	136	783				
Revisions of previous estimates	—	(1)	(2)	(3)				
Extensions and discoveries	62	461	54	193				
Production	(44)	(334)	—	(100)				
As of December 31, 2020	342	2,052	188	873				
As of January 1, 2021					342	2,052	188	873
Sales of minerals in place	(9)	(15)	—	(12)	(9)	(15)	—	(12)
Revisions of previous estimates	(50)	320	(53)	(51)	(50)	320	(53)	(51)
Extensions and discoveries	73	450	43	190	73	450	43	190
Production	(31)	(421)	—	(101)	(31)	(421)	—	(101)
As of December 31, 2021	325	2,386	178	899	325	2,386	178	899
Sales of minerals in place	(7)	(18)	(4)	(14)	(7)	(18)	(4)	(14)
Revisions of previous estimates	17	210	13	66	17	210	13	66
Extensions and discoveries	57	294	25	132	57	294	25	132
Production	(43)	(412)	—	(112)	(43)	(412)	—	(112)

As of December 31, 2022	349	2,460	212	971	349	2,460	212	971
Sales of minerals in place					—	—	—	—
Revisions of previous estimates					(46)	74	(23)	(57)
Extensions and discoveries					61	770	59	248
Production					(44)	(402)	—	(110)
As of December 31, 2023					320	2,902	248	1,052
Total consolidated and equity interests in reserves at December 31, 2022	8,338	43,038	5,085	20,596				
Total consolidated and equity interests in reserves at December 31, 2023					9,353	51,523	6,353	24,294
Net proved developed reserves as of December 31, 2020	5,073	23,504	2,252	11,244				
Net proved developed reserves as of December 31, 2021	5,493	28,426	3,039	13,269	6,016	31,211	3,369	14,587
Net proved developed reserves as of December 31, 2022	6,976	37,882	4,388	17,677	7,551	41,173	4,806	19,219
Net proved developed reserves as of December 31, 2023					7,754	45,684	5,485	20,854

Net proved undeveloped reserves as of December 31, 2020	2,071	9,565	868	4,533				
Net proved undeveloped reserves as of December 31, 2021	1,353	4,126	578	2,618	1,488	4,672	643	2,908
Net proved undeveloped reserves as of December 31, 2022	1,362	5,155	697	2,919	1,811	6,609	882	3,795
Net proved undeveloped reserves as of December 31, 2023					1,599	5,839	868	3,440

Natural gas reserves are converted to BOE based on a 6:1 ratio: six Mcf of natural gas converts to one BOE.

Notable changes in proved reserves during the year ended **December 31, 2020** **December 31, 2021**, included:

- **Net change due to extensions and discoveries:** The increases are a result of additional development by the operators of the properties under which we own mineral interests. In 2020, a net addition of 2,142 MBOE occurred primarily from the completion of 655 new wells on our acreage and from the addition of 877 new proved undeveloped locations due to permitting and drilling activity.
- **Revisions:** Increases in oil & gas are also due to changes in the underlying commodity prices during the year and revisions of previous quantity estimates.

Notable changes in proved reserves during the year ended **December 31, 2021**, included:

- **Net change due to extensions and discoveries:** **discoveries** - The increases are a result of additional development by the operators of the properties under which we own mineral interests. In 2021, a net addition of **1,181****1,358** MBOE occurred primarily from the completion of **843****906** new wells on our acreage and from the addition of **474****498** new proved undeveloped locations due to permitting and drilling activity.

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- **Revisions:** **Revisions** - Increases in oil & gas are also due to changes in the underlying commodity prices during the year and revisions of previous quantity estimates.

Notable changes in proved reserves during the year ended **December 31, 2022**, included:

- **Net change due to extensions and discoveries:** **discoveries** - The increases are a result of additional development by the operators of the properties under which we own mineral interests. In 2022, a net addition of **5,647****4,598** MBOE occurred primarily from the completion of **1,119****1,212** new wells on our acreage and from the addition of **824****878** new proved undeveloped locations due to permitting and drilling activity.

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- **Revisions:** **Revisions** - Increases in oil & gas are also due to changes in the underlying commodity prices during the year and revisions of previous quantity estimates.

Notable changes in proved reserves during the year ended December 31, 2023, included:

- **Net change due to extensions and discoveries** - The increases are a result of additional development by the operators of the properties under which we own mineral interests. In 2023, a net addition of 2,897 MBOE occurred primarily from the completion of 2,117 new wells on our acreage and from the addition of 548 new proved undeveloped locations due to permitting and drilling activity.
- **Revisions** - Increases in oil & gas are also due to changes in the underlying commodity prices during the year and revisions of previous quantity estimates.

Standardized Measure of Discounted Future Net Cash Flows

In accordance with United States Securities and Exchange Commission ("SEC") and FASB requirements, future **Future** cash inflows represent expected revenues from production of period-end quantities of proved reserves based on the 12-month unweighted average of first-of-the-month commodity prices for the **year** years ended **December 31, 2022, December 31, 2023, 2022 and 2021**. All prices are adjusted for quality, transportation fees, energy content and regional basis differentials. Future cash inflows are computed by applying applicable prices relating to our proved reserves to the year-end quantities of those reserves. Future production costs are derived based on current costs assuming continuation of existing economic conditions.

While due care was taken in preparation of the following cash flow projections, we do not represent that this data is the fair value of our oil & gas properties, or a fair estimate of the present value of cash flows to be obtained from their development and production. Material revisions to estimates of proved reserves may occur in the future; development and production of the reserves may not occur in the periods assumed; actual prices are expected to vary significantly from those used and actual costs may vary.

	As of December 31,			As of December 31,		
	2022	2021	2020	2023	2022	2021

		(in thousands)							(in thousands)						
		Our			Our			Our	Our			Our			
		Share of			Share of			Share of	Share of			Share of			
		an Equity			an Equity			an	an Equity			an Equity			
		Method			Method			Equity	Method			Method			
		Consolidated Investee Consolidated Investee Consolidated Investee							Consolidated Investee Consolidated Investee Consolidated Investee						
Future cash inflows		\$ 1,134,245	\$ 52,636	\$ 577,114	\$ 31,636	\$ 302,112	\$ 15,414	\$ 914,461	\$ 34,986	\$ 1,275,564	\$ 52,636	\$ 636,933	\$ 31,636		
Future production costs and severance taxes		(86,314)	(4,287)	(43,474)	(2,484)	(21,555)	(1,244)	(69,507)	(2,548)	(97,158)	(4,287)	(48,013)	(2,484)		
Future income tax expense (1)		(241,024)	—	—	—	—	—	(194,339)	—	(255,504)	—	—	—		
Future net cash flows (undiscounted)		806,907	48,349	533,640	29,152	280,557	14,170	650,615	32,438	922,902	48,349	588,920	29,152		
Annual discount 10% for estimated timing		(398,089)	(23,904)	(260,718)	(13,980)	(130,341)	(6,406)	(315,327)	(14,852)	(466,245)	(23,904)	(289,037)	(13,980)		
Total standardized measure (2)		\$ 408,818	\$ 24,445	\$ 272,922	\$ 15,172	\$ 150,216	\$ 7,764	\$ 335,288	\$ 17,586	\$ 456,657	\$ 24,445	\$ 299,883	\$ 15,172		

- (1) On March 15, 2022, Alliance Minerals changed its Federal income tax status from a pass-through entity to a taxable entity via a "check the box" election, which became effective January 1, 2022. See Note 97 – Income Tax in our consolidated financial statements for more information.
- (2) Includes standardized discounted future net cash flows of approximately \$45.3 million \$31.6 million, \$17.9 million \$45.3 million and \$5.2 million \$17.9 million attributable to noncontrolling interests in the ARLP Partnership's consolidated subsidiaries as of December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, respectively.

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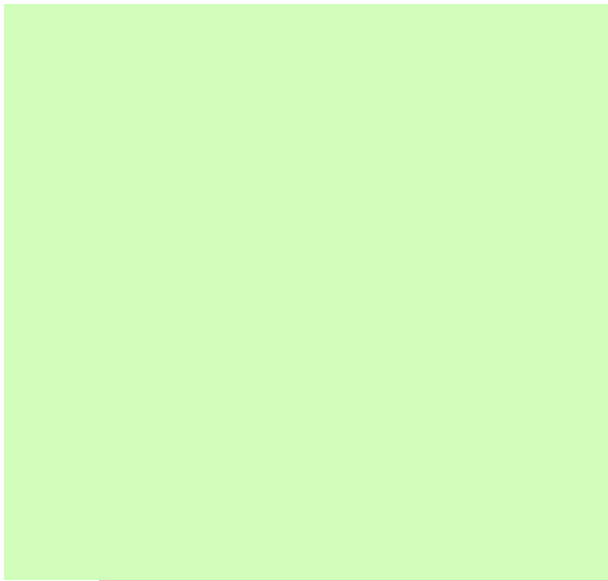
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The average realized product prices weighted by production over the remaining lives of the properties are presented in the table below:

	For the Year Ended December 31,			For the Year Ended December 31,		
	2022	2021	2020	2023	2022	2021
Oil (per Bbl)	\$ 92.5	\$ 63.57	\$ 36.95	\$ 77.61	\$ 92.5	\$ 63.57
Natural gas (per Mcf)	5.43	2.98	0.88	1.55	5.43	2.98
NGLs (per Bbl)	35.87	21.13	7.99	22.63	35.87	21.13

Changes in the standardized measure of discounted future net cash flows related to the proved oil & gas reserves of the properties are as follows:

As of December 31,			As of December 31,		
2022	2021	2020	2023	2022	2021



	(in thousands)							(in thousands)						
	Our		Our		Our		Consolidated Investee	Our		Our		Our		Consolidated Investee
	Share of	an	Share of	an	Share of	an		Share of	an	Share of	an	Share of	an	
	Equity	Equity	Equity	Equity	Equity	Equity	Method	Equity	Equity	Equity	Equity	Equity	Equity	Method
	Method	Method	Method	Method	Method	Method	Method	Method	Method	Method	Method	Method	Method	Method
	Consolidated Investee	Consolidated Investee	Consolidated Investee	Consolidated Investee	Consolidated Investee	Consolidated Investee	Consolidated Investee	Consolidated Investee	Consolidated Investee	Consolidated Investee	Consolidated Investee	Consolidated Investee	Consolidated Investee	Consolidated Investee
Standardized measure, beginning of year	\$ 272,922	\$ 15,172	\$ 150,216	\$ 7,764	\$ 230,950	\$ 12,215		\$ 456,657	\$ 24,445	\$ 299,883	\$ 15,172	\$ 165,483	\$ 7,764	
Purchases and sales of reserves in place, less related costs	55,812	(265)	15,358	(264)	(567)	—		17,519	—	55,812	(265)	15,358	(264)	
Sales, net of production costs	(126,558)	(6,376)	(67,592)	(3,316)	(38,301)	(2,300)		(124,328)	(4,081)	(137,860)	(6,376)	(75,672)	(3,316)	
Net changes due to extensions and discoveries	125,570	5,139	34,284	3,613	15,770	1,344		60,628	3,582	149,721	5,139	37,395	3,613	
Net changes in prices and production costs	184,403	8,386	120,103	6,753	(67,524)	(3,906)		(185,935)	(7,960)	211,222	8,386	132,427	6,753	
Revisions of previous quantity estimates	28,226	344	8,310	(871)	(2,843)	(378)		15,479	(686)	21,457	344	9,252	(871)	

Net changes in income taxes (1)	(123,567)	—	—	—	—	—	36,699	—	(138,047)	—	—	—
Accretion of discount	21,046	1,086	11,745	545	16,216	870	39,912	1,839	23,283	1,086	12,933	545
Changes in timing and other	(29,036)	959	498	948	(3,485)	(81)	18,657	447	(28,814)	959	2,707	948
Net increase (decrease) in standardized measures	135,896	9,273	122,706	7,408	(80,734)	(4,451)	(121,369)	(6,859)	156,774	9,273	134,400	7,408
Standardized measure, end of year	\$ 408,818	\$ 24,445	\$ 272,922	\$ 15,172	\$ 150,216	\$ 7,764	\$ 335,288	\$ 17,586	\$ 456,657	\$ 24,445	\$ 299,883	\$ 15,172

(1) On March 15, 2022, Alliance Minerals changed its federal income tax status from a pass-through entity to a taxable entity via a "check the box" election, which became effective January 1, 2022. See Note 97 – Income Tax in our consolidated financial statements for more information.

Net change in prices and production costs occur from one reporting period to another when the SEC reporting price for that period changes. For 2022, this was a major component of the overall reserves value change from 2021 due to the surge in global energy demand during the recovery from the economic downturn related to the COVID-19 pandemic during 2020. For 2020, net changes in prices and production costs were major components of the overall reserves value change from 2019 due mainly to the COVID-19 pandemic and the subsequent decline in oil and gas demand.

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SCHEDULE I – CONDENSED FINANCIAL INFORMATION OF REGISTRANT ALLIANCE RESOURCE PARTNERS, L.P.

CONDENSED BALANCE SHEETS (PARENT)

DECEMBER 31, 2022 2023 AND 2021 2022

(In thousands, except unit data)

	December 31,		December 31,	
	2022	2021	2023	2022*
ASSETS				
CURRENT ASSETS:				
Cash and cash equivalents	\$ 2,174	\$ 2,173	\$ 2,043	\$ 2,174
Total current assets	2,174	2,173	2,043	2,174
OTHER ASSETS:				
Investments in consolidated subsidiaries	1,653,951	1,277,110	1,894,158	1,720,499
Total other assets	1,653,951	1,277,110	1,894,158	1,720,499
TOTAL ASSETS	\$ 1,656,125	\$ 1,279,283	\$1,896,201	\$1,722,673

LIABILITIES AND PARTNERS' CAPITAL				
CURRENT LIABILITIES:				
Accrued taxes other than income taxes	\$	100	\$	100
Total current liabilities		100		100
Total liabilities		100		100
PARTNERS' CAPITAL:				
Limited Partners - Common Unitholders 127,195,219 units outstanding		1,656,025		1,279,183
Limited Partners - Common Unitholders 127,125,437 and 127,195,219 units outstanding, respectively			1,896,027	1,656,025
General Partner's interest			—	66,548
Total Partners' Capital			1,896,027	1,722,573
TOTAL LIABILITIES AND PARTNERS' CAPITAL	\$	1,656,125	\$	1,279,283
			\$1,896,201	\$1,722,673

*Recast as discussed in "Item 8. Financial Statements and Supplementary Data—Note 1 – Organization and Presentation" of this Annual Report on Form 10-K.

See accompanying notes.

CONDENSED STATEMENTS OF OPERATIONS (PARENT)

FOR THE YEARS ENDED DECEMBER 31, 2023, 2022 2021 AND 2020 2021

(In thousands, except unit and per unit data)

	Year Ended December 31,			Year Ended December 31,		
	2022	2021	2020	2023	2022*	2021*
EXPENSES:						
General and administrative				\$ 151	\$ —	\$ —
Total operating expenses				151	—	—
LOSS FROM OPERATIONS				(151)	—	—
Interest income	\$ —	\$ —	\$ 24	57	—	—
Equity in earnings of consolidated subsidiaries	577,190	178,157	(129,244)	630,212	586,200	182,771
NET INCOME (LOSS) ATTRIBUTABLE TO ARLP	\$ 577,190	\$ 178,157	\$ (129,220)			
NET INCOME ATTRIBUTABLE TO ARLP				\$ 630,118	\$ 586,200	\$ 182,771
NET INCOME ATTRIBUTABLE TO ARLP						
GENERAL PARTNER				\$ 1,384	\$ 9,010	\$ 4,614
LIMITED PARTNERS				\$ 628,734	\$ 577,190	\$ 178,157
EARNINGS PER LIMITED PARTNER UNIT - BASIC AND DILUTED						
	\$ 4.39	\$ 1.36	\$ (1.02)	\$ 4.81	\$ 4.39	\$ 1.36
WEIGHTED-AVERAGE NUMBER OF UNITS OUTSTANDING – BASIC AND DILUTED	127,195,219	127,195,219	127,164,659	127,180,312	127,195,219	127,195,219

*Recast as discussed in "Item 8. Financial Statements and Supplementary Data—Note 1 – Organization and Presentation" of this Annual Report on Form 10-K.

See accompanying notes.

CONDENSED STATEMENTS OF CASH FLOWS (PARENT)
FOR THE YEARS ENDED DECEMBER 31, 2023, 2022 2021 AND 2020 2021
(In thousands)

	Year Ended December 31,			Year Ended December 31,		
	2022	2021	2020	2023	2022*	2021*
CASH FLOWS FROM OPERATING ACTIVITIES:	\$ 196,348	\$ 52,157	\$ 51,751	\$ 364,448	\$ 196,348	\$ 52,157
CASH FLOWS FROM FINANCING ACTIVITIES:						
Distributions paid to Partners	(196,347)	(52,158)	(51,753)	(364,579)	(196,347)	(52,158)
Net cash used in financing activities	(196,347)	(52,158)	(51,753)	(364,579)	(196,347)	(52,158)
NET CHANGE IN CASH AND CASH EQUIVALENTS	1	(1)	(2)	(131)	1	(1)
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	2,173	2,174	2,176	2,174	2,173	2,174
CASH AND CASH EQUIVALENTS AT END OF PERIOD	\$ 2,174	\$ 2,173	\$ 2,174	\$ 2,043	\$ 2,174	\$ 2,173

* Recast as discussed in "Item 8. Financial Statements and Supplementary Data—Note 1 – Organization and Presentation" of this Annual Report on Form 10-K.

See accompanying notes.

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NOTES TO FINANCIAL INFORMATION (PARENT)

1. BASIS OF PRESENTATION

In these parent-company-only financial statements, our investment in consolidated subsidiaries is stated at cost plus equity in undistributed earnings of subsidiaries and reduced by distributions received from subsidiaries since the date of acquisition. These parent-company-only financial statements have been recast as a result of the JC Resources Acquisition as discussed in "Item 8. Financial Statements and Supplementary Data—Note 1 – Organization and Presentation" of this Annual Report on Form 10-K. These parent-company-only financial statements should be read in conjunction with our consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" of this Annual Report on Form 10-K.

2. GUARANTEES

As the parent of Alliance Coal and the Intermediate Partnership, ARLP was is a guarantor of the Replaced Credit Facility and is a guarantor of the Senior Notes discussed in "Item 8. Financial Statements and Supplementary Data—Note 8 – Long-Term Debt" of this Annual Report on Form 10-K. In addition to these guarantees, ARLP has provided guarantees on surety indemnity agreements and financially guaranteed certain coal supply agreements. The duration of these guarantees varies. The maximum undiscounted potential future payment obligation for our guarantees of certain coal supply agreements as of December 31, 2022 December 31, 2023 is approximately \$425.6 million as a result of elevated market prices, \$75.1 million. These guarantees provide for compensation to customers based on additional cost to the customer to replace any contracted tons that our subsidiaries fail to deliver. We do not expect to make any payments under these guarantees.

3. CASH DISTRIBUTIONS RECEIVED

We received distributions of \$196.3 million \$364.6 million, \$52.2 million \$196.3 million and \$51.8 million \$52.2 million from our consolidated subsidiaries during the years ended December 31, 2022 December 31, 2023, 2021, 2022, and 2020, 2021, respectively.

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ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANT ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures. We maintain controls and procedures designed to provide reasonable assurance that information required to be disclosed in the reports we file with the SEC is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC and that such information is accumulated and communicated to our management, including the **Chief Executive Officer CEO** and **Chief Financial Officer, CFO**, as appropriate, to allow for timely decisions regarding required disclosures. As required by Rule 13a-15(b) of the **Securities Exchange Act, of 1934 ("Exchange Act")**, we have evaluated, under the supervision and with the participation of our management, including the **Chief Executive Officer CEO** and **Chief Financial Officer, CFO**, the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) or Rule 15d-15(e) of the Exchange Act) as of **December 31, 2022** **December 31, 2023**. Based on this evaluation, the **Chief Executive Officer CEO** and **Chief Financial Officer CFO** concluded that these controls and procedures are effective as of **December 31, 2022** **December 31, 2023**.

Our management, including the **Chief Executive Officer CEO** and **Chief Financial Officer, CFO**, does not expect that our disclosure controls or our internal controls over financial reporting will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the ARLP Partnership have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that simple errors or mistakes can occur. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based, in part, upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected. We monitor our disclosure controls and internal controls and make modifications as necessary; our intent in this regard is that the disclosure controls and the internal controls will be maintained as systems change and conditions warrant.

Management's Annual Report on Internal Control over Financial Reporting. Management of the ARLP Partnership is responsible for establishing and maintaining effective internal control over financial reporting as defined in Rules 13a-15(f) under the Exchange Act. The ARLP Partnership's internal control over financial reporting is designed to provide reasonable assurance to our management and Board of Directors of our general partner regarding the preparation and fair presentation of published financial statements. Our controls are designed to provide reasonable assurance that the ARLP Partnership's assets are protected from unauthorized use and that transactions are executed in accordance with established authorizations and properly recorded. The internal controls are supported by written policies and are complemented by a staff of competent business process owners and an internal auditor supported by competent and qualified external resources used to assist in testing the operating effectiveness of the ARLP Partnership's internal control over financial reporting. Management concluded that the design and operations of our internal controls over financial reporting at **December 31, 2022** **December 31, 2023** are effective and provide reasonable assurance the books and records accurately reflect the transactions of the ARLP Partnership.

Because of inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Management assessed the effectiveness of our internal control over financial reporting as of **December 31, 2022** **December 31, 2023**. In making this assessment, management used the criteria set forth by **the Committee of Sponsoring Organizations of the Treadway Commission ("COSO")** **COSO** in *Internal Control—Integrated Framework (2013)*. Based on its assessment, management concluded that, as of **December 31, 2022** **December 31, 2023**, the ARLP Partnership's internal control over financial reporting

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was effective based on those criteria, and management believes that we have no material internal control weaknesses in our financial reporting process.

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Grant Thornton LLP, an independent registered public accounting firm, has made an independent assessment of the effectiveness of our internal control over financial reporting as of **December 31, 2022** **December 31, 2023**, as stated in their report that is included herein.

Changes in Internal Controls Over Financial Reporting. There have not been any changes in our internal controls over financial reporting (as defined in Rule 13a-15(f) or Rule 15d-15(f) of the Exchange Act) in the three months ended **December 31, 2022** **December 31, 2023** that has materially affected, or is reasonably likely to materially affect, our internal controls over financial reporting.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors of Alliance Resource Management GP, LLC
and **the** Unitholders of Alliance Resource Partners, L.P.

Opinion on internal control over financial reporting

We have audited the internal control over financial reporting of Alliance Resource Partners, L.P. (a Delaware limited partnership) and subsidiaries (the "Partnership") as of **December 31, 2022** **December 31, 2023**, based on criteria established in the 2013 *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). In our opinion, the Partnership maintained, in all material respects, effective internal control over financial reporting as of **December 31, 2022** **December 31, 2023**, based on criteria established in the 2013 *Internal Control—Integrated Framework* issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated financial statements of the Partnership as of and for the year ended **December 31, 2022** **December 31, 2023**, and our report dated **February 24, 2023** **February 23, 2024** expressed an unqualified opinion on those financial statements.

Basis for opinion

The Partnership's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Partnership's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Partnership in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and limitations of internal control over financial reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ GRANT THORNTON LLP

Tulsa, Oklahoma

February **24, 2023** **23, 2024**

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ITEM 9B. OTHER INFORMATION

None. None of our directors or officers adopted, modified or terminated a Rule 10b5-1 trading arrangement or a non-Rule 10b5-1 trading arrangement during the three months ended December 31, 2023, as such terms are defined under Item 408(a) of Regulation S-K.

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PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE OF THE GENERAL PARTNER

As is commonly the case with publicly traded limited partnerships, we are managed and operated by our general partner. The following table shows information for executive officers and members of the Board of Directors as of the date of the filing of this Annual Report on Form 10-K. Executive officers and directors are elected until death, resignation, retirement, disqualification, or removal.

Name	Age	Position With Our General Partner
Joseph W. Craft III	72 73	Chairman, President and Chief Executive Officer
Brian L. Cantrell	63 64	Former Senior Vice President and Chief Financial Officer
Megan J. Cordle	50 51	Vice President, Controller and Chief Accounting Officer
R. Eberley Davis	65 66	Senior Vice President, General Counsel and Secretary
Cary P. Marshall	59	Senior Vice President and Chief Financial Officer
Robert G. Sachse	74 75	Executive Vice President
Kirk D. Tholen	50 51	Senior Vice President; also President, Alliance Minerals, LLC
Timothy J. Whelan	60 61	Senior Vice President - Sales and Marketing of Alliance Coal, LLC
D. Andrew Woodward	40 41	Senior Vice President - New Ventures
Thomas M. Wynne	66 67	Senior Vice President and Chief Operating Officer
Nick Carter	76 77	Director and Member of Audit, Compensation and Conflicts Committees
Robert J. Druten	75 76	Director and Member of Audit, Compensation and Conflicts* Committees
John H. Robinson	72 73	Director and Member of Audit, Compensation* and Conflicts Committees
Wilson M. Torrence	81 82	Director and Member of Audit* and Compensation Committees

* Indicates Chairman of Committee.

Joseph W. Craft III has been President, Chief Executive Officer ("CEO") CEO and a Director since August 1999, Chairman of the Board of Directors since January 1, 2019, and indirectly owns our general partner. Previously Mr. Craft served as President of MAPCO Coal Inc. since 1986. During that period, he also was Senior Vice President of MAPCO Inc. and had previously been that company's General Counsel and Chief Financial Officer. He is a Director of the National Mining Association, and a Director and former Chairman of America's Power. Mr. Craft is a Director and former Chairman of the Kentucky Chamber of Commerce. He has been a Director of BOK Financial Corporation (NASDAQ: BOKF) since 2007 and chairman of its compensation committee since 2014. Mr. Craft holds a Bachelor of Science degree in Accounting and a

Juris Doctorate degree from the University of Kentucky. Mr. Craft also is a graduate of the Senior Executive Program of the Alfred P. Sloan School of Management at the Massachusetts Institute of Technology. The specific experience, qualifications, attributes, or skills that led to the conclusion Mr. Craft should serve as a Director include his long history of significant involvement in the coal industry, his demonstrated business acumen and his exceptional leadership of the Partnership since its inception.

Brian L. Cantrell has been was Senior Vice President and Chief Financial Officer since CFO from October 2003. Prior to 2003 through his current position, retirement on March 31, 2023. Mr. Cantrell was President of AFN Communications, LLC from November 2001 to October 2003 where he had previously served as Executive Vice President and Chief Financial Officer after joining AFN in September 2000. Mr. Cantrell's previous positions include Chief Financial Officer, Treasurer and Director with Brighton Energy, LLC from August 1997 to September 2000; Vice President—Finance of KCS Medallion Resources, Inc.; and Vice President—Finance, Secretary

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and Treasurer of Intercoast Oil and Gas Company. Mr. Cantrell is a Certified Public Accountant and

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holds Master of Accountancy and Bachelor of Accountancy degrees from the University of Oklahoma. Mr. Cantrell announced his retirement effective March 31, 2023.

Megan J. Cordle became Vice President, Controller and Chief Accounting Officer in March 2022. Since joining the Partnership in October 1999, Ms. Cordle has held several positions of increasing responsibility, serving as Vice President Assistant Controller prior to her current position. She held the position of Audit Manager with Deloitte & Touche LLP prior to joining the Partnership. She is a certified public accountant and holds a Bachelor of Science in Business Administration degree with a major in Accounting from the University of Tulsa.

R. Eberley Davis has been Senior Vice President, General Counsel and Secretary since February 2007. From 2003 to February 2007, Mr. Davis practiced law in the Lexington, Kentucky office of Stoll Keenon Ogden PLLC. Prior to joining Stoll Keenon Ogden, Mr. Davis was Vice President, General Counsel and Secretary of Massey Energy Company for one year. Mr. Davis also served in various positions, including Vice President and General Counsel, for Lodestar Energy, Inc. from 1993 to 2002. Mr. Davis is an alumnus of the University of Kentucky, where he received a Bachelor of Arts degree in Economics and his Juris Doctorate degree. He also holds a Master of Business Administration degree from the University of Kentucky. Mr. Davis is a Trustee of the Energy and Mineral Law Foundation and a member of the Kentucky Bar Association.

Cary P. Marshall became Senior Vice President and CFO in April 2023. Prior to his current position, Mr. Marshall previously served as Vice President, Corporate Finance and Treasurer since May 2003. Mr. Marshall joined Alliance in 1993 and has held several positions with increasing responsibilities in the finance and marketing areas. Mr. Marshall joined Alliance's predecessor, MAPCO Inc. in 1989 and held a variety of corporate finance positions. Mr. Marshall is an alumnus of Southern Methodist University, where he received a Bachelor of Business Administration degree and a Master of Business Administration degree.

Robert G. Sachse has been Executive Vice President since August 2000. From November 2006 until the beginning of 2016, Mr. Sachse had responsibility for our coal marketing, sales and transportation functions. Mr. Sachse was also Vice Chairman of our general partner from August 2000 to January 2007. Mr. Sachse was Executive Vice President and Chief Operating Officer of MAPCO Inc. from 1996 to 1998 when

MAPCO merged with The Williams Companies. Mr. Sachse held various positions while with MAPCO Coal Inc. from 1982 to 1991, and was promoted to President of MAPCO Natural Gas Liquids in 1992. Mr. Sachse holds a Bachelor of Science degree in Business Administration from Trinity University and a Juris Doctorate degree from the University of Tulsa.

Kirk D. Tholen became Senior Vice President in December 2019 and also serves as President of the Partnership's oil & gas minerals business. Prior to his current position, Mr. Tholen most recently served as a Managing Director within the Oil & Gas Group and Head of the Acquisitions and Divestitures ("A&D") &D Practice for Houlihan Lokey in Houston. From 2012 to 2015, he was Head of A&D for Credit Agricole CIB and was responsible for creating and leading their A&D platform to service domestic and cross-border client transactions as well as assisting in reserve-base lending, equity offerings and high-yield debt offerings. From 2006 to 2012, Mr. Tholen provided business development, marketing, transaction management, negotiating and closing services to clients at Albrecht & Associates, Inc., a sell-side E&P boutique advisory firm. His previous industry experience also includes serving as a Region Engineer for BJ Services from 1996 to 2006, where he provided drilling and fracturing technical services to clients operating in the lower 48 and Gulf of Mexico predominately as a dedicated in-house engineer focused on drilling and completions for BP, Conoco and Devon. Mr. Tholen began his career in 1992 joining UNOCAL's Louisiana inland waters and shallow shelf operation and reservoir engineering team. He holds a Bachelor of Science degree in Chemical Engineering from the University of Louisiana at Lafayette and a Master of Business Administration degree from the University of Houston.

Timothy J. Whelan has been Senior Vice President - Sales and Marketing of Alliance Coal, LLC since May 2013. Since joining the Partnership in September 2003, Mr. Whelan has held several positions with increasing responsibility, serving as Vice President – Sales prior to his current position. Mr. Whelan previously served in various business development positions for MAPCO Inc. and as Director, Power & Gas Origination for Williams Energy Marketing and Trading. Mr. Whelan has over 30 years of energy industry experience and is a former board member of the American Coal Council and The Coal Institute. Mr. Whelan holds a Bachelor of Science degree in Finance from the University of Arkansas.

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D. Andrew Woodward became Senior Vice President – New Ventures in September 2022. Prior to joining the Partnership, Mr. Woodward most recently served as Chief Executive Officer of Blueknight Energy Partners, L.P. (NASDAQ: BKEP/BKEPP) where he led the partnership's strategy, commercial activities and a successful sale of the business in August 2022. Prior to Blueknight, Mr. Woodward was the principal financial officer and Vice President, Finance and Treasurer of Andeavor Logistics, L.P. (NYSE: ANDX). Prior to this position, Mr. Woodward held various positions in corporate development, finance and investor relations at Andeavor (NYSE: ANDV), now Marathon Petroleum Corp. (NYSE: MPC). Before joining Andeavor, Mr. Woodward served as Vice President at RBC Capital Markets within its energy investment banking group. Mr. Woodward received his Bachelor of Arts in economics and philosophy from Colorado College and his Master of Business Administration from the University of Texas.

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Thomas M. Wynne has been Senior Vice President and Chief Operating Officer since March 2009. Mr. Wynne joined the company in 1981 as a mining engineer and held a variety of positions with the company prior to his appointment in July 1998 as Vice President—Operations. Mr. Wynne has served the coal industry on the National Executive Committee for National Mine Rescue and previously as a member of the Coal Safety Committee for the National Mining Association. In addition, Mr. Wynne is a past Chairman of the Kentucky Coal Association.

Mr. Wynne holds a Bachelor of Science degree in Mining Engineering from the University of Pittsburgh and a Master of Business Administration degree from West Virginia University.

Nick Carter became a Director in April 2015. Mr. Carter is a member of the Audit, Compensation and Conflicts Committees. Mr. Carter retired as President and Chief Operating Officer of Natural Resource Partners L.P. (NYSE: NRP) on September 1, 2014, having served in such capacities since 2002 and in other roles for NRP or its affiliates since 1990. Prior to 1990, Mr. Carter held various positions with MAPCO Coal Inc. and was engaged in the private practice of law. Mr. Carter previously served on the board of directors, the audit committee and as chairman of the compensation committee of Community Trust Bancorp, Inc. (NASDAQ: CTBI). Mr. Carter also previously served as chairman of the National Council of Coal Lessors for 12 years, as chairman of the West Virginia Chamber of Commerce, and as a board member of the West Virginia Coal Association, the Indiana Coal Council, the National Mining Association, and ACCCE. Mr. Carter has served as a board member of the Kentucky Coal Association for over 20 years and currently is its Treasurer. Mr. Carter holds Bachelor's and Juris Doctorate degrees from the University of Kentucky and a Master of Business Administration degree from the University of Hawaii. The specific experience, qualifications, attributes or skills that led to the conclusion Mr. Carter should serve as a Director include his extensive experience in the coal and energy industries and in senior corporate leadership.

Robert J. Druten became a Director effective January 1, 2019. Mr. Druten is Chairman of the Conflicts Committee and is a member of the Audit and Compensation Committees. From January 2007 through 2018, Mr. Druten was a member of the board of directors of Alliance GP, LLC, the former general partner of [Alliance Holdings GP, L.P. \("AHGP"\)](#), [AHGP](#). From September 1994 until his retirement in August 2006, Mr. Druten served as Executive Vice President and Chief Financial Officer of Hallmark Cards, Inc. Mr. Druten holds a Bachelor of Science degree in Accounting from the University of Kansas as well as a Master of Business Administration from Rockhurst University. Mr. Druten previously served as Chairman of the Board of Directors of Kansas City Southern Industries, Inc. (NYSE: KSU), a transportation and financial services company, and was Chairman of its executive committee and a member of its compensation committee and nominating and governance committees, and now serves as a trustee of the voting trust holding KSU pending the Surface Transportation Board's review and approval of KSU's recent combination with Canadian Pacific Railway Limited. [Mr. Druten is also a Trustee and former Chairman of the Board of Entertainment Properties Trust \(NYSE: EPR\), a real estate investment trust focused on the acquisition of movie theatre complexes and other entertainment-related properties, and is a member of its audit, compensation, finance and governance committees.](#) Mr. Druten previously served as a director of American Italian Pasta, from 2007 until it was acquired by Ralcorp Holdings in July 2010, where he was the Chair of its audit committee and also served on its compensation committee. The specific experience, qualifications, attributes or skills that led to the conclusion Mr. Druten should serve as Director are demonstrated by his lengthy and distinguished service as Chief Financial Officer of Hallmark, including direct oversight of a public company subsidiary, and his extensive experience serving as a director of public companies in multiple industries.

John H. Robinson became a Director in December 1999. Mr. Robinson is Chairman of the Compensation Committee and a member of the Audit and Conflicts Committees. Mr. Robinson is the Chairman of Hamilton Ventures, LLC. From 2003 to 2004, he was Chairman of EPC Global, Ltd., an engineering staffing company. From 2000 to 2002, he was the Executive Director of Amey plc, a British business process outsourcing company. Mr. Robinson served as Vice Chairman of Black & Veatch, Inc. from 1998 to 2000. He began his career at Black & Veatch in 1973 and was a General Partner and Managing Partner prior to becoming Vice Chairman when the firm was incorporated. Mr. Robinson is a Director of Coeur Mining Corporation and a member of its executive and audit committees and chairman of its compensation committee. He holds Bachelor and Master of Science degrees in Engineering from the University of Kansas and is a graduate of the Owner-President-Management Program at the Harvard Business School. The specific experience,

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qualifications, attributes or skills that led to the conclusion Mr. Robinson should serve as a Director include his significant experience in the engineering and consulting industries, his extensive service in senior corporate leadership positions in both industries and his familiarity with financial matters.

Wilson M. Torrence became a Director in January 2007. Mr. Torrence is Chairman of the Audit Committee and a member of the Compensation Committee. From April 2015 through June 2018, Mr. Torrence was also a member of the

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board of directors of Alliance GP, LLC, the former general partner of AHGP, and chairman of its audit committee. Mr. Torrence retired from Fluor Corporation in 2006 as a Senior Vice President of Project Development and Investments and after retirement has performed investment and business consulting services for various clients. Mr. Torrence was employed at Fluor from 1989 to 2006 where, among other roles, he was responsible for the global Project Investment and Structured Finance Group and served as Chairman of Fluor's Investment Committee. In that position, Mr. Torrence had executive responsibility for Fluor's global activities in developing and arranging third-party financing for some of Fluor's clients' construction projects. Prior to joining Fluor in 1989, Mr. Torrence was President and CEO of Combustion Engineering Corporation's Waste to Energy Division and, during that time, also served as Chairman of the Institute of Resource Recovery, a Washington-based industry advocacy organization. Mr. Torrence began his career at Mobil Oil Corporation, where he held several executive positions, including Assistant Treasurer of Mobil's International Marketing and Refining Division and Chief Financial and Planning Officer of Mobil Land Development Company. Mr. Torrence holds a Bachelor and a Master of Business Administration degree from Virginia Tech University. The specific experience, qualifications, attributes or skills that led to the conclusion Mr. Torrence should serve as a Director include his extensive experience in the construction and energy businesses, his senior corporate finance-related and other leadership positions and his participation in numerous financing transactions.

Board of Directors

Mr. Craft, who has been President and CEO and a member of the Board of Directors since ARLP's inception, assumed the Chairman role effective January 1, 2019. We believe this leadership structure of the Board of Directors is appropriate for the Partnership given Mr. Craft's extensive knowledge of our industries, significant ownership position, and proven leadership of the Partnership.

The Board of Directors generally administers its risk oversight function through the board as a whole. The Chairman, President and CEO, who reports to the Board of Directors, and the other executives named above, who report to the Chairman, President and CEO or, in the case of Mrs. Cordle, the CFO, have day-to-day risk management responsibilities. At the Board of Directors' request, each of these executives attends the meetings of the Board of Directors, where the Board of Directors routinely receives reports on our financial results, the status of our operations and our safety performance, and other aspects of the implementation of our business strategy, with ample opportunity for specific inquiries of management. In addition, management provides periodic reports of the Partnership's financial and operational performance to each member of the Board of Directors. The [audit committee of the Board of Directors \("Audit Committee"\) Committee](#) provides additional risk oversight through its quarterly meetings, where it receives a report from the Partnership's internal auditor, who reports directly to the Audit Committee, and reviews the Partnership's contingencies, significant transactions and subsequent events, among other matters, with management and our independent auditors.

The Board of Directors has selected as director nominees individuals with experience, skills and qualifications relevant to the business of the Partnership, such as experience in energy or related industries or with financial markets, expertise in mining, engineering or finance, and a history of service in senior leadership positions. The Board of Directors has not established a formal process for identifying director nominees, nor does it have a formal policy regarding the consideration of diversity in identifying director nominees, but has endeavored to assemble a [diverse talented](#) group of individuals with the qualities and attributes required to provide effective oversight of the Partnership.

Audit Committee

The Audit Committee comprises all four non-employee members of the Board of Directors (Messrs. Carter, Druten, Robinson, and Torrence). After reviewing the qualifications of the current members of the Audit Committee, and any relationships they may have with us that might affect their independence, the Board of Directors has determined that all current Audit Committee members are "independent" as that concept is defined in Section 10A of the Exchange Act, all current Audit Committee members are "independent" as that concept is defined in the applicable rules of NASDAQ Stock Market, LLC, all current Audit Committee members are financially literate, and Mr. Torrence qualifies as an "audit committee financial expert" under the applicable rules promulgated pursuant to the Exchange Act.

Report of the Audit Committee

The Audit Committee oversees our financial reporting process on behalf of the Board of Directors. Management has primary responsibility for the financial statements and the reporting process including the systems of internal controls.

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The Audit Committee has responsibility for the appointment, compensation and oversight of the work of our independent registered public accounting firm and assists the Board of Directors by conducting its own review of our:

- filings with the SEC pursuant to the Securities Act of 1933 ("Securities Act") and the Exchange Act (i.e., Forms 10-K, 10-Q, and 8-K);
- press releases and other communications by us to the public concerning earnings, financial condition and results of operations, including changes in distribution policies or practices affecting the holders of our units, if such review is not undertaken by the Board of Directors;
- systems of internal controls regarding finance and accounting that management and the Board of Directors have established; and
- auditing, accounting and financial reporting processes generally.

In fulfilling its oversight and other responsibilities, the Audit Committee met eight times during 2022, 2023. The Audit Committee's activities included, but were not limited to: (a) selecting the independent registered public accounting firm, (b) meeting periodically in executive session with the independent registered public accounting firm, (c) reviewing the Quarterly Reports on Form 10-Q for the three months ended March 31, June 30, and September 30, 2022 September 30, 2023, (d) performing a self-assessment of the committee, (e) reviewing the Audit Committee charter, and (f) reviewing the overall scope, plans and findings of our internal auditor. Based on the results of the annual self-assessment, the Audit Committee believes that it satisfied the requirements of its charter. A copy of the Audit Committee charter is publicly available on our website under "Investor Relations" at www.arlp.com and is available in print without charge to any unitholder who requests it. Such requests should be directed to Investor Relations at (918) 295-7674, 295-7673. The Audit Committee also reviewed and discussed with management and the independent registered public accounting firm this Annual Report on Form 10-K, including the audited financial statements.

Our independent registered public accounting firm, Grant Thornton, LLP ("Grant Thornton"), is responsible for expressing an opinion on the conformity of the audited financial statements with GAAP. The Audit Committee reviewed with Grant Thornton its judgment as to the quality, not just the acceptability, of our accounting principles and such other matters as are required to be discussed with the Audit Committee pursuant to the applicable requirements of the Public Company Accounting Oversight Board ("PCAOB") PCAOB and the SEC.

The Audit Committee received written disclosures and the letter from Grant Thornton required by applicable requirements of the PCAOB Rule 3526, "Communication with Audit Committees Concerning Independence," and has discussed with Grant Thornton its independence from management and the ARLP Partnership.

Based on the reviews and discussions referred to above, the Audit Committee recommended to the Board of Directors that the audited financial statements be included in the Annual Report on Form 10-K for the year ended December 31, 2022 December 31, 2023 for filing with the SEC.

Members of the Audit Committee:

Wilson M. Torrence, Chairman
Nick Carter
Robert J. Druten
John H. Robinson

Code of Ethics

We have adopted a code of ethics with which the Chairman, President and CEO and the senior financial officers (including the principal financial officer and the principal accounting officer) are expected to comply. The code of ethics is publicly available on our website under "Investor Relations" at www.arlp.com and is available in print without charge to any unitholder who requests it. Such requests should be directed to Investor Relations at (918) 295-7674. 295-7673. If any

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substantive amendments are made to the code of ethics or if there is a grant of a waiver, including any implicit waiver, from a provision of the code to the President and CEO, Chief Financial Officer, or Chief Accounting Officer, we will

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disclose the nature of such amendment or waiver on our website or in a report on Form 8-K. There were no such amendments or waivers during the year ended December 31, 2022 December 31, 2023.

Communications with the Board

Unitholders or other interested parties can contact any director or committee of the Board of Directors by writing to them c/o Senior Vice President, General Counsel and Secretary, P.O. Box 22027, Tulsa, Oklahoma 74121-2027. Comments or complaints relating to our accounting, internal accounting controls or auditing matters will also be referred to members of the Audit Committee. The Audit Committee has procedures for (a) receipt, retention and treatment of complaints received by us regarding accounting, internal accounting controls, or auditing matters and (b) the confidential, anonymous submission by our employees of concerns regarding questionable accounting or auditing matters.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act, as amended, requires directors, executive officers and persons who beneficially own more than ten percent of a registered class of our equity securities to file with the SEC initial reports of ownership and reports or changes in ownership of such equity securities. Based on a review of the copies of the forms furnished to us and written representations from certain reporting persons, we believe that during 2022 2023 none of our directors or executive officers or persons who beneficially owned more than ten percent of a registered class of our equity securities were delinquent with respect to any of the filing requirements under Section 16(a), with the following exception: a Form 3/A was filed on November 7, 2023 for Ms. Kathleen Mowry, who beneficially owns more than ten percent of our common units, to correct her reported beneficial ownership in her initial Form 3 filed on June 5, 2018.

Reimbursement of Expenses of our General Partner and its Affiliates

Our general partner does not receive any management fee or other compensation in connection with its management of us. Our general partner is reimbursed by us for all expenses incurred on our behalf. Please see "Item 13. Certain Relationships and Related Transactions, and Director Independence—Administrative Services."

ITEM 11. EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

Introduction

The compensation committee of the Board of Directors ("Compensation Committee") Committee oversees the compensation of our general partner's executive officers, including the Chairman, President and CEO (our principal executive officer) the Senior Vice President and Chief Financial Officer (our principal financial officer) and the three most highly compensated executive officers in 2022, Named Executive Officers, each of whom is named in the Summary Compensation Table (collectively, our "Named Executive Officers"), Table. Our Named Executive Officers are employees of our operating subsidiary, Alliance Coal. We do not currently, nor did we during the 2023 calendar year, maintain employment agreements with any of our Named Executive Officers.

Compensation Objectives and Philosophy

The compensation of our Named Executive Officers is designed to achieve three key objectives: (i) provide a competitive compensation opportunity to allow us to recruit and retain key management talent, (ii) align executive officers' interests with unitholder interests and (iii) motivate and reward the executive officers for creating sustainable, capital-efficient growth in available cash to maximize unitholder returns. In making decisions regarding executive compensation, the Compensation Committee reviews current compensation levels of other companies in the coal industry and other peers, considers the Chairman, President and CEO's assessment of each of the other executives, and uses its discretion to determine an appropriate total compensation package of base salary and short-term and long-term incentives. The Compensation Committee intends for each executive officer's total compensation to be competitive in the marketplace and to effectively motivate the officer. Based on its review of our overall executive compensation program, the Compensation Committee believes the program is appropriately applied to our general partner's executive officers and is necessary to attract and retain the executive officers who are essential to our continued development and success, to compensate those executive officers for their contributions and to enhance unitholder value. Moreover, the Compensation Committee believes the total compensation opportunities provided to our general partner's executive officers create alignment with

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our long-term interests and those of our unitholders. As a result, we do not maintain unit ownership requirements for our Named Executive Officers.

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Setting Executive Compensation

We have not historically maintained employment agreements with any of our Named Executive Officers. We provided an employment letter to our Senior Vice President, Mr. Tholen (the "Tholen Employment Letter"), in connection with his hiring in December 2019 setting forth the initial terms of his employment, which we determined were necessary to successfully hire Mr. Tholen and in the best interests of the Company. Mr. Tholen also serves as the President of Alliance Minerals, LLC. The Tholen Employment Letter provided, among other things, that if Mr. Tholen's employment was involuntarily terminated on or before December 31, 2022, other than for Good Cause (as defined in the Tholen Employment Letter), Mr. Tholen would have received a severance payment in an amount equal to (a) two times Mr. Tholen's then-effective annual base salary plus (b) two times the then-effective standard payout for Mr. Tholen under the short-term incentive plan ("STIP"), which amount would have been paid at the time of Mr. Tholen's termination of employment. The foregoing description of the Tholen Employment Letter does not purport to be complete and is qualified in its entirety by reference to the full and complete text of the Tholen Employment Letter, which is filed as an exhibit to this filing. The potential severance benefits provided by the Tholen Employment Letter are expired, but they were applicable during the 2022 year to which this section of the disclosure relates.

Role of the Compensation Committee

The Compensation Committee discharges the Board of Directors' responsibilities relating to our general partner's executive compensation program. The Compensation Committee oversees our compensation and benefit plans and policies, administers our incentive bonus and equity participation plans, and reviews and approves annually all compensation decisions relating to our Named Executive Officers. The Compensation Committee is empowered by the Board of Directors and by the Compensation Committee's charter to make all decisions regarding compensation for our Named Executive Officers without ratification or other action by the Board of Directors. The Compensation Committee has the authority to secure services for executive compensation matters, legal advice, or other expert services, both from within and outside the company. While the Compensation Committee is empowered to delegate all or a portion of its duties to a subcommittee, it has not done so.

The Compensation Committee comprises all of our directors who have been determined to be "independent" by the Board of Directors in accordance with applicable NASDAQ Stock Market, LLC and SEC regulations, presently Messrs. Robinson, Carter, Druten and Torrence.

Role of Executive Officers

Each year, the Chairman, President and CEO submits recommendations to the Compensation Committee for adjustments to the salary, bonuses and long-term equity incentive awards payable to our Named Executive Officers, excluding himself. The Chairman, President and CEO bases his recommendations on his assessment of each executive's performance, experience, demonstrated leadership, job knowledge and management skills. The Compensation Committee considers the recommendations of the Chairman, President and CEO as one factor in making compensation decisions regarding our Named Executive Officers. Historically, and in 2022, 2023, the Compensation Committee and the Chairman, President and CEO have been substantially aligned on decisions regarding the compensation of the Named Executive Officers. As executive officers are promoted or hired during the year, the Chairman, President and CEO makes compensation recommendations to the Compensation Committee and works closely with the Compensation Committee to ensure that all compensation arrangements for executive officers are consistent with our compensation philosophy and are approved by the Compensation Committee. At the direction of the Compensation Committee, the Chairman, President and CEO and the Senior Vice President, General Counsel and Secretary attend certain meetings of the Compensation Committee.

Use of Peer Group Comparisons

The Compensation Committee believes that it is important to review and compare our performance with that of peer companies in the coal industry and reviews the composition of the peer group annually. The peer group for 2023 (which was the same peer group applicable to the 2022 calendar year) included Alpha Metallurgical Resources, Inc., Arch Resources, Inc., Consol Energy, Inc., Natural Resource Partners L.P., Peabody Energy Corporation, and Warrior Met Coal, Inc. In assessing the competitiveness of our executive compensation program for 2022, 2023, the Compensation Committee, with the assistance of the Chairman, President and CEO, collected and analyzed peer group proxy information and developed a comparative analysis of base salaries, short-term incentives, total cash compensation, long-term incentives and total compensation. The Compensation Committee uses the peer group data as a

point of reference for comparative purposes, but it is not the determinative factor for the compensation of our Named Executive Officers. The Compensation Committee exercises discretion in determining the nature and extent of the use of comparative pay data.

Consideration of Equity Ownership and CEO Compensation

Mr. Craft, the Chairman, President and CEO, is evaluated and treated differently with respect to compensation than our other Named Executive Officers. Mr. Craft and related entities own significant equity positions in ARLP and Mr. Craft indirectly owns our general partner. Because of these ownership positions, the interests of Mr. Craft are directly aligned with those of our unitholders. Mr. Craft has not received an increase in base salary since 2002, has not received a bonus under our STIP since 2005 and did not receive any grants of **Long-Term Incentive Plan ("LTIP")** LTIP awards from 2005 through 2015. On **January 22, 2016, January 22,**

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2016, the Compensation Committee approved an LTIP award for Mr. Craft that vested on January 1, 2019. Mr. Craft has not received any subsequent LTIP awards. Beginning in February 2016, at Mr. Craft's request, his annual base salary was reduced to \$1.

Compensation Components

Overview

The principal components of compensation for our Named Executive Officers (other than Mr. Craft) include:

- base salary;
- annual cash incentive bonus awards under the STIP; and
- awards of restricted units under the **LTIP, LTIP, including DERs.**

The relative amount of each component is not based on any formula, but rather is based on the recommendation of the Chairman, President and CEO, subject to the discretion of the Compensation Committee to make any modifications it deems appropriate.

Each of our All executive officers, including the Named Executive Officers, **(including Mr. Craft) also receives supplemental retirement benefits through the Supplemental Executive Retirement Plan ("SERP"). In addition, all executive officers are entitled to customary benefits available to our employees generally, including group medical, dental, and life insurance and participation in our profit sharing and savings plan ("PSSP"). PSSP.** Our PSSP is a defined contribution plan and includes an employer matching contribution of 75% on the first 3% of eligible compensation contributed by the employee, an employer non-matching contribution of 0.75% of eligible compensation, and an employer supplemental contribution of 5% of eligible compensation. The PSSP provides an additional means of attracting and retaining qualified employees by providing tax-advantaged opportunities for employees to save for retirement. **Each of our Named Executive Officers (including Mr. Craft) also received supplemental retirement benefits through the SERP in 2023, which are described in more detail below.**

Base Salary

When reviewing base salaries, the Compensation Committee's policy is to consider the individual's experience, tenure and performance, the individual's level of responsibility, the position's complexity and its importance to us in relation to other executive positions, our financial performance, and competitive pay practices. The Compensation Committee also considers comparative compensation data of companies in

our peer group and the recommendation of the Chairman, President and CEO of our general partner. Base salaries are reviewed annually to ensure continuing consistency with market levels, and adjustments to base salaries are made as needed to reflect movement in the competitive market as well as individual performance. **None of our Named Executive Officers received an increase in salary during the 2023 year.**

Annual Cash Incentive Bonus Awards

The STIP is designed to assist us in attracting, retaining and motivating qualified personnel by rewarding management, including our Named Executive Officers, and selected other salaried employees with cash awards for our achievement of an annual financial performance target. The annual performance target is recommended by the Chairman, President and CEO and approved by the Compensation Committee, typically in January of each year. The performance measure is subject to equitable adjustment in the sole discretion of the Compensation Committee to reflect the occurrence of any significant events during the year.

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The performance target historically has been EBITDA-based, with items added or removed from the EBITDA calculation to ensure that the performance target reflects the operating results of our core businesses. (EBITDA is defined as net income of ARLP before net interest expense, income taxes, depreciation, depletion and amortization and net income attributable to noncontrolling interest.) The aggregate cash available for awards under the STIP each year is dependent on our actual financial results for the year compared to the annual performance target, and it increases in relation to our EBITDA, as adjusted, exceeding the minimum threshold. Our STIP Guidelines provide that achieving the minimum threshold is the minimum acceptable result for a performance pay-out to occur under the STIP, although the Compensation Committee may determine satisfactory results and adjust the size of the pay-out pool in its sole discretion. In **2022, 2023**, the Compensation Committee approved a minimum financial performance target of **\$630.0 million** **\$756.2 million** in EBITDA from current

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operations, normalized by excluding any charges for unit-based and directors' compensation. For **2022, 2023**, we exceeded the minimum performance target.

Individual awards to our Named Executive Officers each year are determined by **and in the discretion of** the Compensation Committee. However, the Compensation Committee does not establish individual target payout amounts for the Named Executive Officers' STIP awards. As it does when reviewing base salaries, in determining individual awards under the STIP, the Compensation Committee considers its assessment of the individual's performance, our financial performance, comparative compensation data of companies in our peer group and the recommendation of the Chairman, President and CEO, although EBITDA-based performance targets described above are given significant weight. The compensation expense associated with STIP awards is recognized in the year earned, with the cash awards generally payable in the first quarter of the following calendar year. Termination of employment of an executive officer for any reason prior to payment of a cash award will result in forfeiture of any right to the award, unless and to the extent waived by the Compensation Committee in its discretion.

The performance measure for the STIP in **2023 2024** will be **based on adjusted** EBITDA for current operations, excluding charges for unit-based and directors' compensation. As discussed above, the Compensation Committee may, in its discretion, make equitable adjustments to the performance criteria under the STIP and adjust the amount of the aggregate pay-out. The Compensation Committee believes the STIP

performance criteria for 2023 2024 will be reasonably difficult to achieve and therefore support our key compensation objectives discussed above.

The Compensation Committee maintains discretion to grant cash bonus awards outside of the STIP to address special situations.

Equity Awards under the LTIP

Equity compensation pursuant to the LTIP is a key component of our executive compensation program. Our LTIP is sponsored by Alliance Coal. Under the LTIP, grants may be made of either (a) restricted units, (b) options to purchase common units (although to date, no grants of options have been made) or c) (c) cash awards. The Compensation Committee has the authority to determine the participants to whom restricted units are granted, the number of restricted units to be granted to each such participant, and the conditions under which the restricted units may become vested, including the duration of any vesting period. Annual grant levels for designated participants (including our Named Executive Officers) are recommended by our general partner's Chairman, President and CEO, subject to review and approval by the Compensation Committee. Grant levels are intended to support the objectives of the comprehensive compensation package described above.

The LTIP grants provide our Named Executive Officers with the opportunity to achieve a meaningful ownership stake in the Partnership, thereby assuring that their interests are aligned with our success. Even though Mr. Craft was has not been granted an award under the LTIP from since 2005, through 2021 with the exception of one grant in 2016, the Compensation Committee believes Mr. Craft's interests are directly aligned with the interests of our unitholders as a result of his ownership positions. There is no formula for determining the size of awards to any individual recipient and, as it does when reviewing base salaries and individual STIP payments, the Compensation Committee considers its assessment of the individual's performance, our financial performance, compensation levels at peer companies in the coal industry and the recommendation of the Chairman, President and CEO. Amounts realized from prior grants, including amounts realized due to changes in the value of our common units, are not considered in setting grant levels or other compensation for our Named Executive Officers.

Restricted Units. Restricted units granted under the LTIP are "phantom" or notional units that upon vesting entitle the participant to receive an ARLP common unit. Restricted units granted under the LTIP vest at the end of a stated period from the grant date, provided we achieve an aggregate performance target for that period. However, if a grantee's

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employment is terminated for any reason prior to the vesting of any restricted units, those restricted units will be automatically forfeited, unless the Compensation Committee, in its sole discretion, determines otherwise. The number of units actually distributed upon satisfaction of the applicable vesting requirements is reduced to cover the income tax withholding requirement for each individual participant based on the fair market value of the common units as of the date of distribution. At the Compensation Committee's discretion, grants of restricted units under the LTIP may include the contingent right to receive quarterly distributions in an amount equal to the cash distributions we make to unitholders during the vesting period ("DERs"). period. DERs are payable, in the discretion of the Compensation Committee, either in cash or in the form of additional Restricted Units credited to a book-keeping account subject to the same vesting restrictions as the tandem award.

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The performance target applicable to restricted unit awards under the LTIP is based on a normalized EBITDA measure with that measure typically being similar to the STIP measure for the year of the grant. The target, however, and requires achieving an aggregate performance

level for the vesting period. We typically issue grants under the LTIP at the beginning of each year, with the exceptions of new employees who begin employment with us at some other time and job promotions that may occur at some other time. The compensation expense associated with LTIP grants is recognized over the vesting period in accordance with FASB Accounting Standards Codification ("ASC") ASC 718, *Compensation — Stock Compensation*.

Our general partner's policy is to grant restricted units pursuant to the LTIP to serve as a means of incentive compensation for performance. Therefore, no consideration will be payable by the LTIP participants upon receipt of the common units. Common units to be delivered upon the vesting of restricted units may be common units we already own, common units we acquire in the open market or from any other person, newly issued common units, or any combination of the foregoing. If we issue new common units upon payment of the restricted units instead of purchasing them, the total number of common units outstanding will increase.

The LTIP provides the Compensation Committee with the discretion to determine the conditions for vesting (as well as all other terms and conditions) associated with any award under the plan, and to amend any of those conditions so long as an amendment does not materially reduce the benefit to the participant. The Compensation Committee believes the performance-related vesting conditions of all outstanding awards under the LTIP will be reasonably difficult to satisfy and therefore support our key compensation objectives discussed above.

Grants for 2022 under the LTIP, made January 26, 2022, will cliff vest on January 1, 2025, provided we achieve a target level of aggregate EBITDA for current operations, excluding any charges for unit-based and directors' compensation, for the period January 1, 2022 through December 31, 2024. Regardless of achieving the EBITDA target, the 2022 grants have a minimum value guarantee of either \$6.41 or \$9.62 per unit. Grants for 2023 under the LTIP, made January 27, 2023, will cliff vest on January 1, 2026, provided we achieve a target level of aggregate EBITDA for current operations, excluding any charges for unit-based and directors' compensation, for the period January 1, 2023 through December 31, 2025. Regardless of achieving the EBITDA target, the 2023 grants have a minimum value guarantee of either \$10.27 or \$15.41 per unit. Grants for 2024 under the LTIP, made January 24, 2024, will cliff vest on January 1, 2027, provided we achieve a target level of aggregate EBITDA for current operations, excluding any charges for unit-based and directors' compensation, for the period January 1, 2024 through December 31, 2026. Regardless of achieving the EBITDA target, the 2024 grants have a minimum value guarantee of either \$10.63 or \$15.95 per unit. The LTIP provides the Compensation Committee with the discretion to determine the conditions for vesting (as well as all other terms and conditions) associated with any award under the plan, and to amend any of those conditions so long as an amendment does not materially reduce the benefit to the participant. The Compensation Committee believes the performance-related vesting conditions of all outstanding awards under the LTIP will be reasonably difficult to satisfy and therefore support our key compensation objectives discussed above.

Unit Options. We have not made any grants of unit options. The Compensation Committee, in the future, may decide to make unit option grants to employees and directors on terms determined by the Compensation Committee.

Grant Timing. The Compensation Committee does not time, nor has the Compensation Committee in the past timed, the grant of LTIP awards in coordination with the release of material non-public information. Instead, LTIP awards are granted only at the time or times dictated by our normal compensation process as developed by the Compensation Committee.

Effect of a Change in Control. Upon a "change in control" as defined in the LTIP, all awards outstanding under the LTIP will automatically vest and become payable or exercisable, as the case may be, in full. Please see "Item 11. Executive Compensation—Potential Payments Upon a Termination or Change of Control."

Amendments and Termination. The Board of Directors or the Compensation Committee may, in its discretion, terminate the LTIP at any time with respect to any common units for which a grant has not previously been made. Except as required by the rules of the exchange on which the common units may be listed at that time, the Board of Directors or

the Compensation Committee may alter or amend the LTIP in any manner from time to time; provided, however, that no change in any outstanding grant may be made that would materially impair the rights of the participant without the consent of the affected participant. In addition, the Board of Directors or the Compensation Committee may, in its discretion, establish such additional compensation and incentive arrangements as it deems appropriate to motivate and reward our employees.

Supplemental Executive Retirement Plan

We maintain the SERP to help attract and motivate key employees, including our Named Executive Officers. The SERP is sponsored by Alliance Coal. Participation in the SERP aligns the interest of each Named Executive Officer participant with the interests of our unitholders because all allocations made to participants under the SERP are made in the form of notional common units of ARLP, defined in the SERP as "phantom units." The Compensation Committee approves the SERP

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participants and their percentage allocations, and can could amend or terminate the SERP at any time. All of our Named Executive Officers currently participate in the SERP.

On December 14, 2023 the Compensation Committee approved termination of the SERP, and authorized distribution of accounts to participants on December 15, 2024 or as soon thereafter as practical. Account settlements must be delayed at least one year according to termination rules governing the SERP. The accounts will continue to accrue benefits in accordance with plan terms until distributed.

Under the terms of the SERP, a participant is was entitled to receive on December 31 of each year an allocation of phantom units having a fair market value equal to his or her percentage allocation multiplied by the sum of the participant's base salary and cash bonus received that year, then reduced by any supplemental contribution that was made to our defined contribution PSSP for the participant that year. A participant's cumulative notional phantom unit account balance earns the equivalent of common unit distributions, which are added to the notional account balance in the form of additional phantom units. All amounts granted under the SERP vest immediately and are would be paid out upon the participant's termination from employment in ARLP common units equal to the number of phantom units then credited to the participant's account, less the number of units required to satisfy our tax withholding obligations. A participant in the SERP is not entitled to an allocation for the year in which his termination from employment occurs, except as described below.

A participant in the SERP including any of our Named Executive Officers, is entitled to receive an allocation under the SERP for the year in which his employment is terminated only if such termination results from one of the following events:

- (1) the participant's employment is terminated other than for "cause";
- (2) the participant terminates employment for "good reason";
- (3) a change of control of us or our general partner occurs and, as a result, the participant's employment is terminated (whether voluntary or involuntary);
- (4) death of the participant;
- (5) the participant attains (or has attained) retirement age of 65 years; or
- (6) the participant incurs a total and permanent disability, which shall be deemed to occur if the participant is eligible to receive benefits under the terms of the long-term disability program we maintain.

This allocation for the year in which a participant's termination occurs occurred shall equal the participant's eligible compensation for such year (including any severance amount, if applicable) multiplied by his percentage allocation under the SERP, reduced by any supplemental contribution that was made to our defined contribution PSSP for the participant that year.

Other Compensation-Related Matters

Securities Trading Policy; Prohibitions on Hedging and Trading in Derivatives

To ensure alignment of the interests of our unitholders with our directors and all officers, including Named Executive Officers, the general partner's Securities Trading Policy prohibits any employee, officer, or director of the Partnership or any of its subsidiaries from engaging in trading involving (1) options or other derivative securities relating to ARLP units; (2) debt securities of ARLP or its affiliates; (3) hedging transactions involving ARLP securities; or (4) purchases of ARLP units on margin.

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Tax Deductibility of Compensation

The deduction limitations imposed under Section 162(m) of the Internal Revenue Code do not apply to compensation paid to our Named Executive Officers because we are a limited partnership and not a "corporation" within the meaning of Section 162(m).

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Perquisites and Personal Benefits

The Partnership provides a limited amount of perquisites and personal benefits to the Named Executive Officers in keeping with the Compensation Committee's objectives to provide competitive compensation to motivate and reward executive officers for creating sustainable, capital-efficient growth in available cash. These perquisites and personal benefits typically include amounts for items such as tax preparation fees and annual physical medical exams, and are reviewed annually by the Compensation Committee.

Clawback Policy

We maintain the Alliance Resource Partners, L.P. Incentive-Based Compensation Recoupment Policy (the "Clawback Policy"), which is administered by the Compensation Committee. The Clawback Policy authorizes the Compensation Committee to recoup incentive compensation in the event of a restatement of financial statements. A copy of the Clawback Policy is filed as Exhibit 97.1 to this Annual Report on Form 10-K.

Compensation Committee Report

The Compensation Committee has submitted the following report for inclusion in this Annual Report on Form 10-K:

Our Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis contained in this Annual Report on Form 10-K with management. Based on our Compensation Committee's review of and the discussions with management with respect to the

Compensation Discussion and Analysis, our Compensation Committee recommended to the Board of Directors that the Compensation Discussion and Analysis be included in this Annual Report on Form 10-K for the fiscal year ended **December 31, 2022** **December 31, 2023**.

The foregoing report is provided by the following directors, who constitute all the members of the Compensation Committee:

Members of the Compensation Committee:

John H. Robinson, Chairman
Nick Carter
Robert J. Druten
Wilson M. Torrence

Notwithstanding anything to the contrary set forth in any of our previous filings under the Securities Act or the Exchange Act, that incorporate future filings, including this Annual Report on Form 10-K, in whole or in part, the foregoing Compensation Committee Report shall not be deemed to be filed with the SEC or incorporated by reference into any filing under the Securities Act or the Exchange Act, except to the extent that we specifically incorporate it by reference.

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Summary Compensation Table

Name and Principal Position ⁽¹⁾	Non-Equity							Non-Equity						
	Year	Salary (\$)	Bonus (\$)(1)	Awards (\$)(2)(3)	Compensation (\$)(4)	Compensation (\$)(5)	Total	Year	Salary (\$)(2)	Bonus (\$)(3)	Awards (\$)(4)	Compensation (\$)(5)	Compensation (\$)(6)	Total
Joseph W. Craft III President, Chief Executive Officer and Chairman	2022	1	—	—	—	—	1	2023	1	—	—	—	—	1
	2021	1	—	—	—	—	1	2022	1	—	—	—	—	1
	2020	1	—	—	—	—	1	2021	1	—	—	—	—	1
Cary P. Marshall, Senior Vice President and Chief Financial Officer	2023	293,269	26,340	666,555	220,000	63,368	1,269,532							

Brian L. Cantrell,	2022	304,000	117,723	—	340,000	54,089	815,812	2023	105,231	789,241	—	—	6,548	901,020
Senior Vice President and Former Senior Vice President	2021	309,846	—	567,182	250,000	30,443	1,157,471							
Chief Financial Officer	2020	309,846	289,513	756,965	—	181,843	1,538,167	2021	309,846	—	567,182	250,000	30,443	1,157,471
R. Eberley Davis	2022	362,693	152,898	629,541	365,000	86,600	1,596,732	2023	365,000	50,966	634,461	285,000	83,247	1,418,674
Senior Vice President, General Counsel and Secretary	2021	351,635	—	722,394	365,000	41,768	1,480,797	2022	362,693	152,898	629,541	365,000	86,600	1,596,732
	2020	351,635	377,249	964,133	—	248,531	1,941,548	2021	351,635	—	722,394	365,000	41,768	1,480,797
Kirk D. Tholen	2022	500,000	1,000,000	1,040,560	531,920	204,252	3,276,732	2023	500,000	1,000,000	734,083	341,000	223,014	2,798,097
Senior Vice President; also President Alliance Minerals, LLC	2021	509,615	500,000	1,194,061	540,000	152,688	2,896,364	2022	500,000	1,000,000	1,040,560	531,920	204,252	3,276,732
	2020	500,000	500,000	862,779	500,000	421,764	2,784,543	2021	509,615	500,000	1,194,061	540,000	152,688	2,896,364
Thomas M. Wynne	2022	427,000	175,179	728,391	460,000	87,433	1,878,003	2023	430,000	58,393	734,083	345,000	101,155	1,668,631
Senior Vice President and Chief Operating Officer	2021	411,769	—	835,818	400,000	43,588	1,691,175	2022	427,000	175,179	728,391	460,000	87,433	1,878,003
	2020	411,769	391,899	1,114,122	—	267,645	2,185,435	2021	411,769	—	835,818	400,000	43,588	1,691,175

- (1) Mr. Cantrell retired from his position as Senior Vice President and CFO on March 31, 2023. Mr. Marshall was appointed Senior Vice President and CFO effective April 1, 2023.
- (2) Amounts represent the salary earned by each Named Executive Officer for the respective year. The amounts for Mr. Cantrell include \$23,385 paid in 2023 for unused vacation upon his retirement on March 31, 2023.
- (3) The amount for Mr. Marshall represents the second payment of the 2020 service-based vesting LTIP awards which was paid in cash in February 2023. The amounts for Messrs. Cantrell, Davis and Wynne represent the first payment and second payments of the 2020 service-based vesting LTIP awards which were paid in cash in February 2022 and February 2023, respectively, as well as a cash bonuses bonus paid in December 2020, 2023 to Mr. Cantrell. The amounts for Mr. Tholen represent the first payment payments of his 2019 and 2020 service-based vesting LTIP awards which was were paid in cash in February 2022 and 2023, respectively, and the last two installments installment of his signing bonus paid in 2021 and 2020.

- (2) Restricted units granted in February 2020 were determined to be improbable of vesting and amended during the fourth quarter of 2020 for all LTIP participants other than Mr. Tholen, including Messrs. Cantrell, Davis and Wynne. The amendments modified the performance vesting requirement and granted additional restricted units. The modified performance vesting requirement makes it probable the awards will vest. As a result, the amounts for 2020 for Messrs. Cantrell, Davis, and Wynne include \$409,822, \$521,981 and \$603,944, respectively, representing the grant date fair value of the restricted units when originally granted in February 2020, and \$213,857, \$272,385 and \$315,156, respectively, representing the fair value of the same restricted units at the date of modification in December 2020. The fair value of the modified awards was calculated by taking the fair value of the modified awards at the date of modification minus the fair value of the original awards immediately prior to modification. Since the original awards granted in February 2020 were determined to be improbable of vesting, the fair value of the original awards immediately prior to modification was zero. The 2020 amounts also include the grant date fair value of the additional restricted units granted in December 2020. The grants include a minimum value guarantee. For Mr. Tholen, the 2020 amount represents the grant date fair value of the restricted units when originally granted in February 2020. The restricted units granted to Mr. Tholen in February 2020 were canceled in December 2020 and replaced with a cash service award that was paid one-half in February 2022 and one-half in February 2023. Mr. Craft did not receive any grants under the LTIP during 2020, 2021.
- (3) (Other than the restricted units which were modified in December 2020 and discussed in footnote (2) above, the The Unit Awards represent the aggregate grant date fair value of restricted units granted pursuant to FASB ASC 718, using the same assumptions as used for financial reporting purposes and which are more fully described in "Item 8. Financial Statements and Supplementary Data—Note 18 16 – Common Unit-Based Compensation Plans," to each Named Executive Officer under the LTIP in the respective year. The restricted units that were granted in 2018 were settled in cash at \$4.99 per unit in December 2020. The cash settlement is included in "All Other Compensation" in 2020. Please see "Item 11. Compensation Discussion and Analysis—Compensation Program Components—Equity Awards under the LTIP" for a description of the terms of the awards.
- (4) (5) amounts represent the STIP bonus earned for the respective year. STIP payments typically are made in the first quarter of the year following the year in which they are earned, however the STIP payment to Mr. Tholen in 2020 was made in December 2020. earned. Please see "Item 11. Compensation Discussion and Analysis—Compensation Program Components—Annual Cash Incentive Bonus Awards."

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- (5) (6) For all Named Executive Officers, the amounts represent the sum of the (a) SERP phantom unit contributions valued at the market closing price of our common units on the date the phantom unit was granted, (b) profit sharing savings plan employer contribution and (c) perquisites in excess of \$10,000. In addition, the amounts for 2020 include cash settlement in December 2020 of restricted units that were granted under the LTIP in 2018. A reconciliation of the 2022 2023 amounts is as follows:

	Profit Sharing Plan		
	Employer		
	SERP (\$)	Contribution (\$)	Total (\$)
Joseph W. Craft III	—	—	—
Brian L. Cantrell	29,769	24,320	54,089
R. Eberley Davis	62,200	24,400	86,600
Kirk D. Tholen	179,852	24,400	204,252
Thomas M. Wynne	63,033	24,400	87,433

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	Profit Sharing Plan			
	Employer			Total (\$)
	SERP (\$)	Contribution (\$)	Perquisites (a)	
Joseph W. Craft III	—	—	\$ —	—
Cary P. Marshall	24,632	23,461	15,275	63,368
Brian L. Cantrell	—	6,548	—	6,548
R. Eberley Davis	56,847	26,400	—	83,247
Kirk D. Tholen	196,614	26,400	—	223,014
Thomas M. Wynne	62,905	26,400	11,850	101,155

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Grants of Plan-Based Awards Table

Name	All Other															
	Estimated Future Payouts Under			Estimated Future Payouts Under			Unit	Grant Date			Estimated Future Payouts Under			Estimated Future Payou		
	Non-Equity Incentive Plan Awards			Equity Incentive Plan Awards			Awards:	Fair Value			Non-Equity Incentive Plan Awards			Equity Incentive Plan A		
	Threshold	Target	Maximum	Threshold	Target	Maximum	Number of	of Unit			Threshold	Target	Maximum	Threshold	Target	M
	\$(3)	\$(4)	\$(3)	(#)(5)	(#)(6)	(#)(5)	Units (#)(7)	Awards \$(8)		Grant Date	Approved Date	\$(3)	\$(4)	\$(3)	(#)(5)	(#)(6)
Joseph W. Craft III	February 14, 2022	(1), (2)						5,452	73,875	February 14, 2023	(1), (2)					
	May 13, 2022	(1), (2)						5,725	106,142	May 15, 2023	(1), (2)					
	August 12, 2022	(1), (2)						5,465	124,438	August 14, 2023	(1), (2)					
	November 14, 2022	(1), (2)						6,673	145,538	November 14, 2023	(1), (2)					
								23,315	449,993							

Brian L.										
Cantrell	February 14, 2022	(1), (2)		794	10,759					
Cary P.										
Marshall							February 15, 2023	February 15, 2023		30,945
	May 13, 2022	(1), (2)		834	15,462		February 14, 2023	(1), (2)		—
	August 12, 2022	(1), (2)		796	18,125		May 15, 2023	(1), (2)		—
	November 14, 2022	(1), (2)		972	21,199		August 14, 2023	(1), (2)		—
	December 31, 2022	(2)		1,465	29,769		November 14, 2023	(1), (2)		—
	January 26, 2022	January 23, 2023	340,000	—	—		December 31, 2023	(2)		—
							January 27, 2023	February 7, 2024	220,000	—
									220,000	30,945
Brian L.										
Cantrell							February 14, 2023	(1), (2)		
									340,000	4,861
										95,314
R.										
Eberley										
Davis	February 10, 2022	February 10, 2022		47,192	—	629,541	February 15, 2023	February 15, 2023		29,455
	February 14, 2022	(1), (2)		—	1,205	16,328	February 14, 2023	(1), (2)		—
	May 13, 2022	(1), (2)		—	1,266	23,472	May 15, 2023	(1), (2)		—
	August 12, 2022	(1), (2)		—	1,208	27,506	August 14, 2023	(1), (2)		—
	November 14, 2022	(1), (2)		—	1,475	32,170	November 14, 2023	(1), (2)		—
	December 31, 2022	(2)		—	3,061	62,200	December 31, 2023	(2)		—
	January 26, 2022	January 23, 2023	365,000	—	—	—	January 27, 2023	February 7, 2024	285,000	—
									285,000	29,455
Kirk D.										
Tholen	February 10, 2022	February 10, 2022		78,003	—	1,040,560	February 15, 2023	February 15, 2023		34,080
	February 14, 2022	(1), (2)		—	833	11,287	February 14, 2023	(1), (2)		—
	May 13, 2022	(1), (2)		—	875	16,223	May 15, 2023	(1), (2)		—
	August 12, 2022	(1), (2)		—	835	19,013	August 14, 2023	(1), (2)		—
	November 14, 2022	(1), (2)		—	1,019	22,224	November 14, 2023	(1), (2)		—
	December 31, 2022	(2)		—	8,851	179,852	December 31, 2023	(2)		—
	January 26, 2022	January 23, 2023	531,920	—	—	—	January 27, 2023	February 7, 2024	341,000	—
									341,000	34,080
Thomas M.										
Wynne	February 10, 2022	February 10, 2022		54,602	—	728,391	February 15, 2023	February 15, 2023		34,080
	February 14, 2022	(1), (2)		—	1,203	16,301	February 14, 2023	(1), (2)		—
	May 13, 2022	(1), (2)		—	1,263	23,416	May 15, 2023	(1), (2)		—
	August 12, 2022	(1), (2)		—	1,206	27,461	August 14, 2023	(1), (2)		—
	November 14, 2022	(1), (2)		—	1,472	32,104	November 14, 2023	(1), (2)		—
	December 31, 2022	(2)		—	3,102	63,033	December 31, 2023	(2)		—
	January 26, 2022	January 23, 2023	460,000	—	—	—	January 27, 2023	February 7, 2024	345,000	—
									345,000	34,080

- (1) In accordance with the provisions of the SERP, a participant's cumulative notional phantom unit account balance earns the equivalent of common unit distributions when we pay a distribution to our common unitholders, which is added to the account balance in the form of phantom units.
- (2) These contributions are made in accordance with the SERP plan document that has been approved by the Compensation Committee. Therefore, these contributions are not separately approved by the Compensation Committee.
- (3) Awards under the STIP are subject to our achieving an annual financial performance target each year. However, determination of individual awards under the STIP is based on an assessment of the Named Executive Officer's performance, comparative compensation data of companies in our peer group and recommendation of the Chairman, President and CEO. The STIP does not specify any threshold or maximum payout amounts. Please see "Item 11. Compensation Discussion and Analysis—Compensation Components—*Annual Cash Incentive Bonus Awards*" for additional information regarding the STIP awards.
- (4) These amounts represent awards pursuant to our STIP. On January 26, 2022 January 27, 2023, the Compensation Committee set the EBITDA target amount for use in determining the total plan payout for 2022, 2023. The discretionary payout allocations to all participating employees is determined after the year is completed. Please see "Item 11. Compensation Discussion and Analysis—Compensation Components—*Annual Cash Incentive Bonus Awards*" for additional information regarding the STIP awards.

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- (5) Grants of restricted units under our LTIP are generally not subject to minimum thresholds, targets or maximum payout conditions. However, the vesting of these grants is subject to the satisfaction of certain performance criteria. The

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grants include a minimum value guarantee. Please see "Item 11. Compensation Discussion and Analysis—Compensation Components—*Equity Awards under the LTIP.*"

- (6) These awards are grants of restricted units pursuant to our LTIP. The grants include a minimum value guarantee. Mr. Cantrell did not receive an LTIP award in 2022 2023 as his announced retirement on March 31, 2023 is in March 2023 was prior to the vesting of these grants. Please see "Item 11. Compensation Discussion and Analysis—Compensation Components—*Equity Awards under the LTIP.*"
- (7) These awards are phantom units added to each Named Executive Officer's SERP notional account balance. Please see "Item 11. Compensation Discussion and Analysis—Compensation Components—*Supplemental Executive Retirement Plan.*"
- (8) We calculated the fair value of LTIP awards granted on February 10, 2022 February 15, 2023 to our Named Executive Officers using a value of \$13.34 \$21.54 per unit, the closing unit price on the grant date. We calculated the fair value of SERP phantom unit awards using the market closing price on the date the phantom unit award was granted. Phantom units granted under the SERP vest on the date granted.

Narrative Disclosure Relating to the Summary Compensation Table and Grants of Plan-Based Awards Table

Annual Cash Incentive Bonus Awards

Under the STIP, our Named Executive Officers are eligible for cash awards for our achieving an annual financial performance target. The annual performance target is recommended by the Chairman, President and CEO of our general partner and approved by the Compensation Committee, typically in January of each year. The performance target historically has been EBITDA-based, with items added or removed from the EBITDA calculation to ensure that the performance target reflects the pure operating results of our core business. (EBITDA is calculated as net income attributable to ARLP before net interest expense, income taxes and depreciation, depletion and amortization.) The aggregate cash available for awards under the STIP each year is dependent on our actual financial results for the year compared to the annual performance target. The cash available generally increases in relationship to our EBITDA, as adjusted, exceeding the minimum financial performance target and is subject to adjustment by the Compensation Committee in its discretion. The Compensation Committee maintains discretion to grant cash bonus awards outside of the STIP to address special situations. Please see "Item 11. Compensation Discussion and Analysis—Compensation Components—Annual Cash Incentive Bonus Awards."

Long-Term Incentive Plan

Under the LTIP, grants may be made of either (a) restricted units, (b) options to purchase common units, although to date, no grants of options have been made, and (c) cash awards. Annual grant levels for designated participants (including our Named Executive Officers) are recommended by our general partner's Chairman, President and CEO, subject to the review and approval of the Compensation Committee. Restricted units granted under the LTIP are "phantom" or notional units that upon vesting entitle the participant to receive an ARLP unit. Restricted units granted under the LTIP vest at the end of a stated period from the grant date (which is currently approximately three years for all outstanding restricted units), provided we achieve an aggregate performance target for that period. The performance target is based on a normalized EBITDA measure, with that measure typically being similar to the STIP measure for the year of the grant. The target, however, requires achieving an aggregate performance level for the three-year period. The grants include a minimum value guarantee. Please see "Item 11. Compensation Discussion and Analysis—Compensation Components—Equity Awards under the LTIP."

During the fourth quarter of 2020, it was determined the vesting performance requirement with respect to the **restricted units granted under the LTIP on January 22, 2020 (the "2020 Grants")** **2020 Grants** was not probable of being satisfied, and previously recognized expense for the 2020 Grants was reversed. In December 2020, the 2020 Grant to Mr. Tholen was canceled and the Compensation Committee approved amending the terms of the 2020 Grants to participants other than Mr. Tholen. The amendments to the 2020 Grants revised the vesting performance requirement and increased the number of restricted units granted under the amended 2020 Grants. The amended 2020 Grants vested on January 1, 2023.

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In addition, in 2020 the Compensation Committee approved new 2020 service-based vesting LTIP awards. These awards are denominated in cash were paid 75% in February 2022 and 25% in February 2023 for all participants other than

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Mr. Tholen. Mr. Tholen was granted a service-based vesting award denominated in cash and was paid one-half in February 2022 and one-half in February 2023.

As with the bonus awards above, these These 2020 LTIP actions were taken by the Compensation Committee in recognition of the difficulty of managing our business through the unprecedented impacts of the COVID-19 pandemic and based on its determination that such actions were prudent and necessary to help retain and motivate our management team. They are described herein to provide details regarding the LTIP awards that are included below within the table titled "Units Vested Table for 2023."

Supplemental Executive Retirement Plan

Under the terms of the SERP, participants are were entitled to receive on December 31 of each year an allocation of phantom units having a fair market value equal to his or her percentage allocation multiplied by the sum of base salary and cash bonus received that year, then reduced by any supplemental contribution that was made to our defined contribution PSSP for the participant that year. A participant's cumulative notional phantom unit account balance earns the equivalent of common unit distributions. The calculated distributions are added to the notional account balance in the form of additional phantom units. All amounts granted under the SERP vest immediately and are would be paid out upon the participant's termination or death in ARLP common units equal to the number of phantom units then credited to the participant's account, subject to reduction of the number of units distributed to cover withholding obligations. Please see "Item 11. Compensation Discussion and Analysis—Compensation Components—Supplemental Executive Retirement Plan."

Salary and Bonus in Proportion to Total Compensation

The following table shows the total of salary and bonus in proportion to total compensation from the Summary Compensation Table:

Name	Year	Salary and Bonus as a % of Total			Year	Salary and Bonus as a % of Total		
		Salary and Bonus (\$)(1)	Total Compensation (\$)	Total Compensation (\$)(1)		Salary and Bonus (\$)(1)	Total Compensation (\$)	Total Compensation (\$)(1)
Joseph W. Craft III	2022	1	1	100.0%	2023	1	1	100.0%
Cary P. Marshall	2023	319,609	1,269,532	25.2%				
Brian L. Cantrell	2022	421,723	815,812	51.7%	2023	894,472	901,020	99.3%
R. Eberley Davis	2022	515,591	1,596,732	32.3%	2023	415,966	1,418,674	29.3%
Kirk D. Tholen	2022	1,500,000	3,276,732	45.8%	2023	1,500,000	2,798,097	53.6%
Thomas M. Wynne	2022	602,179	1,878,003	32.1%	2023	488,393	1,668,631	29.3%

(1) Percentages were calculated using the base salary and bonus of the Named Executive Officers. The bonus we provided in 2022 2023 to our Named Executive Officers was the firstsecond payment of the 2020 service-based vesting LTIP awards which were paid in cash in February 2022. See above for more discussion of the 2020 service-based vesting LTIP awards. 2023 and a separate cash bonus to Mr. Cantrell.

Outstanding Equity Awards at 2022 2023 Fiscal Year End Table

Name	Equity Incentive Plan		Equity Incentive Plan	
	Awards:	Market or Payout Value	Awards:	Market or Payout Value
	Number of Unearned Units or Other Rights That Have Not Vested (#)(1)	Not Vested (\$)(2)		
Joseph W. Craft III	—	—	—	\$ —
Cary P. Marshall			124,278	2,632,208
Brian L. Cantrell	163,212	3,316,648	—	—
R. Eberley Davis	255,070	5,183,022	196,447	4,160,748
Kirk D. Tholen	276,023	5,608,787	310,103	6,567,982
Thomas M. Wynne	294,841	5,991,169	227,292	4,814,044

(1) Amounts represent restricted units awarded under the LTIP that were not vested as of **December 31, 2022** **December 31, 2023**. Subject to our achieving financial performance targets, these units will vest as follows:

Name	January 1,			January 1,		
	2023	2024	2025	2024	2025	2026
Joseph W. Craft III	—	—	—	—	—	—
Cary P. Marshall				64,160	29,173	30,945
Brian L. Cantrell	69,152	94,060	—	—	—	—
R. Eberley Davis	88,078	119,800	47,192	119,800	47,192	29,455
Kirk D. Tholen	—	198,020	78,003	198,020	78,003	34,080
Thomas M. Wynne	101,629	138,610	54,602	138,610	54,602	34,080

Please see "Item 11. Compensation Discussion and Analysis—Compensation Components—*Equity Awards under the LTIP*." All grants of restricted units under the LTIP include the contingent right to receive quarterly cash distributions in an amount equal to the cash distributions we make to unitholders during the vesting period.

(2) Stated values are based on **\$20.32** **\$21.18** per unit, the closing price of our common units on **December 30, 2022** **December 29, 2023**, the final market trading day of **2022**, **2023**.

Units Vested for 2022

Our Named Executive Officers did not have any restricted units granted under the LTIP that vested during 2022. For more information on the LTIP, please see "Item 11. Compensation Discussion and Analysis—Compensation Components—Equity Awards under the LTIP."

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Units Vested Table for 2023

Name	Unit Awards	
	Number of Units	
	Acquired on Vesting (#)(1)	Value Realized on Vesting \$(1)
Joseph W. Craft III	—	\$ —
Cary P. Marshall	51,842	1,053,429
Brian L. Cantrell	69,152	1,405,169
R. Eberley Davis	88,078	1,789,745
Kirk D. Tholen	—	—
Thomas M. Wynne	101,629	2,065,101

(1) Amounts represent the number and value of restricted units granted under the LTIP that vested in 2023. All of these units vested on January 1, 2023 and are valued at \$20.32 per unit, the closing price on December 30, 2022, the final market trading day of 2022. Please see "Item 11. Compensation Discussion and Analysis—Compensation Components—Equity Awards under the LTIP."

Nonqualified Deferred Compensation Table for 2022 2023

Name	Executive	Registrant	Aggregate	Withdrawals/	Aggregate	Executive	Registrant	Aggregate	Withdrawals/	Aggregate
	Contributions	Contributions	Earnings	Distributions	Balance	Contributions	Contributions	Earnings	Distributions	Balance
	in Last Fiscal Year (\$ (1)	in Last Fiscal Year (\$ (2)	in Last Fiscal Year (\$ (3)	in Last Fiscal Year (\$ (1)	at Last Fiscal Year End (\$ (4)	in Last Fiscal Year (\$ (1)	in Last Fiscal Year (\$ (2)	in Last Fiscal Year (\$ (3)	in Last Fiscal Year (\$ (4)	at Last Fiscal Year End (\$ (5)
Joseph W. Craft III	—	—	2,738,048	—	6,464,686	—	—	1,224,776	—	7,689,463
Cary P. Marshall	—	24,632	180,648	—	1,158,694	—	24,632	180,648	—	1,158,694
Brian L. Cantrell	—	29,769	398,686	—	971,052	—	—	28,887	(999,939)	—
R. Eberley Davis	—	62,200	605,165	—	1,491,000	—	56,847	282,507	—	1,830,354

Kirk D.										
Tholen	—	179,852	418,103	—	1,166,957	—	196,614	221,116	—	1,584,688
Thomas M.										
Wynne	—	63,033	603,948	—	1,488,948	—	62,905	282,123	—	1,833,976

(1) Column not applicable.

(2) Amounts represent awards of phantom units contributed to each Named Executive Officer's SERP notional account balance. Please see "Item 11. Compensation Discussion and Analysis—Compensation Components—*Supplemental Executive Retirement Plan*." These amounts have also been included within the "All Other Compensation" column of the Summary Compensation Table for the 2022 2023 year.

(3) Amounts represent earnings accrued during 2022 2023 on each Named Executive Officer's SERP notional account balance for additional phantom units as a result of quarterly distributions on our common units and changes in the market value of the notional account balance. The market value of the notional account balance at the end of 2023 and 2022 was \$21.18 and 2021 was \$20.32 and \$12.64 per common unit, respectively. Earnings were not above-market or preferential.

(4) Amount represents a payout of Mr. Cantrell's SERP notional account balance upon his retirement in March 2023 and was valued \$20.27 per unit, representing the closing price of our common units on March 30, 2023.

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(5) Amounts represent the Named Executive Officer's cumulative notional account balance of phantom units valued at \$20.32, \$21.18, the closing price of our common units on December 30, 2022 December 29, 2023, the final market-trading day of 2022, 2023. The amounts include aggregate phantom unit quarterly distributions, changes in market value and the following aggregate amounts contributed since inception to each Named Executive Officer's SERP notional account balance including the amounts contributed in the last fiscal year shown in the table above: Mr. Craft, \$670,927; Mr. Cantrell, \$420,996; Marshall, \$253,302; Mr. Davis, \$688,966; \$745,813; Mr. Tholen; \$461,000; \$657,614; and Mr. Wynne, \$611,054; \$673,959. These amounts contributed since inception, other than the amounts contributed in the last fiscal year, were previously reported as compensation in the Summary Compensation Table in previous years if the Named Executive Officer was included in those years. On December 14, 2023 the Compensation Committee approved termination of the SERP, and authorized distribution of accounts to participants on December 15, 2024 or as soon thereafter as practical. As a result, all SERP accounts are expected to be settled prior to the end of the 2024 year. The accounts will continue to accrue benefits in accordance with plan terms until distributed.

Narrative Discussion Relating to the Nonqualified Deferred Compensation Table for 2022 2023

Supplemental Executive Retirement Plan

Under the terms of the SERP, participants are were entitled to receive on December 31 of each year an allocation of phantom units having a fair market value equal to their percentage allocation multiplied by the sum of base salary and cash bonus received that year, then reduced by any supplemental contribution that was made to our defined contribution PSSP for the participant that year. A participant's cumulative notional phantom unit account balance earns the equivalent of common unit distributions. The calculated distributions are added to the notional account balance in the form of additional phantom units. All amounts granted under the SERP vest immediately and are would be paid out upon the participant's termination or death in ARLP common units equal to the number of phantom units then credited to the participant's account, subject to reduction of the number of units distributed to cover withholding obligations. Please see "Item 11. Compensation Discussion and Analysis—Compensation Components—*Supplemental Executive Retirement Plan*."

Potential Payments Upon a Termination or Change of Control

Each of our Named Executive Officers (other than Mr. Cantrell, described below) is eligible to receive accelerated vesting and payment under the LTIP and the SERP upon certain terminations of employment or upon our change in control. Upon a "change of control," as defined in the LTIP, all awards outstanding under the LTIP will automatically vest and become payable or exercisable, as the case may be, in full. In this regard, all restricted periods shall terminate and all performance criteria, if any, shall be deemed to

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have been achieved at the maximum level. The LTIP defines a "change in control" as one of the following events: (1) any sale, lease, exchange or other transfer of all or substantially all of our assets or Alliance Coal's assets to any person other than a person who is our affiliate; (2) the consolidation or merger of Alliance Coal with or into another person pursuant to a transaction in which the outstanding voting interests of Alliance Coal are changed into or exchanged for cash, securities or other property, other than any such transaction where (a) the outstanding voting interests of Alliance Coal are changed into or exchanged for voting stock or interests of the surviving corporation or its parent and (b) the holders of the voting interests of Alliance Coal immediately prior to such transaction own, directly or indirectly, not less than a majority of the voting stock or interests of the surviving corporation or its parent immediately after such transaction; or (3) a person or group being or becoming the beneficial owner of more than 50% of all voting interests of Alliance Coal then outstanding.

The amounts each of our Named Executive Officers could receive under the SERP have been previously disclosed in "Item 11. Nonqualified Deferred Compensation Table for 2022" 2023 and the amounts each of the Named Executive Officers could receive under the LTIP have been previously disclosed in "Item 11. Outstanding Equity Awards at 2022 2023 Fiscal Year End Table", in each case assuming the triggering event occurred on December 31, 2022 December 31, 2023. In addition, if a Named Executive Officer's employment were terminated as a result of one of certain enumerated events in the SERP, the Named Executive Officer would receive an amount based on an allocation for the year of termination. Please see "Item 11. Compensation Discussion and Analysis—Compensation Components—Supplemental Executive Retirement Plan" for additional information regarding the enumerated events and allocation determination. The exact amount that any Named Executive Officer would receive could only be determined with certainty upon an actual termination or change in control.

The Tholen Employment Letter provided that if Mr. Tholen's employment was involuntarily terminated on or before December 31, 2022, other than for Good Cause (as defined in the Tholen Employment Letter), Mr. Tholen would have received a severance payment in an amount equal to two times Mr. Tholen's then-effective annual base salary plus his target STIP award, which as of December 31, 2022 would have equaled \$2,000,000. However, as noted above, Mr. Tholen was only eligible to receive this potential severance payment through the end of the 2022 year. As of the date of these disclosures, none None of our Named Executive Officers are eligible for severance or change in control benefits outside of their SERP payments and potential equity award acceleration described above.

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In connection with Mr. Cantrell's retirement in 2023, he received a settlement of his SERP account valued at \$999,939 and a \$750,000 cash bonus.

Director Compensation

The sole member of our general partner has the right to set the compensation of the directors of our general partner. Typically, such compensation has been set by the Compensation Committee with the concurrence of Mr. Craft, who indirectly owns our general partner. Mr.

Craft, our only employee director, received no director compensation for 2022, 2023, and all compensation that Mr. Craft received in his capacity as an employee is set forth above within the Summary Compensation Table. The directors of MGP devote 100% of their time as directors of MGP to the business of the ARLP Partnership.

Director Compensation Table for 2022, 2023

Name	2022								2023					
	2022 Compensation							2023 Compensation						
	2022 Compensation							2023 Compensation						
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	2022 Compensation													

(1) Columns are not applicable to 2022, 2023 director compensation.

(2) Amounts represent the grant date fair value of equity awards in 2022, 2023 related to deferrals of distributions earned on deferred units (computed pursuant to FASB ASC 718, using the same assumptions as used for financial reporting purposes and which are more fully described in "Item 8. Financial Statements and Supplementary Data—Note 18, 16 – Common Unit-Based Compensation Plans"). Please see Narrative to Director Compensation Table, below.

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(3) At December 31, 2022, December 31, 2023, each director had the following number of "phantom" ARLP common units credited to his notional account under MGP's Amended and Restated Deferred Compensation Plan for Directors ("the Directors' Deferred Compensation Plan"): Plan:

Name	Directors Deferred Compensation Plan (in Units)
Robert J. Druten	12,877 14,696
John H. Robinson	—
Wilson M. Torrence	10,570 12,064
Nick Carter	—

(4) These amounts represent a discretionary payment to the directors as a result of 2022 performance.

Narrative to Director Compensation Table

Compensation for our non-employee directors includes an annual cash retainer paid quarterly in advance on a pro rata basis. The annual retainer ~~increased in April 2022 to \$185,000 from \$166,000.~~ ~~for 2023 was \$185,000.~~ In addition to the retainer, Mr. Torrence also was entitled to annual cash compensation in ~~2022~~ 2023 of \$30,000 for service as Chairman of the Audit Committee, and Mr. Robinson and Mr. Druten also were entitled to additional annual cash compensation of \$10,000 each for service as Chairman of the Compensation Committee and the Conflicts Committee, respectively.

~~Prior to 2024, Directors have had the option to defer all or part of their cash compensation pursuant to the Directors' Deferred Compensation Plan by completing an election form prior to the beginning of each calendar year. No director elected to defer cash compensation in 2022.~~ 2023. ~~On December 14, 2023 the Board of Directors approved termination of the Directors' Deferred Compensation Plan, and authorized distribution of accounts on December 15, 2024 or as soon~~

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~~thereafter as practical. Termination rules regarding deferred compensation plans required termination of this plan in connection with termination of the SERP.~~

Pursuant to the Directors' Deferred Compensation Plan, a notional account ~~is~~ ~~was~~ established for deferred amounts of cash compensation and credited with notional common units of ARLP, described in the plan as "phantom" units. The number of phantom units credited ~~is~~ ~~was~~ determined by dividing the amount deferred by the average closing unit price for the ten trading days immediately preceding the deferral date.

When quarterly cash distributions ~~are~~ ~~were~~ made with respect to ARLP common units, an amount equal to such quarterly distribution ~~is~~ ~~was~~ credited to the notional account as additional phantom units. Payment of accounts under the Directors' Deferred Compensation Plan will be made in ARLP common units equal to the number of phantom units then credited to the director's account.

Directors ~~may~~ ~~could~~ elect to receive payment of the account resulting from deferrals during a plan year either (a) on the January 1 on or next following their separation from service as a director or (b) on the earlier of a specified January 1 or the January 1 on or next following their separation from service. The payment election ~~must be made~~ ~~was required~~ prior to each plan year; if no election ~~is~~ ~~was~~ made, the account ~~will~~ ~~would~~ be paid on the January 1 on or next following the director's separation from service. The Directors' Deferred Compensation Plan ~~is~~ ~~was~~ administered by the Compensation Committee, and the Board of Directors ~~may~~ ~~reserved the right to~~ change or terminate the plan at any ~~time;~~ ~~time,~~ provided ~~however,~~ that accrued benefits under the plan ~~cannot be~~ ~~were not~~ impaired.

Upon any recapitalization, reorganization, reclassification, split of common units, distribution or dividend of securities on ARLP common units, our consolidation or merger, or sale of all or substantially all of our assets or other similar transaction that is effected in such a way that holders of common units are entitled to receive (either directly or upon subsequent liquidation) cash, securities or assets with respect to or in exchange for ARLP common units, the Compensation Committee shall, in its sole discretion (and upon the advice of financial advisors as may be retained by the Compensation Committee), immediately adjust the notional balance of phantom units in each director's account under the Directors' Deferred Compensation Plan to equitably credit the fair value of the change in the ARLP common units and/or the distributions (of cash, securities or other assets) received or economic enhancement realized by the holders of the ARLP common units.

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CEO Pay Ratio Disclosures

As required by Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act, and Item 402(u) of Regulation S-K, we are providing the following information about the relationship of the annual total compensation of our employees and the annual total compensation of Joseph W. Craft III, our CEO.

For 2022, 2023, our last completed fiscal year:

- The median of the annual total compensation of all employees of our company (other than the CEO) was \$86,003, \$109,758.
- The annual total compensation of our CEO, as reported in the Summary Compensation Table was \$1.
- Based on this information, for 2022, 2023 the ratio of the annual total compensation of our CEO to the median of the annual total compensation of all employees was reasonably estimated to be 0.00001 to 1.

To determine the annual total compensation of our median employee and our CEO, we took the following steps:

- We determined that, as of December 31, 2022, December 31, 2023, our employee population consisted of approximately 3,371, 3,595 individuals with the vast majority of these individuals located in the United States. This population consisted of our full-time and part-time employees, as we do not have seasonal workers.
- We used a consistently applied compensation measure to identify our median employee of comparing the amount of salary or wages reflected in our payroll records as reported to the Internal Revenue Service on Form W-2 for 2022, 2023.
- We identified our median employee for 2023 by consistently applying this compensation measure to all of our employees included in our analysis. Since the vast majority of our employees, including our CEO, are located in the United States, we did not make any cost of living adjustments in identifying the median employee.
- After we identified our median employee, we combined all of the elements of such employee's compensation for the 2022, 2023 year in accordance with the requirements of Item 402(c)(2)(x) of Regulation S-K, resulting in

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annual total compensation of \$86,003, \$109,758, comprised of such employee's W-2 compensation of \$82,956, \$103,299 and contributions in the amount of \$3,047, \$6,459 that we made on the employee's behalf to our 401(k) plan for the 2022, 2023 year.

- With respect to the annual total compensation of our CEO, we used the amount reported in the "Total" column of our 2022, 2023 Summary Compensation Table.

Compensation Committee Interlocks and Insider Participation

Mr. Craft, Chairman, President and CEO of our general partner, is also Chairman, President and CEO of AGP. Otherwise, none of our executive officers serves as a member of the board of directors or compensation committee of any entity that has one or more of its executive officers serving as a member of the Board of Directors or Compensation Committee of our general partner.

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ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED UNITHOLDER MATTERS

The following table sets forth certain information as of **February 8, 2023** **February 8, 2024**, regarding the beneficial ownership of common units held by (a) each director of our general partner, (b) each executive officer of our general partner identified in the Summary Compensation Table included in "Item 11. Executive Compensation" above, (c) all directors and executive officers as a group, and (d) each person known by our general partner to be the beneficial owner of 5% or more of our common units. The address of our general partner and, unless otherwise indicated in the footnotes to the table below, each of the directors, executive officers and 5% unitholders reflected in the table below is 1717 South Boulder Avenue, Suite 400, Tulsa, Oklahoma 74119. Unless otherwise indicated in the footnotes to the table below, the common units reflected as being beneficially owned by our general partner's directors and Named Executive Officers are held directly by such directors and officers. The percentage of common units beneficially owned is based on **128,055,279** **128,061,981** common units outstanding as of **February 8, 2023** **February 8, 2024**.

Name of Beneficial Owner	Percentage of Common		Percentage of Common	
	Common Units Beneficially Owned	Units Beneficially Owned	Common Units Beneficially Owned	Units Beneficially Owned
Directors and Executive Officers				
Joseph W. Craft III (1)	18,651,259	14.6%	18,800,000	14.7%
Nick Carter	20,000	*	20,000	*
Robert J. Druten	25,628	*	25,628	*
John H. Robinson	7,462	*	7,462	*
Wilson M. Torrence	40,396	*	40,396	*
Brian L. Cantrell	234,617	*	252,193	*
R. Eberley Davis	196,255	*	262,446	*
Cary P. Marshall (2)			1,077,748	*
Kirk D. Tholen	—	*	110,396	*
Thomas M. Wynne (2)	1,207,648	*		
All directors and executive officers as a group (13 persons)	20,773,080	16.2%		
Thomas M. Wynne (3)			1,284,334	1.0%
All directors and executive officers as a group (14 persons)			22,392,314	17.5%
5% Common Unit Holder				
Kathleen S. Craft	16,223,539	12.7%		
Kathleen Mowry			16,167,865	12.6%

* Less than one percent.

(1) The common units attributable to Mr. Craft consist of (i) **18,482,657** **18,631,398** common units held directly by him and (ii) 168,602 common units attributable to Mr. Craft's spouse.

(2) The common units attributable to Mr. **Wynne Marshall** consist of (i) 856,612 common units held directly by him and (ii) 351,036 common units held through a trust and another entity controlled by him.

(3) The common units attributable to Mr. Wynne consist of (i) 859,940 common units held directly by him and (ii) 424,394 common units held through a trust and another entity controlled by him.

Plan Category	Number of units to be issued upon		Number of units remaining	Number of units to be issued upon	
	exercise/vesting of outstanding	Weighted-average exercise	available for future issuance	exercise/vesting of outstanding	Weighted-average exerci
	options, warrants and rights	price of outstanding options,	under equity compensation plans	options, warrants and rights	price of outstanding optio
	as of December 31, 2022	warrants and rights	as of December 31, 2022	as of December 31, 2023	warrants and rights
Equity compensation plans approved by unitholders:					
Long-Term Incentive Plan	3,697,133	N/A	7,759,827	2,710,344	N/A
Equity compensation plans not approved by unitholders:					
Supplemental Executive Retirement Plan	719,093	N/A	N/A	785,186	N/A
Directors' Deferred Compensation	23,447	N/A	N/A	26,760	N/A

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ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

In addition to the related-party transactions discussed in "Item 8. Financial Statements and Supplementary Data—Note 22 — Related-Party Transactions and Note 26 – Subsequent Events" ARLP has the following additional related-party transactions:

Related-Party Transactions

The Board of Directors and its Conflicts Committee review our related-party transactions that involve a potential conflict of interest between MGP, which holds a non-economic general partner interest in ARLP, or any of its affiliates and ARLP or its subsidiaries or any other partner of ARLP to determine that such transactions are fair and reasonable to the ARLP. As a result of these reviews, the Board of Directors and the Conflicts Committee approved each of the transactions described below that had such potential conflict of interest.

Expense Reimbursements

Our partnership agreement provides that MGP and its affiliates be reimbursed for all direct and indirect expenses incurred or payments made on behalf of us, including, but not limited to, director fees and expenses, management's salaries and related benefits (including incentive compensation), and accounting, budgeting, planning, treasury, public relations, land administration, environmental, permitting, payroll, benefits, disability, workers' compensation management, legal and information technology services. MGP may determine in its sole discretion the expenses that are allocable to us. Total costs billed to us by MGP and its affiliates were approximately \$0.8 million for the year ended

December 31, 2022. The executive officers of MGP are employees of and paid by Alliance Coal, and the reimbursement we pay to MGP pursuant to the partnership agreement does not include any compensation expenses associated with them.

JC Land

Our subsidiary, Alliance Service, Inc. ("ASI"), has a time-sharing agreement with Mr. Craft and Mr. Craft's affiliate, JC Land, LLC ("JC Land"), concerning their use of aircraft owned by ASI for purposes other than our business. In accordance with the provisions of that agreement, Mr. Craft and JC Land paid ASI \$0.09 million for the year ended December 31, 2022 for use of the aircraft. In addition, Alliance Coal has a time-sharing agreement with JC Land concerning Alliance Coal's use of an airplane owned by JC Land. In accordance with the provisions of that agreement, Alliance Coal paid JC Land \$0.3 million for the year ended December 31, 2022 for use of the aircraft.

Effective August 1, 2013, Alliance Coal entered into an expense reimbursement agreement with JC Land regarding pilots employed by Alliance Coal to operate aircraft owned by ASI and JC Land. In accordance with the expense reimbursement agreement, JC Land reimburses Alliance Coal for a portion of the compensation expense for its pilots. JC Land paid us \$0.3 million in 2022 pursuant to this agreement. Separately, JC Land paid us \$0.5 million during 2022 for fuel, pilot travel, etc. paid by us on their behalf.

Omnibus Agreement

We are party to an omnibus agreement with MGP and AGP, which governs potential competition among us and the other parties to this agreement. Pursuant to the terms of the omnibus agreement, AGP and its affiliates agreed, for so long as Mr. Craft controls MGP, not to engage in the business of mining, marketing or transporting coal in the United States, unless it first offers us the opportunity to engage in a potential activity or acquire a potential business, and the Board of Directors, with the concurrence of its Conflicts Committee, elects to cause us not to pursue such opportunity or acquisition. In addition, AGP has the ability to purchase businesses, the majority value of which is not mining, marketing or transporting coal, provided AGP offers us the opportunity to purchase the coal assets following the acquisition. The restriction does not apply to the assets retained and business conducted by an affiliate of AGP at the closing of our initial public offering. Except as provided above, AGP and its affiliates are prohibited from engaging in activities wherein they compete directly with us.

Related-Party Transactions

In addition to the related-party policies and transactions discussed in "Item 8. Financial Statements and Supplementary Data — Note 1 — Organization and Presentation and Note 20 — Related-Party Transactions" ARLP has the following additional related-party transactions:

Expense Reimbursements

Our partnership agreement provides that MGP and its affiliates be reimbursed for all direct and indirect expenses incurred or payments made on behalf of us, including, but not limited to, director fees and expenses. MGP may determine in its sole discretion the expenses that are allocable to us. Total costs billed to us by MGP and its affiliates were approximately \$1.0 million for the year ended December 31, 2023. The executive officers of MGP are employees of and paid by Alliance Coal, and the reimbursement we pay to MGP pursuant to the partnership agreement does not include any compensation expenses associated with them.

JC Land

Alliance Coal has a time-sharing agreement with JC Land concerning Alliance Coal's use of an airplane owned by JC Land. In accordance with the provisions of that agreement, Alliance Coal paid JC Land \$0.3 million for the year ended December 31, 2023 for use of the aircraft.

Effective August 1, 2013, Alliance Coal entered into an expense reimbursement agreement with JC Land regarding pilots employed by Alliance Coal to operate aircraft owned by Alliance Service, Inc. and JC Land. In accordance with the expense reimbursement agreement, JC Land reimburses Alliance Coal for a portion of the compensation expense for its pilots. JC Land paid us \$0.3 million in 2023 pursuant to this agreement. Separately, JC Land paid us \$0.5 million during 2023 for fuel, pilot travel, etc. paid by us on their behalf.

Director Independence

As a publicly traded limited partnership listed on the NASDAQ Global Select Market, we are required to maintain a sufficient number of independent directors on the board of our general partner to satisfy the audit committee requirement set forth in NASDAQ Rule 4350(d)(2). Rule 4350(d)(2) requires us to maintain an audit committee of at least three members, each of whom must, among other requirements, be independent as defined under NASDAQ Rule 4200(a)(15) and meet the criteria for independence set forth in Rule 10A-3(b)(1) under the Exchange Act (subject to the exemptions provided in Rule 10A-3(c)).

All members of the Audit Committee—and Compensation Committees—Messrs. Torrence, Carter, Druten and Robinson—and all members of the Compensation Committee—Messrs. Robinson, Carter, Druten and Torrence—are independent directors as defined under applicable NASDAQ and Exchange Act rules. Please see "Item 10. Directors, Executive Officers and Corporate Governance of the General Partner—Audit Committee" and "Item 11. Executive Compensation—Compensation Discussion and Analysis."

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The firm of Grant Thornton LLP is our independent registered public accounting firm for the 2022 2023 year. The following table sets forth fees paid to Grant Thornton LLP during the years ended December 31, 2022 December 31, 2023 and 2021: 2022:

	2022	2021	2023	2022
	(in thousands)		(in thousands)	
Audit Fees (1)	\$ 813	\$ 670	\$748	\$813
Audit-related fees (2)	—	—	207	59
Tax fees (3)	—	—	—	—
All other fees	—	—	—	—
Total	\$ 813	\$ 670	\$955	\$872

- (1) Audit fees consist primarily of the audit and quarterly reviews of the consolidated financial statements, but can also be related to statutory audits of subsidiaries required by governmental or regulatory bodies, attestation services required by statute or regulation, comfort letters, consents, assistance with and review of documents filed with the SEC, work performed by tax professionals in connection with the audit and quarterly reviews, and accounting and financial reporting consultations and research work necessary to comply with GAAP.
- (2) Audit-related fees include fees consist primarily of attest services related to acquisition due diligence financial reporting that are not required by statute or regulation but can also include accounting consultations and accounting consultations. audits in connections with acquisitions.
- (3) Tax fees consist primarily of services rendered for tax compliance, tax advice, and tax planning.

The charter of the Audit Committee provides that the committee is responsible for the pre-approval of all auditing services and permitted non-audit services to be performed for us by our independent registered public accounting firm, subject to the requirements of applicable law. In accordance with such charter, the Audit Committee may delegate the authority to grant such pre-approvals to the Audit Committee chairman or a sub-committee of the Audit Committee, which pre-approvals are then reviewed by the full Audit Committee at its next regular meeting. Typically, however, the Audit Committee itself reviews the matters to be approved. The Audit Committee periodically monitors the services rendered by and actual fees paid to the independent registered public accounting firm to ensure that such services are within the parameters approved by the Audit Committee.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) (1) Financial Statements and Supplementary Data.

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(a)(2) Financial Statement Schedule.

All other schedules are omitted because they are not applicable or the information is shown in the financial statements or notes thereto.

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(a)(3) and (c) The exhibits listed below are filed as part of this annual report.

Exhibit Number	Exhibit Description	Form	Incorporated by Reference			Filed Herewith*
			SEC File No. and Film No.	Exhibit	Filing Date	
3.1	Fourth Amended and Restated Agreement of Limited Partnership of Alliance Resource Partners, L.P.	8-K	000-26823 17990766	3.2	07/28/2017	
3.2	Amended and Restated Agreement of Limited Partnership of Alliance Resource Operating Partners, L.P.	10-K	000-26823 583595	3.2	03/29/2000	
3.3	Amended and Restated Certificate of Limited Partnership of Alliance Resource Partners, L.P.	8-K	000-26823 17990766	3.6	07/28/2017	
3.4	Certificate of Limited Partnership of Alliance Resource Operating Partners, L.P.	S-1/A	333-78845 99669102	3.8	07/23/1999	
3.5	Certificate of Formation of Alliance Resource Management GP, LLC	S-1/A	333-78845 99669102	3.7	07/23/1999	
3.6	Amendment No. 1 to the Fourth Amended and Restated Agreement of Limited Partnership of Alliance Resource Partners, L.P.	10-K	000-26823 18634680	3.9	02/23/2018	
3.7	Amendment No. 2 to Fourth Amended and Restated Agreement of Limited Partnership of Alliance Resource Partners, L.P., dated as of May 31, 2018.	8-K	000-26823 1883834	3.3	06/06/2018	
3.8	Amendment No. 3 to Fourth Amended and Restated Agreement of Limited Partnership of Alliance Resource Partners, L.P., dated as of June 1, 2018.	8-K	000-26823 1883834	3.4	06/06/2018	

3.9	Amendment No. 1 to Amended and Restated Agreement of Limited Partnership of Alliance Resource Operating Partners, L.P., dated as of May 31, 2018.	8-K	000-26823 1883834	3.5	06/06/2018
3.10	Third Amended and Restated Operating Agreement of Alliance Resource Management GP, LLC, dated as of May 31, 2018.	8-K	000-26823 1883834	3.7	06/06/2018
4.1	Form of Common Unit Certificate (Included as Exhibit A to the Fourth Amended and Restated Agreement of Limited Partnership of Alliance Resource Partners, L.P., included in this Exhibit Index as Exhibit 3.2).	8-K	000-26823 17990766	3.2	07/28/2017

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Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith*
		Form	SEC File No. and Film No.	Exhibit	Filing Date	
4.2	Indenture, dated as of April 24, 2017, by and among Alliance Resource Operating Partners, L.P. and Alliance Resource Finance Corporation, as issuers, Alliance Resource Partners, L.P., as parent, the subsidiary guarantors party thereto and Wells Fargo Bank, National Association, as trustee.	8-K	000-26823 17798539	4.1	04/24/2017	
4.3	Form of 7.500% Senior Note due 2025 (included in Exhibit 4.2).	8-K	000-26823 17778550	4.1	04/24/2017	
4.4	Description of the Registrant's Securities registered under Section 12 of the Securities Exchange Act of 1934.					b
10.1	Amendment and Restatement of Letter of Credit Facility Agreement dated October 2, 2010.	10-Q	000-26823 11823116	10.1	05/09/2011	
10.2	Letter of Credit Facility Agreement dated as of October 2, 2001, between Alliance Resource Partners, L.P. and Bank of the Lakes, National Association.	10-Q	000-26823 1782487	10.25	11/13/2001	
10.3	First Amendment to the Letter of Credit Facility Agreement between Alliance Resource Partners, L.P. and Bank of the Lakes, National Association.	10-Q	000-26823 02827517	10.32	11/14/2002	

10.4	Promissory Note Agreement dated as of October 2, 2001, between Alliance Resource Partners, L.P. and Bank of the Lakes, N.A.	10-Q	000-26823 1782487	10.26	11/13/2001
10.5	Guarantee Agreement, dated as of October 2, 2001, between Alliance Resource GP, LLC and Bank of the Lakes, N.A.	10-Q	000-26823 1782487	10.27	11/13/2001
10.6	Contribution and Assumption Agreement, dated August 16, 1999, among Alliance Resource Holdings, Inc., Alliance Resource Management GP, LLC, Alliance Resource GP, LLC, Alliance Resource Partners, L.P., Alliance Resource Operating Partners, L.P. and the other parties named therein	10-K	000-26823 583595	10.3	03/29/2000
10.7	Omnibus Agreement, dated August 16, 1999, among Alliance Resource Holdings, Inc., Alliance Resource Management GP, LLC, Alliance Resource GP, LLC and Alliance Resource Partners, L.P.	10-K	000-26823 583595	10.4	03/29/2000
10.8 ⁽¹⁾	Amended and Restated Alliance Coal, LLC 2000 Long-Term Incentive Plan	10-K	000-26823 04667577	10.17	03/15/2004

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Exhibit Number	Exhibit Description	Form	Incorporated by Reference			Filed Herewith*
			SEC File No. and Film No.	Exhibit	Filing Date	
10.9 ⁽¹⁾	First Amendment to the Alliance Coal, LLC 2000 Long-Term Incentive Plan	10-K	000-26823 04667577	10.18	03/15/2004	
10.10 ⁽¹⁾	Alliance Coal, LLC Short-Term Incentive Plan	10-K	000-26823 583595	10.12	03/29/2000	
10.11 ⁽¹⁾	Alliance Coal, LLC Supplemental Executive Retirement Plan	S-8	333-85258 02595143	99.2	04/01/2002	
10.12 ⁽¹⁾	Alliance Resource Management GP, LLC Deferred Compensation Plan for Directors	S-8	333-85258 02595143	99.3	04/01/2002	
10.13	Guaranty by Alliance Resource Partners, L.P. dated March 16, 2012	10-Q	000-26823 12825281	10.3	05/09/2012	

10.14 ⁽²⁾	Base Contract for Purchase and Sale of Coal, dated March 16, 2012, between Seminole Electric Cooperative, Inc. and Alliance Coal, LLC	10-Q	000-26823 12825281	10.1	05/09/2012
10.15 ⁽²⁾	Contract of Confirmation, effective March 16, 2012, between Seminole Electric Cooperative, Inc., Alliance Coal, LLC and Alliance Resource Partners, L.P.	10-Q/A	000-26823 12947715	10.2	07/05/2012
10.16	Amended and Restated Charter for the Audit Committee of the Board of Directors dated February 23, 2009	10-K	000-26823 09647063	10.35	03/02/2009
10.17	Second Amendment to the Omnibus Agreement dated May 15, 2006 by and among Alliance Resource Partners, L.P., Alliance Resource GP, LLC, Alliance Resource Management GP, LLC, Alliance Resource Holdings, Inc., Alliance Resource Holdings II, Inc., AMH-II, LLC, Alliance Holdings GP, L.P., Alliance GP, LLC and Alliance Management Holdings, LLC	10-Q	000-26823 061017824	10.1	08/09/2006
10.18	Administrative Services Agreement dated May 15, 2006 among Alliance Resource Partners, L.P., Alliance Resource Management GP, LLC, Alliance Resource Holdings II, Inc., Alliance Holdings GP, L.P. and Alliance GP, LLC	10-Q	000-26823 061017824	10.2	08/09/2006
10.19 ⁽¹⁾	First Amendment to the Alliance Coal, LLC Short-Term Incentive Plan	10-K	000-26823 07660999	10.52	03/01/2007
10.20 ⁽¹⁾	Second Amendment to the Alliance Coal, LLC Short-Term Incentive Plan	10-K	000-26823 08654096	10.53	02/29/2008

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Exhibit Number	Exhibit Description	Form	Incorporated by Reference			Filed Herewith*
			SEC File No. and Film No.	Exhibit	Filing Date	
10.21 ⁽¹⁾	Amended and Restated Alliance Coal, LLC Supplemental Executive Retirement Plan dated as of January 1, 2011	10-K	000-26823 11645603	10.40	02/28/2011	
10.22 ⁽¹⁾	Amended and Restated Alliance Resource Management GP, LLC Deferred Compensation Plan for Directors dated as of January 1, 2011	10-K	000-26823 11645603	10.42	02/28/2011	

10.23	Amendment No. 2 to Letter of Credit Facility Agreement between Alliance Resource Partners, L.P. and Bank of the Lakes, National Association, dated April 13, 2009	10-Q	000-26823 09811514	10.1	05/08/2009
10.24 ⁽²⁾	Agreement for the Supply of Coal, dated August 20, 2009 between Tennessee Valley Authority and Alliance Coal, LLC	10-Q	000-26823 091164883	10.2	11/06/2009
10.25	Amended and Restated Charter for the Compensation Committee of the Board of Directors dated February 23, 2010.	10-K	000-26823 10638795	10.49	02/26/2010
10.26	Amended and Restated Administrative Services Agreement effective January 1, 2010, among Alliance Resource Partners, L.P., Alliance Resource Management GP, LLC, Alliance Resource Holdings II, Inc., Alliance Resource Operating Partners, L.P., Alliance Holdings GP, L.P. and Alliance GP, LLC.	10-Q	000-26823 101000555	10.1	08/09/2010
10.27	Uncommitted Line of Credit and Reimbursement Agreement dated April 9, 2010 between Alliance Resource Partners, L.P. and Fifth Third Bank.	10-Q	000-26823 101000555	10.2	08/09/2010
10.28	Purchase and Sale Agreement, dated as of December 5, 2014, among Alliance Resource Operating Partners, L.P., as buyer and Alliance Coal, LLC, Gibson County Coal, LLC, Hopkins County Coal, LLC, Mettiki Coal (WV), LLC, Mt. Vernon Transfer Terminal, LLC, River View Coal, LLC, Sebree Mining, LLC, Tunnel Ridge, LLC and White County Coal, LLC, as originators	8-K	000-26823 141277053	10.1	12/10/2014
10.29	Sale and Contribution Agreement, dated as of December 5, 2014, among Alliance Resource Operating Partners, L.P., as seller and AROP Funding, LLC, as buyer	8-K	000-26823 141277053	10.2	12/10/2014

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Exhibit Number		Incorporated by Reference				Filed Herewith*
		SEC				
		Form	File No. and Film No.	Exhibit	Filing Date	
Exhibit Description						

10.30	Receivables Financing Agreement, dated as of December 5, 2014, among Borrower, PNC Bank, National Association, as administrative agent as well as the letter of credit bank, the persons from time to time party thereto as lenders, the persons from time to time party thereto as letter of credit participants, and Alliance Coal, LLC, as initial servicer	8-K	000-26823 141277053	10.3	12/10/2014
10.31	Performance Guaranty, dated as of December 5, 2014, by AROP in favor of PNC Bank, National Association, as administrative agent	8-K	000-26823 141277053	10.4	12/10/2014
10.32	Master Lease Agreement, dated as of October 29, 2015, between Alliance Resource Operating Partners, L.P., Hamilton County Coal, LLC and White Oak Resources LLC, as lessees, and PNC Equipment Finance, LLC and the other lessors named therein.	8-K	000-26823 151198024	10.1	11/04/2015
10.33 ⁽¹⁾	The Amended and Restated Alliance Coal, LLC Long-Term Incentive Plan as amended by the Third Amendment and Fourth Amendment	10-K	000-26823 161460619	10.46	02/26/2016
10.34	First Amendment to the Receivables Financing Agreement, dated as of December 4, 2015	10-Q	000-26823 161634229	10.1	05/10/2016
10.35	Second Amendment to the Receivables Financing Agreement, dated as of February 24, 2016	10-Q	000-26823 161634229	10.2	05/10/2016
10.36	Joinder Agreement, dated as of February 24, 2016, among Warrior Coal, LLC, Webster County Coal, LLC, White Oak Resources LLC and Hamilton County Coal, LLC, dated as of February 24, 2016	10-Q	000-26823 161634229	10.3	05/10/2016
10.37	Third Amendment to the Receivables Financing Agreement, dated as of December 2, 2016	10-K	000-26823 17636362	10.45	02/24/2017
10.38	Fourth Amendment to the Receivables Financing Agreement, dated as of November 27, 2017	10-K	000-26823 18634680	10.47	02/23/2018
10.39	Fifth Amendment to the Receivables Financing Agreement, dated as of January 17, 2018	10-K	000-26823 18634680	10.48	02/23/2018

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Incorporated by Reference

Incorporated by Reference

Exhibit Number	SEC						SEC					
	Exhibit Description	Form	File No. and Film No.	Exhibit	Filing Date	Filed Herewith*	Exhibit Description	Form	File No. and Film No.	Exhibit	Filing Date	Filed Herewith*
4.2							Indenture, dated as of April 24, 2017, by and among Alliance Resource Operating Partners, L.P. and Alliance Resource Finance Corporation, as issuers, Alliance Resource Partners, L.P., as parent, the subsidiary guarantors party thereto and Wells Fargo Bank, National Association, as trustee.	8-K	000-26823 17798539	4.1	04/24/2017	
10.43	Sixth Amendment to the Receivables Financing Agreement, dated as of June 19, 2018	10-Q	000-26823 18994075	10.2	08/06/2018							
4.3							Form of 7.500% Senior Note due 2025 (included in Exhibit 4.2).	8-K	000-26823 17778550	4.1	04/24/2017	
10.40	Seventh Amendment to the Receivables Financing Agreement, dated as of January 16, 2019	10-K	000-26823 19624803	10.52	02/22/2019							
4.4							Description of the Registrant's Securities registered under Section 12 of the Securities Exchange Act of 1934.	10-K	000-26823, 23666549	4.4	02/24/2023	

10.41	Subscription Agreement for Partnership Interest - General Partner Interest dated December 14, 2018 by and among Alliance Resource Partners, L.P., AllDale Minerals, LP and AllDale Mineral Management, LLC.	10-K	000-26823	10.53	02/22/2019	19624803	
10.1							Contribution and Assumption Agreement, dated August 16, 1999, among Alliance Resource Holdings, Inc., Alliance Resource Management GP, LLC, Alliance Resource GP, LLC, Alliance Resource Partners, L.P., Alliance Resource Operating Partners, L.P. and the other parties named therein
10.42	Subscription Agreement for Partnership Interest - Limited Partner Interest dated December 14, 2018 by and among Alliance Resource Partners, L.P., AllDale Minerals, LP and AllDale Mineral Management, LLC.	10-K	000-26823	10.54	02/22/2019	19624803	

10.2						Omnibus Agreement, dated August 16, 1999, among Alliance Resource Holdings, Inc., Alliance Resource Management GP, LLC, Alliance Resource GP, LLC and Alliance Resource Partners, L.P.	10-K	000-26823	583595	10.4	03/29/2000
10.43	Subscription Agreement for Partnership Interest - General Partner Interest dated December 14, 2018 by and among Alliance Resource Partners, L.P., AllDale Minerals II, LP and AllDale Mineral Management II, LLC.	10-K	000-26823	19624803	10.55	02/22/2019					
10.3 ⁽¹⁾						Alliance Coal, LLC Short-Term Incentive Plan	10-K	000-26823	583595	10.12	03/29/2000
10.44	Subscription Agreement for Partnership Interest - Limited Partner Interest dated December 14, 2018 by and among Alliance Resource Partners, L.P., AllDale Minerals II, LP and AllDale Mineral Management II, LLC.	10-K	000-26823	19624803	10.56	02/22/2019					
10.4 ⁽¹⁾						Alliance Coal, LLC Supplemental Executive Retirement Plan	S-S	333-85258	02595143	99.2	04/01/2002

10.45	AllDale Minerals, LP Joinder Agreements dated January 3, 2019 by and among Alliance Royalty, LLC, AllRoy GP, LLC and AllDale Minerals, LP.	10-K	000-26823 19624803	10.57	02/22/2019				
10.5 ⁽¹⁾						Alliance Resource Management GP, LLC Deferred Compensation Plan for Directors	S-8	333-85258 02595143	99.3 04/01/2002
10.46	AllDale Minerals II, LP Joinder Agreements dated January 3, 2019 by and among Alliance Royalty, LLC, AllRoy GP, LLC and AllDale Minerals II, LP.	10-K	000-26823 19624803	10.58	02/22/2019				
10.6						Third Amended and Restated Charter for the Audit Committee of the Board of Directors			b
10.47	Purchase and Sale Agreement by and between Wing Resources LLC, and Wing Resources II LLC, as sellers, and Alliance Resource Partners, L.P., as buyer, dated as of June 21, 2019.	10-Q	000-26823 19997858	10.1	08/05/2019				

10.7						Second Amendment to the Omnibus Agreement dated May 15, 2006 by and among Alliance Resource Partners, L.P., Alliance Resource GP, LLC, Alliance Resource Management GP, LLC, Alliance Resource Holdings, Inc., Alliance Resource Holdings II, Inc., AMH-II, LLC, Alliance Holdings GP, L.P., Alliance GP, LLC and Alliance Management Holdings, LLC	10-Q	000-26823	10.1	08/09/2006	061017824
10.48	Eighth Amendment to the Receivables Financing Agreement, dated as of October 22, 2019.	10-Q	000-26823	10.2	11/05/2019						
10.8						Administrative Services Agreement dated May 15, 2006 among Alliance Resource Partners, L.P., Alliance Resource Management GP, LLC, Alliance Resource Holdings II, Inc.,	10-Q	000-26823	10.2	08/09/2006	061017824

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Incorporated by Reference	Incorporated by Reference

Exhibit Number	Exhibit Description	Form	SEC	Exhibit	Filing Date	Filed Herewith*	Exhibit Description	Form	SEC	Exhibit	Filing Date	Filed Herewith*
			File No. and Film No.						File No. and Film No.			
	Alliance Holdings GP, L.P. and Alliance GP, LLC											
10.49	Employment letter to Kirk Tholen, dated October 21, 2019.	10-K	000-26823 20636450	10.61	02/20/2020							
10.9 ⁽¹⁾							First Amendment to the Alliance Coal, LLC Short-Term Incentive Plan	10-K	000-26823 07660999	10.52	03/01/2007	
10.50	Fifth Amended and Restated Credit Agreement, dated as of March 9, 2020, by and among Alliance Resource Operating Partners, L.P., as borrower, JPMorgan Chase Bank, N.A., as administrative agent, and the lenders party thereto.	8-K	000-26823 20711345	10.1	03/13/2020							
10.10 ⁽¹⁾							Second Amendment to the Alliance Coal, LLC Short-Term Incentive Plan	10-K	000-26823 08654096	10.53	02/29/2008	
10.51	Fifth Amendment to the Alliance Coal and Restated Alliance Coal, LLC 2000 Long-Term Incentive Plan.	8-K	000-26823 201385345	10.1	12/14/2020							

10.11 ⁽¹⁾	Amended and Restated Alliance Coal, LLC Supplemental Executive Retirement Plan dated as of January 1, 2011	10-K	000-26823	10.40	02/28/2011	11645603
10.52	Ninth Amendment to the Receivables Financing Agreement, dated as of January 15, 2021.	10-K	000-26823	10.64	02/23/2021	21663570
10.12 ⁽¹⁾	Amended and Restated Alliance Resource Management GP, LLC Deferred Compensation Plan for Directors dated as of January 1, 2011	10-K	000-26823	10.42	02/28/2011	11645603
10.53	Tenth Amendment to the Receivables Financing Agreement, dated as of January 14, 2022.	10-K	000-26823	10.57	02/25/2022	22677260
10.13	Amended and Restated Charter for the Compensation Committee of the Board of Directors dated January 27, 2023.					b
10.54	Eleventh Amendment to the Receivables Financing Agreement, dated as of January 13, 2023.					b

10.14	Amended and Restated Administrative Services Agreement effective January 1, 2010, among Alliance Resource Partners, L.P., Alliance Resource Management GP, LLC, Alliance Resource Holdings II, Inc., Alliance Resource Operating Partners, L.P., Alliance Holdings GP, L.P. and Alliance GP, LLC.	10-Q	000-26823	10.1	08/09/2010
			101000555		

10.55	<u>Credit Agreement,</u> <u>dated as of</u> <u>January 13, 2023,</u> <u>among Alliance</u> <u>Coal, LLC, as</u> <u>borrower, Alliance</u> <u>Resource</u> <u>Operating</u> <u>Partners, L.P.,</u> <u>Alliance Resource</u> <u>Partners, L.P., UC</u> <u>Coal, LLC, UC</u> <u>Mining, LLC, UC</u> <u>Processing, LLC</u> <u>and MGP II, LLC</u> <u>as additional</u> <u>Alliance entities</u> <u>and the initial</u> <u>lenders, initial</u> <u>issuing banks and</u> <u>swingline bank</u> <u>named therein,</u> <u>PNC Bank,</u> <u>National</u> <u>Association as</u> <u>administrative</u> <u>agent and</u> <u>collateral agent</u> <u>and PNC Capital</u> <u>Markets LLC,</u> <u>BOKF, NA DBA</u> <u>Bank of</u> <u>Oklahoma, Fifth</u> <u>Third Bank,</u> <u>National</u> <u>Association, Old</u> <u>National Bank and</u> <u>Trust Securities,</u> <u>Inc. as joint lead</u> <u>arrangers and</u> <u>joint bookrunners</u> <u>and the other</u> <u>institutions named</u> <u>therein as</u> <u>documentation</u> <u>agents.</u>	8-K	000-26823 23540292	10.1	01/20/2023

10.15							Receivables Financing Agreement, dated as of December 5, 2014, among Borrower, PNC Bank, National Association, as administrative agent as well as the letter of credit bank, the persons from time to time party thereto as lenders, the persons from time to time party thereto as letter of credit participants, and Alliance Coal, LLC, as initial servicer	8-K	000-26823	10.3	12/10/2014	141277053
10.56	Sixth Amendment to the Amended and Restated Alliance Coal, LLC 2000 Long-Term Incentive Plan.	8-K	000-26823	10.1	11/18/2022	221401012						
10.16 ⁽¹⁾												
14.1	Code of Ethics for Principal Executive Officer and Senior Financial Officers	10-K	000-26823	14.1	03/01/2013	13656028						
10.17							First Amendment to the Receivables Financing Agreement, dated as of December 4, 2015	10-Q	000-26823	10.1	05/10/2016	161634229
10.18							Second Amendment to the Receivables Financing Agreement, dated as of February 24, 2016	10-Q	000-26823	10.2	05/10/2016	161634229

10.19	Third Amendment to the Receivables Financing Agreement, dated as of December 2, 2016	10-K	000-26823	10.45	02/24/2017
			17636362		

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Exhibit Number	Incorporated by Reference						Incorporated by Reference					
	SEC						SEC					
	Exhibit Description	Form	File No. and Film No.	Exhibit	Filing Date	Filed Herewith*	Exhibit Description	Form	File No. and Film No.	Exhibit	Filing Date	Filed Herewith*
10.20							Fourth Amendment to the Receivables Financing Agreement, dated as of November 27, 2017	10-K	000-26823	10.47	02/23/2018	
									18634680			
16.1	Letter of Ernst & Young LLP, dated as of March 1, 2021.	8-K	000-26823	16.1	03/01/2021							
			21695057									
10.21							Fifth Amendment to the Receivables Financing Agreement, dated as of January 17, 2018	10-K	000-26823	10.48	02/23/2018	
									18634680			
21.1	List of Subsidiaries.					b						
10.22							Sixth Amendment to the Receivables Financing Agreement, dated as of June 19, 2018	10-Q	000-26823	10.2	08/06/2018	
									18994075			
23.1	Consent of Grant Thornton LLP.					b						

10.23		Seventh Amendment to the Receivables Financing Agreement, dated as of January 16, 2019	10-K	000-26823 19624803	10.52	02/22/2019
23.2	Consent of Ernst & Young LLP.	b				
10.24		Eighth Amendment to the Receivables Financing Agreement, dated as of October 22, 2019.	10-Q	000-26823 191192460	10.2	11/05/2019
23.3	Consent of Netherland, Sewell & Associates, Inc.	b				
10.25		Fifth Amended and Restated Credit Agreement, dated as of March 9, 2020, by and among Alliance Resource Operating Partners, L.P., as borrower, JPMorgan Chase Bank, N.A., as administrative agent, and the lenders party thereto.	8-K	000-26823 20711345	10.1	03/13/2020
31.1	Certification of Joseph W. Craft III, President and Chief Executive Officer of Alliance Resource Management GP, LLC, the general partner of Alliance Resource Partners, L.P., dated February 24, 2023, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	b				

10.26			Fifth Amendment to the Amended and Restated Alliance Coal, LLC 2000 Long-Term Incentive Plan.	8-K	000-26823 201385345	10.1	12/14/2020
31.2	Certification of Brian L. Cantrell, Senior Vice President and Chief Financial Officer of Alliance Resource Management GP, LLC, the general partner of Alliance Resource Partners, L.P., dated February 24, 2023, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	b					
10.27			Ninth Amendment to the Receivables Financing Agreement, dated as of January 15, 2021.	10-K	000-26823 21663570	10.64	02/23/2021
32.1	Certification of Joseph W. Craft III, President and Chief Executive Officer and Chairman of Alliance Resource Management GP, LLC, the general partner of Alliance Resource Partners, L.P., dated February 24, 2023, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	b					

10.28	Tenth Amendment to the Receivables Financing Agreement, dated as of January 14, 2022.	10-K	000-26823	10.57	02/25/2022	22677260
32.2	Certification of Brian L. Cantrell, Senior Vice President and Chief Financial Officer of Alliance Resource Management GP, LLC, the general partner of Alliance Resource Partners, L.P., dated February 24, 2023, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	b				
95.1	Federal Mine Safety and Health Act Information	b				
96.1	Henderson/Union Resources SEC S-K 1300 Technical Report Summary dated February 2022.	10-K/A	000-26823 221205681	96.1	08/26/2022	
96.2	River View Mine SEC S-K 1300 Technical Report Summary February 2022.	10-K/A	000-26823 221205681	96.2	08/26/2022	
10.29	Eleventh Amendment to the Receivables Financing Agreement, dated as of January 13, 2023.	10-K	000-26823	10.54	02/24/2023	23666549

10.30

[Thirteenth](#)
[Amendment to the](#)
[Receivables](#)
[Financing](#)
[Agreement, dated](#)
[as of January 12,](#)
[2024.](#)

10-K

b

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		Incorporated by Reference							
		SEC							
Exhibit Number	Exhibit Description	File No. and		Filed		Herewith*			
		Form	Film No.	Exhibit	Filing Date				
10.31						Credit Agreement, dated as of January 13, 2023, among Alliance Coal, LLC, as borrower, Alliance Resource Operating Partners, L.P., Alliance Resource Partners, L.P., UC Coal, LLC, UC Mining, LLC, UC Processing, LLC and MGP II, LLC as additional Alliance entities and the initial lenders, initial issuing banks and swingline bank named therein, PNC Bank, National	8-K	000-26823	10.101/20/2023 23540292

						Association as administrative agent and collateral agent and PNC Capital Markets LLC. BOKE, NA DBA Bank of Oklahoma, Fifth Third Bank, National Association, Old National Bank and Trust Securities, Inc. as joint lead arrangers and joint bookrunners and the other institutions named therein as documentation agents.	
10.32						Sixth 8- 000-26823 10.111/18/2022 Amendment to K 221401012 the Amended and Restated Alliance Coal. LLC 2000 Long-Term Incentive Plan.	
14.1						Code of Ethics 10- 000-26823 14.103/01/2013 for Principal K 13656028 Executive Officer and Senior Financial Officers	
96.3	Hamilton Mine SEC S- K 1300 Technical Report Summary dated February 2022.	10- K/A	000-26823 221205681	96.3	08/26/2022		
21.1						List of Subsidiaries.	p

96.4	Gibson South Mine SEC S-K 1300 Technical Report Summary dated February 2022.	10-K/A	000-26823 221205681	96.4	08/26/2022	
23.1					Consent of Grant Thornton LLP.	b
96.5	Tunnel Ridge Mine SEC S-K 1300 Technical Report Summary dated January 2023.			b		
23.2					Consent of Cawley, Gillespie & Associates, Inc.	b
99.1	Report of Netherland, Sewell & Associates, Inc., dated January 5, 2023			b		
31.1					Certification of Joseph W. Craft III, President and Chief Executive Officer of Alliance Resource Management GP, LLC, the general partner of Alliance Resource Partners, L.P., dated February 23, 2024, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	b
101	Interactive Data File (Form 10-K for the year ended December 31, 2022 filed in Inline XBRL).			b		

31.2			Certification of Cary P. Marshall, Senior Vice President and Chief Financial Officer of Alliance Resource Management GP, LLC, the general partner of Alliance Resource Partners, L.P., dated February 23, 2024, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	b
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).	b		
32.1			Certification of Joseph W. Craft III, President and Chief Executive Officer and Chairman of Alliance Resource Management GP, LLC, the general partner of Alliance Resource Partners, L.P., dated February 23, 2024, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	b

32.2	Certification of Cary P. Marshall, Senior Vice President and Chief Financial Officer of Alliance Resource Management GP, LLC, the general partner of Alliance Resource Partners, L.P., dated February 23, 2024, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	b

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95.1	Federal Mine Safety and Health Act Information							b
96.1	Henderson/Union Resources SEC S-K 1300 Technical Report Summary dated February 2024.							b
96.2	River View Complex SEC S-K 1300 Technical Report Summary February 2024.							b
96.3	Hamilton Mine SEC S-K 1300 Technical Report Summary dated February 2022.	10-K/A	000-26823 221205681	96.3	08/26/2022			
96.4	Gibson South Mine SEC S-K 1300 Technical Report Summary dated February 2022.	10-K/A	000-26823 221205681	96.4	08/26/2022			
96.5	Tunnel Ridge Mine SEC S-K 1300 Technical Report Summary dated February 2023.							b
97.1	Alliance Resource Partners, L.P. Incentive Based Compensation Recoupment Policy.							b

99.1	Report of Cawley, Gillespie & Associates, Inc., dated December 7, 2023	b
101	Interactive Data File (Form 10-K for the year ended December 31, 2023 filed in Inline XBRL).	b
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).	b

* Filed herewith (or furnished, in the case of Exhibits 32.1 and 32.2).

- (1) Denotes management contract or compensatory plan or arrangement.
- (2) Portions of this exhibit have been omitted pursuant to a request for confidential treatment under Rule 24b-2 of the Exchange Act, as amended, and the omitted material has been separately filed with the SEC.

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Signatures

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized, in Tulsa, Oklahoma, on February 24, 2023 February 23, 2024.

ALLIANCE RESOURCE PARTNERS, L.P.

By: Alliance Resource Management GP, LLC
its general partner

/s/ Joseph W. Craft III

Joseph W. Craft III
President, Chief Executive
Officer and Chairman

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Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date

<u>/s/ Joseph W. Craft III</u> Joseph W. Craft III	President, Chief Executive Officer, and Chairman (Principal Executive Officer)	February 24, 2023 23, 2024
<u>/s/ Brian L. Cantrell Cary P. Marshall</u> Brian L. Cantrell Cary P. Marshall	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	February 24, 2023 23, 2024
<u>/s/ Megan J. Cordle</u> Megan J. Cordle	Vice President, Controller and Chief Accounting Officer (Principal Accounting Officer)	February 24, 2023 23, 2024
<u>/s/ Nick Carter</u> Nick Carter	Director	February 24, 2023 23, 2024
<u>/s/ Robert J. Druten</u> Robert J. Druten	Director	February 24, 2023 23, 2024
<u>/s/ John H. Robinson</u> John H. Robinson	Director	February 24, 2023 23, 2024
<u>/s/ Wilson M. Torrence</u> Wilson M. Torrence	Director	February 24, 2023 23, 2024

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Exhibit 4.4

DESCRIPTION OF THE REGISTRANT'S SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF THE
SECURITIES EXCHANGE ACT OF 1934 10.6

THIRD AMENDED AND RESTATED
CHARTER FOR THE AUDIT COMMITTEE
OF THE BOARD OF DIRECTORS OF
ALLIANCE RESOURCE MANAGEMENT GP, LLC

The board of this Exhibit 4.4, references to "the Partnership," "we," "our" and "us" refer only to directors (the "Board") of Alliance Resource Management GP, LLC (the "Company"), the general partner of Alliance Resource Partners, L.P. (the "Partnership"), a Delaware limited partnership ("ARLP" has established the Audit Committee of the Board (the "Committee") with authority, responsibility and not to its subsidiaries or parent.

Common Units

Our common units represent limited partner interests specific duties as described in ARLP. The holders of these common units are entitled to participate in partnership distributions and exercise the rights or privileges available to limited partners under the Fourth this Third Amended and Restated Agreement Charter for the Audit Committee (this "Charter").

MEMBERSHIP

The Committee shall consist of Limited Partnership of ARLP, as amended (the "Partnership Agreement"). For a description three or more directors. Each member of the rights Committee shall be independent in accordance with the requirements of holders Rule 10A-3 promulgated under the Securities Exchange Act of common units 1934 (the "Exchange Act"), the rules of the Nasdaq Stock Market, LLC ("Nasdaq") and any other applicable laws, rules or regulations. The composition of the Committee and qualifications of its members shall comply in all other respects with applicable laws, rules and regulations, including that at least one member of the Committee will be an "audit committee financial expert" (as defined by applicable rules of the Securities and Exchange Commission (the "SEC")). Notwithstanding the foregoing membership requirements and subject to partnership distributions, please read "Cash Distribution Policy." For a description applicable law, no action of other rights and privileges the Committee will be invalid by reason of limited partners under our Partnership Agreement, including voting rights, please read "Description of Our Partnership Agreement." any such requirement not being met at the time such action is taken.

Exchange Listing The members of the Committee shall be appointed by the Board. The Board may remove any member from the Committee at any time with or without cause.

Our common units trade PURPOSE

The purpose of the Committee is to oversee the Partnership's accounting and financial reporting processes and the audit of the Partnership's financial statements. To fulfill this obligation, the Committee relies on management for the preparation and accuracy of the Partnership's financial statements and for establishing effective internal controls and procedures to ensure the Partnership's compliance with applicable accounting standards, financial reporting procedures, laws and regulations. The Committee also relies on the NASDAQ Global Select Market under internal auditors to test and report on the symbol "ARLP." internal controls and control environment, and on the independent auditors for an independent audit in accordance with applicable professional standards. The members of the Committee are not employees of the Company or the Partnership or any of their respective subsidiaries and are not responsible for conducting the audit or performing other accounting procedures.

American Stock Transfer & Trust Company serves as registrar and transfer agent for our common units. We pay all fees charged by the transfer agent for transfers of common units, except the following that must be paid by unitholders:

- surety bond premiums to replace lost or stolen certificates, taxes and other governmental charges;
- special charges for services requested by a holder of a common unit; and
- other similar fees or charges.

There is no charge to unitholders for disbursements of our cash distributions. We will indemnify the transfer agent, its agents and each of their stockholders, directors, officers and employees against all claims and losses that may arise out of acts performed or omitted for its activities as transfer agent, except for any liability due to any gross negligence or intentional misconduct of the indemnified person or entity.

Transfer of Common Units

Any transfer of common units will not be recorded by the transfer agent or recognized by us until either (i) the certificates evidencing the common units being transferred are surrendered for registration of transfer or (ii) the receipt of proper instructions from the registered owner of uncertificated common units. Upon satisfaction of the requirements in our Partnership Agreement with respect to a transfer, the transferee of common units:

- becomes the record holder of the common units and is an assignee until admitted into our partnership as a substituted limited partner;
- automatically requests admission as a substituted limited partner in our partnership;
- agrees to be bound by the terms and conditions of, and executes, our Partnership Agreement;

- represents that the transferee has the capacity, power and authority to enter into the Partnership Agreement;
- grants powers of attorney to officers of our general partner and any liquidator of us as specified in the Partnership Agreement; and
- makes the consents and waivers contained in the Partnership Agreement.

An assignee will become a substituted limited partner of our partnership for DUTIES AND RESPONSIBILITIES

The Committee shall have the transferred common units upon the consent of our general partner following duties and the recording of the name of the assignee on our books and records. The general partner may withhold its consent in its sole discretion.

A transferee's broker, agent or nominee may complete, execute and deliver a transfer application. We are entitled to treat the nominee holder of a common unit as the absolute owner. In that case, the beneficial holder's rights are limited solely to those that it has against the nominee holder as a result of any agreement between the beneficial owner and the nominee holder.

Common units are securities and are transferable according to the laws governing transfer of securities. In addition to other rights acquired upon admission as a substituted limited partner in our partnership for the transferred common units, a purchaser or transferee of common units who does not execute and deliver a transfer application obtains only: responsibilities:

A. •	To (1) select and retain an independent registered public accounting firm to act as the right to assign Partnership's independent auditors for the common unit to a purchaser or other transferee; purpose of auditing the Partnership's annual financial statements, books, records, accounts and internal controls over financial reporting, (2) set the compensation of the Partnership's independent auditors, (3) oversee the work done by the Partnership's independent auditors and (4) terminate the Partnership's independent auditors, if necessary.
B. •	To select, retain, set the right to transfer compensation for, oversee and terminate, if necessary, any other registered public accounting firm engaged (including resolution of disagreements between management and the right to seek admission as a substituted limited partner in our partnership auditor regarding financial reporting) for the transferred common units. Thus, a purchaser purpose of preparing or transferee of common units who does not execute and deliver a transfer application; issuing an audit report or performing other audit, review or attestation services for the Partnership.
C. •	To pre-approve all audit and permitted non-audit and tax services that may be provided by the Partnership's independent auditors or other registered public accounting firms, and establish policies and procedures for the Committee's pre-approval of permitted services by the Partnership's independent auditors or other registered public accounting firms on an on-going basis. The Committee may delegate the authority to grant such pre-approvals to the Committee Chair or a sub-committee of the Committee, which pre-approvals will not receive cash distributions or federal income tax allocations, unless then be reviewed by the common units are held in a nominee or "street name" account and the nominee or broker has executed and delivered a transfer application; and full Committee at its next regular meeting.

- D. At least annually, to obtain and review a report by the Partnership's independent auditors that describes (1) the accounting firm's internal quality control procedures, (2) any material issues raised by the most recent internal quality control review, peer review or Public Company Accounting Oversight Board review of the firm or by any other inquiry or investigation by governmental or professional authorities in the past five years regarding one or more audits carried out by the firm and any steps taken to deal with any such issues, and (3) all relationships between the firm and the Company, the Partnership or any of their respective subsidiaries; and to discuss with the independent auditors this report and any relationships or services that may not receive some federal income tax information or reports furnished to record holders impact the objectivity and independence of common units. the auditors.
- E. To review and discuss with the Partnership's independent auditors (1) the auditors' responsibilities under generally accepted auditing standards, (2) the overall audit strategy, (3) the scope and timing of the annual audit, the procedures to be followed and the staffing of the audit, (4) any significant risks identified during the auditors' risk assessment procedures and (5) the results, including significant findings, of the annual audit.
- F. At least annually, to evaluate the qualifications, performance and independence of the Partnership's independent auditors, including an evaluation of the lead audit partner, and to confirm with the independent registered public accounting firm that the firm is in compliance with the partner rotation requirements established by the SEC.
- G. To obtain and review a report by the Partnership's independent auditors that describes: (1) all critical accounting policies and practices to be used in the audit; (2) all alternative treatments of financial information within generally accepted accounting principles

The transferor of common units has a duty to provide the transferee with all information that may be necessary to transfer the common units. The transferor does not have a duty to insure the execution of the transfer application by the transferee and has no liability or responsibility if the transferee neglects or chooses not to execute and forward the transfer application to the transfer agent. 2

Until a common unit has been transferred on our books, we and the transfer agent may treat the record holder of the common unit as the absolute owner for all purposes, except as otherwise required by law or stock exchange regulations.

("GAAP") that have been discussed with management, the ramifications of the use of such alternative treatments and the treatment preferred by the auditors; and (3) other material written communications between the auditors and management.

- H. To keep the Partnership's independent auditors informed of the Committee's understanding of the Partnership's relationships and transactions with related parties that are significant to the Partnership; and to review and discuss with the Partnership's independent auditors the auditors' evaluation of the Partnership's identification of, accounting for, and disclosure of its relationships and transactions with related parties, including any significant matters arising from the audit regarding the Partnership's relationships and transactions with related parties.
- I. To review updates from management regarding, and discuss with management, the Partnership's data privacy, cybersecurity and information technology risks, as well as related key initiatives and action plans.

- J. To review and discuss with the Partnership's independent auditors and management the Partnership's annual audited financial statements and unaudited quarterly financial statements (including the related notes), the form of audit opinion to be issued by the auditors on the annual audited financial statements and the disclosure under "Management's Discussion and Analysis of Financial Condition and Results of Operations" to be included in the Partnership's annual report on Form 10-K before the Form 10-K is filed and quarterly reports on Forms 10-Q before the applicable Form 10-Q is filed.
- K. To review disclosures provided by the Partnership's Chief Executive Officer and Chief Financial Officer to the Committee during their certification process for the Partnership's annual report on Form 10-K and quarterly reports on Form 10-Q about any significant deficiencies in the design or operation of internal controls or material weaknesses therein.
- L. To recommend to the Board that the audited financial statements be included in the Partnership's Form 10-K and produce the audit committee report required to be included in the Partnership's annual report.
- M. To review with management, the internal auditors and the Partnership's independent auditors the adequacy and effectiveness of the Partnership's financial reporting processes, internal control over financial reporting and disclosure controls and procedures, including any significant deficiencies or material weaknesses in the design or operation of, and any material changes in, the Partnership's processes, controls and procedures and any special audit steps adopted in light of any material control deficiencies, and any fraud involving management or other employees with a significant role in such processes, controls and procedures.
- N. To set clear Company and Partnership hiring policies for employees or former employees of the Partnership's independent auditors.
- O. To establish and oversee procedures for the receipt, retention and treatment of complaints received by the Company or the Partnership regarding accounting, internal accounting controls or auditing matters and the confidential, anonymous submission by employees of

CASH DISTRIBUTION POLICY³

the Company, the Partnership or any of their respective subsidiaries of concerns regarding questionable accounting or auditing matters.

- P. The Committee shall obtain written or verbal reports from the management employee responsible for ethics oversight with respect to compliance by the employees of the Company, the Partnership or any of their respective subsidiaries with the Code of Ethics.
- Q. To review with management and the Partnership's independent auditors the Company's earnings press releases, including financial information and earnings guidance provided therein.

OUTSIDE ADVISORS AND INDEPENDENT INVESTIGATIONS

The Committee shall have the authority, in its sole discretion, to retain and obtain the advice and assistance of Available Cash independent outside counsel and such other advisors as it deems necessary to fulfill its duties and responsibilities under this Charter. The Committee may also utilize the services of the Company's regular outside legal counsel and other advisors. The Committee shall also have the authority to investigate any matter brought to its attention, including, but not limited to, complaints or restatements relating to accounting, internal accounting controls or auditing matters, within the scope of the responsibilities delegated to the Committee as it deems appropriate, including the authority to request any officer, employee or advisor of the Company meet with the Committee or any advisors engaged by the Committee. The Committee shall set the compensation, and oversee the work, of any outside counsel, experts and other advisors retained for the purposes of carrying out its duties.

General. Available cash with respect to each quarter may, at The Committee shall receive appropriate funding from the discretion Company, as determined by the Committee in its capacity as a committee of the general partner, be Board, for the payment of (i) distributed in respect of repurchases compensation to the Partnership's independent auditors or any other accounting firm engaged to perform services for the Partnership, (ii) any outside counsel or experts and any other advisors retained by the Committee and (iii) ordinary administrative expenses of the common units or (ii) distributed to the limited partners as of a record date selected by the general partner in accordance with each limited partner's percentage interest. Any distribution pursuant to clause (ii) will be made within 45 days following the end of the applicable quarter.

Definition of Available Cash. Available cash generally means, for any quarter ending prior to liquidation, all cash on hand at the end of that quarter less the amount of cash reserves Committee that are necessary or appropriate in carrying out its duties.

STRUCTURE AND OPERATIONS

Unless the reasonable discretion Chair is elected by the full Board, the members of the general partner to:

- provide for the proper conduct of our business;
- comply with applicable law or any partnership debt instrument or other agreement; or
- provide funds for distributions to unitholders in respect of any one or more of the next four quarters.

General Partner Interest Committee shall elect a Chair by a majority vote of all the Committee members. The Committee shall meet at least quarterly at such times and places as it deems necessary to fulfill its responsibilities. Minutes shall be taken for each Committee meeting which shall then be approved at the next regular meeting of the Committee. The Committee shall report regularly to the Board regarding its actions, unless all other directors are present as guests at the Committee's meetings, and make recommendations to the Board as appropriate. The Committee is governed by the same rules regarding meetings (including meetings in person or by telephone or other similar communications equipment), action without meetings, notice, waiver of notice, and quorum and voting requirements as are applicable to the Board.

The general partner owns a non-economic general partner interest in ARLP. Committee shall, at least annually, review and evaluate its own performance and submit itself to the Board's review and evaluation.

Effect of Issuance of Additional Units⁴

The Committee shall review this Charter at least annually and recommend any proposed changes to the Board for approval. The Partnership shall make this Charter available on or other equity securities for consideration through the Partnership's website as required by applicable rules and under terms regulations. In addition, the Partnership shall disclose in its Annual Report on Form 10-K that a copy of this Charter is available on the Partnership's website and conditions approved by our general partner provide the website address.

DELEGATION OF AUTHORITY

The Committee shall have the authority to delegate any of its responsibilities, along with the authority to take action in relation to such responsibilities, to one or more subcommittees as the Committee in its sole discretion deems appropriate from time to time under the circumstances and without the approval of our unitholders. We may fund acquisitions through the issuance of additional common units or other equity securities, consistent with applicable law.

Holders of any additional common units that we issue will be entitled to share equally with our then-existing unitholders in distributions of available cash. In addition, the issuance of additional interests may dilute the value of the interests of the then-existing unitholders. As Revised: January 24, 2024

Distribution of Cash Upon Liquidation Exhibit 10.13

General. If we dissolve and liquidate, we will sell our assets or otherwise dispose of our assets and we will adjust the partners' capital account balances to show any resulting gain or loss. We will first apply the proceeds of liquidation to the payment of our creditors in the order of priority provided in our Partnership Agreement and by law and, thereafter, distribute to the unitholders in accordance with their adjusted capital account balances.

Manner of Adjustment. If we liquidate, we would allocate any loss to the general partner and each unitholder as follows:

- First, to the unitholders, in accordance with their percentage interests, until the capital accounts of the unitholders have been reduced to zero; and
- Thereafter, 100% to the general partner.

Interim Adjustments to Capital Accounts. If we issue additional security interests or make distributions of property, we will make interim adjustments to capital accounts. These adjustments would be based on the fair market value of the interests or the property distributed and any gain or loss would be allocated to the unitholders and the general partner in the same way that a gain or loss is allocated upon liquidation.

ALLIANCE RESOURCE PARTNERS, L.P.

COMPENSATION COMMITTEE CHARTER

Adopted: February 28, 2007

Amended and Restated: February 22, 2008

Amended and Restated: January 27, 2009

Amended and Restated: February 23, 2010

Amended and Restated: January 27, 2022

Amended and Restated: January 27, 2023

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COMPENSATION COMMITTEE CHARTER

Adopted February 28, 2007

Amended and Restated February 22, 2008

Amended and Restated January 27, 2009

Amended and Restated February 23, 2010

Amended and Restated January 27, 2022

Amended and Restated January 27, 2023

I. Purpose of Committee

The purpose of the Compensation Committee (the "Committee") of the Board of Directors (the "Board") of Alliance Resource Management GP, LLC (the "Company"), the managing general partner of Alliance Resource Partners, L.P. (the "Partnership"), is to discharge the Board's responsibilities relating to compensation of the Partnership's executives and the Company's directors and to produce an annual report relating to the CD&A (as defined below) for inclusion in the Partnership's Annual Report on Form 10-

K, in accordance with the rules and regulations of the Securities and Exchange Commission (the “SEC”).

II. Committee Membership

The Committee shall be composed of all members of the Board whom the Board has determined (i) have no material relationship with the Company, the Partnership or any of its consolidated subsidiaries and (ii) are otherwise “independent” under the NASDAQ rules; provided, however, that at all times, the Committee shall be composed of at least two members.

All matters before the Committee shall be determined by a majority vote of the Committee members present.

Members shall be appointed by the Board and shall serve at the pleasure of the Board and for such terms as the Board may determine.

III. Committee Structure and Operations

The Board shall designate one member of the Committee as its chairperson. The Committee shall meet in person, by videoconference, or telephonically at least four times a year at a time and place determined by the Committee chairperson, with further meetings to occur, or actions to be taken by unanimous written consent, when deemed necessary or desirable by the Committee or its chairperson. The Committee shall produce a report that summarizes the actions taken at each Committee meeting, and such report shall be presented to the Board at the next Board meeting.

The Committee may invite such members of management to its meetings, as it may deem desirable or appropriate, consistent with the maintenance of the confidentiality of compensation discussions. The Partnership’s President and Chief Executive Officer (the “CEO”) should attend all meetings of the Committee, including any meeting where the CEO’s performance or compensation is discussed, unless specifically excused by the Committee; provided, however, that

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the CEO shall not be present during the voting or deliberations regarding his or her own compensation.

IV. Committee Duties and Responsibilities

The following are the duties and responsibilities of the Committee:

1. To review corporate goals and objectives relative to the CEO.
2. To set the CEO’s compensation level.
3. To review corporate goals and objectives relative to the Partnership’s senior executive officers, including the Partnership’s named executive officers.

4. To set the compensation level of the Partnership's senior executive officers.
5. Review and approve, in consultation with senior management, the Partnership's general compensation philosophy, strategy, policies and programs.
6. Review and approve, in consultation with senior management, the Partnership's executive compensation programs including the establishment of salaries and other compensation for the Partnership's CEO, Chief Financial Officer and the other senior executive officers, including those named in the Summary Compensation Table.
7. Review and approve the Partnership's management incentive compensation plans, and equity-based plans, including, without limitation, the Partnership's short-term incentive plan (STIP), long-term incentive plan (LTIP) and supplemental executive retirement plan (SERP).
8. Review and approve grants of restricted units under the LTIP or other awards pursuant to such plan and any other equity-based plans, if applicable.
9. Periodically review senior management's recommendations with respect to the Partnership's ERISA-qualified benefit plans and retirement program.
10. Review perquisites or other personal benefits to the Partnership's executive officers and the Company's directors and recommend any changes to the Company's Board of Directors.
11. Review expense statements of executive officers.
12. To the extent we have any employment agreements or any of the following arrangements, review and approve any employment agreements, severance or termination arrangements or change of control arrangements to be made with any executive officer of the Partnership.

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13. Approve a policy regarding director compensation and recommend to the Board annual retainer amounts consistent with the director compensation policy.
 14. In connection with the Partnership's Annual Report on Form 10-K or other applicable SEC filing:
 - (A) review and discuss with management the Compensation Discussion and Analysis ("CD&A") required by SEC Regulation S-K, Item 402. Based on such review and discussion, recommend to the Board that the CD&A be included in the Partnership's Annual Report on Form 10-K or other applicable SEC filing.

- (B) prepare the compensation committee report in accordance with all applicable rules and regulations of the SEC for inclusion above the names of the members of the compensation committee in the Partnership's Annual Report on Form 10-K. This report shall state the Committee (i) reviewed and discussed with management the CD&A and (ii) based on such review and discussion, recommended to the Board that the CD&A be included in the Partnership's Annual Report on Form 10-K or other applicable SEC filing.
- 15. Following adoption of a clawback policy by the Board, to the extent the Board or Audit Committee of the Board has determined that an accounting restatement has occurred, the Committee will review and consider whether such restatement requires recoupment of incentive-based compensation received by current or former executive officers, in accordance with the terms of the then-existing clawback policy.
- 16. In its sole discretion, have the ability to retain and provide appropriate funding to experts, consultants and other advisors, including without limitation, independent counsel, compensation consulting firms and legal or other advisors as the Committee deems necessary, to aid in the Committee's discharge of its duties. In the event that such an expert, consultant or other advisor is engaged, then the Committee shall:
 - (A) be directly responsible for the appointment, compensation and oversight of the work of such outside persons; and
 - (B) analyze the relationships of such outside persons with all members of the Committee as well as the Company as a whole. This analysis must include the specific factors identified by the SEC and the NASDAQ as well as any other factors that affect the independence of such outside persons.
- 17. Perform such other activities consistent with the Committee's charter, the Partnership's partnership agreement, the Partnership's Certificate of Limited Partnership, the Company's Certificate of Formation, governing law, the rules and regulations of the NASDAQ and such other requirements applicable to us as the Committee or the Board deem necessary or appropriate.

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- 18. Review and reassess the adequacy of the Committee's charter annually and submit recommended changes, if any, to the Board for its consideration and approval.
 - 19. Annually perform an evaluation of itself.

V. Delegation to Subcommittee

The Committee may, in its discretion, delegate all or a portion of its duties and responsibilities to a subcommittee of the Committee. In particular, the Committee may delegate the approval of certain transactions to a subcommittee composed solely of one or more members of the Committee who are "Non-Employee Directors" for the purposes of Rule 16b-3 under the Securities Exchange Act of 1934, as in effect from time to time.

VI. Resources and Authority of the Committee

The Committee shall have the resources and authority appropriate to discharge its duties and responsibilities, including the authority to select, retain, terminate, and approve the fees and other retention terms of special counsel or other experts or consultants, as it deems appropriate, without seeking approval of the Board or management. With respect to consultants retained to assist in the determination or evaluation of director, CEO or senior executive compensation, this authority shall be vested solely in the Committee.

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Exhibit 10.30

**THIRTEENTH AMENDMENT TO THE
RECEIVABLES FINANCING AGREEMENT**

BETWEEN

AROP FUNDING, LLC,

as Borrower;

ALLIANCE COAL, LLC,

as initial Servicer; and

PNC CAPITAL MARKETS LLC,

as Structuring Agent; and

PNC BANK, NATIONAL ASSOCIATION,

as LC Bank, LC Participant, Lender and Administrative Agent.

***Note:** The Receivables Financing Agreement was amended on April 21, 2023 by a Twelfth Amendment to the Receivables Financing Agreement that amended certain defined terms but was immaterial for SEC reporting purposes.

The following is a summary of certain material provisions of our Partnership Agreement that relate to ownership of our common units.

Capital Contributions

Unitholders are not obligated to make additional capital contributions, except as described below under “—Limited Liability.”

Voting Rights

The following is a summary of the common unitholder vote required for approval of the matters specified below. Matters that call for the approval of a “unit majority” require the approval of a majority of outstanding common units.

In voting their common units, the general partner and its affiliates have no duty or obligation whatsoever to us or the limited partners, including any duty to act in the best interests of us or the limited partners.

Issuance of additional units	No approval right.
Amendment of our Partnership Agreement	Certain amendments may be made by the general partner without the approval of the unitholders. Other amendments generally require the approval of a unit majority. Please read “—Amendment of Our Partnership Agreement.”
Merger of the Partnership or the sale of all or substantially all of our assets	Unit majority in certain circumstances. Please read “—Merger, Sale or Other Disposition of Assets.”
Dissolution of the Partnership	Unit majority. Please read “—Termination and Dissolution.”
Continuation of our business upon dissolution	Unit majority. Please read “—Termination and Dissolution.”
Withdrawal of the general partner	No approval right. Please read “—Withdrawal or Removal of the General Partner.”
Removal of the general partner	Not less than 66.7% of the outstanding units, voting as a single class, including units held by the general partner and its affiliates. Please read “—Withdrawal or Removal of the General Partner.”
Transfer of the general partner interest	No approval right.
Transfer of ownership interests in the general partner	No approval right.

If any person or group other than our general partner and its affiliates acquires beneficial ownership of 20% or more of any class of units, that person or group loses voting rights on all of its units. This loss of voting rights does not apply to any person or group that acquires the units from our general partner or its affiliates and any transferees of that person or group approved by our general partner.

Applicable Law

Our Partnership Agreement is governed by Delaware law, without regard to its principles of conflicts of law.

Limited Liability

Assuming that a limited partner does not participate in the control of our business within the meaning of the Delaware Revised Uniform Limited Partnership Act (the "Delaware Act") and otherwise acts in conformity with the provisions of our Partnership Agreement, its liability under the Delaware Act will be limited, subject to possible exceptions, to the amount of capital it is obligated to contribute to us for its common units plus its share of any undistributed profits and assets. If it were determined, however, that the right or exercise of the right by the limited partners as a group:

- to remove or replace the general partner;
- to approve some amendments to our Partnership Agreement; or
- to take other action under our Partnership Agreement

constituted "participation in control" of our business for purposes of the Delaware Act, then the limited partners could be held personally liable for our obligations under the laws of Delaware to the same extent as the general partner. This liability would extend to persons who transact business with us who reasonably believe that the limited partner is a general partner.

Under the Delaware Act, a limited partnership may not make a distribution to a partner if, after the distribution, all liabilities of the limited partnership, other than liabilities to partners on account of their partnership interests and liabilities for which the recourse of creditors is limited to specific property of the Partnership, exceed the fair value of the assets of the limited partnership. For the purpose of determining the fair value of the assets of a limited partnership, the Delaware Act provides that the fair value of property subject to liability for which recourse of creditors is limited shall be included in the assets of the limited partnership only to the extent that the fair value of that property exceeds the nonrecourse liability. The Delaware Act provides that a limited partner who receives a distribution and knew at the time of the distribution that the distribution was in violation of the Delaware Act shall be liable to the limited partnership for the amount of the distribution for three years. Under the Delaware Act, an assignee who becomes a substituted limited partner of a limited partnership is liable for the obligations of its assignor to make contributions to the Partnership, except the assignee is not obligated for liabilities unknown to it at the time it became a limited partner and which could not be ascertained from our Partnership Agreement.

Issuance of Additional Securities

Our Partnership Agreement authorizes us to issue an unlimited number of additional limited partner interests and other securities for the consideration and on the terms and conditions established by the general partner in its sole discretion without the approval of any limited partners.

It is possible that we will fund acquisitions through the issuance of additional common units or other securities. Holders of any additional common units we issue will be entitled to share equally with the then-existing holders of common units in our distributions of available cash. See "Cash Distribution Policy" above. In addition, the issuance of additional partnership interests may dilute the value of the interests of the then-existing holders of common units in our net assets.

In accordance with Delaware law and the provisions of our Partnership Agreement, we may also issue additional securities that, in the sole discretion of the general partner, may have special voting

rights to which the common units are not entitled.

Amendment of Our Partnership Agreement

General. Amendments to our Partnership Agreement may be proposed only by or with the consent of the general partner which consent may be given or withheld in its sole discretion. A proposed amendment shall be effective upon approval by the holders of a unit majority, unless a greater or different percentage is required under our Partnership Agreement or by Delaware law. Each proposed amendment that requires the approval of the holders of a specified percentage of outstanding common units shall be set forth in a writing that contains the text of the proposed amendment. If such an amendment is proposed, the general partner shall seek the written approval of the requisite percentage of common units or call a meeting of the unitholders to consider and vote on such proposed amendment. The general partner shall notify all record holders upon final adoption of any such proposed amendments.

Prohibited Amendments. No amendment may be made that would:

- enlarge the obligations of any limited partner without its consent, unless approved by at least a majority of the type or class of limited partner interests so affected
- enlarge the obligations of, restrict in any way any action by or rights of, or reduce in any way the amounts distributable, reimbursable or otherwise payable by the Partnership to the general partner or any of its affiliates without its consent, which may be given or withheld in its sole discretion;
- change the term of the Partnership;
- provide that the Partnership is not dissolved upon the expiration of its term or upon an election to dissolve the Partnership by the general partner that is approved by the holders of a majority of the outstanding common units; or
- give any person the right to dissolve the Partnership other than the general partner's right to dissolve the Partnership with the approval of the holders of a majority of the outstanding common units.

The provision of our Partnership Agreement preventing the amendments having the effects described in the clauses above can be amended upon the approval of the holders of at least 90% of the outstanding common units.

No Unitholder Approval. The general partner may generally make amendments to our Partnership Agreement without the approval of any limited partner or assignee to reflect:

- a change in the name of the Partnership, the location of the principal place of business of the Partnership, the registered agent or the registered office of the Partnership;
- the admission, substitution, withdrawal or removal of partners in accordance with our Partnership Agreement;
- a change that, in the sole discretion of the general partner, is necessary or advisable to qualify or continue the qualification of the Partnership as a limited partnership or a partnership in which the limited partners have limited liability under the laws of any state or to ensure that the Partnership will not be treated as an association taxable as a corporation or otherwise taxed as an entity for federal income tax purposes;
- an amendment that is necessary, in the opinion of counsel, to prevent the Partnership or the general partner or their directors, officers, trustees or agents from in any manner being subjected to the provisions of the Investment Company Act of 1940, as amended, the Investment Advisers Act of 1940, as amended, or "plan asset" regulations adopted under the Employee Retirement Income Security Act of 1974, as amended, regardless of whether such are substantially similar to plan asset regulations currently applied or proposed by the United States Department of Labor;
- an amendment that in the discretion of the general partner is necessary or advisable for the authorization or issuance of any class or series of securities;
- any amendment expressly permitted in our Partnership Agreement to be made by the general partner acting alone;
- an amendment effected, necessitated or contemplated by a merger agreement that has been approved under the terms of our Partnership Agreement;

- any amendment that, in the discretion of the general partner, is necessary or advisable for the formation by the Partnership of, or its investment in, any corporation, partnership or other entity, as otherwise permitted by our Partnership Agreement;
- a change in the fiscal year or taxable year of the Partnership and related changes; and
- any other amendments substantially similar to any of the matters described in above.

In addition, the general partner may make amendments to our Partnership Agreement without the approval of any limited partner or assignee if those amendments, in the discretion of the general partner:

- do not adversely affect the limited partners in any material respect;
- are necessary or advisable to satisfy any requirements, conditions or guidelines contained in any opinion, directive, order, ruling or regulation of any federal or state agency or judicial authority or contained in any federal or state statute;
- are necessary or advisable to facilitate the trading of limited partner interests or to comply with any rule, regulation, guideline or requirement of any securities exchange on which the limited partner interests are or will be listed for trading, compliance with any of which the general partner deems to be in the best interests of the Partnership and the limited partners;
- are necessary or advisable for any action taken by the general partner relating to splits or combinations of units under the provisions of our Partnership Agreement; or
- are required to effect the intent of the provisions of our Partnership Agreement or are otherwise contemplated by our Partnership Agreement.

Opinion of Counsel. No amendments, except those under “—No Unitholder Approval” shall become effective without the approval of the holders of at least 90% of the then outstanding common units, unless the Partnership obtains an opinion of counsel to the effect that such amendment will not affect the limited liability of any limited partner under applicable law.

Any amendment that would have a material adverse effect on the rights or preferences of any type or class of outstanding units in relation to other classes of units will require approval by the holders of a majority of the outstanding common units of the class affected. Any amendment that reduces the voting percentage required to take any action is required to be approved by the affirmative vote of limited partners constituting not less than the voting requirement sought to be reduced.

Merger, Sale or Other Disposition of Assets

A merger or consolidation of us requires the prior consent of our general partner. However, our general partner has no duty or obligation to consent to any merger or consolidation and may decline to do so free of any duty or obligation whatsoever to us or the limited partners, including any duty to act in good faith or in the best interest of us or the limited partners.

The general partner is generally prohibited, without the prior approval of holders of a majority of the outstanding common units, from causing the Partnership to, among other things, sell, exchange or otherwise dispose of all or substantially all of its assets in a single transaction or a series of related transactions, including by way of merger, consolidation or other combination; provided that the general partner may mortgage, pledge, hypothecate or grant a security interest in all or substantially all of the Partnership’s assets without that approval. The general partner may also sell all or substantially all of the Partnership’s assets under a foreclosure or other realization upon the encumbrances above without that approval.

If the conditions specified in our Partnership Agreement are satisfied, our general partner may convert us or any of our subsidiaries into a new limited liability entity or merge us or any of our subsidiaries into, or convey some or all of our assets to, a newly formed entity if the sole purpose of that merger or conveyance is to effect a mere change in our legal form into another limited liability entity. The limited partners are not entitled to dissenters’ rights of appraisal under our Partnership Agreement or applicable Delaware law in the event of a conversion, merger or consolidation, a sale of substantially all of our assets, or any other transaction or event.

Termination and Dissolution

We will continue until close of Partnership business on December 31, 2098, unless terminated sooner under our Partnership Agreement. We will dissolve upon:

- the election of the general partner to dissolve us, if approved by the holders of a majority of the outstanding common units;
- the withdrawal or removal of the general partner or any other event that results in its ceasing to be the general partner other than by reason of a transfer of its general partner interest in accordance with our Partnership Agreement or withdrawal or removal following approval and admission of a successor;
- the entry of a decree of judicial dissolution of the Partnership; or
- the sale of all or substantially all of the assets and properties of the Partnership.

Upon a dissolution under the second bullet point above, the holders of a majority of the outstanding common units may also elect, within specific time limitations, to reconstitute the Partnership and continue its business on the same terms and conditions described in our Partnership Agreement by forming a new limited partnership on terms identical to those in our Partnership Agreement and having as a successor general partner an entity approved by the holders of units representing a unit majority, subject to receipt by the Partnership of an opinion of counsel to the effect that:

- the action would not result in the loss of limited liability of any limited partner; and
- neither the Partnership, the reconstituted limited partnership, Alliance Resource Operating Partners, L.P., nor Alliance Coal, LLC would be treated as an association taxable as a corporation or otherwise be taxable as an entity for federal income tax purposes upon the exercise of that right to continue.

Liquidation and Distribution of Proceeds

Upon our dissolution, unless we are reconstituted and continued as a new limited partnership, the liquidator authorized to wind up our affairs will, acting with all of the powers of the general partner that the liquidator deems necessary or desirable in its good faith judgment, liquidate our assets and apply the proceeds of the liquidation as provided in "Cash Distribution Policy—Distribution of Cash Upon Liquidation." The liquidator may, in its absolute discretion, defer liquidation or distribution of our assets for a reasonable period of time or distribute assets to partners in kind if it determines that a sale would be impractical or would cause undue loss to the partners. With respect to any liability that is contingent, conditional or unmaturing or is otherwise not yet due and payable, the liquidator shall either settle such claim for such amount as it thinks appropriate or establish a reserve of cash or other assets to provide for its payment. When paid, any unused portion of the reserve shall be distributed as additional liquidation proceeds.

Withdrawal or Removal of the General Partner

The general partner may withdraw as the general partner without first obtaining approval from any unitholder by giving 90 days' written notice, and that withdrawal will not constitute a violation of our Partnership Agreement. In addition, our Partnership Agreement permits the general partner in some instances to sell or otherwise transfer all of its general partner interests in the Partnership without the approval of the unitholders.

Upon the withdrawal of the general partner under any circumstances, other than as a result of a transfer by the general partner of all or a part of its general partner interests in the Partnership, the holders of a majority of the outstanding common units may, prior to the effective date, select a successor to that withdrawing general partner. If a successor is not elected, or is elected but an opinion of counsel regarding limited liability and tax matters cannot be obtained, the Partnership will be dissolved, wound up

and liquidated, unless within 180 days after that withdrawal the holders of a majority of the outstanding common units agree in writing to continue the business of the Partnership and to appoint a successor general partner. See “—Termination and Dissolution” above.

The general partner may not be removed unless that removal is approved by the vote of the holders of not less than 66.7% of the outstanding units, including units held by the general partner and its affiliates, and the Partnership receives an opinion of counsel regarding limited liability and tax matters. Any removal of this kind is also subject to the approval of a successor general partner by the vote of the holders of a majority of the outstanding common units.

Withdrawal of Limited Partners

No limited partner has any right to withdraw from the Partnership, except that when a transferee of a limited partner's limited partner interest becomes a record holder of the limited partner interest so transferred, such transferring limited partner will cease to be a limited partner with respect to the limited partner interest so transferred

Change of Management Provisions

Our Partnership Agreement contains specific provisions that are intended to discourage a person or group from attempting to remove Alliance Resource Management GP, LLC as our general partner or otherwise change management. If any person or group other than the general partner and its affiliates acquires beneficial ownership of 20% or more of any class of units, that person or group loses voting rights on all of its units. This loss of voting rights does not apply to any person or group that acquires the units from our general partner or its affiliates and any transferees of that person or group approved by our general partner. Please read “—Voting Rights.”

Limited Call Right

If at any time our general partner and its affiliates own more than 80% of the then-issued and outstanding limited partner interests of any class, our general partner will have the right, which it may assign in whole or in part to any of its affiliates or to us, to acquire all, but not less than all, of the limited partner interests of the class held by unaffiliated persons, as of a record date to be selected by our general partner, on at least 10, but not more than 60, days' notice. The purchase price in the event of this purchase is the greater of:

- the highest price paid by our general partner or any of its affiliates for any limited partner interests of the class purchased within the 90 days preceding the date on which our general partner first mails notice of its election to purchase those limited partner interests; and
- the average of the daily closing prices of the Partnership securities of such class over the 20 trading days preceding the date that is three days before the date the notice is mailed.

As a result of our general partner's right to purchase outstanding limited partner interests, a holder of limited partner interests may have his limited partner interests purchased at an undesirable time or at a price that may be lower than market prices at various times prior to such purchase or lower than a common unitholder may anticipate the market price to be in the future.

Status as Limited Partner or Assignee

By transfer of common units in accordance with our Partnership Agreement, each transferee of common units shall be admitted as a limited partner with respect to the common units transferred when such transfer and admission are reflected in our books and records. Except as described above under “—

Limited Liability", the common units will be fully paid, and unitholders will not be required to make additional contributions.

Non-Citizen Assignees; Redemption

If we are or become subject to federal, state or local laws or regulations that, in the reasonable determination of the general partner, creates a substantial risk of cancellation or forfeiture of any property that we have an interest in because of the nationality, citizenship or other related status of any limited partner or assignee, we may redeem the units held by the limited partner or assignee at their current market price. In order to avoid any cancellation or forfeiture, the general partner may require each limited partner or assignee to furnish information about his nationality, citizenship or related status. If a limited partner or assignee fails to furnish information about this nationality, citizenship or other related status within 30 days after a request for the information or the general partner determines after receipt of the information that the limited partner or assignee is not an eligible citizen, the limited partner or assignee may be treated as a non-citizen assignee. In addition to other limitations on the rights of an assignee who is not a substituted limited partner, a non-citizen assignee does not have the right to direct the voting of his units and may not receive distributions in kind upon our liquidation.

Exhibit 10.54

Execution Version

ELEVENTH AMENDMENT TO THE RECEIVABLES FINANCING AGREEMENT

This ELEVENTH THIRTEENTH AMENDMENT TO THE RECEIVABLES FINANCING AGREEMENT (this "Amendment"), dated as of January 13, 2023 January 12, 2024, is entered into by and among the following parties:

- (i) AROP FUNDING, LLC ("Borrower"), as Borrower;
- (ii) ALLIANCE COAL, LLC, as initial Servicer; and
- (iii) PNC CAPITAL MARKETS LLC, a Pennsylvania limited liability company, as Structuring Agent; and
- (iv) PNC BANK, NATIONAL ASSOCIATION ("PNC"), as LC Bank, LC Participant, Lender and Administrative Agent.

Capitalized terms used but not otherwise defined herein (including such terms used above) have the respective meanings assigned thereto in the Receivables Financing Agreement described below.

BACKGROUND

A. The parties hereto have entered into a Receivables Financing Agreement, dated as of December 5, 2014 (as amended, restated, supplemented or otherwise modified through to the date hereof, the "Receivables Financing Agreement").

B. Concurrently herewith, the parties hereto are entering into an Amended and Restated Fee Letter (the "Fee Letter") dated as of the date hereof.

C. The parties hereto desire to amend the Receivables Financing Agreement as set forth herein.

NOW, THEREFORE, with the intention of being legally bound hereby, and in consideration of the mutual undertakings expressed herein, each party to this Amendment hereby agrees as follows:

SECTION 1. Amendments to the Receivables Financing Agreement. The Receivables Financing Agreement is hereby amended as follows:

(a) shown on the definition of "Credit Agreement" marked pages set forth in on Section 1.01 Exhibit A of the Receivables Financing Agreement is amended by restating in its entirety as follows:

(i) "Credit Agreement" means the Credit Agreement, dated as of January 13, 2023, among Alliance Coal LLC, as borrower, the lenders from time to time party thereto, the letter of credit issuing banks from time to time party thereto and the Credit Agreement Administrative Agent, as amended, restated, amended

and restated, supplemented or otherwise modified from time to time.

(b) the definition of "Credit Agreement Administrative Agent" set forth in Section 1.01 of the Receivables Financing Agreement is amended by restating in its entirety as follows:

(i) "Credit Agreement Administrative Agent" means PNC Bank, National Association, as administrative agent and/or collateral agent under the Credit Agreement.

(c) the definition of "No-Petition Letter" set forth in Section 1.01 of the Receivables Financing Agreement is amended by restating in its entirety as follows:

(i) "No-Petition Letter" means that certain Letter Agreement re Pledge of SPV Interests, entered into, or to be entered into, in connection with the Eleventh Amendment to this Agreement, by and among the Credit Agreement Administrative Agent, the Administrative Agent and the other parties thereto.

Notwithstanding the foregoing, until such time as the Credit Agreement is entered and becomes effective, the defined terms "Credit Agreement", "Credit Agreement Administrative Agent" and "No-Petition Letter" shall continue to have the meanings in effect prior to giving effect to the foregoing amendments to such defined terms.

(d) the definition of "Scheduled Termination Date" set forth in Section 1.01 of the Receivables Financing Agreement is amended by deleting the date "January 13, 2023" where it appears therein and substituting "January 12, 2024" therefor.

(e) each of Sections 7.01(e) and 7.02(e) of the Receivables Financing Agreement is amended by adding the following sentence to the end of such Section:

Without limiting the foregoing, the receivables securitization program evidenced by this Agreement and the other Transaction Documents is (and has been at all times on and after January 13, 2023) permitted and incurred pursuant to Section 5.02(b)(xi) of the Credit Agreement.

(f) the following new clause (aa) is added to the end of Section 8.01 of the Receivables Financing Agreement:

(aa) Credit Agreement Carve-Out. The Borrower shall at all times cause the receivables securitization program evidenced by this Agreement and the other Transaction Documents to be permitted and incurred pursuant to Section 5.02(b)(xi) of the Credit Agreement. The Borrower shall not permit Section 5.02(b)(xi) of the Credit Agreement to be amended, removed or otherwise

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modified, except with the Administrative Agent's prior written consent.

(g) the following new clause (o) is added to the end of Section 8.02 of the Receivables Financing Agreement:

(o) Credit Agreement Carve-Out. The Servicer shall at all times cause the receivables securitization program evidenced by this Agreement and the other Transaction Documents to be permitted and incurred pursuant to Section 5.02(b)(xi) of the Credit Agreement. The Servicer shall not permit Section 5.02(b)(xi) of the Credit Agreement to be amended, removed or otherwise modified, except with the Administrative Agent's prior written consent.

(h) Section 10.01(f) of the Receivables Financing Agreement is amended by restating sub-clause (ii) thereof in its entirety as follows:

(ii) the Days' Sales Outstanding shall exceed 50 days; hereto.

SECTION 2. Representations and Warranties of the Borrower and Servicer. The Borrower and the Servicer hereby represent and warrant to each of the parties hereto as of the date hereof as follows:

(a) *Representations and Warranties*. The representations and warranties made by it in the Receivables Financing Agreement and each of the other Transaction Documents to which it is a party are true and correct as of the date hereof.

(b) *Enforceability*. The execution and delivery by it of this Amendment, and the performance of its obligations under this Amendment, the Receivables Financing Agreement (as amended hereby) and the other Transaction Documents to which it is a party are within its organizational powers and have been duly authorized by all necessary action on its part, and this Amendment, the Receivables Financing Agreement (as amended hereby) and the other

Transaction Documents to which it is a party are (assuming due authorization and execution by the other parties thereto) its valid and legally binding obligations, enforceable in accordance with its terms, except (x) the enforceability thereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws from time to time in effect relating to creditors' rights, and (y) the remedy of specific performance and injunctive and other forms of equitable relief may be subject to equitable defenses and to the discretion of the court before which any proceeding therefor may be brought.

(c) *No Event of Default.* No Event of Default or Unmatured Event of Default has occurred and is continuing, or would occur as a result of this Amendment or the transactions contemplated hereby.

SECTION 3. Effect of Amendment; Ratification. All provisions of the Receivables Financing Agreement and the other Transaction Documents, as expressly amended and modified

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by this Amendment, shall remain in full force and effect. After this Amendment becomes effective, all references in the Receivables Financing Agreement (or in any other Transaction Document) to "this Receivables Financing Agreement", "this Agreement", "hereof", "herein" or words of similar effect referring to the Receivables Financing Agreement shall be deemed to be references to the Receivables Financing Agreement as amended by this Amendment. This Amendment shall not be deemed, either expressly or impliedly, to waive, amend or supplement any provision of the Receivables Financing Agreement other than as set forth herein. The Receivables Financing Agreement, as amended by this Amendment, is hereby ratified and confirmed in all respects.

SECTION 4. Conditions to Effectiveness. Effectiveness. This Amendment shall become effective as of the date hereof upon the Administrative Agent's receipt of (a) counterparts of this Amendment and the Related Agreements executed by each of the parties hereto and thereto and (b) the renewal fee owing under the Fee Letter. of:

- (a) counterparts to this Amendment executed by each of the parties hereto;
- (b) counterparts to the Fee Letter executed by each of the parties thereto and all fees owing thereunder; and
- (c) an opinion of counsel to the Borrower, Servicer and Performance Guarantor with respect to customary corporate, enforceability and no-conflicts matters, in form and substance satisfactory to the Administrative Agent.

SECTION 5. Severability. Any provisions of this Amendment which are prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof, and any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction.

SECTION 6. Transaction Document. This Amendment shall be a Transaction Document for purposes of the Receivables Financing Agreement.

SECTION 7. Counterparts. This Amendment may be executed in any number of counterparts and by different parties on separate counterparts, each of which when so executed shall be deemed to be an original and all of which when taken together shall constitute but one and the same instrument. Delivery of an executed counterpart of a signature page to this Amendment by facsimile or e-mail transmission shall be effective as delivery of a manually executed counterpart hereof.

SECTION 8. GOVERNING LAW AND JURISDICTION.

THIS AMENDMENT, INCLUDING THE RIGHTS AND DUTIES OF THE PARTIES HERETO, SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK (INCLUDING SECTIONS 5-1401 AND 5-1402 OF THE GENERAL OBLIGATIONS LAW OF THE STATE OF NEW YORK, BUT WITHOUT REGARD TO ANY OTHER CONFLICTS OF LAW PROVISIONS THEREOF, EXCEPT TO THE EXTENT THAT THE PERFECTION, THE EFFECT OF PERFECTION OR PRIORITY OF THE INTERESTS OF ADMINISTRATIVE AGENT OR ANY LENDER IN THE COLLATERAL IS GOVERNED BY THE LAWS OF A JURISDICTION OTHER THAN THE STATE OF NEW YORK).

EACH PARTY HERETO HEREBY IRREVOCABLY SUBMITS TO (I) WITH RESPECT TO THE BORROWER AND THE SERVICER, THE EXCLUSIVE JURISDICTION, AND (II) WITH RESPECT TO EACH OF THE OTHER PARTIES HERETO, THE NON-EXCLUSIVE JURISDICTION, IN EACH CASE, OF ANY NEW YORK STATE OR FEDERAL COURT

SITTING IN NEW YORK CITY, NEW YORK IN ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS AMENDMENT, AND EACH PARTY HERETO HEREBY IRREVOCABLY AGREES THAT ALL CLAIMS IN RESPECT OF SUCH ACTION OR PROCEEDING (I) IF BROUGHT BY THE BORROWER, THE SERVICER OR ANY AFFILIATE THEREOF, SHALL BE HEARD AND DETERMINED, AND (II) IF BROUGHT BY ANY OTHER PARTY TO THIS AMENDMENT, MAY BE HEARD AND DETERMINED, IN EACH CASE, IN SUCH NEW YORK STATE COURT OR, TO THE EXTENT PERMITTED BY LAW, IN SUCH FEDERAL COURT. **NOTHING IN THIS SECTION SHALL AFFECT THE RIGHT OF THE ADMINISTRATIVE AGENT OR ANY OTHER CREDIT PARTY TO BRING ANY ACTION OR PROCEEDING AGAINST THE BORROWER OR THE SERVICER OR ANY OF THEIR RESPECTIVE PROPERTY IN THE COURTS OF OTHER JURISDICTIONS. EACH OF THE BORROWER AND THE SERVICER HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT IT MAY EFFECTIVELY DO SO, THE DEFENSE OF AN INCONVENIENT FORUM TO THE MAINTENANCE OF SUCH ACTION OR PROCEEDING. THE PARTIES HERETO AGREE THAT A FINAL JUDGMENT IN ANY SUCH ACTION OR PROCEEDING SHALL BE CONCLUSIVE AND MAY BE**

ENFORCED IN OTHER JURISDICTIONS BY SUIT ON THE JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY LAW.

SECTION 9. Section Headings. The various headings of this Amendment are included for convenience only and shall not affect the meaning or interpretation of this Amendment, the Receivables Financing Agreement or any provision hereof or thereof.

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, the parties hereto have executed this Amendment by their duly authorized officers as of the date first above written.

AROP FUNDING, LLC

as the Borrower

By: /s/ CARY P. MARSHALL

Name: Cary P. Marshall

Senior Vice President and Chief Financial

Title: Officer

ALLIANCE COAL, LLC,

as the Servicer

By: /s/ CARY P. MARSHALL

Name: Cary P. Marshall

Senior Vice President and Chief Financial

Title: Officer

Thirteenth Amendment to Receivables Financing Agreement

PNC BANK, NATIONAL ASSOCIATION,
as Administrative Agent

By: /s/ DEREK BRADFORD
Name: Deric Bradford
Title: Senior Vice President

PNC BANK, NATIONAL ASSOCIATION,
as LC Bank and as an LC Participant

By: /s/ DEREK BRADFORD
Name: Deric Bradford
Title: Senior Vice President

PNC BANK, NATIONAL ASSOCIATION,
as a Lender

By: /s/ DEREK BRADFORD
Name: Deric Bradford
Title: Senior Vice President

Thirteenth Amendment to Receivables Financing Agreement

PNC CAPITAL MARKETS LLC,
as a Structuring Agent

By: /s/ DERIC BRADFORD
Name: Deric Bradford
Title: Managing Director

Thirteenth Amendment to Receivables Financing Agreement

Reaffirmation of Performance Guaranty. By executing a counterpart to this Amendment, the Performance Guarantor hereby unconditionally reaffirms its obligations under the Performance Guaranty and acknowledges and agrees that such obligations continue in full force and effect (including, without limitation, with respect to the "Guaranteed Obligations", as defined in the Performance Guaranty), and the Performance Guaranty is hereby ratified and confirmed.

ALLIANCE RESOURCE OPERATING
PARTNERS, L.P., as Performance Guarantor

By: MGP II, LLC, its managing general partner

By: /s/ CARY P. MARSHALL
Name: Cary P. Marshall
Title: Senior Vice President and Chief Financial Officer

Thirteenth Amendment to Receivables Financing Agreement

EXHIBIT A

Thirteenth Amendment to Receivables Financing Agreement

EXECUTION VERSION

EXHIBIT A to ~~Twelfth~~ Thirteenth Amendment dated ~~April 21, 2023~~ January 12, 2024

RECEIVABLES FINANCING AGREEMENT

Dated as of December 5, 2014

by and among

AROP FUNDING, LLC,
as Borrower,

THE PERSONS FROM TIME TO TIME PARTY HERETO,
as Lenders and LC Participants,

PNC BANK, NATIONAL ASSOCIATION,
as LC Bank,
PNC BANK, NATIONAL ASSOCIATION,
as Administrative Agent,
PNC CAPITAL MARKETS LLC,
as Structuring Agent,
and
ALLIANCE COAL, LLC,
as initial Servicer

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This RECEIVABLES FINANCING AGREEMENT (as amended, restated, supplemented or otherwise modified from time to time, this “Agreement”) is entered into as of December 5, 2014 by and among the following parties:

- (i) AROP FUNDING, LLC, a Delaware limited liability company, as Borrower (together with its successors and assigns, the “Borrower”);
- (ii) the Persons from time to time party hereto as Lenders and LC Participants;
- (iii) PNC BANK, NATIONAL ASSOCIATION, as LC Bank (in such capacity, together with its successors and assigns in such capacity, the “LC Bank”);
- (iv) PNC BANK, NATIONAL ASSOCIATION (“PNC”), as Administrative Agent;
- (v) PNC CAPITAL MARKETS LLC, a Pennsylvania limited liability company, as Structuring Agent; and
- (vi) ALLIANCE COAL, LLC, a Delaware limited liability company (“Alliance”), as initial Servicer (in such capacity, together with its successors and assigns in such capacity, the “Servicer”).

PRELIMINARY STATEMENTS

The Borrower has acquired, and will acquire from time to time, Receivables from the Transferor pursuant to the Sale and Contribution Agreement. The Transferor has acquired, and will acquire from time to time, Receivables from the Originator(s) pursuant to the Purchase and Sale Agreement. The Borrower has requested (a) that the Lenders make Loans from time to time to the Borrower and (b) the LC Bank to issue Letters of Credit for the account of the Borrower from time to time, in each case, on the terms, and subject to the conditions set forth herein, secured by, among other things, the Receivables.

In consideration of the mutual agreements, provisions and covenants contained herein, the sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

ARTICLE I

DEFINITIONS

SECTION 1.01. Certain Defined Terms. As used in this Agreement, the following terms shall have the following meanings (such meanings to be equally applicable to both the singular and plural forms of the terms defined):

~~“Accrual Period” means, with respect to each Loan, (i) initially, the period commencing on the date such Loan is made pursuant to Section 2.01 (or in the case of any fees payable hereunder, commencing on the Closing Date) and ending on (but not including) the next~~

~~Settlement Date and (ii) thereafter, each period commencing on such Settlement Date and ending on (but not including) the next Settlement Date.~~

“Adjusted LC Participation Amount” means, at any time of determination, the greater of (i) the LC Participation Amount less the amount of cash collateral held in the LC Collateral Account at such time and (ii) zero (\$0).

“Administrative Agent” means PNC, in its capacity as contractual representative for the Credit Parties, and any successor thereto in such capacity appointed pursuant to Article XI or Section 14.03(f).

“Administrative Agent’s Account” means the account from time to time designated by the Administrative Agent to the Borrower and the Servicer for purposes of receiving payments to or for the account of the Credit Parties hereunder.

“Adverse Claim” means any ownership interest or claim, mortgage, deed of trust, pledge, lien, security interest, hypothecation, charge or other encumbrance or security arrangement of any nature whatsoever, whether voluntarily or involuntarily given, including, but not limited to, any conditional sale or title retention arrangement, and any assignment, deposit arrangement or lease intended as, or having the effect of, security and any filed financing statement or other notice of any of the foregoing (whether or not a lien or other encumbrance is created or exists at the time of the filing); it being understood that any thereof in favor of, or assigned to, the Administrative Agent (for the benefit of the Secured Parties) shall not constitute an Adverse Claim.

“Advisors” has the meaning set forth in Section 14.06(c).

"Affected Person" means each Credit Party and each of their respective Affiliates.

"Affiliate" means, as to any Person, any other Person that, directly or indirectly, is in control of, is controlled by or is under common control with such Person. For purposes of this definition, control of a Person shall mean the power, direct or indirect: (x) to vote 25% or more of the securities having ordinary voting power for the election of directors or managers of such Person or (y) to direct or cause the direction of the management and policies of such Person, in either case whether by ownership of securities, contract, proxy or otherwise.

"Aggregate Capital" means, at any time of determination, the aggregate outstanding Capital of all Lenders and LC Participants at such time.

"Aggregate Interest" means, at any time of determination, the aggregate accrued and unpaid Interest on the Loans of all Lenders at such time.

"Agreement" has the meaning set forth in the preamble to this Agreement.

"AHGP Management Investors" means any of (1) C-Holdings, LLC, (2) the management, officers and/or directors of Alliance GP, LLC and/or the Parent and/or the sole or managing general partner of Parent who are also unit holders (or partners or shareholders) of Alliance Holdings GP, L.P. or Alliance Resource Partners, L.P. (all such persons of management, officers

and directors, collectively, the "Management Persons"), (3) any corporation, limited liability company, partnership, trust or other legal entity owned, directly or indirectly, by such Management Person or by such Management Person and his or her spouse or direct lineal descendent or, in the case of a trust, as to which such Management Person is (either individually or together with such Management Person's spouse) a trustee, and/or (4) any Person that is a party to the Transfer Restrictions Agreement (so long as the Transfer Restrictions Agreement remains in effect).

"Alliance" has the meaning set forth in the preamble to this Agreement.

"Anti-Corruption Laws" means the United States Foreign Corrupt Practices Act of 1977, as amended, the UK Bribery Act 2010, and any other similar anti-corruption Laws or regulations administered or enforced in any jurisdiction in which the Parent or any of its Subsidiaries conduct business.

"Anti-Terrorism Law" means any Law in force or hereinafter enacted related to terrorism, money laundering, or economic sanctions, including the Bank Secrecy Act, 31 U.S.C. § 5311 *et seq.*, the USA PATRIOT Act, the International Emergency Economic Powers Act, 50 U.S.C. 1701, *et seq.*, the Trading with the Enemy Act, 50 U.S.C. App. 1, *et seq.*, 18 U.S.C. § 2332d, and 18 U.S.C. § 2339B.

"Applicable Law" means, with respect to any Person, any Law (x) that is applicable to such Person or any of its property, (y) to which such Person is a party or (z) by which any of such Person's property is bound. For the avoidance of doubt, FATCA shall constitute an "Applicable Law" for all purposes of this Agreement.

"Asset Acquisition" means (a) an investment by the Parent or any Subsidiary of Parent in any other person pursuant to which such person shall become a Subsidiary of Parent or shall be merged

with or into the Parent or any Subsidiary of Parent, (b) the acquisition by the Parent or any Subsidiary of Parent of the assets of any person (other than a Subsidiary of Parent) which constitute all or substantially all of the assets of such person or (c) the acquisition by the Parent or any Subsidiary of Parent of any division or line of business of any person (other than a Subsidiary of Parent).

"Assignment and Acceptance Agreement" means an assignment and acceptance agreement entered into by a Lender, an Eligible Assignee, and the Administrative Agent, and, if required, the Borrower, pursuant to which such Eligible Assignee may become a party to this Agreement, in substantially the form of Exhibit B hereto.

"Assumption Agreement" has the meaning set forth in Section 14.03(h).

"Attorney Costs" means and includes all reasonable fees, costs, expenses and disbursements of any law firm or other external counsel and all reasonable disbursements of internal counsel.

"Bankruptcy Code" means the United States Bankruptcy Reform Act of 1978 (11 U.S.C. § 101, et seq.), as amended from time to time.

"Base Rate" means, for any day ~~and any Lender~~, a fluctuating ~~interest rate~~ per annum ~~as shall be in effect from time to time, which rate shall be at all times~~ rate of interest equal to the highest of:

(i) the Overnight Bank Funding Rate, plus 0.50%, ~~(a) the Prime Rate; and (b) 0.50% per annum above the latest Overnight Bank Funding Rate; and~~

(eii) 1.00% per annum above the Daily BSBY Floating Rate, the Prime Rate, and (iii) Daily Simple SOFR, plus 0.10%, so long as Daily ~~BSBY Floating Rate~~ Simple SOFR is offered, ascertainable and not unlawful

provided, however, if the Base Rate as determined above would be less than zero, then such rate shall be deemed to be zero. Any change in the Base Rate (or any component thereof) shall take effect at the opening of business on the day such change occurs. Notwithstanding anything to the contrary contained herein, in the case of any event specified in Section 2.06(a) or Section 2.06(b), to the extent any such determination affects the calculation of Base Rate, the definition hereof shall be calculated without reference to clause (iii) above until the circumstances give rise to such event no longer exist.

~~"Base Rate Option" means the option of the Borrower to have Loans bear interest at the rate and under the terms specified in Section 2.03(a)(i).~~ "Loan" means, at any time, any Loan or any related Capital (or portion thereof) on which Interest accrues by reference to the Base Rate.

"Benchmark Replacement" has the meaning set forth in Section 2.06(d).

"Beneficial Ownership Regulation" means 31 C.F.R § 1010.230.

"Bloomberg" means Bloomberg Index Services Limited (or a successor administrator).

"Borrower" has the meaning specified in the preamble to this Agreement.

"Borrower Indemnified Amounts" has the meaning set forth in Section 13.01(a).

"Borrower Indemnified Party" has the meaning set forth in Section 13.01(a).

"Borrower Obligations" means all present and future indebtedness, reimbursement obligations, and other liabilities and obligations (howsoever created, arising or evidenced, whether direct or indirect, absolute or contingent, or due or to become due) of the Borrower to any Credit Party, Borrower Indemnified Party and/or any Affected Person, arising under or in connection with this Agreement or any other Transaction Document or the transactions contemplated hereby or thereby, and shall include, without limitation, all Capital and Interest on the Loans, reimbursement for drawings under the Letters of Credit, all Fees and all other amounts due or to become due under the Transaction Documents (whether in respect of fees, costs, expenses, indemnifications or otherwise), including, without limitation, interest, fees and other obligations that accrue after the commencement of any Insolvency Proceeding with respect to the Borrower (in each case whether or not allowed as a claim in such proceeding).

"Borrower's Net Worth" means, at any time of determination, an amount equal to (i) the sum of (A) the aggregate Outstanding Balance of all Pool Receivables at such time, plus (B) the fair market value of all cash and cash equivalents owned by Borrower at such time, minus (ii) the sum of (A) the Aggregate Capital at such time, plus (B) the Adjusted LC Participation Amount at such time, plus (C) the Aggregate Interest at such time, plus (D) the aggregate accrued and unpaid Fees at such time, plus (E) the aggregate outstanding principal balance of all Subordinated Notes at such time, plus (F) the aggregate accrued and unpaid interest on all Subordinated Notes at such time, plus (G) without duplication, the aggregate accrued and unpaid other Borrower Obligations at such time.

"Borrowing Base" means, at any time of determination, the amount equal to (a) the Net Receivables Pool Balance at such time, minus (b) the Total Reserves at such time.

"Borrowing Base Deficit" means, at any time of determination, the amount, if any, by which (a) the Aggregate Capital plus the Adjusted LC Participation Amount at such time, exceeds (b) the Borrowing Base at such time.

"Borrowing Tranche" means specified portions of Loans outstanding as follows: (a) ~~any Loans to which a BSBY Rate Option applies under the same Loan Request by the Borrower~~ all Loans (or portions of Capital thereof) for which the applicable Interest Rate is determined by reference to Daily 1M SOFR shall constitute one Borrowing Tranche, (b) ~~all Loans (or portions of Capital thereof) for which the applicable Interest Rate is determined by reference to Base Rate shall constitute one Borrowing Tranche, and~~ (c) ~~any Loans (or portions of Capital thereof) for which the applicable Interest Rate is determined by reference to the Term SOFR Rate~~ and which have the same Interest Period shall constitute one Borrowing Tranche, ~~(b) all Loans to which a Daily BSBY Floating Rate Option applies shall constitute one Borrowing Tranche and (c) all Loans to which a Base Rate Option applies shall constitute one Borrowing Tranche.~~

"Breakage Fees" means amounts owed by Borrower pursuant to Section 5.02.

"Breakage Fee" means (i) ~~for any Interest Period for which Interest is computed by reference to the BSBY Rate Option and a reduction of Capital is made for any reason on any day other than a Settlement Date or~~ (ii) ~~to the extent that the Borrower shall for any reason, fail to borrow on the date specified by the Borrower in connection with any request for funding pursuant to Article II of this~~

Agreement, the amount, if any, by which (A) the additional Interest (calculated without taking into account any Breakage Fee or any shortened duration of such Interest Period pursuant to the definition thereof) which would have accrued during such Interest Period on the reductions of Capital relating to such Interest Period had such reductions not been made (or, in the case of clause (ii) above, the amounts so failed to be borrowed or accepted in connection with any such request for funding by the Borrower), exceeds (B) the income, if any, received by the applicable Lender from the investment of the proceeds of such reductions of Capital (or such amounts failed to be borrowed by the Borrower). A certificate as to the amount of any Breakage Fee (including the computation of such amount) shall be submitted by the affected Lender to the Borrower and shall be presumed correct absent manifest error.

"BSBY Floor" means a rate of interest equal to zero basis points (0.00%).

"BSBY Rate" means, with respect to Loans comprising any Borrowing Tranche to which the BSBY Rate Option applies for any Interest Period, the rate per annum determined by the Administrative Agent by dividing (the resulting quotient rounded upwards, at the Administrative Agent's discretion, to the nearest 1/100th of 1%) (a) the BSBY Screen Rate two (2) Business Days prior to the first day of such Interest Period and having a term comparable to such Interest Period; provided that if the rate is not published on such determination date, then the rate per annum for purposes of this clause (a) shall be the BSBY Screen Rate on the first Business Day immediately prior thereto, by (b) a number equal to 1.00 minus the BSBY Reserve Percentage; provided, further, that if the BSBY Rate, determined as provided above, would be less than the BSBY Floor, then the BSBY Rate shall be deemed to be the BSBY Floor.

The BSBY Rate shall be adjusted with respect to any Loan to which the BSBY Rate Option applies that is outstanding on the effective date of any change in the BSBY Reserve Percentage as of such effective date and the Administrative Agent shall give prompt notice to the Borrower of the BSBY Rate as determined or adjusted in accordance herewith, which determination shall be conclusive absent manifest error.

"BSBY Rate Loan" means a Loan that bears interest based on the BSBY Rate.

"BSBY Rate Option" means the option of the Borrower to have Loans bear interest at the rate and under the terms specified in Section 2.03(a)(ii).

"BSBY Reserve Percentage" shall mean, as of any day, the maximum effective percentage in effect on such day, if any, as prescribed by the Board of Governors of the Federal Reserve System (or any successor) for determining the reserve requirements (including, without limitation, supplemental, marginal and emergency reserve requirements) with respect to BSBY Screen Rate funding.

"BSBY Screen Rate" means the Bloomberg Short Term Bank Yield Index rate administered by Bloomberg and published by Bloomberg (or such other commercially available source providing such quotations as may be designated by the Administrative Agent from time to time).

"Business Day" means any day (other than a Saturday or Sunday) on which banks are not authorized or required to close in Pittsburgh, Pennsylvania or New York City, New York; provided that,

for purposes of any direct or indirect calculation or determination of ~~the BSBY Screen Rate~~ SOFR, the term "Business Day" means any such day that is also a U.S. Government Securities Business Day.

"Capital" means, with respect to any Lender, without duplication, the aggregate amounts (i) paid to, or on behalf of, the Borrower in connection with all Loans made by such Lender pursuant to Article II, (ii) paid by such Lender, as an LC Participant, to the LC Bank in respect of a Participation Advance made by such Lender to LC Bank pursuant to Section 3.04(b), and (iii) with respect to the Lender that is the LC Bank, paid by the LC Bank with respect to all drawings under the Letter of Credit to the extent such drawings have not been reimbursed by the Borrower or funded by Participation Advances, as reduced from time to time by Collections distributed and applied on account of such Capital pursuant to Section 4.01; provided, that if such Capital shall

have been reduced by any distribution and thereafter all or a portion of such distribution is rescinded or must otherwise be returned for any reason, such Capital shall be increased by the amount of such rescinded or returned distribution as though it had not been made.

"Capital Stock" means, with respect to any Person, any and all common shares, preferred shares, interests, participations, rights in or other equivalents (however designated) of such Person's capital stock, partnership interests, limited liability company interests, membership interests or other equivalent interests and any rights (other than debt securities convertible into or exchangeable for capital stock), warrants or options exchangeable for or convertible into such capital stock or other equity interests.

"Change in Control" means the occurrence of any of the following: (a) the Transferor ceases to own, directly, 100% of the issued and outstanding Capital Stock and other equity interests of Borrower free and clear of all Adverse Claims (other than any Adverse Claim in favor of the Credit Agreement Administrative Agent), (b) Parent ceases to own, directly or indirectly, 98% or more of the issued and outstanding Capital Stock or other equity interests of any Originator or the Servicer, (c) the managing general partner of the Parent shall at any time for any reason cease to be either the sole or managing general partner of Alliance Resource Partners, L.P. or (d) the AHGP Management Investors shall at any time for any reason cease to (i) possess the right, directly or indirectly, to elect or appoint a majority of the board of directors of the managing general partner of the Parent or (ii) control, directly or indirectly, the managing general partner of the Parent. Notwithstanding the foregoing, any transaction or series of transactions that result in (I) Alliance Holdings GP, L.P. merging with and into Alliance Resource Partners, L.P., with either Alliance Holdings GP, L.P. or Alliance Resource Partners, L.P. as the surviving entity, (II) Alliance Holdings GP, L.P. becoming a direct or indirect wholly-owned subsidiary of Alliance Resource Partners, L.P., (III) Alliance Resource Partners, L.P. merging with or into Alliance Holdings GP, L.P. or a Subsidiary thereof, with Alliance Holdings GP, L.P. or such Subsidiary as the surviving entity, or (IV) any exchange of incentive distribution rights in Alliance Resource Partners, L.P. and/or exchange of general partner interests in Alliance Resource Partners, L.P. or the Parent for common units of Alliance Resource Partners, L.P. (any such transaction described in clause (I) - (IV) above, a "Simplification Transaction"), shall not constitute a Change in Control hereunder regardless of whether or not, after giving effect to such Simplification Transaction, any of the events described in clauses (c) or (d) of the first sentence of this definition of Change in Control shall have occurred.

“Change in Law” means the occurrence, after the Closing Date (or with respect to any Lender, if later, the date on which such Lender becomes a Lender), of any of the following: (a) the adoption or taking effect of any law, rule, regulation or treaty, (b) any change in any law, rule, regulation or treaty or in the administration, interpretation, implementation or application thereof by any Governmental Authority or (c) the making or issuance of any request, rule, guideline or directive (whether or not having the force of law) by any Governmental Authority; provided that notwithstanding anything herein to the contrary, (x) the Dodd-Frank Wall Street Reform and Consumer Protection Act and all requests, rules, guidelines or directives thereunder or issued in connection therewith and (y) all requests, rules, guidelines or directives promulgated by the Bank for International Settlements, the Basel Committee on Banking Supervision (or any successor or similar authority) or the United States or foreign regulatory authorities, in each case

pursuant to the agreements reached by the Basel Committee on Banking Supervision in “Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems” (as amended, supplemented or otherwise modified or replaced from time to time), shall in each case be deemed to be a “Change in Law”, regardless of the date enacted, adopted or issued.

“Closing Date” means December 5, 2014.

“Code” means the Internal Revenue Code of 1986, as amended, reformed or otherwise modified from time to time.

“Collateral” has the meaning set forth in Section 5.05(a).

“Collections” means, with respect to any Pool Receivable: (a) all funds that are received by any Originator, the Transferor, the Borrower, the Servicer or any other Person on their behalf in payment of any amounts owed in respect of such Pool Receivable (including purchase price, finance charges, interest and all other charges), or applied to amounts owed in respect of such Pool Receivable (including insurance payments and net proceeds of the sale or other disposition of repossessed goods or other collateral or property of the related Obligor or any other Person directly or indirectly liable for the payment of such Pool Receivable and available to be applied thereon), (b) all Deemed Collections, (c) all proceeds of all Related Security with respect to such Pool Receivable and (d) all other proceeds of such Pool Receivable.

“Commitment” means, with respect to any Lender, LC Participant or LC Bank, as applicable, the maximum aggregate amount which such Person is obligated to lend or pay hereunder on account of all Loans and all drawings under all Letters of Credit, on a combined basis, as set forth on Schedule I or in the Assumption Agreement or other agreement pursuant to which it became a Lender and/or LC Participant, as such amount may be modified in connection with any subsequent assignment pursuant to Section 14.03 or in connection with a reduction in the Facility Limit pursuant to Section 2.02(e) or an increase in Commitments pursuant to Section 2.02(h). If the context so requires, “Commitment” also refers to a Lender’s obligation to make Loans, make Participation Advances and/or issue Letters of Credit hereunder in accordance with this Agreement.

“Concentration Percentage” means (i) for any Group AA Obligor, 30.00%, (ii) for any Group A Obligor, 17.50%, (iii) for any Group B Obligor, 15.00%, (iv) for any Group C Obligor, 12.50% and (v) for any Group D Obligor, 7.50%.

"Concentration Reserve" means, at any time of determination, an amount equal to: (a) the sum of the Aggregate Capital plus the LC Participation Amount on such date, multiplied by (b)(i) the Concentration Reserve Percentage on such date, divided by (ii) 100% minus the Concentration Reserve Percentage on such date.

"Concentration Reserve Percentage" means, at any time of determination, the largest of: (a) the sum of the five (5) largest Obligor Percentages of the Group D Obligors, (b) the sum of the three (3) largest Obligor Percentages of the Group C Obligors, (c) the sum of the two (2) largest Obligor Percentage of the Group B Obligors and (d) the largest Obligor Percentage of the Group A Obligors; provided, that, for purposes of determining the Concentration Reserve Percentage, with respect to any Eligible Receivable supported by an Eligible Supporting Letter of

Credit, the "Obligor" thereof (including for purposes of determining such Obligor's Obligor Percentage and status as a Group A Obligor, Group B Obligor, Group C Obligor or Group D Obligor) shall be deemed to be the related Eligible Supporting Letter of Credit Provider; provided, further that if any Pool Receivable is partially supported by an Eligible Supporting Letter of Credit, then the "Obligor" thereof shall be deemed to be (i) with respect to the Unsupported Outstanding Balance of such Pool Receivable, the Obligor of such Pool Receivable and (ii) with respect to the Supported Outstanding Balance of such Pool Receivable, the related Eligible Supporting Letter of Credit Provider.

"Conforming Changes" means, with respect to Daily 1M SOFR, the ~~BSBY-ScreenTerm SOFR~~ Rate or any Benchmark Replacement in relation thereto, any technical, administrative or operational changes (including changes to the definition of "Base Rate," the definition of "Business Day," the definition of ~~"Accrual Period"~~ or ~~"Interest Period,"~~ the definition of "U.S. Government Securities Business Day," timing and frequency of determining rates and making payments of interest, timing of borrowing requests or prepayment, conversion or continuation notices, the applicability and length of lookback periods, the applicability of breakage provisions, and other technical, administrative or operational matters) that the Administrative Agent decides may be appropriate to reflect the adoption and implementation of Daily 1M SOFR, the ~~BSBY-ScreenTerm SOFR~~ Rate or such Benchmark Replacement and to permit the administration thereof by the Administrative Agent in a manner substantially consistent with market practice (or, if the Administrative Agent decides that adoption of any portion of such market practice is not administratively feasible or if the Administrative Agent determines that no market practice for the administration of Daily 1M SOFR, the ~~BSBY-ScreenTerm SOFR~~ Rate or the Benchmark Replacement exists, in such other manner of administration as the Administrative Agent decides is reasonably necessary in connection with the administration of this Agreement and the other Transaction Documents).

"Consolidated Cash Flow" means, as of any date of determination for any applicable period, the excess, if any, of (a) the sum of, without duplication, the amounts for such period, taken as a single accounting period, of (i) Consolidated Net Income for such period, plus (ii) to the extent deducted in the determination of Consolidated Net Income for such period, without duplication, (A) Consolidated Non-Cash Charges, (B) Consolidated Interest Expense and (C) Consolidated Income Tax Expense, over (b) the sum of, without duplication, the amounts for such period, taken as a single accounting period, of (i) any non-cash items increasing Consolidated Net Income for such period (x) to the extent that such items constitute reversals of Consolidated Non-Cash Charges for a previous period and which were included in the computation of Consolidated Cash Flow for such previous

period pursuant to the provisions of the preceding clause (a) or (y) for unrealized gains under derivative instruments, and (ii) any cash charges for such period to the extent that such charges constituted non-cash items for a previous period and to the extent such charges are not otherwise included in the determination of Consolidated Net Income; provided that Consolidated Cash Flow shall be calculated, without duplication, after giving effect on a pro forma basis for such period, in all respects in accordance with GAAP, to any Transfer or Asset Acquisitions (including, without limitation any Asset Acquisition by the Parent or any Subsidiary of Parent giving rise to the need to determine Consolidated Cash Flow as a result of the Parent or one of its Subsidiaries (including any person that becomes a Subsidiary as result of any such Asset Acquisition) incurring, assuming or otherwise becoming liable for any debt) occurring during the period commencing on the first day

of such period to and including the date of the transaction, as if such Transfer or Asset Acquisition occurred on the first day of such period.

"Consolidated Fixed Charges" means, with respect to the Parent and its Subsidiaries for any period, the sum of Consolidated Interest Expense plus cash distributions for such period, in each case, determined on a consolidated basis in accordance with GAAP.

"Consolidated Income Tax Expense" means, with respect to any period, all provisions for Federal, state, local and foreign income taxes of the Parent and its Subsidiaries for such period as determined on a consolidated basis in accordance with GAAP.

"Consolidated Interest Expense" means, as of any date of determination for any applicable period, the sum (without duplication) of the following (in each case, eliminating all offsetting debits and credits between the Parent and its Subsidiaries and all other items required to be eliminated in the course of the preparation of consolidated financial statements of the Parent and its Subsidiaries in accordance with GAAP): (a) all interest in respect of debt of the Parent and its Subsidiaries whether paid or accrued (including non-cash interest payments and imputed interest on capital lease obligations) deducted in determining Consolidated Net Income for such period, and (b) all debt discount (but not expense) amortized or required to be amortized in the determination of Consolidated Net Income for such period.

"Consolidated Net Income" means, with reference to any period, the net income (or loss) of the Parent and its Subsidiaries for such period (taken as a cumulative whole), as determined in accordance with GAAP; provided that there shall be excluded:

(a) the income (or loss) of any person accrued prior to the date it becomes a Subsidiary or is merged into or consolidated with the Parent or a Subsidiary, and the income (or loss) of any person, substantially all of the assets of which have been acquired in any manner, realized by such other person prior to the date of acquisition,

(b) any aggregate net gain or loss during such period arising from the sale, conversion, exchange or other disposition of capital assets (such term to include, without limitation, (i) all non-current assets, and, without duplication, (ii) the following, whether or not current: all fixed assets, whether tangible or intangible, all inventory sold in conjunction with the disposition of fixed assets, and all securities (as defined in Section 2(a)(1) of the Securities Act, as amended from time to time);

(c) debt extinguishment costs and expenses in an amount not to exceed \$25,000,000 for the duration of the Parent Revolving Facility;

(d) transaction costs, fees and expenses in connection with any acquisition or issuance of Debt or equity (whether or not successful) by the Parent or any of its Subsidiaries; and

(e) the amount of any non-cash unusual or non-recurring restructuring or similar charges; provided that any determination of whether a charge is unusual or non-recurring

shall be made by the Parent's chief financial officer (or person acting in a similar capacity) pursuant to such officer's good faith judgment.

"Consolidated Non-Cash Charges" means, with respect to the Parent and its Subsidiaries for any period, the aggregate depreciation, depletion and amortization (other than amortization of debt discount and expense), the non-cash portion of advance royalties, any non-cash employee compensation expenses for such period, impairment charges, unrealized losses and gains under derivative instruments and non-cash charges due to cumulative effects of changes in accounting principles, in each case, reducing Consolidated Net Income of the Parent and its Subsidiaries for such period as determined on a consolidated basis in accordance with GAAP.

"Contract" means, with respect to any Receivable, any and all contracts, instruments, agreements, leases, invoices, notes or other writings, pursuant to which such Receivable arises or that evidence such Receivable or under which an Obligor becomes or is obligated to make payment in respect of such Receivable.

"Controlled Group" means all members of a controlled group of corporations or other business entities and all trades or businesses (whether or not incorporated) under common control which, together with Parent or any of its Subsidiaries, are treated as a single employer under Section 414 of the Code.

"Controlled Related Party" of a Borrower Indemnified Party or Servicer Indemnified Party means (1) any Affiliate of a Borrower Indemnified Party or Servicer Indemnified Party (as applicable), (2) the respective directors, officers, or employees of such Borrower Indemnified Party or Servicer Indemnified Party (as applicable) and its Affiliates and (3) the respective agents or representatives of such Borrower Indemnified Party or Servicer Indemnified Party (as applicable) and its Affiliates, in the case of this clause (3), acting on behalf of or at the instructions of such Borrower Indemnified Party or Servicer Indemnified Party (as applicable) or its Affiliates; provided, however, that no Covered Entity or Affiliate of a Covered Entity, or any director, officer, employee, agent or representative of any of the foregoing shall constitute a "Controlled Related Party".

"Covered Entity" means (a) each of the Parent, the Borrower, the Originators, the Servicer, the Performance Guarantor and their respective Subsidiaries, and (b) each Person that, directly or indirectly, controls a Person described in clause (a) above. For purposes of this definition, control of a Person means the direct or indirect (x) ownership of, or power to vote, 25% or more of the issued and outstanding equity interests having ordinary voting power for the election of directors of such Person or other Persons performing similar functions for such Person, or (y) power to direct or cause the direction of the management and policies of such Person whether by ownership of equity interests, contract or otherwise.

"Credit Agreement" means the Credit Agreement, dated as of January 13, 2023, among Alliance Coal LLC, as borrower, the lenders from time to time party thereto, the letter of credit issuing banks from time to time party thereto and the Credit Agreement Administrative Agent, as amended, restated, amended and restated, supplemented or otherwise modified from time to time.

"Credit Agreement Administrative Agent" means PNC Bank, National Association, as administrative agent and/or collateral agent under the Credit Agreement.

"Credit and Collection Policy" means, as the context may require, those receivables credit and collection policies and practices of the Originators in effect on the Closing Date and described in Exhibit E, as modified in compliance with this Agreement.

"Credit Extension" means the making of any Loan or the issuance of any Letter of Credit or any modification, extension or renewal of any Letter of Credit.

"Credit Party" means each Lender, the LC Bank, each LC Participant and the Administration Agent.

"Daily ~~BSBY Floating Rate~~ 1M SOFR" means, for any day, the rate per annum determined by the Administrative Agent ~~by dividing (the resulting quotient rounded upwards, at the Administrative Agent's discretion, to the nearest 1/100th of 1%) (a) the BSBY Screen~~ equal to the Term SOFR Reference Rate for such day for a one (1) month period, ~~by (b) a number equal to 1.00 minus the BSBY Reserve Percentage as published by the Term SOFR Administrator; provided, that if the Daily BSBY Floating Rate 1M SOFR, determined as provided above, would be less than the BSBY SOFR Floor, then the Daily BSBY Floating Rate 1M SOFR shall be deemed to be the BSBY SOFR Floor. The~~ Such rate of interest will be adjusted automatically as of each Business Day based on changes in ~~the Daily BSBY Rate 1M SOFR~~ without notice to the Borrower.

"Daily ~~BSBY Floating Rate Loan~~" means ~~a Loan that bears interest based on Daily BSBY Floating Rate.~~

"Daily ~~BSBY Floating Rate Option~~" means ~~the option of the Borrower to have Loans bear interest at the rate and under the terms specified in Section 2.03(a)(iii).~~

"Daily Report" means a report substantially in the form of Exhibit I-2.

"Days' Sales Outstanding" means, for any Fiscal Month, an amount computed as of the last day of such Fiscal Month equal to: (a) the average of the Outstanding Balance of all Pool Receivables as of the last day of each of the three most recent Fiscal Months ended on the last day of such Fiscal Month, divided by (b) (i) the aggregate initial Outstanding Balance of all Pool Receivables originated by the Originators during the three most recent Fiscal Months ended on the last day of such Fiscal Month, divided by (ii) 90.

"Daily Simple SOFR" means, for any day (a "SOFR Rate Day"), the interest rate per annum determined by the Administrative Agent equal to SOFR for the day (the "SOFR Determination Date") that is 2 Business Days prior to (i) such SOFR Rate Day if such SOFR Rate Day is a Business Day or (ii) the Business Day immediately preceding such SOFR Rate Day if such SOFR Rate Day is not a Business Day, in each case, as such SOFR is published by the Federal Reserve Bank of New York

(or a successor administrator of the secured overnight financing rate) on the website of the Federal Reserve Bank of New York, currently at <http://www.newyorkfed.org>, or any successor source identified by the Federal Reserve Bank of New York or its successor administrator for the secured overnight financing rate from time to

time. If Daily Simple SOFR as determined above would be less than the SOFR Floor, then Daily Simple SOFR shall be deemed to be the SOFR Floor. If SOFR for any SOFR Determination Date has not been published or replaced with a Benchmark Replacement by 5:00 p.m. (Pittsburgh, Pennsylvania time) on the second Business Day immediately following such SOFR Determination Date, then SOFR for such SOFR Determination Date will be SOFR for the first Business Day preceding such SOFR Determination Date for which SOFR was published in accordance with the definition of "SOFR"; provided that SOFR determined pursuant to this sentence shall be used for purposes of calculating Daily Simple SOFR for no more than 3 consecutive SOFR Rate Days. If and when Daily Simple SOFR as determined above changes, any applicable rate of interest based on Daily Simple SOFR will change automatically without notice to the Borrower, effective on the date of any such change.

"Debt" means, as to any Person at any time of determination, any and all indebtedness, obligations or liabilities (whether matured or unmatured, liquidated or unliquidated, direct or indirect, absolute or contingent, or joint or several) of such Person (without duplication) for or in respect of: (i) borrowed money, (ii) amounts raised under or liabilities in respect of any bonds, debentures, notes, note purchase, acceptance or credit facility, or other similar instruments or facilities, (iii) reimbursement obligations (contingent or otherwise) under any letter of credit, (iv) any other transaction (including production payments (excluding royalties), installment purchase agreements, forward sale or purchase agreements, capitalized leases and conditional sales agreements) having the commercial effect of a borrowing of money entered into by such Person to finance its operations or capital requirements (but not including accounts payable incurred in the ordinary course of such Person's business payable on terms customary in the trade), (v) all net obligations of such Person in respect of interest rate on currency hedges or (vi) any Guaranty of any such Debt.

"Deemed Collections" has the meaning set forth in Section 4.01(d).

"Default Ratio" means the ratio (expressed as a percentage and rounded to the nearest 1/100 of 1%, with 5/1000th of 1% rounded upward) computed as of the last day of each Fiscal Month by dividing: (a) the aggregate Outstanding Balance of all Pool Receivables that are Defaulted Receivables at such time, by (b) the initial Outstanding Balance of all Pool Receivables generated by the Originators during the month that is three Fiscal Months before such month. For avoidance of doubt, the exclusion of any Excluded Calculation Obligor Receivable from the definition of Defaulted Receivable shall be retroactively applied in calculating the Default Ratio for all months during its Excluded Calculation Obligor Ineligibility Period.

"Defaulted Receivable" means a Receivable:

- (a) as to which any payment, or part thereof, remains unpaid for more than 60 days and less than 91 days from the original due date for such payment;

(b) as to which any payment, or part thereof, remains unpaid for less than 61 days from the original due date for such payment and consistent with the Credit and

Collection Policy, has been or should be written off the applicable Originator's or the Borrower's books as uncollectible; or

(c) as to which any payment, or part thereof, remains unpaid for less than 61 days from the original due date for such payment and an Insolvency Proceeding shall have occurred with respect to the Obligor thereof or any other Person obligated thereon or owning any Related Security with respect thereto;

provided, that no Receivable the Obligor of which is an Excluded Calculation Obligor shall constitute a Defaulted Receivable during its Excluded Calculation Obligor Ineligibility Period.

"Delinquency Ratio" means the ratio (expressed as a percentage and rounded to the nearest 1/100 of 1%, with 5/1000th of 1% rounded upward) computed as of the last day of each Fiscal Month by dividing: (a) the aggregate Outstanding Balance of all Pool Receivables that were Delinquent Receivables on such day, by (b) the aggregate Outstanding Balance of all Pool Receivables on such day. For avoidance of doubt, the exclusion of any Excluded Calculation Obligor Receivable from the definition of Delinquent Receivable shall be retroactively applied in calculating the Delinquency Ratio for all months during its Excluded Calculation Obligor Ineligibility Period.

"Delinquent Receivable" means a Receivable as to which any payment, or part thereof, remains unpaid for 61 days or more from the original due date for such payment; provided, that no Receivable the Obligor of which is an Excluded Calculation Obligor shall constitute a Delinquent Receivable during its Excluded Calculation Obligor Ineligibility Period.

"Dilution Horizon Ratio" means, for any Fiscal Month, the ratio (expressed as a percentage and rounded to the nearest 1/100th of 1%, with 5/1000th of 1% rounded upward) computed as of the last day of such Fiscal Month by dividing: (a) the aggregate initial Outstanding Balance of all Pool Receivables generated by the Originators during the most recent Fiscal Month, by (b) the Net Receivables Pool Balance as of the last day of such Fiscal Month.

"Dilution Ratio" means, for any Fiscal Month, the greater of (i) 0.50% and (ii) the ratio (expressed as a percentage and rounded to the nearest 1/100th of 1%, with 5/1000th of 1% rounded upward), computed as of the last day of each Fiscal Month by dividing: (a) the aggregate amount of Deemed Collections during such Fiscal Month (other than any Deemed Collections with respect to any Receivables that were both (I) generated by an Originator during such Fiscal Month and (II) written off the applicable Originator's or the Borrower's books as uncollectible during such Fiscal Month), by (b) the aggregate initial Outstanding Balance of all Pool Receivables generated by the Originators during the Fiscal Month that is one month prior to such Fiscal Month.

"Dilution Reserve" means, on any day, an amount equal to: (a) the Aggregate Capital plus the LC Participation Amount on such day, multiplied by (b) (i) the Dilution Reserve Percentage on such day, divided by (ii) 100% minus the Dilution Reserve Percentage on such day.

"Dilution Reserve Percentage" means, on any day, the product of (a) the Dilution Horizon Ratio, multiplied by (b) the sum of (i) 2.25 times the average of the Dilution Ratios for the twelve most recent Fiscal Months, plus (ii) the Dilution Volatility Component.

"Dilution Volatility Component" means, for any Fiscal Month, (a) the positive difference, if any, between: (i) the highest Dilution Ratio for any Fiscal Months during the twelve most recent Fiscal Month and (ii) the arithmetic average of the Dilution Ratios for such twelve months times (b) (i) the highest Dilution Ratio for any Fiscal Month during the twelve most recent Fiscal Months, divided by (ii) the arithmetic average of the Dilution Ratios for such twelve months.

"Dollars" and "\$" each mean the lawful currency of the United States of America.

"Drawing Date" has the meaning set forth in Section 3.04(a).

"Eligible Assignee" means (i) any Lender or any of its Affiliates and (ii) any other financial institution approved by the Borrower, such approval not to be unreasonably withheld, conditioned or delayed.

"Eligible Foreign Obligor" means an Obligor (or with respect to any Receivable that is supported by an Eligible Supporting Letter of Credit, such Eligible Supporting Letter of Credit Provider) which is organized under the laws of any country (or with respect to an Eligible Supporting Letter of Credit Provider, the country in which the office from which it is obligated to make payment with respect to such Eligible Supporting Letter of Credit is located) (other than the United States) that is not a Sanctioned Country and that has a foreign currency rating of at least "BBB-" by S&P and "Baa3" by Moody's.

"Eligible Receivable" means, at any time of determination, a Pool Receivable:

(a) the Obligor of which is: (i) a resident of the United States of America or an Eligible Foreign Obligor; (ii) not a federal governmental authority other than TVA; (iii) not a Sanctioned Person; (iv) not an Affiliate of the Borrower, the Parent, the Transferor, the Servicer or any Originator; (v) [Reserved]; (vi) not the Obligor with respect to Delinquent Receivables with an aggregate Outstanding Balance exceeding 25% of the aggregate Outstanding Balance of all such Obligor's Pool Receivables; and (vii) not a Material Supplier to any Originator or the Transferor or an Affiliate of such Material Supplier;

(b) for which an Insolvency Proceeding shall not have occurred with respect to the Obligor thereof or any other Person obligated thereon or owning any Related Security with respect thereto;

(c) that is denominated and payable only in U.S. dollars in the United States of America, and the Obligor with respect to which has been instructed to remit Collections in respect thereof directly to a Lock-Box or Lock-Box Account in the United States of America;

(d) that does not have a due date which is more than 60 days after the original invoice date of such Receivable; provided that a Receivable the Obligor of which is

Alcoa Corporation, Alcoa Power Generating, Inc. or one of their Affiliates may satisfy this clause (d) so long as (i) such Receivable does not have a due date which is more than 120 days after the original invoice date of such Receivable and (ii) the Administrative Agent has not given five (5) Business Days' notice to the Servicer that such increased tenor provided for in this proviso has not been revoked by the Administrative Agent (acting in its sole discretion);

(e) that arises under a Contract for the sale of goods or services in the ordinary course of the applicable Originator's business;

(f) that arises under a duly authorized Contract that is in full force and effect and that is a legal, valid and binding obligation of the related Obligor, enforceable against such Obligor in accordance with its terms;

(g) that has been sold by an Originator to the Transferor pursuant to the Purchase and Sale Agreement and sold or contributed by the Transferor to the Borrower pursuant to the Sale and Contribution Agreement, and with respect to which transfers all conditions precedent under the Sale Agreements have been met;

(h) that, together with any Contract related thereto, conforms in all material respects with all Applicable Laws (including any applicable laws relating to usury, truth in lending, fair credit billing, fair credit reporting, equal credit opportunity, fair debt collection practices and privacy);

(i) with respect to which all consents, licenses, approvals or authorizations of, or registrations or declarations with or notices to, any Governmental Authority or other Person required to be obtained, effected or given by an Originator in connection with the creation of such Receivable, the execution, delivery and performance by such Originator of the related Contract or the assignment thereof under the Purchase and Sale Agreement have been duly obtained, effected or given and are in full force and effect;

(j) that is not subject to any existing dispute, right of rescission, set-off, counterclaim, any other defense against the applicable Originator (or any assignee of such Originator) or Adverse Claim, and the Obligor of which holds no right as against the applicable Originator to cause such Originator to repurchase the goods or merchandise, the sale of which shall have given rise to such Receivable; provided, that only such portion of such Receivable that is subject to any of the foregoing shall be deemed to be ineligible pursuant to this clause (j);

(k) that satisfies all applicable requirements of the Credit and Collection Policy;

(l) that, together with the Contract related thereto, has not been modified, waived or restructured since its creation, except as permitted pursuant to Section 9.02 of this Agreement and for amendments, modifications or restructuring of Contracts with respect to future Receivables to the extent as permitted by Sections 8.01(j) and 8.02(g);

(m) in which the Borrower owns good and marketable title, free and clear of any Adverse Claims, and that is freely assignable (including without any consent of the related Obligor or any Governmental Authority);

(n) for which the Administrative Agent (on behalf of the Secured Parties) shall have a valid and enforceable first priority perfected security interest therein and in the Related Security and Collections with respect thereto, in each case free and clear of any Adverse Claim;

(o) that constitutes an "account" or a "general intangible" as defined in the UCC, and that is not evidenced by instruments or chattel paper;

(p) that is neither a Defaulted Receivable nor a Delinquent Receivable;

(q) for which none of any Originator, the Borrower, the Transferor, the Parent or the Servicer has established any offset or netting arrangements with the related Obligor in connection with the ordinary course of payment of such Receivable;

(r) that represents amounts earned and payable by the Obligor that are not subject to the performance of additional services by the Originator thereof, the Transferor or the Borrower (other than the delivery of the related goods or merchandise with respect to In-Transit Receivables), and the related goods or merchandise shall have been shipped and/or services performed;

(s) that if not yet billed or invoiced, the related coal has been shipped within the last sixty (60) days;

(t) which (i) does not arise from a sale of accounts made as part of a sale of a business or constitute an assignment for the purpose of collection only, (ii) is not a transfer of a single account made in whole or partial satisfaction of a preexisting indebtedness or an assignment of a right to payment under a contract to an assignee that is also obligated to perform under the contract and (iii) is not a transfer of an interest in or an assignment of a claim under a policy of insurance;

(u) which does not relate to the sale of any consigned goods or finished goods which have incorporated any consigned goods into such finished goods;

(v) if the Obligor of which is a Top Twenty-Five Obligor, in which no Originator or the Transferor (or any Affiliate of any of the foregoing) owes any amount to such Obligor (including as a result of such Obligor being a Supplier to such Person); provided, that only such portion of such Receivable to the extent subject to potential offset respecting any of the foregoing shall be deemed to be ineligible pursuant to this clause (v);

(w) that satisfies all applicable requirements of clause (j) of Section 6.1 of the Purchase and Sale Agreement; and

(x) that for any Excluded Calculation Obligor Receivable, an Excluded Calculation Obligor Ineligibility Period is not then continuing for such Excluded Calculation Obligor.

"Eligible Supporting Letter of Credit" means, with respect to any Pool Receivables of an Obligor, an unconditional (except for any draft or documentation required to be presented as a condition to drawings thereunder), irrevocable standby or commercial letter of credit, at all times in form and substance acceptable to the Administrative Agent in its sole discretion, issued or confirmed by an Eligible Supporting Letter of Credit Provider, which letter of credit (i) supports the payment of such Pool Receivables, (ii) names the Originator of such Pool Receivables as the sole beneficiary thereof and (iii) is payable in U.S. Dollars.

"Eligible Supporting Letter of Credit Provider" means a bank so designated in writing by the Administrative Agent to the Servicer (in the sole discretion of the Administrative Agent); provided, at any time after the long-term unsecured senior debt obligation of such bank is withdrawn or falls below a rating of (a) "BBB-" by S&P's on its long-term senior unsecured and uncredit-enhanced debt securities, or (b) "Baa3" by Moody's on its long-term senior unsecured and uncredit-enhanced debt securities, that the Administrative Agent may revoke (in the sole discretion) any such designation by written notice, which revocation shall be effective on the date so designated, and on such effective date, each letter of credit issued or confirmed by such bank shall cease to be an Eligible Supporting Letter of Credit.

"Embargoed Property" means any property; (a) beneficially owned, directly or indirectly, by a Sanctioned Person; (b) that is due to or from a Sanctioned Person; (c) in which a Sanctioned Person otherwise holds any interest; (d) that is located in a Sanctioned Jurisdiction; or (e) that otherwise would cause any actual or possible violation by the Lenders or the Administrative Agent of any applicable Anti-Terrorism Law if the Lenders or the Administrative Agent were to obtain an encumbrance on, lien on, pledge of, or security interest in such property, or provide services in consideration of such property.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended from time to time, and any rule or regulation issued thereunder.

"ERISA Affiliate" means, with respect to any Person, any corporation, trade or business which together with the Person is a member of a controlled group of corporations or a controlled group of trades or businesses and would be deemed a "single employer" within the meaning of Sections 414(b), (c), (m) of the Code or Section 4001(b) of ERISA.

"Event of Default" has the meaning specified in Section 10.01.

"Excess Concentration" means, the sum, without duplication, of:

(a) the sum of the amounts calculated for each of the Obligors equal to the excess (if any) of (i) aggregate Outstanding Balance of the Eligible Receivables of such Obligor, over (ii) the product of (x) such Obligor's Concentration Percentage, multiplied by (y) the aggregate Outstanding Balance of all Eligible Receivables; plus

(b) the excess (if any) of (i) the aggregate Outstanding Balance of all Eligible Receivables, the Obligors of which are Eligible Foreign Obligors, over (ii) the product of (x) 3.50%, multiplied by (y) the aggregate Outstanding Balance of all Eligible Receivables; plus

(c) the excess (if any) of (i) the aggregate Outstanding Balance of all Eligible Receivables that are In-Transit Receivables, over (ii) the product of (x) 7.5%, multiplied by (y) the aggregate Outstanding Balance of all Eligible Receivables; plus

(d) the excess (if any) of (i) the aggregate Outstanding Balance of all Eligible Receivables that have not been billed, over (ii) the product of (x) 10.0%, multiplied by (y) the aggregate Outstanding Balance of all Eligible Receivables; plus

(e) the excess (if any) of (i) the aggregate Outstanding Balance of all Eligible Receivables that have a due date which is more than 60 days after the original invoice date of such Receivable, over (ii) the product of (x) 7.5%, multiplied by (y) the aggregate Outstanding Balance of all Eligible Receivables;

provided, that, for purposes of determining the “Excess Concentration” pursuant to clause (a) above, with respect to any Eligible Receivable supported by an Eligible Supporting Letter of Credit, the “Obligor” thereof shall be deemed to be the related Eligible Supporting Letter of Credit Provider, provided, further that, for purposes of determining the “Excess Concentration” pursuant to clause (b) above, with respect to any Eligible Receivable supported by an Eligible Supporting Letter of Credit, the “Obligor” thereof shall be deemed to be the related Eligible Supporting Letter of Credit Provider (and, with respect to any Eligible Receivable supported by an Eligible Supporting Letter of Credit, such Obligor shall be deemed to be organized under the laws of the country in which the office from which it is obligated to make payment with respect to such Eligible Supporting Letter of Credit is located) and provided, further that if any Pool Receivable is partially supported by an Eligible Supporting Letter of Credit, then the “Obligor” thereof shall be deemed to be (i) with respect to the Unsupported Outstanding Balance of such Pool Receivable, the Obligor of such Pool Receivable and (ii) with respect to the Supported Outstanding Balance of such Pool Receivable, the related Eligible Supporting Letter of Credit Provider.

“Exchange Act” means the Securities Exchange Act of 1934, as amended or otherwise modified from time to time.

“Excluded Calculation Obligor” means any Obligor listed in Schedule VI hereto, which may be amended from time to time by the Borrower’s delivering a revised Schedule VI that is approved in writing by the Administrative Agent (acting in its sole discretion).

“Excluded Calculation Obligor Ineligibility Period” means the period for any Obligor specified on Schedule VI, which may be amended from time to time by the Borrower’s delivering a revised Schedule VI that is approved in writing by the Administrative Agent (acting in its sole discretion).

“Excluded Calculation Obligor Receivable” means a Receivable the Obligor of which is an Excluded Calculation Obligor.

“Excluded Receivable” means any Receivable (without giving effect to the exclusion of “Excluded Receivables” from the definition of “Receivable”) which arose from the sale of minerals that were extracted from one or more of the mineheads set forth on Schedule IV hereto or the sale or leasing of equipment (provided, that coal shall not constitute equipment for purposes of this definition).

"Excluded Taxes" means any of the following Taxes imposed on or with respect to an Affected Person or required to be withheld or deducted from a payment to an Affected Person: (a) Taxes imposed on or measured by net income (however denominated), franchise Taxes and branch profits Taxes, in each case, (i) imposed as a result of such Affected Person being organized under the laws of, or having its principal office or, in the case of any Lender, its applicable lending office located in, the jurisdiction imposing such Tax (or any political subdivision thereof) or (ii) that are Other Connection Taxes, (b) in the case of a Lender, U.S. federal withholding Taxes imposed on amounts payable to or for the account of such Lender with respect to an applicable interest in the Loans or Commitment pursuant to a law in effect on the date on which (i) such Lender makes a Loan or its Commitment or (ii) such Lender changes its lending office, except in each case to the extent that amounts with respect to such Taxes were payable either to such Lender's assignor immediately before such Lender became a party hereto or to such Lender immediately before it changed its lending office and (c) any U.S. federal withholding Taxes imposed pursuant to FATCA.

"Exiting Lender" has the meaning set forth in [Section 2.02\(g\)](#).

"Facility Limit" means ~~\$60,000,000~~ [90,000,000](#) as reduced or increased from time to time pursuant to [Section 2.02\(e\)](#) or [2.02\(h\)](#), as applicable. References to the unused portion of the Facility Limit shall mean, at any time of determination, an amount equal to (x) the Facility Limit at such time, minus (y) the sum of the Aggregate Capital plus the LC Participation Amount.

"FATCA" means Sections 1471 through 1474 of the Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with) and any current or future regulations or official interpretations thereof.

"Fee Letter" has the meaning specified in [Section ~~2.09~~2.03](#).

"Fees" has the meaning specified in [Section ~~2.09~~2.03](#).

"Final Maturity Date" means the date that is one hundred eighty (180) days following the Termination Date (as such date may be extended pursuant to [Section 2.02\(g\)](#)), or such earlier date on which the Loans become due and payable pursuant to [Section 10.01](#).

"Final Payout Date" means the date on or after the Termination Date when (i) the Aggregate Capital and Aggregate Interest have been paid in full, (ii) the LC Participation Amount has been reduced to zero (\$0) and no Letters of Credit issued hereunder remain outstanding and undrawn, (iii) all Borrower Obligations shall have been paid in full, (iv) all other

amounts owing to the Credit Parties and any other Borrower Indemnified Party or Affected Person hereunder and under the other Transaction Documents have been paid in full and (v) all accrued Servicing Fees have been paid in full.

"Financial Officer" of any Person means, the chief executive officer, the chief financial officer, the chief accounting officer, the principal accounting officer, the controller, the treasurer or the assistant treasurer of such Person.

"Fiscal Month" means each calendar month.

“Fitch” means Fitch, Inc. and any successor thereto that is a nationally recognized statistical rating organization.

“Fixed Charge Ratio” means the ratio of (a) Consolidated Cash Flow minus (i) Consolidated Income Tax Expense, minus (ii) Maintenance Cap Ex to (b) Consolidated Fixed Charges of the Parent and its Subsidiaries for each rolling four-quarter period (*provided* that in calculating the Fixed Charge Ratio for any rolling four-quarter period (i) distributions made in the first quarter of such four-quarter period shall be excluded from determining the Fixed Charge Ratio and (ii) all distributions declared or made in the current quarter when the calculation is being made (up to the time when the calculation is being made) shall be included in determining the Fixed Charge Ratio).

“GAAP” means generally accepted accounting principles in the United States of America, consistently applied.

“Governmental Acts” has the meaning set forth in Section 3.09.

“Governmental Authority” means the government of the United States of America or any other nation, or of any political subdivision thereof, whether state or local, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government (including any supra-national bodies such as the European Union or the European Central Bank) and any group or body charged with setting financial accounting or regulatory capital rules or standards (including the Financial Accounting Standards Board, the Bank for International Settlements or the Basel Committee on Banking Supervision or any successor or similar authority to any of the foregoing).

“Group AA Obligor” means any Obligor with a rating of at least: (a) “AA” or better by S&P on such Obligor’s long-term senior unsecured and uncredit-enhanced debt securities, and (b) “Aa2” or better by Moody’s on such Obligor’s long-term senior unsecured and uncredit-enhanced debt securities; provided, that if an Obligor receives a split rating from S&P and Moody’s and satisfies only one of clause (a) or clause (b) above, then if such differences in ratings between S&P and Moody’s is not more than one ratings level, such Obligor shall be deemed to have satisfied each of clause (a) and clause (b) above. Notwithstanding the foregoing, any Obligor that is an Affiliate of an Obligor that satisfies the definition of “Group AA Obligor” shall be deemed to be a Group AA Obligor and shall be aggregated with the Obligor that satisfies such definition for the purposes of determining the “Concentration Reserve Percentage” and the definition of “Excess Concentration” for such Obligors, unless such deemed Obligor separately

satisfies the definition of “Group A Obligor”, “Group B Obligor”, “Group C Obligor” or “Group D Obligor”, in which case such Obligor shall be separately treated as a Group A Obligor, a Group B Obligor, a Group C Obligor or a Group D Obligor, as the case may be, and shall be aggregated and combined for such purposes with any of its Affiliates that are Obligors.

“Group A Obligor” means any Obligor with a short-term rating of at least: (a) “A-1” by S&P, or if such Obligor does not have a short-term rating from S&P, a rating of “A+” or better by S&P on such Obligor’s long-term senior unsecured and uncredit-enhanced debt securities, and (b) “P-1” by Moody’s, or if such Obligor does not have a short-term rating from Moody’s, “A1” or better by Moody’s on such Obligor’s long-term senior unsecured and uncredit-enhanced debt securities; provided, that if an Obligor receives a split rating from S&P and Moody’s and satisfies only one of clause (a) or clause

(b) above, then (i) if such differences in ratings between S&P and Moody's is not more than one ratings level, such Obligor shall be deemed to have satisfied each of clause (a) and clause (b) above and (ii) if such differences in ratings between S&P and Moody's is two ratings level, such Obligor's rating shall be deemed to be one ratings level lower than its rating from the higher of S&P and Moody's and after giving effect to such adjustment in rating, such Obligor shall be required to satisfy only one of clause (a) or clause (b) above. Notwithstanding the foregoing, any Obligor that is an Affiliate of an Obligor that satisfies the definition of "Group A Obligor" shall be deemed to be a Group A Obligor and shall be aggregated with the Obligor that satisfies such definition for the purposes of determining the "Concentration Reserve Percentage" and the definition of "Excess Concentration" for such Obligors, unless such deemed Obligor separately satisfies the definition of "Group AA Obligor", "Group B Obligor", "Group C Obligor" or "Group D Obligor", in which case such Obligor shall be separately treated as a Group AA Obligor, a Group B Obligor, a Group C Obligor or a Group D Obligor, as the case may be, and shall be aggregated and combined for such purposes with any of its Affiliates that are Obligors.

"Group B Obligor" means an Obligor that is not a Group A Obligor, with a short-term rating of at least: (a) "A-2" by S&P, or if such Obligor does not have a short-term rating from S&P, a rating of "BBB+" to "A" by S&P on such Obligor's long-term senior unsecured and uncredit-enhanced debt securities, and (b) "P-2" by Moody's, or if such Obligor does not have a short-term rating from Moody's, "Baa1" to "A2" by Moody's on such Obligor's long-term senior unsecured and uncredit-enhanced debt securities; provided, that if an Obligor receives a split rating from S&P and Moody's and satisfies only one of clause (a) or clause (b) above, then (i) if such differences in ratings between S&P and Moody's is not more than one ratings level, such Obligor shall be deemed to have satisfied each of clause (a) and clause (b) above and (ii) if such differences in ratings between S&P and Moody's is two ratings level, such Obligor's rating shall be deemed to be one ratings level lower than its rating from the higher of S&P and Moody's and after giving effect to such adjustment in rating, such Obligor shall be required to satisfy only one of clause (a) or clause (b) above. Notwithstanding the foregoing, any Obligor that is an Affiliate of an Obligor that satisfies the definition of "Group B Obligor" shall be deemed to be a Group B Obligor and shall be aggregated with the Obligor that satisfies such definition for the purposes of determining the "Concentration Reserve Percentage" and the definition of "Excess Concentration" for such Obligors, unless such deemed Obligor separately satisfies the definition of "Group AA Obligor", "Group A Obligor", "Group C Obligor" or "Group D Obligor", in which case such Obligor shall be separately treated as a Group AA Obligor, a Group A Obligor,

a Group C Obligor or a Group D Obligor, as the case may be, and shall be aggregated and combined for such purposes with any of its Affiliates that are Obligors.

"Group C Obligor" means an Obligor that is not a Group A Obligor or a Group B Obligor, with a short-term rating of at least: (a) "A-3" by S&P, or if such Obligor does not have a short-term rating from S&P, a rating of "BBB-" to "BBB" by S&P on such Obligor's long-term senior unsecured and uncredit-enhanced debt securities, and (b) "P-3" by Moody's, or if such Obligor does not have a short-term rating from Moody's, "Baa3" to "Baa2" by Moody's on such Obligor's long-term senior unsecured and uncredit-enhanced debt securities; provided, that if an Obligor receives a split rating from S&P and Moody's and satisfies only one of clause (a) or clause (b) above, then (i) if such differences in ratings between S&P and Moody's is not more than one ratings level, such Obligor

shall be deemed to have satisfied each of clause (a) and clause (b) above and (ii) if such differences in ratings between S&P and Moody's is two ratings level, such Obligor's rating shall be deemed to be one ratings level lower than its rating from the higher of S&P and Moody's and after giving effect to such adjustment in rating, such Obligor shall be required to satisfy only one of clause (a) or clause (b) above. Notwithstanding the foregoing, any Obligor that is an Affiliate of an Obligor that satisfies the definition of "Group C Obligor" shall be deemed to be a Group C Obligor and shall be aggregated with the Obligor that satisfies such definition for the purposes of determining the "Concentration Reserve Percentage" and the definition of "Excess Concentration" for such Obligors, unless such deemed Obligor separately satisfies the definition of "Group AA Obligor", "Group A Obligor", "Group B Obligor" or "Group D Obligor", in which case such Obligor shall be separately treated as a Group AA Obligor, a Group A Obligor, a Group B Obligor or a Group D Obligor, as the case may be, and shall be aggregated and combined for such purposes with any of its Affiliates that are Obligors.

"Group D Obligor" means any Obligor that is not a Group A Obligor, Group B Obligor or Group C Obligor; provided, that any Obligor that is not rated by either Moody's or S&P shall be a Group D Obligor. Notwithstanding the foregoing, any Obligor that is an Affiliate of an Obligor that satisfies the definition of "Group D Obligor" shall be deemed to be a Group D Obligor and shall be aggregated with the Obligor that satisfies such definition for the purposes of determining the "Concentration Reserve Percentage" and the definition of "Excess Concentration" for such Obligors, unless such deemed Obligor separately satisfies the definition of "Group AA Obligor", "Group A Obligor", "Group B Obligor" or "Group C Obligor", in which case such Obligor shall be separately treated as a Group AA Obligor, a Group A Obligor, a Group B Obligor or a Group C Obligor, as the case may be, and shall be aggregated and combined for such purposes with any of its Affiliates that are Obligors.

"Guaranty" of any Person means any obligation of such Person guarantying or in effect guarantying any liability or obligation of any other Person in any manner, whether directly or indirectly, including any such liability arising by virtue of partnership agreements, including any agreement to indemnify or hold harmless any other Person, any performance bond or other suretyship arrangement and any other form of assurance against loss, except endorsement of negotiable or other instruments for deposit or collection in the ordinary course of business.

"Indemnified Taxes" means (a) Taxes, other than Excluded Taxes, imposed on or with respect to any payment made by or on account of any obligation of the Borrower or any of its

Affiliates under any Transaction Document and (b) to the extent not otherwise described in clause (a), Other Taxes.

"Independent Director" has the meaning set forth in Section 8.03(c).

"Information Package" means a report, in substantially the form of Exhibit F.

"Insolvency Proceeding" means (a) any case, action or proceeding before any court or other Governmental Authority relating to bankruptcy, reorganization, insolvency, liquidation, receivership, dissolution, winding-up or relief of debtors or (b) any general assignment for the benefit of creditors of a Person, composition, marshaling of assets for creditors of a Person, or other, similar arrangement in respect of its creditors generally or any substantial portion of its creditors, in each of cases (a) and (b) undertaken under U.S. Federal, state or foreign law, including the Bankruptcy Code.

"Intended Tax Treatment" has the meaning set forth in Section 14.14.

"Interest" means, for each Loan ~~for any Accrual Period (or portion thereof)~~, the amount of interest accrued on the Capital of such Loan ~~during such Accrual Period (or portion thereof)~~ in accordance with ~~Section 2.03(b)~~ this Agreement.

"Interest Period" means the period of time selected by the Borrower in connection with (and to apply to) any election permitted hereunder by the Borrower to have Loans bear interest under the ~~BSBY Term SOFR~~ Rate Option. Subject to the last sentence of this definition, such period shall be one ~~or three Months~~ month. Such Interest Period shall commence on the effective date of such ~~BSBY Term SOFR~~ Rate Option, which shall be (i) the date ~~of such Loan~~ on which the affected Loans are made if the Borrower is requesting new Loans; or (ii) the date of renewal of or conversion to the ~~BSBY Term SOFR~~ Rate Option if the Borrower is renewing or converting to the ~~BSBY Term SOFR~~ Rate Option applicable to outstanding Loans. Notwithstanding the second sentence hereof: (A) any Interest Period which would otherwise end on a date which is not a Business Day shall be extended to the next succeeding Business Day unless such Business Day falls in the next calendar month, in which case such Interest Period shall end on the next preceding Business Day, ~~and~~ (B) the Borrower shall not select, convert to or renew an Interest Period for any portion of the Loans that would end after the Scheduled Termination Date, ~~and~~ (C) any Interest Period that commences on the last Business Day of a calendar month (or on a day for which there is no numerically corresponding day in the last calendar month of such Interest Period) shall end on the last Business Day of the last calendar month of such Interest Period.

"Interest Rate Option" means ~~any BSBY Rate Option, Daily BSBY Floating Rate Option or Base Rate Option~~, subject to Sections 2.03 and 2.05, for any day in any Interest Period for any Loan (or any portion thereof);

(a) if no Event of Default is then continuing and the Administrative Agent has not elected (in its sole discretion) for the Interest Rate for such Loan (or all Loans) to be determined pursuant to clause (b) below, the sum of (i) either (x) if the Borrower has elected the Term SOFR Rate Option for such Loan (or any portion thereof) and such day occurs during an Interest Period, the Term SOFR Rate for such

Interest Period, or (y) in any other case (including if no such election has been made), Daily 1M SOFR, plus (ii) the SOFR Adjustment; or

(b) if an Event of Default is then continuing and the Administrative Agent elects (in its sole discretion) for the Interest Rate for such Loan (or all Loans) to be determined pursuant to this clause (b), the greater of (x) the sum of Daily 1M SOFR plus the SOFR Adjustment, and (y) the Base Rate (in either case, plus any additional margin or spread imposed pursuant to Section 2.05).

For the avoidance of doubt, any election by the Administrative Agent pursuant to clause (b) above shall have immediate effect, and if any Loan is converted to, or deemed to be, a Base Rate Loan pursuant to the terms hereof, the Interest Rate for such Loan shall be the Base Rate as in effect from time to time (plus any additional margin or spread imposed pursuant to Section 2.05).

"Interim Report" means each Daily Report and Weekly Report.

"In-Transit Receivable" means, at any time of determination, any Receivable arising in connection with the sale of any goods or merchandise that as of such time, have been shipped but not delivered to the related Obligor.

"Investment Company Act" means the Investment Company Act of 1940, as amended or otherwise modified from time to time.

"Law" means any law(s) (including common law), constitution, statute, treaty, regulation, rule, ordinance, opinion, issued guidance, release, ruling, order, executive order, injunction, writ, decree, bond, judgment, authorization or approval, lien or award of or any settlement arrangement, by agreement, consent or otherwise, with any Governmental Authority, foreign or domestic.

"LC Bank" has the meaning set forth in the preamble to this Agreement.

"LC Collateral Account" means the account at any time designated as the LC Collateral Account established and maintained by the Administrative Agent (for the benefit of the LC Bank and the LC Participants), or such other account as may be so designated as such by the Administrative Agent.

"LC Fee Expectation" has the meaning set forth in Section 3.05(c).

"LC Limit" means ~~\$60,000,000~~ an amount equal to the Facility Limit. References to the unused portion of the LC Limit shall mean, at any time of determination, an amount equal to (x) the LC Limit at such time, minus (y) the LC Participation Amount.

"LC Participant" means each Lender.

"LC Participation Amount" means at any time of determination, the sum of the amounts then available to be drawn under all outstanding Letters of Credit.

"LC Request" means a letter in substantially the form of Exhibit A hereto executed and delivered by the Borrower to the Administrative Agent, the LC Bank and the Lenders pursuant to Section 3.02(a).

"LCR Security" means any commercial paper or security (other than equity securities issued to Parent or any Originator that is a consolidated subsidiary of Parent under generally accepted accounting principles) within the meaning of Paragraph ___32(e)(1)(viii) of the final rules titled Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, 79 Fed. Reg. 197, 61440 et seq. (October 10, 2014).

"Lenders" means PNC and each other Person that becomes a party to this Agreement in the capacity of a "Lender".

"Letter of Credit" means any stand-by letter of credit issued by the LC Bank at the request of the Borrower pursuant to this Agreement.

"Letter of Credit Application" has the meaning set forth in Section 3.02(a).

"Loan" means any loan made by a Lender pursuant to Section 2.02.

"Loan Request" means a letter in substantially the form of Exhibit A hereto executed and delivered by the Borrower to the Administrative Agent and each Lender pursuant to Section 2.02(a).

"Lock-Box" means each locked postal box with respect to which a Lock-Box Bank who has executed a Lock-Box Agreement pursuant to which it has been granted exclusive access for the purpose of retrieving and processing payments made on the Receivables and which is listed on Schedule II (as such schedule may be modified from time to time in connection with the addition or removal of any Lock-Box in accordance with the terms hereof).

"Lock-Box Account" means each account listed on Schedule II to this Agreement (as such schedule may be modified from time to time in connection with the closing or opening of any Lock-Box Account in accordance with the terms hereof) (in each case, in the name of the Borrower) and maintained at a bank or other financial institution acting as a Lock-Box Bank pursuant to a Lock-Box Agreement for the purpose of receiving Collections.

"Lock-Box Agreement" means each agreement, in form and substance satisfactory to the Administrative Agent, among the Borrower, the Servicer, the Administrative Agent and a Lock-Box Bank, governing the terms of the related Lock-Box Accounts, as the same may be amended, restated, supplemented or otherwise modified from time to time.

"Lock-Box Bank" means any of the banks or other financial institutions holding one or more Lock-Box Accounts.

"Loss Horizon Ratio" means, at any time of determination, the ratio (expressed as a percentage and rounded to the nearest 1/100 of 1%, with 5/1000th of 1% rounded upward) computed by dividing: (a) the sum of (x) the aggregate initial Outstanding Balance of all Pool Receivables generated by the Originators during the five (5) most recent Fiscal Months, plus (y)

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the product of ~~29~~35%, times the aggregate initial Outstanding Balance of all Pool Receivables generated by the Originators during the sixth (6th) most recent Fiscal Month, by (b) the Net Receivables Pool Balance as of such date.

"Loss Reserve" means, at any time of determination, an amount equal to: (a) the sum of the Aggregate Capital plus the LC Participation Amount on such date, multiplied by (b) (i) the Loss Reserve Percentage on such date, divided by (ii) 100% minus the Loss Reserve Percentage on such date.

"Loss Reserve Percentage" means, at any time of determination, the product of (a) 2.25, times (b) the highest average of the Default Ratios for any three consecutive Fiscal Months during the twelve most recent Fiscal Months, times (c) the Loss Horizon Ratio.

"Maintenance Cap Ex" means Parent's and its Subsidiaries' annual (or quarterly, if applicable) average estimated capital expenditures required to maintain, over the long-term, the operating capacity of their capital assets based on estimates developed by management upon a five-year planning horizon and publicly communicated by management from time to time.

"Majority Lenders" means Lenders representing more than 50% of the aggregate Commitments of all Lenders (or, if the Commitments have been terminated, Lenders representing more than 50% of the aggregate outstanding Capital held by all the Lenders).

"Material Adverse Effect" means a material adverse effect on any of the following:

(a) the assets, operations, business or financial condition of (i) if a particular Person is specified, such Person or (ii) if no particular Person is specified, the Borrower, the Transferor, the Servicer, the Performance Guarantor or any Originator;

(b) (i) if a particular Person is specified, the ability of such Person to perform its obligations under this Agreement or any other Transaction Document to which it is a party, or (ii) if no particular Person is specified, the ability of any of the Borrower, the Transferor, the Servicer, the Performance Guarantor or any Originator to perform its obligations, if any, under this Agreement or any other Transaction Document to which it is a party;

(c) the validity or enforceability of this Agreement or any other Transaction Document, or the validity, enforceability, value or collectibility of any material portion of the Pool Receivables;

(d) the status, perfection, enforceability or priority of the Administrative Agent's security interest in the Collateral; or

(e) the rights and remedies of any Credit Party under the Transaction Documents or associated with its respective interest in the Collateral.

"Material Supplier" means, with respect to any Person at any time, any material Supplier for such Person, other than any Supplier that provides such Person electricity or gas in its ordinary course of its business (and does not provide such Person with any other goods or

services material to such Person, other than goods or services incidental to providing electricity and gas).

"Mined Properties" has the meaning set forth in the Purchase and Sale Agreement.

"Minimum Dilution Reserve" means, on any day, an amount equal to (a) the Aggregate Capital plus the LC Participation Amount on such date multiplied by (b) (i) the Minimum Dilution Reserve Percentage, divided by (ii) 100% minus the Minimum Dilution Reserve Percentage on such day.

"Minimum Dilution Reserve Percentage" means, on any day, the product of (a) the average of the Dilution Ratios for the twelve most recent Fiscal Months, multiplied by (b) the Dilution Horizon Ratio.

"Minimum Fixed Charge Ratio Period" means each period, if any, commencing on the date that the Fixed Charge Ratio is less than 1.25:1, and ending on (but not including) the date, if any, that the Fixed Charge Ratio is no longer less than 1.25:1.

~~**"Month"**, with respect to an Interest Period under the BSBY Rate Option, means the interval between the days in consecutive calendar months numerically corresponding to the first day of such Interest Period. If any BSBY Rate Interest Period begins on a day of a calendar month for which there is no numerically corresponding day in the month in which such Interest Period is to end, the~~

~~final month of such Interest Period shall be deemed to end on the last Business Day of such final month.~~

"Monthly Settlement Date" means the 25th day of each calendar month (or if such day is not a Business Day, the next occurring Business Day).

"Moody's" means Moody's Investors Service, Inc. and any successor thereto that is a nationally recognized statistical rating organization.

"Multiemployer Plan" shall mean a multiemployer plan as defined in Section 4001(a)(3) of ERISA to which the Borrower, the Servicer, any Originator, the Parent or any of their respective ERISA Affiliates (other than one considered an ERISA Affiliate only pursuant to subsection (m) or (o) of Section 414 of the Code) is making or accruing an obligation to make contributions, or has within any of the preceding five plan years made or accrued an obligation to make contributions.

"Net Receivables Pool Balance" means, at any time of determination: (a) the Outstanding Balance of Eligible Receivables then in the Receivables Pool, minus (b) the Excess Concentration.

"Notice Date" has the meaning set forth in Section 3.02(b).

"No-Petition Letter" means that certain Letter Agreement re Pledge of SPV Interests, entered into, or to be entered into, in connection with the Eleventh Amendment to this

Agreement, by and among the Credit Agreement Administrative Agent, the Administrative Agent and the other parties thereto.

"Obligor" means, with respect to any Receivable, the Person obligated to make payments pursuant to the Contract relating to such Receivable.

"Obligor Percentage" means, at any time of determination, for each Obligor, a fraction, expressed as a percentage, (a) the numerator of which is the aggregate Outstanding Balance of the Eligible Receivables of such Obligor less the amount (if any) then included in the calculation of the Excess Concentration with respect to such Obligor and (b) the denominator of which is the aggregate Outstanding Balance of all Eligible Receivables at such time.

"Order" has the meaning set forth in Section 3.10.

"Originator" and "Originators" have the meaning set forth in the Purchase and Sale Agreement, as the same may be modified from time to time by adding new Originators or removing Originators, in each case with the prior written consent of the Administrative Agent.

"Other Connection Taxes" means, with respect to any Affected Person, Taxes imposed as a result of a present or former connection between such Affected Person and the jurisdiction imposing such Tax (other than connections arising from such Affected Person having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, engaged in any other transaction pursuant to or enforced any Transaction Document, or sold or assigned an interest in any Loan or Transaction Document).

"Other Taxes" means any and all present or future stamp or documentary Taxes or any other excise or property Taxes, charges or similar levies or fees arising from any payment made hereunder or from the execution, delivery, filing, recording or enforcement of, or otherwise in respect of, this Agreement, the other Transaction Documents and the other documents or agreements to be delivered hereunder or thereunder, except any such Taxes that are Other Connection Taxes imposed with respect to any assignment or participation.

"Outstanding Balance" means, at any time of determination, with respect to any Receivable, the then outstanding principal balance thereof.

"Overnight Bank Funding Rate" means for any day, the rate comprised of both overnight federal funds and overnight eurocurrency borrowings by U.S.-managed banking offices of depository institutions, as such composite rate shall be determined by the Federal Reserve Bank of New York ("NYFRB"), as set forth on its public website from time to time, and as published on the next succeeding Business Day as the overnight bank funding rate by the NYFRB (or by such other recognized electronic source (such as Bloomberg) selected by the Administrative Agent for the purpose of displaying such rate); provided, that if such day is not a Business Day, the Overnight Bank Funding Rate for such day shall be such rate on the immediately preceding Business Day; provided, further, that if such rate shall at any time, for any reason, no longer exist, a comparable replacement rate determined by the Administrative Agent at such time (which determination shall be conclusive absent manifest error). If the Overnight Bank Funding Rate determined as above would be less than zero, then such rate shall be deemed to be zero. The

rate of interest charged shall be adjusted as of each Business Day based on changes in the Overnight Bank Funding Rate without notice to the Borrower. "Federal Reserve Board" means the Board of Governors of the Federal Reserve System, or any entity succeeding to any of its principal functions.

"Parent" means Alliance Resource Operating Partners, L.P., a Delaware limited partnership.

"Parent Revolving Facility" means the Parent's revolving credit facility under the Credit Agreement, as it may be extended, refinanced or refunded by some or all of the lenders thereunder.

"Parent Group" has the meaning set forth in Section 8.03(c).

"Participant" has the meaning set forth in Section 14.03(d).

"Participant Register" has the meaning set forth in Section 14.03(e).

"Participation Advance" has the meaning set forth in Section 3.04(b).

"PBGC" means the Pension Benefit Guaranty Corporation, or any successor thereto.

"PATRIOT Act" has the meaning set forth in Section 14.15.

"Pension Plan" means a pension plan as defined in Section 3(2) of ERISA that is subject to Title IV of ERISA with respect to which any Originator, the Transferor, the Borrower or any other member of the Controlled Group may have any liability, contingent or otherwise.

"Percentage" means, at any time of determination, with respect to any Lender, a fraction (expressed as a percentage), (a) the numerator of which is (i) prior to the termination of all Commitments hereunder, its Commitment at such time or (ii) if all Commitments hereunder have been terminated, the aggregate outstanding Capital of all Loans being funded by the Lenders at such time and (b) the denominator of which is (i) prior to the termination of all Commitments hereunder, the aggregate Commitments of all Lenders at such time or (ii) if all Commitments hereunder have been terminated, the aggregate outstanding Capital of all Loans at such time.

"Performance Guarantor" means Parent.

"Performance Guaranty" means the Performance Guaranty, dated as of the Closing Date, by the Performance Guarantor in favor of the Administrative Agent for the benefit of the Secured Parties, as such agreement may be amended, restated, supplemented or otherwise modified from time to time.

"Person" means an individual, partnership, corporation (including a business trust), joint stock company, trust, unincorporated association, joint venture, limited liability company or other entity, or a government or any political subdivision or agency thereof.

"PNC" has the meaning set forth in the preamble to this Agreement.

"Pool Receivable" means a Receivable in the Receivables Pool.

"Pro Rata Share" shall mean, as to any LC Participant, a fraction, the numerator of which equals the Commitment of such LC Participant at such time and the denominator of which equals the aggregate of the Commitments of all LC Participants at such time.

"Prime Rate" means the interest rate per annum announced from time to time by the Administrative Agent at its main offices in Pittsburgh, Pennsylvania as its then prime rate, which rate may not be the lowest or most favorable rate then being charged to commercial borrowers or others by the Administrative Agent and may not be tied to any external rate of interest or index. Any change in the Prime Rate shall take effect at the opening of business on the day such change is announced.

"Purchase and Sale Agreement" means the Purchase and Sale Agreement, dated as of the Closing Date, among the Servicer, the Originators and the Transferor, as such agreement may be amended, amended and restated, supplemented or otherwise modified from time to time.

"Qualifying Interim Report" has the meaning set forth in Section 4.01(e).

"Receivable" means any right to payment of a monetary obligation, whether or not earned by performance, owed to any Originator, the Transferor or the Borrower, whether constituting an account, as-extracted collateral, chattel paper, payment intangible, instrument or general intangible, in each instance arising in connection with the sale of goods that have been or are to be sold or for services rendered or to be rendered, and includes, without limitation, the obligation to pay any finance charges, fees and other charges with respect thereto; provided, however, that "Receivable" shall not include any such right to payment of a monetary obligation that is an Excluded Receivable. Any such right to payment arising from any one transaction, including, without limitation, any such right to payment represented by an individual invoice or agreement, shall constitute a Receivable

separate from a Receivable consisting of any such right to payment arising from any other transaction.

"Receivables Pool" means, at any time of determination, all of the then outstanding Receivables transferred (or purported to be transferred) to the Borrower pursuant to the Sale and Contribution Agreement prior to the Termination Date.

"Register" has the meaning set forth in Section 14.03(b).

"Reimbursement Obligation" has the meaning set forth in Section 3.04(a).

"Related Rights" has the meaning set forth in Section 1.1 of the Purchase and Sale Agreement.

"Related Security" means, with respect to any Receivable:

(a) all of the Borrower's, the Transferor's and each Originator's interest in any goods (including returned goods), and documentation of title evidencing the

shipment or storage of any goods (including returned goods), the sale of which gave rise to such Receivable;

(b) all instruments and chattel paper that may evidence such Receivable;

(c) all other security interests or liens and property subject thereto from time to time purporting to secure payment of such Receivable, whether pursuant to the Contract related to such Receivable or otherwise, together with all UCC financing statements or similar filings relating thereto;

(d) all of the Borrower's, the Transferor's and each Originator's rights, interests and claims under the related Contracts and all guaranties, indemnities, insurance and other agreements (including the related Contract) or arrangements of whatever character from time to time supporting or securing payment of such Receivable or otherwise relating to such Receivable, whether pursuant to the Contract related to such Receivable or otherwise; and

(e) all of the Borrower's and the Transferor's rights, interests and claims under the Sale Agreements and the other Transaction Documents.

"Reportable Compliance Event" means that: (a) any Covered Entity becomes a Sanctioned Person, or is charged by indictment, criminal complaint, or similar charging instrument, arraigned, custodially detained, penalized or the subject of an assessment for a penalty, or enters into a settlement with an Governmental Authority in connection with any economic sanctions or other Anti-Terrorism Law or Anti-Corruption law, or any predicate crime to any anti-Terrorism Law or Anti-Corruption Law, or has knowledge of facts or circumstances to the effect that it is reasonably likely that any aspect of its operations represents a violation of any Anti-Terrorism Law or Anti-Corruption Law; (b) any Covered Entity engages in a transaction that has caused or may cause the Lenders or the Administrative Agent to be in violation of any Anti-Terrorism Laws, including a Covered Entity's use of any proceeds of the facilities to fund any operations in, finance any investments or activities in, or, make any payments to, directly or indirectly, a Sanctioned Person or Sanctioned Jurisdiction; (c)

any Collateral becomes Embargoed Property; or (d) any Covered Entity otherwise violates, or reasonably believes that it will violate, any of the representations, warranties or covenants set forth in Sections 7.01(q), 7.01(bb), 7.02(r), 7.02(x), 8.01(u) or 8.01(m) of this Agreement.

“Reportable Event” shall mean any reportable event as defined in Section 4043(c) of ERISA or the regulations issued thereunder with respect to a Pension Plan (other than a Pension Plan maintained by an ERISA Affiliate which is considered an ERISA Affiliate only pursuant to subsection (m) or (o) of Section 414 of the Code).

“Representatives” has the meaning set forth in Section 14.06(c).

“Required Capital Amount” means \$12,000,000.

“Responsible Officer” of any Person means, any Financial Officer, any vice president, the secretary, the general counsel, or any other officer of such Person customarily performing functions similar to those performed by any of the above-designated officers or responsible for

the administration of the obligations of such Person under the Transaction Documents and also, with respect to a particular matter any other officer to whom such matter is referred because of such officer's knowledge of and familiarity with the particular subject.

“S&P” means Standard & Poor's Rating Services, a Standard & Poor's Financial Services LLC business, and any successor thereto that is a nationally recognized statistical rating organization.

“Sale Agreements” means the Purchase and Sale Agreement and the Sale and Contribution Agreement.

“Sale and Contribution Agreement” means the Sale and Contribution Agreement, dated as of the Closing Date, among the Servicer, the Transferor and the Borrower, as such agreement may be amended, amended and restated, supplemented or otherwise modified from time to time.

“Sanctioned Country” means a country subject to a sanctions program maintained under any Anti-Terrorism Law.

“Sanctioned Person” means (a) a Person that is the subject of sanctions administered by OFAC or the U.S. Department of State (“State”), including by virtue of being (i) named on OFAC's list of “Specially Designated Nationals and Blocked Persons”; (ii) organized under the Laws of, ordinarily resident in, or physically located in a Sanctioned Jurisdiction; (iii) owned or controlled 50% or more in the aggregate, by one or more Persons that are the subject of sanctions administered by OFAC; (b) a Person that is the subject of sanctions maintained by the European Union (“E.U.”), including by virtue of being named on the E.U.'s “Consolidated list of persons, groups and entities subject to E.U. financial sanctions” or other, similar lists; (c) a Person that is the subject of sanctions maintained by the United Kingdom (“U.K.”), including by virtue of being named on the “Consolidated List Of Financial Sanctions Targets in the U.K.” or other, similar lists; or (d) a Person that is the subject of sanctions imposed by any Governmental Authority of a jurisdiction whose Laws apply to this Agreement.

“Sanctioned Jurisdiction” means any country, territory, or region that is the subject of sanctions administered by OFAC.

"Scheduled Termination Date" means January ~~12~~10, ~~2024~~2025, as such date may be extended from time to time pursuant to [Section 2.02\(g\)](#).

"SEC" shall mean the U.S. Securities and Exchange Commission or any governmental agencies substituted therefor.

"Secured Parties" means each Credit Party and each Borrower Indemnified Party.

"Securities Act" means the Securities Act of 1933, as amended or otherwise modified from time to time.

"Servicer" has the meaning set forth in the [preamble](#) to this Agreement.

"Servicer Indemnified Amount" has the meaning set forth in [Section 13.02\(a\)](#).

"Servicer Indemnified Party" has the meaning set forth in [Section 13.02\(a\)](#).

"Servicing Fee" shall mean the fee referred to in [Section 9.06\(a\)](#) of this Agreement.

"Servicing Fee Rate" shall mean the rate referred to in [Section 9.06\(a\)](#) of this Agreement.

"Settlement Date" means ~~with respect to any Borrowing Tranche for any Accrual Period or any Fees~~, (i) prior to the Termination Date, the Monthly Settlement Date and (ii) on and after the Termination Date, each day selected from time to time by the Administrative Agent (with the consent or at the direction of the Majority Lenders) (it being understood that the Administrative Agent (with the consent or at the direction of the Majority Lenders) may select such Settlement Date to occur as frequently as daily), or, in the absence of such selection, the Monthly Settlement Date.

["SOFR" means, for any day, a rate equal to the secured overnight financing rate as administered by the Federal Reserve Bank of New York \(or a successor administrator of the secured overnight financing rate\).](#)

["SOFR Adjustment" means ten basis points \(0.10%\).](#)

["SOFR Floor" means a rate of interest per annum equal to zero basis points \(0.00%\).](#)

"Solvent" means, with respect to any Person and as of any particular date, (i) the present fair market value of the assets of such Person is not less than the total amount required to pay the probable liabilities of such Person on its total existing debts and liabilities (including contingent liabilities) as they become absolute and matured, (ii) such Person is able to realize upon its assets and pay its debts and other liabilities, contingent obligations and commitments as they mature and become due in the normal course of business, (iii) such Person is not incurring debts or liabilities beyond its ability to pay such debts and liabilities as they mature and (iv) such Person is not engaged in any business or transaction, and is not about to engage in any business or transaction, for which its property would constitute unreasonably small capital after giving due consideration to the prevailing practice in the industry in which such Person is engaged.

"Structuring Agent" means PNC Capital Markets LLC, a Pennsylvania limited liability company.

"Subject Affiliate Receivable" means any indebtedness and other obligations owed to Hamilton County Coal, LLC, arising in connection with the sale of goods or for services rendered, and includes, without limitation, the obligation to pay any finance charges, fees and other charges with respect thereto.

"Subordinated Note" means the Company Note (as defined in the Sale and Contribution Agreement).

"Sub-Servicer" has the meaning set forth in Section 9.01(d).

"Subsidiary," means, as to any Person, a corporation, partnership, limited liability company or other entity of which shares of stock of each class or other interests having ordinary voting power (other than stock or other interests having such power only by reason of the happening of a contingency) to elect a majority of the Board of Directors or other managers of such entity are at the time owned, or management of which is otherwise controlled: (a) by such Person, (b) by one or more Subsidiaries of such Person or (c) by such Person and one or more Subsidiaries of such Person.

"Supplier" means any Person that provides goods or services to another Person.

"Supported Outstanding Balance" means, for any Receivable at any time that is supported in whole or in part by an Eligible Supporting Letter of Credit, the lesser of (a) the Outstanding Balance of such Receivable and (b) the face amount of such Eligible Supporting Letter of Credit.

"Tax Benefit" has the meaning set forth in Section 5.03(k).

"Taxes" means any and all present or future taxes, levies, imposts, duties, deductions, charges or withholdings imposed by any Governmental Authority and all interest, penalties, additions to tax and any similar liabilities with respect thereto.

"Term SOFR Administrator" means CME Group Benchmark Administration Limited (CBA) (or a successor administrator of the Term SOFR Reference Rate selected by the Administrative Agent in its reasonable discretion).

"Term SOFR Rate" means, for any Interest Period, the interest rate per annum determined by the Administrative Agent (rounded upwards, at the Administrative Agent's discretion, to the nearest 1/100th of 1%) equal to the Term SOFR Reference Rate for a tenor of one month on the day (the "Term SOFR Determination Date") that is two (2) Business Days prior to the first day of such Interest Period. If the Term SOFR Reference Rate for the applicable tenor has not been published or replaced with a Benchmark Replacement by 5:00 p.m. (Pittsburgh, Pennsylvania time) on the Term SOFR Determination Date, then the Term SOFR Reference Rate, for purposes of clause (A) in the preceding sentence, shall be the Term SOFR Reference Rate for such tenor on the first Business Day preceding such Term SOFR Determination Date for which such Term SOFR Reference Rate for such tenor was published in accordance herewith, so long as such first preceding Business Day is not more than three (3) Business Days prior to such Term SOFR Determination Date. If the Term SOFR Rate, determined as provided above, would be less than the SOFR Floor, then the Term SOFR Rate shall be deemed to be the SOFR Floor. The Term SOFR Rate shall be adjusted automatically without notice to the Borrower on and as of the first day of each Interest Period.

"Term SOFR Rate Option" means the option of the Borrower to have Loans (or any portion of Capital) bear interest by reference to the Term SOFR Rate pursuant to Section 2.03(d).

"Term SOFR Reference Rate" means the forward-looking term rate based on SOFR.

"Termination Date" means the earliest to occur of (a) the Scheduled Termination Date, (b) the date on which the "Termination Date" is declared or deemed to have occurred under

Section 10.01 and (c) the date selected by the Borrower on which all Commitments have been reduced to zero pursuant to Section 2.02(e).

"Termination Event" means a "Termination Event" under any Sale Agreement.

"Top Twenty-Five Obligor" means, at any time of determination, the largest twenty-five Obligor based on Outstanding Balance of Receivables then in the Receivables Pool.

"Total Reserves" means, at any time of determination, the sum of: (a) the Yield Reserve, plus (b) the greater of (i) the sum of the Concentration Reserve plus the Minimum Dilution Reserve and (ii) the sum of the Loss Reserve plus the Dilution Reserve. An Excluded Calculation Obligor Receivable shall be excluded from each component of the calculations used to determine Total Reserves during the continuation of an Excluded Calculation Obligor Ineligibility Period with respect to such Excluded Calculation Obligor.

"Transaction Documents" means this Agreement, the Sale Agreements, the Lock-Box Agreements, the Fee Letter, the No-Petition Letter, each Subordinated Note, Demand Note, the Performance Guaranty and all other certificates, instruments, UCC financing statements, reports, notices, agreements and documents executed or delivered under or in connection with this Agreement, in each case as the same may be amended, supplemented or otherwise modified from time to time in accordance with this Agreement.

"Transfer" means, with respect to any person, any transaction in which such person sells, conveys, abandons, transfers, leases (as lessor), or otherwise disposes of any of its assets; provided, however, that "Transfer" shall not include (a) the granting of any liens permitted to be granted under the Credit Agreement, (b) any transfer of assets permitted pursuant to Section 5.02(d) of the Credit Agreement, (c) the making of any Restricted Payment (as defined in the Credit Agreement) permitted in the loan documentation relating to the Credit Agreement or (d) the making of any investments permitted in the loan documentation relating to the Credit Agreement.

"Transfer Restrictions Agreement" means that certain Transfer Restrictions Agreement, dated as of June 13, 2006, by and among Alliance Holdings GP, L.P., Alliance GP, LLC, C-Holdings, LLC, Joseph W. Craft III, Alliance Resource Holdings II, Inc., Alliance Resource Holdings, Inc., Alliance Resource GP, LLC and each other party named therein as a party thereto, as the same may be amended, modified or supplemented.

"Transferor" means the Parent.

"TVA" means Tennessee Valley Authority.

"UCC" means the Uniform Commercial Code as from time to time in effect in the applicable jurisdiction.

"Unmatured Event of Default" means an event that but for notice or lapse of time or both would constitute an Event of Default.

"Unsupported Outstanding Balance" means, for any Receivable at any time, (a) the then Outstanding Balance of such Receivable, less (b) the Supported Outstanding Balance for such Receivable.

"U.S. Government Securities Business Day" means any day except for (a) a Saturday or Sunday or (b) a day on which the Securities Industry and Financial Markets Association recommends that the fixed income departments of its members be closed for the entire day for purposes of trading in United States government securities.

"U.S. Tax Compliance Certificate" has the meaning set forth in Section 5.03(f)(ii)(B)(3).

"Volcker Rule" means Section 13 of the U.S. Bank Holding Company Act of 1956, as amended, and the applicable rules and regulations thereunder.

"Weekly Report" means a report substantially in the form of Exhibit I-1.

"Withdrawal Liability" shall mean liability to a Multiemployer Plan as a result of a complete or partial withdrawal from such Multiemployer Plan, as such terms are defined in Part I of Subtitle E of Title IV of ERISA.

"Yield Reserve" means, at any time of determination, an amount equal to the product of (i) the sum of the Aggregate Capital plus the LC Participation Amount on such date, multiplied by (ii) (x) the Yield Reserve Percentage on such date, divided by (y) 100% minus the Yield Reserve Percentage on such date.

"Yield Reserve Percentage" means, at any time of determination:

$$\frac{1.50 \times \text{DSO} \times (\text{BR} + \text{SFR})}{360}$$

where:

BR =the Base Rate at such time;

DSO =Days' Sales Outstanding for the month most recently ended; and

SFR =the Servicing Fee Rate.

SECTION 1.02. Other Interpretative Matters. All accounting terms not specifically defined herein shall be construed in accordance with GAAP. All terms used in Article 9 of the UCC in the State of New York and not specifically defined herein, are used herein as defined in such Article 9. Unless otherwise expressly indicated, all references herein to "Article," "Section," "Schedule," "Exhibit" or "Annex" shall mean articles and sections of, and schedules, exhibits and annexes to, this Agreement. For purposes of this Agreement, the other Transaction Documents and all such

certificates and other documents, unless the context otherwise requires: (a) references to any amount as on deposit or outstanding on any particular date means such amount at the close of business on such day; (b) the words “hereof,” “herein” and “hereunder” and words of similar import refer to such agreement (or the certificate or other document in

which they are used) as a whole and not to any particular provision of such agreement (or such certificate or document); (c) references to any Section, Schedule or Exhibit are references to Sections, Schedules and Exhibits in or to such agreement (or the certificate or other document in which the reference is made), and references to any paragraph, subsection, clause or other subdivision within any Section or definition refer to such paragraph, subsection, clause or other subdivision of such Section or definition; (d) the term “including” means “including without limitation”; (e) references to any Applicable Law refer to that Applicable Law as amended from time to time and include any successor Applicable Law; (f) references to any agreement refer to that agreement as from time to time amended, restated or supplemented or as the terms of such agreement are waived or modified in accordance with its terms; (g) references to any Person include that Person's permitted successors and assigns; (h) headings are for purposes of reference only and shall not otherwise affect the meaning or interpretation of any provision hereof; (i) unless otherwise provided, in the calculation of time from a specified date to a later specified date, the term “from” means “from and including”, and the terms “to” and “until” each means “to but excluding”; and (j) terms in one gender include the parallel terms in the neuter and opposite gender.

SECTION 1.03. Benchmark Replacement Notification ~~Unavailability of BSBY Screen Rate~~. Section 2.06(d) ~~of this Agreement~~ provides a mechanism for determining an alternative rate of interest in the event that Daily 1M SOFR or the ~~BSBY Screen~~ Term SOFR Rate is no longer available or in certain other circumstances. The Administrative Agent does not warrant or accept any responsibility for and shall not have any liability with respect to, the administration, submission or any other matter related to Daily 1M SOFR or the ~~BSBY Screen~~ Term SOFR Rate, or with respect to any alternative or successor rate thereto, or replacement rate therefor.

~~SECTION 1.04. — Conforming Changes Relating to BSBY. With respect to the BSBY Screen Rate, the Administrative Agent will have the right to make Conforming Changes from time to time and, notwithstanding anything to the contrary herein or in any other Transaction Document, any amendments implementing such Conforming Changes will become effective without any further action or consent of any other party to this Agreement or any other Transaction Document; provided that, with respect to any such amendment effected, the Administrative Agent shall provide notice to the Borrower and the Lenders each such amendment implementing such Conforming Changes reasonably promptly after such amendment becomes effective.~~

ARTICLE II

TERMS OF THE LOANS

SECTION 2.01. Loan Facility ~~Loan Facility~~. Upon a request by the Borrower pursuant to Section 2.02, and on the terms and subject to the conditions hereinafter set forth, each Lender, severally and not jointly, agrees to make Loans to the Borrower on a revolving basis, ratably in accordance with its Commitment from time to time during the period from the Closing Date to the

Termination Date. Under no circumstances shall any Lender be obligated to make any such Loan if, after giving effect to such Loan:

(i) the Aggregate Capital plus the LC Participation Amount would exceed the Facility Limit at such time;

(ii) the sum of (A) the Capital of such Lender, plus (B) such Lender's (in its capacity as an LC Participant) Pro Rata Share of the LC Participation Amount, would exceed the Commitment of such Lender at such time; or

(iii) the Aggregate Capital plus the Adjusted LC Participation Amount would exceed the Borrowing Base at such time.

SECTION 2.02. Making Loans; Repayment of Loans. (a) Each Loan hereunder shall be made on at least two (2) Business Days' prior written request from the Borrower to the Administrative Agent and each Lender in the form of a Loan Request attached hereto as Exhibit A. Each such request for a Loan shall be made no later than 1:00 p.m. (New York City time) on a Business Day (it being understood that any such request made after such time shall be deemed to have been made on the following Business Day) and shall specify (i) the amount of the Loan(s) requested (which shall not be less than \$500,000 and shall be an integral multiple of \$100,000), (ii) the allocation of such amount among the Lenders (which shall be ratable based on the Commitments), (iii) the account to which the proceeds of such Loan shall be distributed and (iv) the date such requested Loan is to be made (which shall be a Business Day).

(b) On the date of each Loan, the Lenders shall, upon satisfaction of the applicable conditions set forth in Article VI and pursuant to the other conditions set forth in this Article II, make available to the Borrower in same day funds an aggregate amount equal to the amount of such Loans requested, at the account set forth in the related Loan Request.

(c) Each Lender's obligation shall be several, such that the failure of any Lender to make available to the Borrower any funds in connection with any Loan shall not relieve any other Lender of its obligation, if any, hereunder to make funds available on the date such Loans are requested (it being understood, that no Lender shall be responsible for the failure of any other Lender to make funds available to the Borrower in connection with any Loan hereunder).

(d) The Borrower shall repay in full the outstanding Capital of each Lender on the Final Maturity Date. Prior thereto, the Borrower shall, on each Settlement Date, make a prepayment of the outstanding Capital of the Lenders to the extent required under Section 4.01 and otherwise in accordance therewith. Notwithstanding the foregoing, the Borrower, in its discretion, shall have the right to make a prepayment, in whole or in part, of the outstanding Capital of the Lenders (together with any associated Breakage Fees and any accrued Interest and Fees in respect of such prepaid Capital) on any Business Day upon two (2) Business Days' prior written notice thereof to the Administrative Agent and each Lender; provided, however, that each such prepayment shall be in a minimum aggregate amount of \$100,000 and shall be an integral multiple of \$100,000 (or, if less, the outstanding Capital, plus accrued but unpaid Interest and Fees together with any associated Breakage Fees). All prepayments pursuant to this section shall be accompanied by any associated indemnity payments due under Section 5.02.

(e) The Borrower may, at any time upon at least fifteen (15) days' prior written notice to the Administrative Agent and each Lender, terminate the Facility Limit in whole or ratably reduce the Facility Limit in part. Each partial reduction in the Facility Limit shall be in a minimum aggregate amount of \$5,000,000 and shall be an integral multiple of \$1,000,000. In connection with any partial reduction in the Facility Limit, the Commitment of each Lender and LC Participant, as well as the LC Limit, shall be ratably reduced. All prepayments pursuant to this section shall be accompanied by any associated indemnity payments due under Section 5.02.

(f) In connection with any reduction of the Commitments, the Borrower shall remit to the Administrative Agent (i) instructions regarding such reduction and (ii) for payment to the Lenders, cash in an amount sufficient to pay (A) Capital of each Lender in excess of its Commitment and (B) all other outstanding Borrower Obligations with respect to such reduction (determined based on the ratio of the reduction of the Commitments being effected to the amount of the Commitments prior to such reduction or, if the Administrative Agent reasonably determines that any portion of the outstanding Borrower Obligations is allocable solely to that portion of the Commitments being reduced or has arisen solely as a result of such reduction, all of such portion) including, without duplication, any associated Breakage Fees. Upon receipt of any such amounts, the Administrative Agent shall apply such amounts first to the reduction of the outstanding Capital, and second to the payment of the remaining outstanding Borrower Obligations with respect to such reduction, including any Breakage Fees, by paying such amounts to the Lenders.

(g) Provided that no Event of Default or Unmatured Event of Default has occurred and is continuing, the Borrower may from time to time advise the Administrative Agent, the LC Bank and each Lender in writing of its desire to extend the Scheduled Termination Date for an additional 364 day period, provided that such request is made not more than one hundred twenty (120) days prior to, and not less than sixty (60) days prior to, the then current Scheduled Termination Date. The Administrative Agent, the LC Bank and each Lender shall notify the Borrower and the Administrative Agent in writing whether or not such Person is agreeable to such extension (it being understood that the Administrative Agent, the LC Bank and any Lender may accept or decline such a request in their sole discretion and on such terms as they may elect) not less than thirty (30) days prior to the then current Scheduled Termination Date; provided, however, that if the Administrative Agent, the LC Bank or any Lender fails to so notify the Borrower and the Administrative Agent, the Administrative Agent, the LC Bank or such Lender, as the case may be, shall be deemed to have declined such extension. In the event that the Administrative Agent, the LC Bank and one or more Lenders have so notified the Borrower and the Administrative Agent in writing that they are agreeable to such extension, the Borrower, the Servicer, the Administrative Agent, the LC Bank and the applicable Lenders shall enter into such documents as the Administrative Agent, the LC Bank and the applicable Lenders may deem necessary or appropriate to effect such extension, and all reasonable out-of-pocket costs and expenses incurred by the Administrative Agent, the LC Bank and the applicable Lenders in connection therewith (including Attorney Costs) shall be paid by the Borrower. In the event any Lender declines such request to extend the Scheduled Termination Date or is deemed to have declined such extension, such Lender shall be an "Exiting Lender" for all purposes of this Agreement.

(h) Increases in Commitments. So long as no Event of Default or Unmatured Event of Default has occurred and is continuing, with the prior written consent of the Administrative Agent and the LC Bank and upon prior notice to the Lenders, the Borrower may from time to time request an increase in the Commitment with respect to one or more Lenders or cause additional Persons to become parties to this Agreement, as lenders, at any time following the Closing Date and prior to the Termination Date; provided, that any such increase in such Lenders' Commitments and the Commitments of all such additional Lenders may not exceed \$100,000,000 in the aggregate during the life of this Agreement; provided, that each request for an increase and addition shall be in a minimum amount of \$10,000,000. At the time of sending such notice with respect to any Lender, the Borrower (in consultation with the Administrative Agent) shall specify the time period within which such Lenders and the Administrative Agent are requested to respond to the Borrower's request (which shall in no event be less than ten (10) Business Days from the date of delivery of such notice to the Administrative Agent). Each Lender being asked to increase its Commitment, the LC Bank and the Administrative Agent shall notify the Borrower within the applicable time period whether or not such Person agrees, in its respective sole discretion, to the increase to such Lender's Commitment. Any such Person not responding within such time period shall be deemed to have declined to consent to an increase in such Lender's Commitment. For the avoidance of doubt, only the consent of the Lender then being asked to increase its Commitment (or an additional Lender), the Administrative Agent and the LC Bank shall be required in order to approve any such request. If the Commitment of any Lender is increased (or a new Person is added as Lender) in accordance with this clause (h), the Administrative Agent, such Lender, the LC Bank and the Borrower shall determine the effective date with respect to such increase and shall enter into such documents as agreed to by such parties to document such increase; it being understood and agreed that the Administrative Agent or any Lender increasing its Commitment pursuant to this Section 2.01(h) may request any of (x) resolutions of the Board of Directors of the Borrower approving or consenting to such Commitment increase and authorizing the execution, delivery and performance of any amendment to this Agreement, (y) a corporate and enforceability opinion of counsel of the Borrower and (z) such other documents, agreements and opinions reasonably requested by such Lender or the Administrative Agent.

SECTION 2.03. Interest and Fees

(a) Fees. On each Settlement Date, the Borrowers shall, in accordance with the terms and priorities for payment set forth in Section 4.01(a), pay to each Lender, the Administrative Agent and the Structuring Agent certain fees (collectively, the "Fees") in the amounts set forth in the fee letter agreements from time to time entered into, among the Borrower, on the one hand, and the Lenders, the Administrative Agent and/or the Structuring Agent, on the other hand (each such fee letter agreement is collectively referred to herein as the "Fee Letter").

(b) Interest and Fees. The Capital of each Lender shall accrue interest on each day when such Capital remains outstanding at the then-applicable Interest Rate for such Lender's related Loan. The Borrowers shall pay all interest and Fees accrued during each Interest Period on the first Settlement Date occurring after the end of such Interest Period in accordance with the terms and priorities for payment set for in Section 4.01(a). For the avoidance of doubt, Interest accrued during each Interest Period shall be due and payable on the first Settlement Date after

such Interest Period without regard to the availability of Collections for payment thereof or whether any applicable Interest Period is continuing.

(c) SECTION 2.03. Interest Rate Options. The Borrower shall pay interest in respect of the outstanding unpaid principal amount of the Loans as selected by it from the Base Rate Option, Daily BSBY Floating Rate Option or BSBY Rate Option specified below applicable to the Loans, it being understood that, subject to the provisions of this Agreement, the Borrower may select different Interest Rate Options and different Interest Periods to apply simultaneously to the Loans comprising different Borrowing Tranches and may convert to or renew one or more Interest Rate Options with respect to all or any portion of the Loans comprising any Borrowing Tranche; provided that there shall not be at any one time outstanding more than three (3) Borrowing Tranches; provided further that if an Event of Default exists and is continuing, the Borrower may not request, convert to, or renew the BSBY Rate Option or Daily BSBY Floating Rate Option for any Loans and the Majority Lenders may demand that all existing Borrowing Tranches bearing interest under the BSBY Rate Option or Daily BSBY Floating Rate Option shall be converted immediately to the Base Rate Option, subject to the obligation of the Borrower to pay any Breakage Fees in connection with such conversion. Highest Lawful Rate. If at any time the designated rate of interest applicable to any Loan made by any Lender exceeds such Lender's highest lawful rate, the rate of interest on such Lender's Loan shall be limited to such Lender's highest lawful rate.

(d) Selection of Term SOFR Rate; Rate Quotations.

(i) So long as no Event of Default is continuing, the Borrower may, by written notice to the Administrative Agent, elect for all or any portion of the Aggregate Capital to accrue interest by reference to the Term SOFR Rate (rather than Daily 1M SOFR) during any Interest Period. Any such notice must specify the amount of the Aggregate Capital subject of such election and must be delivered not later than three (3) Business Days prior to the first day of the affected Interest Period. Any such portion of the Aggregate Capital that is subject to such an election shall be apportioned among the respective Lenders' Capital ratably. Notwithstanding the foregoing, (x) the Borrower shall not make such an election if, as a result thereof, more than five (5) Borrowing Tranches would exist and (y) each Borrowing Tranche for Loans accruing interest by reference to the Term SOFR Rate shall be not be less than \$500,000 and shall be an integral multiple of \$100,000. For the avoidance of doubt, in the event of any conflict between the Borrower's election pursuant to this clause (i) and rate of interest applied pursuant to the definition of "Interest Rate," the definition of "Interest Rate" shall control.

(a) Interest Rate Options. The Borrower shall have the right to select from the following Interest Rate Options applicable to the Loans:

(i) Base Rate Option: A fluctuating rate per annum (computed on the basis of a year of 365 or 366 days, as the case may be, and actual days elapsed) equal to the Base Rate, such interest rate to change automatically from time to time effective as of the effective date of each change in the Base Rate; or

~~(ii) BSBY Rate Option: A rate per annum (computed on the basis of a year of 360 days and actual days elapsed) equal to the BSBY Rate as determined for each applicable Interest Period; or~~

~~(iii) Daily BSBY Floating Rate Option: A fluctuating rate per annum (computed on the basis of a year of 360 days and actual days elapsed) equal the Daily BSBY Floating Rate, such rate to change automatically from day to day and time to time in accordance with the definition thereof.~~

(ii)(b) Rate Quotations. The Borrower may call the Administrative Agent on or before the date on which a Loan Request is to be delivered to receive an indication of the rates then in effect, but it is acknowledged that such projection shall not be binding on the Administrative Agent or the Lenders nor affect the rate of interest which thereafter is actually in effect when the election is made.

(g) Conforming Changes Relating to Daily 1M SOFR and the Term SOFR Rate. With respect to Daily 1M SOFR and the Term SOFR Rate, the Administrative Agent will have the right to make Conforming Changes from time to time and, notwithstanding anything to the contrary herein or in any other Transaction Document, any amendments implementing such Conforming Changes will become effective without further action or consent of any other party to this Agreement or any other Transaction Document; provided that, the Administrative Agent shall provide notice to the Borrower and the Lenders of each such amendment implementing such Conforming Changes reasonably promptly after such amendment becomes effective.

SECTION 2.04. [Reserved].

~~SECTION 2.04. Interest Periods. At any time when the Borrower shall select, convert to or renew a BSBY Rate Option, the Borrower shall notify the Administrative Agent thereof at least three (3) Business Days prior to the effective date of such BSBY Rate Option by delivering a Loan Request. The notice shall specify an Interest Period during which such Interest Rate Option shall apply. Notwithstanding the preceding sentence, the following provisions shall apply to any selection of, renewal of, or conversion to a BSBY Rate Option:~~

~~(a) Amount of Borrowing Tranche. Each Borrowing Tranche of Loans under the BSBY Rate Option shall be in integral multiples of, and not less than, the respective amounts specified in Section 2.02(a); and~~

~~(b) Renewals. In the case of the renewal of a BSBY Rate Option at the end of an Interest Period, the first day of the new Interest Period shall be the last day of the preceding Interest Period, without duplication in payment of interest for such day.~~

SECTION 2.05. Interest After Default. To the extent permitted by Applicable Law, upon the occurrence of an Event of Default and until such time such Event of Default shall have been cured or waived, at the discretion of the Administrative Agent or upon written demand by the Majority Lenders to the Administrative Agent:

(i)(a) Interest Rate. The ~~rate of interest for~~ Interest Rate applicable to each Loan otherwise applicable pursuant to Section 2.03(ab); shall be increased by 2.00% per annum;

~~(ii)(b)~~ **Other Obligations.** Each other Borrower Obligation hereunder if not paid when due shall bear interest at a rate per annum equal to the sum of the rate of interest applicable to Loans under the Base Rate Option plus an additional 2.00% per annum from the time such Borrower Obligation becomes due and payable until the time such Borrower Obligation is paid in full; and

~~(iii)(e)~~ **Acknowledgment.** The Borrower acknowledges that the increase in rates referred to in this ~~Section 2.05(e)~~ reflects, among other things, the fact that such Loans or other amounts have become a substantially greater risk given their default status and that the Lenders are entitled to additional compensation for such risk; and all such interest shall be payable by Borrower upon demand by Administrative Agent.

SECTION 2.06. ~~BSBY~~ **Rate Unascertainable; Increased Costs; Illegality; Benchmark Replacement Setting.**

(a) **Unascertainable; Increased Costs.** If, ~~on or prior to the first day of an Interest Period~~ at any time:

(i) the Administrative Agent shall have determined (which determination shall be conclusive and binding absent manifest error) that (x) ~~BSBY~~ the Term SOFR Rate or Daily ~~BSBY Floating Rate Option~~ 1M SOFR, as applicable, cannot be determined ~~because it is not available or published on a current basis;~~ (y) ~~adequate and reasonable means do not otherwise exist for determining any requested Interest Periods with respect to an existing or proposed BSBY Rate Loan; or~~ (z) ~~a fundamental change has occurred with respect to the BSBY Rate or Daily BSBY Floating Rate (including, without limitation, changes in national or international financial, political or economic conditions), and~~ pursuant to the definition thereof; or

(ii) any Lender determines that for any reason ~~in connection with any request for a BSBY Rate Loan or Daily BSBY Floating Rate Loan or a conversion thereto or a continuation thereof that the BSBY Rate for any requested Interest Period with respect to a proposed BSBY Rate Loan or Daily BSBY Floating Rate Loan~~ that the Term SOFR Rate does not adequately and fairly reflect the cost to such Lender of funding ~~such Loan,~~ establishing or maintaining such Lender's Loans during the applicable Interest Period or Daily 1M SOFR does not adequately and fairly reflect the cost to such Lender of funding, establishing or maintaining such Lender's Loans, and such Lender has provided notice of such determination to the Administrative Agent;

then the Administrative Agent shall have the rights specified in Section 2.06(c).

(b) **Illegality.** If at any time any Lender shall have determined or any Governmental Authority shall have asserted that the making, maintenance or funding of ~~any BSBY Rate Loan or Daily BSBY Floating Rate Loan~~ Loan or accruing interest by reference to

Daily 1M SOFR or the Term SOFR Rate or the determination of or charging of interest by reference to Daily 1M SOFR or the Term SOFR Rate has been made impracticable or unlawful, by compliance by such Lender in good faith with any Applicable Law or any interpretation or application thereof by

any Governmental Authority or with any request or directive of any such Governmental Authority (whether or not having the force of Applicable Law), then the Administrative Agent shall have the rights specified in Section 2.06(c).

(c) Administrative Agent's and Lender's Rights. In the case of any event specified in Section 2.06(a) ~~above (i)~~, the Administrative Agent shall promptly so notify the Lenders and the Borrower thereof, and in the case of an event specified in Section 2.06(b) ~~above (ii)~~, such Lender shall promptly so notify the Administrative Agent and endorse a certificate to such notice as to the specific circumstances of such notice, and the Administrative Agent shall promptly send copies of such notice and certificate to the other Lenders and the Borrower.

(e) Upon such date as shall be specified in such notice (which shall not be earlier than the date such notice is given), the obligation of (i) the Lenders, in the case of such notice given by the Administrative Agent, or (ii) such Lender, in the case of such notice given by such Lender, to allow the Borrower to select, convert to or, renew ~~a BSBY Rate Loan or Daily BSBY Floating Rate Loan or~~ continue a Loan accruing interest by reference to Daily 1M SOFR or the Term SOFR Rate, as applicable, shall be suspended (to the extent of the affected ~~Daily BSBY Floating Interest Rate Loan, BSBY Rate Loan or Interest Periods Period~~) until the Administrative Agent shall have later notified the Borrower, or such Lender shall have later notified the Administrative Agent, of the Administrative Agent's or such Lender's, as the case may be, determination that the circumstances giving rise to such previous determination no longer exist. ~~If at any time the Administrative Agent makes a determination under Section 2.06(a) and the Borrower has previously notified the Administrative Agent of its selection of, conversion to or renewal of a BSBY Rate Option or Daily BSBY Floating Rate Option and the BSBY Rate Option or Daily BSBY Floating Rate Option, as applicable, has not yet gone into effect, absent due notice from the Borrower of revocation, conversion or prepayment, such notification shall be deemed to provide for selection of, conversion to or renewal of the Base Rate Option otherwise available with respect to such Loans.~~

Upon a determination by the Administrative Agent under Section 2.06(a), (A) if a Borrower has previously delivered a Loan Request for an affected Loan that has not yet been made, such Loan Request shall be deemed to request a Base Rate Loan, (B) any outstanding affected Loans accruing interest by reference to Daily 1M SOFR shall automatically be converted into Base Rate Loans and (C) any outstanding affected Loans accruing interest by reference to the Term SOFR Rate shall be deemed to have been converted into Base Rate Loans at the end of the applicable Interest Period.

If any Lender notifies the Administrative Agent of a determination under Section 2.06(b), the Borrower shall, subject to the Borrower's obligation to pay any Breakage Fees, as to any Loan of the Lender to which ~~a BSBY Rate Option or Daily BSBY Floating Rate Option~~ Daily 1M SOFR or the Term SOFR Rate applies, on the date specified in such notice either convert such Loan to ~~the~~ a Base Rate ~~Option otherwise available with respect to such Loan~~ Loan or prepay such Loan ~~in accordance with Section 2.02(d)~~. Absent due notice from the Borrower of conversion or

prepayment, such Loan shall automatically be converted to ~~the~~ a Base Rate ~~Option otherwise available with respect to such~~ Loan upon such specified date.

(d) Benchmark Replacement Setting.

(i) Benchmark Replacement. Notwithstanding anything to the contrary herein or in any other Transaction Document, if a Benchmark Transition Event ~~has and its related Benchmark Replacement Date have~~ occurred prior to ~~the Reference Time in respect of~~ any setting of the then-current Benchmark, then ~~(*)~~ (A) if a Benchmark Replacement is determined in accordance with clause (1) ~~or of the definition of "Benchmark Replacement" for such Benchmark Replacement Date, such Benchmark Replacement will replace such Benchmark for all purposes hereunder and under any Transaction Document in respect of such Benchmark setting and subsequent Benchmark settings without any amendment to, or further action or consent of any other party to, this Agreement or any other Transaction Document~~ and (B) if a Benchmark Replacement is determined in accordance with clause (2) of the definition of "Benchmark Replacement" for such Benchmark Replacement Date, such Benchmark Replacement will replace such Benchmark for all purposes hereunder and under any Transaction Document in respect of ~~such Benchmark setting and subsequent Benchmark settings without any amendment to, or further action or consent of any other party to, this Agreement or any other Transaction Document~~ and ~~(y)~~ if a Benchmark Replacement is determined in accordance with clause ~~(3)~~ of the definition of "Benchmark Replacement" for such Benchmark Replacement Date, such Benchmark Replacement will replace such Benchmark for all purposes hereunder and under any Transaction Document in respect of any Benchmark setting at or after 5:00 p.m. (New York City time) on the fifth (5th) Business Day after the date notice of such Benchmark Replacement is provided to the Lenders without any amendment to, or further action or consent of any other party to, this Agreement or any other Transaction Document so long as the Administrative Agent has not received, by such time, written notice of objection to such Benchmark Replacement from Lenders comprising the Majority Lenders.

(ii) Benchmark Replacement Conforming Changes. In connection with the implementation ~~and, use,~~ administration, adoption or implementation of a Benchmark Replacement, the Administrative Agent will have the right to make Conforming Changes from time to time and, notwithstanding anything to the contrary herein or in any other Transaction Document, any amendments implementing such Conforming Changes will become effective without any further action or consent of any other party to this Agreement or any other Transaction Document.

(iii) Notices; Standards for Decisions and Determinations. The Administrative Agent will promptly notify the Borrower and the Lenders of (A) ~~any occurrence of a Benchmark Transition Event and its related Benchmark Replacement Date,~~ (B) the implementation of any Benchmark Replacement, ~~and~~ (C) the effectiveness of any Conforming Changes, ~~(D) in connection with the use, administration, adoption, or implementation of a Benchmark Replacement. The Administrative Agent will notify the Borrower of~~ (x) the removal or reinstatement of any tenor of a Benchmark pursuant to paragraph (iv) below and ~~(E)~~ (y) the commencement ~~or conclusion~~ of any Benchmark

Unavailability Period. Any determination, decision or election that may be made by the Administrative Agent or, if applicable, any Lender (or group of Lenders) pursuant to this Section 2.06(d), including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take

or refrain from taking any action or any selection, will be conclusive and binding absent manifest error and may be made in its or their sole discretion and without consent from any other party to this Agreement or any other Transaction Document except, in each case, as expressly required pursuant to this Section 2.06(d).

(iv) Unavailability of Tenor of Benchmark. Notwithstanding anything to the contrary herein or in any other Transaction Document, at any time (including in connection with the implementation of a Benchmark Replacement), ~~(iA)~~ if the then-current Benchmark is a term rate or based on a term rate and either ~~(A)~~ any tenor for such Benchmark is not displayed on a screen or other information service that publishes such rate from time to time as selected by the Administrative Agent in its reasonable discretion or ~~(B)~~ the regulatory supervisor for the administrator of such Benchmark has provided a public statement or publication of information announcing that any tenor for such Benchmark is not or will ~~no longer be compliant with, or the administrator of such Benchmark fails to be aligned with, the International Organization of Securities Commissions (IOSCO) Principles for Financial Benchmarks~~ not be representative, then the Administrative Agent may modify the definition of “Accrual Period” or “Interest Period” (or any similar or analogous definition) for any Benchmark settings at or after such time to remove such ~~non-compliant or non-aligned~~ unavailable or non-representative tenor; and ~~(#B)~~ if a tenor that was removed pursuant to clause ~~(iA)~~ above either ~~(A)~~ is subsequently displayed on a screen or information service for a Benchmark (including a Benchmark Replacement) or ~~(B)~~ is not, or is no longer, subject to an announcement that it is not or will ~~no longer be compliant with, or the administration of such Benchmark fails to be aligned with, the International Organization of Securities Commissions (IOSCO) Principles for Financial Benchmarks~~ not be representative for a Benchmark (including a Benchmark Replacement), then the Administrative Agent may modify the definition of “Accrual Period” or “Interest Period” (or any similar or analogous definition) for all Benchmark settings at or after such time to reinstate such previously removed tenor.

(v) Benchmark Unavailability Period. Upon the Borrower’s receipt of notice of the commencement of a Benchmark Unavailability Period, with respect to Daily 1M SOFR or the Term SOFR Rate, the Borrower may revoke any pending request for a Loan bearing interest based on ~~the BSBY Screen Rate, such rate or~~ conversion to or continuation of Loans bearing interest based on ~~the BSBY Screen Rate, such rate~~ to be made, converted or continued during any Benchmark Unavailability Period and, failing that, the Borrower will be deemed to have converted any such request into a request for a Base Rate Loan ~~of~~ or conversion to ~~Loans bearing interest under the a~~ Base Rate Option Loan. During ~~any~~ a Benchmark Unavailability Period or at any time that a tenor for the then-current Benchmark is not an Available Tenor, the component of the Base Rate based upon the then-current Benchmark or such tenor for such Benchmark, as applicable, will not be used in any determination of the Base Rate.

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(vi) Definitions. As used in this Section 2.06(d):

“Available Tenor” means, as of any date of determination and with respect to the then-current Benchmark, as applicable, ~~(x) if the then-current~~ if such Benchmark ~~(a) is Daily 1M SOFR, one month, and (b)~~ (a) is Daily 1M SOFR, one month, and (b) is a term rate ~~or is based on a term rate~~, any tenor for such Benchmark ~~(or component thereof)~~ that is or may be used for determining the Term SOFR

Rate applicable to a loan or the length of an Interest Period or (y) otherwise, any payment period for interest calculated with reference to such Benchmark, as applicable, interest period pursuant to this Agreement as of such date. For and not including, for the avoidance of doubt, the Available Tenor for the Daily BSBY Floating Rate is one month any tenor of such Benchmark that is then removed from the definition of "Interest Period" pursuant to this clause (vi) of Section 2.06(d).

"Benchmark" means, initially, the BSBY Screen SOFR, Daily 1M SOFR and the Term SOFR Rate; provided that if a replacement of the Benchmark Transition Event has occurred pursuant to this Section titled "with respect to the then-current Benchmark Replacement Setting", then "Benchmark" means the applicable Benchmark Replacement to the extent that such Benchmark Replacement has replaced such prior benchmark rate. Any reference to "Benchmark" shall include, as applicable, the published component used in the calculation thereof pursuant to this Section.

"Benchmark Replacement" means, for any Available Tenor with respect to any Benchmark Transition Event, the first alternative set forth in the order below that can be determined by the Administrative Agent for the applicable Benchmark Replacement Date:

(1) the sum of: (A) Term SOFR and (B) the related Benchmark Replacement Adjustment;

(1)(2) the sum of: (A) Daily Simple SOFR and (B) the related Benchmark Replacement SOFR Adjustment; and

(2)(3) the sum of (A) the alternate benchmark rate that has been selected by the Administrative Agent and the Borrower as the replacement for the then current Benchmark for the applicable Corresponding Tenor, giving due consideration to (x) any selection or recommendation of a replacement benchmark rate or the mechanism for determining such a rate by the Relevant Governmental Body or (y) any evolving or then-prevailing market convention, including any applicable recommendations made by the Relevant Governmental Body, for U.S. dollar denominated for determining a benchmark rate as a replacement to the then-current Benchmark for Dollar-denominated syndicated credit facilities at such time and (B) the related Benchmark Replacement Adjustment;

provided that, in the case of clause (1), such Unadjusted Benchmark Replacement is displayed on a screen or other information service that publishes such rate from time to time as selected by the Administrative Agent in its reasonable discretion; provided, further, that if the Benchmark Replacement as determined pursuant to clause (1), (2) or

(3) above would be less than the Floor, the Benchmark Replacement will be deemed to be the Floor for the purposes of this Agreement and the other Transaction Documents.

"Benchmark Replacement Adjustment" means, with respect to any replacement of the then-current Benchmark with an Unadjusted Benchmark Replacement for any applicable Available Tenor for any setting of such Unadjusted Benchmark Replacement;

~~(1) for purposes of clauses (1) and (2) of the definition of “Benchmark Replacement,” the applicable amount(s) set forth below:~~

Available Tenor	Benchmark Replacement Adjustment*
One Week	0.03839% (3.839 basis points)
One Month	0.11448% (11.448 basis points)
Two Months	0.18456% (18.456 basis points)
Three Months	0.26161% (26.161 basis points)
Six Months	0.42826% (42.826 basis points)
Twelve Months	0.71513% (71.513 basis points)
* These values represent the ARRC/SDA recommended spread adjustment values available here: https://assets.bbhub.io/professional/sites/10/IBOR_Fallbacks_LIBOR_Cessation_Announcement_20210305.pdf	

~~(2) for purposes of clause (3) of the definition of “Benchmark Replacement Adjustment,” means, with respect to any replacement of the then-current Benchmark with an Unadjusted Benchmark Replacement, the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected by the Administrative Agent and the Borrower for the applicable Corresponding Tenor, giving due consideration to (A) any selection or recommendation of a spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement by the Relevant Governmental Body or (B) any evolving or then-prevailing market convention, including any applicable recommendations made by the Relevant Governmental Body, for U.S. dollar-denominated for determining a spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement for Dollar-denominated syndicated credit facilities at such time;~~

~~provided that, if the then-current Benchmark is a term rate, more than one tenor of such Benchmark is available as of the applicable Benchmark Replacement Date and the applicable Unadjusted Benchmark Replacement will not be a term rate, the Available Tenor of such Benchmark for purposes of this definition of “Benchmark Replacement Adjustment” shall be deemed to be the Available Tenor that has approximately the same length (disregarding business day adjustments) as the payment period for interest calculated with reference to such Unadjusted Benchmark Replacement;~~

“Benchmark Replacement Date” means a date and time determined by the Administrative Agent, which date shall be ~~at the end of an Interest Period and~~ no later

than the earliest to occur of the following events with respect to the then-current Benchmark:

~~(1)(4)~~ in the case of clause (1) or (2) of the definition of “Benchmark Transition Event,” the later of (A) the date of the public statement or publication of information referenced therein and (B) the date on which the administrator of such Benchmark (or

the published component used in the calculation thereof) permanently or indefinitely ceases to provide such Benchmark (or such component thereof), or, if such Benchmark is a term rate or is based on a term rate, all Available Tenors of such Benchmark (or such component thereof); or

~~(2)~~ (2) in the case of clause (3) of the definition of “Benchmark Transition Event,” the ~~later of (A) date determined by the Administrative Agent, which date shall promptly follow~~ the date of the public statement or publication of information referenced therein and ~~(B) the date specified by the administrator of such Benchmark or a Governmental Authority having jurisdiction over the Administrative Agent or such administrator on which the Benchmark is or will no longer be compliant with, or the administration of such Benchmark fails to be aligned with, the International Organization of Securities Commissions (IOSCO) Principles for Financial Benchmarks the International Organization of Securities Commissions (IOSCO) Principles for Financial Benchmarks;~~ or

~~(3) in the case of clause (4) of the definition of “Benchmark Transition Event,” the first Business Day following the fifth (5th) consecutive Business Day that all Available Tenors of such Benchmark are not published.~~

For the avoidance of doubt, ~~(i) if the event giving rise to the Benchmark Replacement Date occurs on the same day as, but earlier than, the Reference Time in respect of any determination, the Benchmark Replacement Date will be deemed to have occurred prior to the Reference Time for such determination and (ii) if such Benchmark is a term rate or is based on a term rate~~, the “Benchmark Replacement Date” will be deemed to have occurred in the case of clause (1) ~~or (2) and (3)~~ with respect to any Benchmark upon the occurrence of the applicable event or events set forth therein with respect to all then-current Available Tenors of such Benchmark (or the published component used in the calculation thereof).

“Benchmark Transition Event” means, the occurrence of one or more of the following events, with respect to ~~any the~~ then-current Benchmark:

~~(1)~~ (1) a public statement or publication of information by or on behalf of the administrator of such Benchmark (or the published component used in the calculation thereof), announcing that such administrator has ceased or will cease to provide such Benchmark (or such component thereof), or, if such Benchmark is a term rate or based on a term rate, all Available Tenors of such Benchmark (or such component thereof), permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor

administrator that will continue to provide any Available Tenor of such Benchmark (or such component thereof);

~~(2)~~ (2) a public statement or publication of information by a Governmental Authority having jurisdiction over the Administrative Agent, the regulatory supervisor for the administrator of such Benchmark (or the published component used in the

calculation thereof), the ~~Board of Governors of the~~ Federal Reserve ~~System~~Board, the Federal Reserve Bank of New York, an insolvency official with jurisdiction over the administrator for such Benchmark (or such component), a resolution authority with jurisdiction over the administrator for such Benchmark (or such component) or a court or an entity with similar insolvency or resolution authority over the administrator for such Benchmark (or such component), which states that the administrator of such Benchmark (or such component) has ceased or will cease to provide such Benchmark (or such component thereof) or, if such Benchmark is a term rate or based on a term rate, all Available Tenors of such Benchmark (or such component thereof) permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide such Benchmark (or such component thereof) or, if such Benchmark is a term rate or based on a term rate, any Available Tenor of such Benchmark (or such component thereof); or

(3) a public statement or publication of information by the regulatory supervisor for the administrator of such Benchmark (or the published component used in the calculation thereof) or a Governmental Authority having jurisdiction over the Administrative Agent announcing that such Benchmark (or component thereof) or, if such Benchmark is a term rate or based on a term rate, all Available Tenors of such Benchmark (or such component thereof) are not, or as of a specified future date will not be, representative.

For the avoidance of doubt, if such Benchmark is a term rate or based on a term rate, a "Benchmark Transition Event" will be deemed to have occurred with respect to any Benchmark if a public statement or publication of information set forth above has occurred with respect to each then-current Available Tenor of such Benchmark (or the published component used in the calculation thereof).

~~(3) the administrator of the Benchmark or a Governmental Authority having jurisdiction over the Administrative Agent or such administrator has made a public statement identifying a specific date after which all Available Tenors of the Benchmark are or will no longer be compliant with, or the administration of all Available Tenors of the Benchmark fails to be aligned with, the International Organization of Securities Commissions (IOSCO) Principles for Financial Benchmarks; or~~

~~(4) all Available Tenors of the Benchmark are not published by the administrator of such Benchmark for five (5) consecutive Business Days and such failure is not the result of a temporary moratorium, embargo or disruption~~

~~declared by the administrator of such Benchmark or by the regulatory supervisor for the administrator of such Benchmark;~~

"Benchmark Unavailability Period" means the period (if any) (x) beginning at the time that a Benchmark Replacement Date ~~pursuant to clauses (1) or (2) of that definition~~ has occurred if, at such time, no Benchmark Replacement has replaced the then-current Benchmark for all purposes hereunder and under any Transaction Document in accordance with this Section ~~titled "Benchmark Replacement Setting"~~2.06(d), and (y) ending at the time

that a Benchmark Replacement has replaced the then-current Benchmark for all purposes hereunder and under any Transaction Document in accordance with this Section titled ~~"Benchmark Replacement Setting."~~2.06(d).

~~"Corresponding Tenor" with respect to any Available Tenor means, as applicable, either a tenor (including overnight) or an interest payment period having approximately the same length (disregarding business-day adjustment) as such Available Tenor.~~

~~"Daily Simple SOFR" means, for any day, SOFR, with the conventions for this rate (which will include a lookback) being established by the Administrative Agent in accordance with the conventions for this rate recommended by the Relevant Governmental Body for determining "Daily Simple SOFR" for syndicated business loans; provided, that if the Administrative Agent decides that any such convention is not administratively feasible for the Administrative Agent, then the Administrative Agent may establish another convention in its reasonable discretion.~~

~~"Floor" means the benchmark rate floor, if any, provided in this Agreement initially (as of the execution of this Agreement, the modification, amendment or renewal of this Agreement or otherwise) with respect to the BSBY Rate or Daily BSBY Floating 1M SOFR or the Term SOFR Rate, as applicable, or, if no floor is specified, zero.~~

~~"Reference Time" means, with respect to any setting of the then current Benchmark, the time determined by the Administrative Agent in its reasonable discretion.~~

~~"Relevant Governmental Body" means the Board of Governors of the Federal Reserve System and/or the Federal Reserve Bank of New York, or a committee officially endorsed or convened by the Board of Governors of the Federal Reserve System and/or the Federal Reserve Bank of New York, or any successor thereto.~~

~~"SOFR" means, with respect to any Business Day, a rate per annum equal to the secured overnight financing rate for such Business Day published by the Federal Reserve Bank of New York (or a successor administrator of the secured overnight financing rate) on the website of the Federal Reserve Bank of New York, currently at <http://www.newyorkfed.org> (or any successor source for the secured overnight financing rate identified as such by the administrator of the secured overnight financing rate from time to time).~~

~~"Term SOFR" means, for the applicable Corresponding Tenor, the forward-looking term rate based on SOFR that has been selected or recommended by the Relevant Governmental Body.~~

~~"Unadjusted Benchmark Replacement" means the applicable Benchmark Replacement excluding the related Benchmark Replacement Adjustment.~~

~~SECTION 2.07. — Selection of Interest Rate Options. — If the Borrower fails to select a new Interest Period to apply to any Borrowing Tranche of Loans under the BSBY Rate Option at the expiration of an existing Interest Period applicable to such Borrowing Tranche in accordance with the provisions of Section 2.04, the Borrower shall be deemed to have converted such Borrowing Tranche to the Daily BSBY Floating Rate commencing upon the last day of the existing Interest Period. — If the~~

~~Borrower provides any Loan Request related to a Loan at the BSBY Rate Option but fails to identify an Interest Period therefor, such Loan Request shall be deemed to request an Interest Period of one (1) month. Any Loan Request that fails to select an Interest Rate Option shall be deemed to be a request for the Daily BSBY Floating Rate Option.~~

~~SECTION 2.08. Interest Payment Dates. Each Loan shall accrue interest on each day when such Loan remains outstanding at the then applicable interest rate pursuant to the terms of this Agreement for the Borrowing Tranche relating to such Loan. The Borrower shall pay all interest (including, for the avoidance of doubt, all interest accrued on BSBY Rate Loans during an Accrual Period regardless of whether the applicable Interest Period has ended) accrued during each Accrual Period on each Settlement Date in accordance with the terms and priorities for payment set forth in Section 4.01.~~

~~SECTION 2.09. Fees. On each Settlement Date (or such other date as provided therein), the Borrower shall, in accordance with the terms and priorities for payment set forth in Section 4.01, pay to each Lender, the Administrative Agent and the Structuring Agent certain fees (collectively, the "Fees") in the amounts set forth in the fee letter agreements from time to time entered into, among the Borrower and one or more of the Lenders, the LC Bank, the Administrative Agent and/or the Structuring Agent (each such fee letter agreement, as amended, restated, supplemented or otherwise modified from time to time, collectively being referred to herein as the "Fee Letter").~~

~~SECTION 2.07. [Reserved].~~

~~SECTION 2.08. [Reserved].~~

~~SECTION 2.09. [Reserved].~~

SECTION 2.10. Records of Loans. Each Lender shall record in its records, the date and amount of each Loan made by such the Lender hereunder, the interest rate with respect thereto, the interest accrued thereon and each repayment and payment thereof. Subject to Section 14.03(b), such records shall be conclusive and binding absent manifest error. The failure to so record any such information or any error in so recording any such information shall not, however, limit or otherwise affect the obligations of the Borrower hereunder or under the other

Transaction Documents to repay the Capital of each Lender, together with all interest accruing thereon and all other Borrower Obligations.

ARTICLE III

LETTER OF CREDIT FACILITY

SECTION 3.01. Letters of Credit—

(a) Subject to the terms and conditions hereof and the satisfaction of the applicable conditions set forth in Article VI, the LC Bank shall issue or cause the issuance of Letters of Credit on behalf of the Borrower (and, if applicable, on behalf of, or for the account of, an Originator or an Affiliate of such Originator in favor of such beneficiaries as such Originator or an Affiliate of such Originator may elect with the consent of the Borrower); provided, however, that the LC Bank will not

be required to issue or cause to be issued any Letters of Credit to the extent that after giving effect thereto:

(i) the Aggregate Capital plus the LC Participation Amount would exceed the Facility Limit at such time;

(ii) the Aggregate Capital plus the LC Participation Amount would exceed the Borrowing Base at such time;

(iii) the LC Participation Amount would exceed the LC Limit at such time; or

(iv) the LC Participation Amount would exceed the aggregate of the Commitments of the LC Participants at such time.

(b) Interest shall accrue on all amounts drawn under Letters of Credit for each day on and after the applicable Drawing Date so long as such drawn amounts shall have not been reimbursed to the LC Bank pursuant to the terms hereof.

SECTION 3.02. Issuance of Letters of Credit; Participations.

(a) The Borrower may request the LC Bank, upon two (2) Business Days' prior written notice submitted on or before 1:00 p.m. (New York City time), to issue a Letter of Credit by delivering to the Administrative Agent, each Lender and the LC Bank, the LC Bank's form of Letter of Credit Application (the "Letter of Credit Application"), substantially in the form of Exhibit D attached hereto and an LC Request, in each case completed to the satisfaction of the Administrative Agent and the LC Bank; and such other certificates, documents and other papers and information as the Administrative Agent or the LC Bank may reasonably request.

(b) Each Letter of Credit shall, among other things, (i) provide for the payment of sight drafts or other written demands for payment when presented for honor thereunder in accordance with the terms thereof and when accompanied by the documents described therein and (ii) have an expiry date not later than twelve (12) months after such Letter of Credit's date of issuance, extension or renewal, as the case may be, and in no event later than twelve (12) months

after the Scheduled Termination Date. The terms of each Letter of Credit may include customary "evergreen" provisions providing that such Letter of Credit's expiry date shall automatically be extended for additional periods not to exceed twelve (12) months unless, not less than thirty (30) days (or such longer period as may be specified in such Letter of Credit) (the "Notice Date") prior to the applicable expiry date, the LC Bank delivers written notice to the beneficiary thereof declining such extension; provided, however, that if (x) any such extension would cause the expiry date of such Letter of Credit to occur after the date that is twelve (12) months after the Scheduled Termination Date or (y) the LC Bank determines that any condition precedent (including, without limitation, those set forth in Sections 3.01 and Article VI) to issuing such Letter of Credit hereunder are not satisfied (other than any such condition requiring the Borrower to submit an LC Request or Letter of Credit Application in respect thereof), then the LC Bank, in the case of clause (x) above, may (or, at the written direction of any LC Participant, shall) or, in the case of clause (y) above, shall, use reasonable efforts in accordance with (and to the extent permitted by) the terms of such Letter of Credit to prevent the extension of such expiry date (including notifying the Borrower and the beneficiary of

such Letter of Credit in writing prior to the Notice Date that such expiry date will not be so extended). Each Letter of Credit shall be subject either to the Uniform Customs and Practice for Documentary Credits (2007 Revision), International Chamber of Commerce Publication No. 600, and any amendments or revisions thereof adhered to by the LC Bank or the International Standby Practices (ISP98-International Chamber of Commerce Publication Number 590), and any amendments or revisions thereof adhered to by the LC Bank, as determined by the LC Bank.

(c) Immediately upon the issuance by the LC Bank of any Letter of Credit (or any amendment to a Letter of Credit increasing the amount thereof), the LC Bank shall be deemed to have sold and transferred to each LC Participant, and each LC Participant shall be deemed irrevocably and unconditionally to have purchased and received from the LC Bank, without recourse or warranty, an undivided interest and participation, to the extent of such LC Participant's Pro Rata Share, in such Letter of Credit, each drawing made thereunder and the obligations of the Borrower hereunder with respect thereto, and any security therefor or guaranty pertaining thereto. Upon any change in the Commitments or Pro Rata Shares of the LC Participants pursuant to this Agreement, it is hereby agreed that, with respect to all outstanding Letters of Credit and unreimbursed drawings thereunder, there shall be an automatic adjustment to the participations pursuant to this clause (c) to reflect the new Pro Rata Shares of the assignor and assignee LC Participant or of all LC Participants with Commitments, as the case may be. In the event that the LC Bank makes any payment under any Letter of Credit and the Borrower shall not have reimbursed such amount in full to the LC Bank pursuant to Section 3.04(a), each LC Participant shall be obligated to make Participation Advances with respect to such Letter of Credit in accordance with Section 3.04(b).

SECTION 3.03. Requirements For Issuance of Letters of Credit. The Borrower shall authorize and direct the LC Bank to name the Borrower, an Originator or an Affiliate of an Originator as the "Applicant" or "Account Party" of each Letter of Credit.

SECTION 3.04. Disbursements, Reimbursement.

(a) In the event of any request for a drawing under a Letter of Credit by the beneficiary or transferee thereof, the LC Bank will promptly notify the Administrative Agent and

the Borrower of such request. The Borrower shall reimburse (such obligation to reimburse the LC Bank shall sometimes be referred to as a "Reimbursement Obligation") the LC Bank prior to noon (New York City time), on each date that an amount is paid by the LC Bank under any Letter of Credit (each such date, a "Drawing Date") in an amount equal to the amount so paid by the LC Bank. In the event the Borrower fails to reimburse the LC Bank for the full amount of any drawing under any Letter of Credit by noon (New York City time) on the Drawing Date (including because the conditions precedent to a Loan requested by the Borrower pursuant to Section 2.01 shall not have been satisfied), the LC Bank will promptly notify each LC Participant thereof. Any notice given by the LC Bank pursuant to this Section may be oral if promptly confirmed in writing; provided that the lack of such a prompt written confirmation shall not affect the conclusiveness or binding effect of such oral notice.

(b) Each LC Participant shall upon any notice pursuant to clause (a) above make available to the LC Bank an amount in immediately available funds equal to its Pro Rata Share of the amount of the drawing (a "Participation Advance"), whereupon the LC Participants shall each be deemed to

have made a Loan to the Borrower in that amount. If any LC Participant so notified fails to make available to the LC Bank the amount of such LC Participant's Pro Rata Share of such amount by 2:00 p.m. (New York City time) on the Drawing Date, then interest shall accrue on such LC Participant's obligation to make such payment, from the Drawing Date to the date on which such LC Participant makes such payment (i) at a rate per annum equal to the Overnight Bank Funding Rate during the first three days following the Drawing Date and (ii) at a rate per annum equal to the Base Rate on and after the fourth day following the Drawing Date. The LC Bank will promptly give notice to each LC Participant of the occurrence of the Drawing Date, but failure of the LC Bank to give any such notice on the Drawing Date or in sufficient time to enable any LC Participant to effect such payment on such date shall not relieve such LC Participant from its obligation under this clause (b). Each LC Participant's Commitment shall continue until the last to occur of any of the following events: (A) the LC Bank ceases to be obligated to issue or cause to be issued Letters of Credit hereunder, (B) no Letter of Credit issued hereunder remains outstanding and uncanceled or (C) all Credit Parties have been fully reimbursed for all payments made under or relating to Letters of Credit.

SECTION 3.05. Repayment of Participation Advances.

(a) Upon (and only upon) receipt by the LC Bank for its account of immediately available funds from or for the account of the Borrower (i) in reimbursement of any payment made by the LC Bank under a Letter of Credit with respect to which any LC Participant has made a Participation Advance to the LC Bank or (ii) in payment of Interest on the Loans made or deemed to have been made in connection with any such draw, the LC Bank will pay to each LC Participant, ratably (based on the outstanding drawn amounts funded by each such LC Participant in respect of such Letter of Credit), in the same funds as those received by the LC Bank; it being understood, that the LC Bank shall retain a ratable amount of such funds that were not the subject of any payment in respect of such Letter of Credit by any LC Participant.

(b) If the LC Bank is required at any time to return to the Borrower, or to a trustee, receiver, liquidator, custodian, or any official in any Insolvency Proceeding, any portion of the payments made by the Borrower to the LC Bank pursuant to this Agreement in reimbursement of a payment made under a Letter of Credit or interest or fee thereon, each LC

Participant shall, on demand of the LC Bank, forthwith return to the LC Bank the amount of its Pro Rata Share of any amounts so returned by the LC Bank plus interest at the Overnight Bank Funding Rate, from the date the payment was first made to such LC Participant through, but not including, the date the payment is returned by such LC Participant.

(c) If any Letters of Credit are outstanding and undrawn on the Termination Date, the LC Collateral Account shall be funded from Collections (or, in the Borrower's sole discretion, by other funds available to the Borrower) in an amount equal to the aggregate undrawn face amount of such Letters of Credit plus all related fees to accrue through the stated expiration dates thereof (such fees to accrue, as reasonably estimated by the LC Bank, the "LC Fee Expectation").

SECTION 3.06. Documentation ~~Documentation~~. The Borrower agrees to be bound by the terms of the Letter of Credit Application and by the LC Bank's interpretations of any Letter of Credit issued for the Borrower and by the LC Bank's written regulations and customary practices relating to letters of credit, though the LC Bank's interpretation of such regulations and practices may be

different from the Borrower's own. In the event of a conflict between the Letter of Credit Application and this Agreement, this Agreement shall govern. The LC Bank shall not be liable for any error, negligence and/or mistakes, whether of omission or commission, in following the Borrower's instructions or those contained in the Letters of Credit or any modifications, amendments or supplements thereto.

SECTION 3.07. Determination to Honor Drawing Request. In determining whether to honor any request for drawing under any Letter of Credit by the beneficiary thereof, the LC Bank shall be responsible only to determine that the documents and certificates required to be delivered under such Letter of Credit have been delivered and that they comply on their face with the requirements of such Letter of Credit and that any other drawing condition appearing on the face of such Letter of Credit has been satisfied in the manner so set forth.

SECTION 3.08. Nature of Participation and Reimbursement Obligations. Each LC Participant's obligation in accordance with this Agreement to make Participation Advances as a result of a drawing under a Letter of Credit, and the obligations of the Borrower to reimburse the LC Bank upon a draw under a Letter of Credit, shall be absolute, unconditional and irrevocable, and shall be performed strictly in accordance with the terms of this Agreement and under all circumstances, including the following circumstances:

(i) any set-off, counterclaim, recoupment, defense or other right which such LC Participant may have against the LC Bank, the other Credit Parties, the Borrower, the Servicer, the Transferor, an Originator, the Performance Guarantor or any other Person for any reason whatsoever;

(ii) the failure of the Borrower or any other Person to comply with the conditions set forth in this Agreement for the making of a Loan, requests for Letters of Credit or otherwise, it being acknowledged that such conditions are not required for the making of Participation Advances hereunder;

(iii) any lack of validity or enforceability of any Letter of Credit or any set-off, counterclaim, recoupment, defense or other right which the Borrower, the Performance Guarantor, the Transferor, the Servicer, an Originator or any Affiliate thereof on behalf of which a Letter of Credit has been issued may have against the LC Bank, or any other Credit Party or any other Person for any reason whatsoever;

(iv) any claim of breach of warranty that might be made by the Borrower, an Originator, the Transferor, the Servicer or any Affiliate thereof, the LC Bank, or any LC Participant against the beneficiary of a Letter of Credit, or the existence of any claim, set-off, defense or other right which the Borrower, the LC Bank or any LC Participant may have at any time against a beneficiary, any successor beneficiary or any transferee of any Letter of Credit or the proceeds thereof (or any Persons for whom any such transferee may be acting), the LC Bank, any other Credit Party or any other Person, whether in connection with this Agreement, the transactions contemplated herein or any unrelated transaction (including any underlying transaction between the Borrower or any Affiliates of the Borrower and the beneficiary for which any Letter of Credit was procured);

(v)the lack of power or authority of any signer of, or lack of validity, sufficiency, accuracy, enforceability or genuineness of, any draft, demand, instrument, certificate or other document presented under any Letter of Credit, or any such draft, demand, instrument, certificate or other document proving to be forged, fraudulent, invalid, defective or insufficient in any respect or any statement therein being untrue or inaccurate in any respect, even if the Administrative Agent or the LC Bank has been notified thereof;

(vi)payment by the LC Bank under any Letter of Credit against presentation of a demand, draft or certificate or other document which does not comply with the terms of such Letter of Credit;

(vii)the solvency of, or any acts or omissions by, any beneficiary of any Letter of Credit, or any other Person having a role in any transaction or obligation relating to a Letter of Credit, or the existence, nature, quality, quantity, condition, value or other characteristic of any property or services relating to a Letter of Credit;

(viii)any failure by the LC Bank or any of the LC Bank's Affiliates to issue any Letter of Credit in the form requested by the Borrower;

(ix)any Material Adverse Effect;

(x)any breach of this Agreement or any other Transaction Document by any party thereto;

(xi)the occurrence or continuance of an Insolvency Proceeding with respect to the Borrower, the Performance Guarantor, the Transferor, any Originator or any Affiliate thereof;

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(xii)the fact that an Event of Default or an Unmatured Event of Default shall have occurred and be continuing;

(xiii)the fact that this Agreement or the obligations of the Borrower or the Servicer hereunder shall have been terminated; and

(xiv)any other circumstance or happening whatsoever, whether or not similar to any of the foregoing.

SECTION 3.09. Indemnity ~~Indemnity~~. In addition to other amounts payable hereunder, the Borrower hereby agrees to protect, indemnify, pay and save harmless the Administrative Agent, the LC Bank, each LC Participant, each other Credit Party and each of the LC Bank's Affiliates that have issued a Letter of Credit from and against any and all claims, demands, liabilities, damages, Indemnified Taxes, penalties, interest, judgments, losses, costs, charges and expenses (including Attorney Costs), on an after-Tax basis, which the Administrative Agent, the LC Bank, any LC Participant, any other Credit Party or any of their respective Affiliates may incur or be subject to as a consequence, direct or indirect, of the issuance of any Letter of Credit, except to the extent resulting from (a) the gross negligence or willful misconduct of the party to be indemnified as determined by a final non-appealable judgment of a court of competent jurisdiction or (b) the wrongful dishonor by the LC Bank of a proper demand for payment made under any Letter of Credit, except if such dishonor

resulted from any act or omission, whether rightful or wrongful, of any present or future de jure or de facto Governmental Authority (all such acts or omissions herein called “Governmental Acts”).

SECTION 3.10. Liability for Acts and Omissions. As between the Borrower, on the one hand, and the Administrative Agent, the LC Bank, the LC Participants, and the other Credit Parties, on the other, the Borrower assumes all risks of the acts and omissions of, or misuse of any Letter of Credit by, the respective beneficiaries of such Letter of Credit. In furtherance and not in limitation of the foregoing, none of the Administrative Agent, the LC Bank, the LC Participants, or any other Credit Party shall be responsible for: (i) the form, validity, sufficiency, accuracy, genuineness or legal effect of any document submitted by any party in connection with the application for an issuance of any such Letter of Credit, even if it should in fact prove to be in any or all respects invalid, insufficient, inaccurate, fraudulent or forged (even if the LC Bank, any LC Participant or any other Credit Party shall have been notified thereof); (ii) the validity or sufficiency of any instrument transferring or assigning or purporting to transfer or assign any such Letter of Credit or the rights or benefits thereunder or proceeds thereof, in whole or in part, which may prove to be invalid or ineffective for any reason; (iii) the failure of the beneficiary of any such Letter of Credit, or any other party to which such Letter of Credit may be transferred, to comply fully with any conditions required in order to draw upon such Letter of Credit or any other claim of the Borrower against any beneficiary of such Letter of Credit, or any such transferee, or any dispute between or among the Borrower and any beneficiary of any Letter of Credit or any such transferee; (iv) errors, omissions, interruptions or delays in transmission or delivery of any messages, by mail, electronic mail, cable, telegraph, telex, facsimile or otherwise, whether or not they be in cipher; (v) errors in interpretation of technical terms; (vi) any loss or delay in the transmission or otherwise of any document required in order to make a drawing under any such Letter of Credit or of the proceeds thereof; (vii) the misapplication by the beneficiary of any such Letter of Credit of the proceeds of any drawing under such Letter of

Credit; or (viii) any consequences arising from causes beyond the control of the Administrative Agent, the LC Bank, the LC Participants, and the other Credit Parties, including any Governmental Acts, and none of the above shall affect or impair, or prevent the vesting of, any of the LC Bank's rights or powers hereunder. In no event shall the Administrative Agent, the LC Bank, the LC Participants, or the other Credit Parties or their respective Affiliates, be liable to the Borrower or any other Person for any indirect, consequential, incidental, punitive, exemplary or special damages or expenses (including without limitation Attorney Costs), or for any damages resulting from any change in the value of any property relating to a Letter of Credit.

Without limiting the generality of the foregoing, the Administrative Agent, the LC Bank, the LC Participants, and the other Credit Parties and each of their respective Affiliates (i) may rely on any written communication believed in good faith by such Person to have been authorized or given by or on behalf of the applicant for a Letter of Credit; (ii) may honor any presentation if the documents presented appear on their face to comply with the terms and conditions of the relevant Letter of Credit; (iii) may honor a previously dishonored presentation under a Letter of Credit, whether such dishonor was pursuant to a court order, to settle or compromise any claim of wrongful dishonor, or otherwise, and shall be entitled to reimbursement to the same extent as if such presentation had initially been honored, together with any interest paid by the LC Bank or its Affiliates; (iv) may honor any drawing that is payable upon presentation of a statement advising negotiation or payment, upon receipt of such statement (even if such statement indicates that a draft or other document is being

delivered separately), and shall not be liable for any failure of any such draft or other document to arrive, or to conform in any way with the relevant Letter of Credit; (v) may pay any paying or negotiating bank claiming that it rightfully honored under the laws or practices of the place where such bank is located; and (vi) may settle or adjust any claim or demand made on the Administrative Agent, the LC Bank, the LC Participants, or the other Credit Parties or their respective Affiliates, in any way related to any order issued at the applicant's request to an air carrier, a letter of guarantee or of indemnity issued to a carrier or any similar document (each, an "Order") and may honor any drawing in connection with any Letter of Credit that is the subject of such Order, notwithstanding that any drafts or other documents presented in connection with such Letter of Credit fail to conform in any way with such Letter of Credit.

In furtherance and extension and not in limitation of the specific provisions set forth above, any action taken or omitted by the LC Bank under or in connection with any Letter of Credit issued by it or any documents and certificates delivered thereunder, if taken or omitted in good faith and without gross negligence or willful misconduct, as determined by a final non-appealable judgment of a court of competent jurisdiction, shall not put the LC Bank under any resulting liability to the Borrower, any Credit Party or any other Person.

ARTICLE IV

SETTLEMENT PROCEDURES AND PAYMENT PROVISIONS

SECTION 4.01. Settlement Procedures.

(a) The Servicer shall set aside and hold in trust for the benefit of the Secured Parties (or, if so requested by the Administrative Agent, segregate in a separate account approved

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by the Administrative Agent), for application in accordance with the priority of payments set forth below, all Collections on Pool Receivables that are received by the Servicer or the Borrower or received in any Lock-Box or Lock-Box Account. On each Settlement Date, the Servicer (or, following its assumption of control of the Lock-Box Accounts, the Administrative Agent) shall, distribute such Collections in the following order of priority:

(i)~~first~~, to the Servicer for the payment of the accrued Servicing Fees payable ~~for the immediately preceding Accrual Period (plus, if applicable, the amount of Servicing Fees payable for any prior Accrual Period to the extent such amount has not been distributed to the Servicer)~~as of such Settlement Date;

(ii)~~second~~, to each Lender and other Credit Party (ratably, based on the amount then due and owing), all accrued and unpaid Interest, Fees and Breakage Fees due to such Lender ~~and other Credit Party for the immediately preceding Accrual Period~~as of such Settlement Date (including any additional amounts or indemnified amounts payable under Sections 5.03 and 13.01 in respect of such payments), plus, if applicable, the amount of any such Interest, Fees and Breakage Fees (including any additional amounts or indemnified amounts payable under Sections 5.03 and 13.01 in respect of such payments) payable ~~for any prior Accrual Period~~as of such Settlement Date to the extent such amount has not been distributed to such Lender or Credit Party;

(iii) third, as set forth in clause (x), (y) or (z) below, as applicable:

(x) prior to the occurrence of the Termination Date, to the extent that a Borrowing Base Deficit exists on such date: (I) first, to the Lenders (ratably, based on the aggregate outstanding Capital of each Lender at such time) for the payment of a portion of the outstanding Aggregate Capital at such time, in an aggregate amount equal to the amount necessary to reduce the Borrowing Base Deficit to zero (\$0) and (II) second, to the LC Collateral Account, in reduction of the Adjusted LC Participation Amount, in an amount equal to the amount necessary (after giving effect to clause (I) above) to reduce the Borrowing Base Deficit to zero (\$0);

(y) on and after the occurrence of the Termination Date: (I) first, to each Lender (ratably, based on the aggregate outstanding Capital of each Lender at such time) for the payment in full of the aggregate outstanding Capital of such Lender at such time and (II) second, to the LC Collateral Account (A) the amount necessary to reduce the Adjusted LC Participation Amount to zero (\$0) and (B) an amount equal to the LC Fee Expectation at such time; or

(z) prior to the occurrence of the Termination Date, at the election of the Borrower and in accordance with Section 2.02(d), to the payment of all or any portion of the outstanding Capital of the Lenders at

such time (ratably, based on the aggregate outstanding Capital of each Lender at such time);

(iv) fourth, to the Credit Parties that are then Exiting Lenders (ratably, based on the amount due and owing at such time), for the payment of all other Borrower Obligations then due and owing by the Borrower to such Credit Parties;

(v) fifth, to the Credit Parties, the Affected Persons and the Borrower Indemnified Parties (ratably, based on the amount due and owing at such time), for the payment of all other Borrower Obligations then due and owing by the Borrower to the Credit Parties, the Affected Persons and the Borrower Indemnified Parties; and

(vi) sixth, the balance, if any, to be paid to the Borrower for its own account.

(b) All payments or distributions to be made by the Servicer, the Borrower and any other Person to the Lenders (or their respective related Affected Persons and the Borrower Indemnified Parties), the LC Bank and the LC Participants hereunder shall be paid or distributed to the Administrative Agent's Account. The Administrative Agent, upon its receipt in the Administrative Agent's Account of any such payments or distributions, shall distribute such amounts to the applicable Lenders, the LC Bank, LC Participants, Affected Persons and the Borrower Indemnified Parties ratably; provided that if the Administrative Agent shall have received insufficient funds to pay all of the above amounts in full on any such date, the Administrative Agent shall pay such amounts to the applicable Lenders, the LC Bank, the LC Participants, Affected Persons and the Borrower Indemnified Parties in accordance with the priority of payments set forth above, and with respect to any such category above for which there are insufficient funds to pay all amounts owing on such

date, ratably (based on the amounts in such categories owing to each such Person) among all such Persons entitled to payment thereof.

(c) If and to the extent the Administrative Agent, any Credit Party, any Affected Person or any Borrower Indemnified Party shall be required for any reason to pay over to any Person any amount received on its behalf hereunder, such amount that is actually paid over shall be deemed not to have been so received but rather to have been retained by the Borrower and, accordingly, the Administrative Agent, such Credit Party, such Affected Person or such Borrower Indemnified Party, as the case may be, shall have a claim against the Borrower for such amount.

(d) For the purposes of this Section 4.01:

(i) if on any day the Outstanding Balance of any Pool Receivable is reduced or adjusted as a result of any defective, rejected, returned, repossessed or foreclosed goods or services, or any revision, cancellation, allowance, rebate, discount or other adjustment made by the Borrower, any Originator, the Transferor, the Servicer or any Affiliate of the Servicer, or any setoff or dispute between the Borrower or any Affiliate of the Borrower, the Transferor or any Affiliate of the Transferor, an Originator or any Affiliate of an Originator, or the Servicer or any Affiliate of the Servicer, and an Obligor, the Borrower shall be deemed to have received on such day a Collection of such

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Pool Receivable in the amount of such reduction or adjustment and shall immediately pay any and all such amounts in respect thereof to a Lock-Box Account (or as otherwise directed by the Administrative Agent at such time) for the benefit of the Credit Parties for application pursuant to Section 4.01(a);

(ii) if on any day any of the representations or warranties in Section 7.01 is not true with respect to any Pool Receivable, the Borrower shall be deemed to have received on such day a Collection of such Pool Receivable in full and shall immediately pay the amount of such deemed Collection to a Lock-Box Account (or as otherwise directed by the Administrative Agent at such time) for the benefit of the Credit Parties for application pursuant to Section 4.01(a) (Collections deemed to have been received pursuant to Section 4.01(d) are hereinafter sometimes referred to as “Deemed Collections”);

(iii) except as provided in clauses (i) or (ii) above or otherwise required by Applicable Law or the relevant Contract, all Collections received from an Obligor (or Eligible Supporting Letter of Credit Provider) of any Receivable shall be applied to the Receivables of such Obligor in the order of the age of such Receivables, starting with the oldest such Receivable, unless such Obligor designates in writing its payment for application to specific Receivables or the relevant Contract provides otherwise; and

(iv) if and to the extent the Administrative Agent, any Credit Party, any Affected Person or any Borrower Indemnified Party shall be required for any reason to pay over to an Obligor (or any trustee, receiver, custodian or similar official in any Insolvency Proceeding) any amount received by it hereunder, such amount actually paid over shall be deemed not to have been so received by such Person but rather to have been retained by the Borrower and, accordingly, such Person shall have a claim against the Borrower for such amount, payable

when and to the extent that any distribution from or on behalf of such Obligor is made in respect thereof.

If Borrower pays any Deemed Collections with respect to any Pool Receivable in an amount equal to the full Outstanding Balance of such Receivable in accordance with clause (d), above, then the Borrower may convey such Receivable to the Transferor, without representation or warranty, free and clear of the security interests created by the Transaction Documents.

(e) The Servicer may, and shall at the direction of the Administrative Agent pursuant to Section 8.02(a)(ii), deliver an Interim Report to the Administrative Agent on any Business Day during a Minimum Fixed Charge Ratio Period. Upon receipt of such Interim Report, the Administrative Agent shall promptly review such Interim Report to determine if such Interim Report constitutes a Qualifying Interim Report. In the event that the Administrative Agent reasonably determines that such Interim Report constitutes a Qualifying Interim Report, so long as no Event of Default or Unmatured Event of Default has occurred and is continuing and the Administrative Agent is then exercising exclusive dominion and control over the Lock-Box

Accounts, the Administrative Agent shall promptly remit to the Servicer from the Lock-Box Accounts (and the LC Collateral Account, if applicable) the lesser of (i) the amount identified on such Qualifying Interim Report as Collections and other amounts on deposit in the Lock-Box

Accounts and/or LC Collateral Account in excess of the amount necessary to ensure that there is no Borrowing Base Deficit and (ii) the aggregate amount of available Collections and other amounts then on deposit in the Lock-Box Accounts and the LC Collateral Account. For purposes of this clause (e), "Qualifying Interim Report" shall mean any Interim Report that satisfies each of the following conditions: (A) such report shows that no Borrowing Base Deficit then exists; (B) such Interim Report is calculated as of the immediately prior Business Day and (C) the Administrative Agent does not in good faith reasonably believe that any of the information or calculations set forth in such Interim Report are false or incorrect in any material respect (and notice of any such determination shall be provided promptly to the Servicer).

SECTION 4.02. Payments and Computations, Etc. (a) All amounts to be paid by the Borrower or the Servicer to the Administrative Agent, any Credit Party, any Affected Person or any Borrower Indemnified Party hereunder shall be paid no later than 12:00 Noon (New York City time) on the day when due in same day funds to the Administrative Agent's Account.

(b) Each of the Borrower and the Servicer shall, to the extent permitted by Applicable Law, pay interest on any amount not paid or deposited by it when due hereunder, at an interest rate per annum equal to 2.00% per annum above the Base Rate, payable on demand.

(c) All computations of interest under subsection (b) above and all computations of Interest, Fees and other amounts hereunder shall be made on the basis of a year of 360 days (or, in the case of amounts determined by reference to the Base Rate, 365 or 366 days, as applicable) for the actual number of days (including the first but excluding the last day) elapsed. Whenever any payment or deposit to be made hereunder shall be due on a day other than a Business Day, such payment or deposit shall be made on the next succeeding Business Day and such extension of time shall be included in the computation of such payment or deposit.

ARTICLE V

INCREASED COSTS; FUNDING LOSSES; TAXES; ILLEGALITY AND SECURITY INTEREST

SECTION 5.01. Increased Costs.

(a) Increased Costs Generally. If any Change in Law shall:

(i) impose, modify or deem applicable any reserve, special deposit, liquidity, compulsory loan, insurance charge or similar requirement against assets of, deposits with or for the account of, or credit extended or participated in by, any Lender or the LC Bank;

(ii) subject any Credit Party to any Taxes (except to the extent such Taxes are Indemnified Taxes for which relief is sought under Section 5.03 or Excluded Taxes) on its loans, loan principal, letters of credit, commitments or other obligations, or its deposits, reserves, other liabilities or capital attributable thereto; or

(iii) impose on any Credit Party any other condition, cost or expense (other than Taxes) (A) affecting the Collateral, this Agreement, any other Transaction

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Document, any Loan or any Letter of Credit or participation therein or (B) affecting its obligations or rights to make Loans or issue or participate in Letters of Credit;

and the result of any of the foregoing shall be to increase the cost to such Credit Party of (A) acting as the Administrative Agent or a Credit Party hereunder, (B) funding or maintaining any Loan or issuing or participating in, any Letter of Credit (or interests therein) or (C) maintaining its obligation to fund or maintain any Loan or issuing or participating in, any Letter of Credit, or to reduce the amount of any sum received or receivable by such Credit Party hereunder, then, upon request of such Credit Party, the Borrower shall pay to such Credit Party such additional amount or amounts as will compensate such Credit Party for such additional costs incurred or reduction suffered as reasonably determined by such Credit Party (which determination shall be made in good faith (and not on an arbitrary or capricious basis) and consistent with similarly situated customers of the Credit Party under agreements having provisions similar to this Section 5.01 after consideration of such factors as the Credit Party then reasonably determines to be relevant).

(b) Capital Requirements. If any Credit Party determines that any Change in Law affecting such Credit Party or any lending office of such Credit Party or such Credit Party's holding company, if any, regarding capital or liquidity requirements, has or would have the effect of reducing the rate of return on such Credit Party's capital or on the capital of such Credit Party's holding company, if any, as a consequence of (A) this Agreement or any other Transaction Document, (B) the commitments of such Credit Party hereunder or under any other Transaction Document, (C) the Loans, Letters of Credit or participations in Letters of Credit, made or issued by such Credit Party or (D) any Capital, to a level below that which such Credit Party or such Credit Party's holding company could have achieved but for such Change in Law (taking into consideration such Credit Party's policies and the policies of such Credit Party's holding company with respect to capital adequacy and liquidity), then from time to time, upon request of such Credit Party, the Borrower will pay to such Credit Party such additional amount or amounts as will compensate such Credit Party or such Credit Party's holding company for any such reduction suffered as reasonably determined by such Credit Party (which determination shall be made in good faith (and not on an arbitrary or capricious basis)

and consistent with similarly situated customers of the Credit Party under agreements having provisions similar to this Section 5.01 after consideration of such factors as the Credit Party then reasonably determines to be relevant).

(c) [Reserved].

(d) Certificates for Reimbursement. A certificate of a Credit Party setting forth the amount or amounts necessary to compensate such Credit Party or its holding company, as the case may be, as specified in clause (a), or (b) of this Section and delivered to the Borrower, shall be conclusive absent manifest error; provided, however, that in connection with making any such request for reimbursement by the Borrower hereunder pursuant to clause (a) or (b) of this Section, the applicable Credit Party shall certify to the Borrower that it or its Affiliates are also generally seeking reimbursement of similar costs from similarly situated customers, which certification shall be conclusive absent manifest error. The Borrower shall, subject to the priorities of payment set forth in Section 4.01, pay such Credit Party the amount

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shown as due on any such certificate on the first Settlement Date occurring after the Borrower's receipt of such certificate.

(e) Delay in Requests. Failure or delay on the part of any Credit Party to demand compensation pursuant to this Section shall not constitute a waiver of such Credit Party's right to demand such compensation; provided that the Borrower shall not be required to compensate a Credit Party pursuant to this Section for any increased costs or reductions incurred more than nine-months prior to the date that such Credit Party notifies the Borrower of the Change in Law giving rise to such increased costs or reductions and of such Credit Party's intention to claim compensation therefor; provided further that, if the Change in Law giving rise to such increased costs or reductions is retroactive, then the nine-month period referred to above shall be extended to include the period of retroactive effect thereof.

SECTION 5.02. Funding Losses ~~The Borrower will pay each Lender all Breakage Fees.~~

In addition to the compensation or payments required by Section 5.01 or Section 5.03, the Borrower shall indemnify each Lender against all liabilities, losses or expenses (including loss of anticipated profits, any foreign exchange losses and any loss or expense arising from the liquidation or reemployment of funds obtained by it to maintain any Loan, from fees payable to terminate the deposits from which such funds were obtained or from the performance of any foreign exchange contract) which such Lender sustains or incurs as a consequence of any:

(a) payment, prepayment, conversion or renewal of any Loan to which the Term SOFR Rate applies on a day other than the last day of the corresponding Interest Period (whether or not any such payment or prepayment is mandatory, voluntary, or automatic and whether or not any such payment or prepayment is then due);

(b) ~~A certificate of a Lender setting forth the amount or amounts necessary to compensate such Lender, as specified in clause (a) above and delivered to the Borrower, shall be presumed correct absent manifest error. The Borrower shall, subject to the priorities of payment set forth in Section 4.01, pay such Lender the amount shown as due on any such certificate on the first Settlement Date occurring after the Borrower's receipt of such certificate.~~ attempt by the Borrower to

revoke (expressly, by later inconsistent notices or otherwise) in whole or part any Loan Request or notice relating to prepayments under Section 2.02(d) or failure by the Borrower (for a reason other than the failure of such Lender to make a Loan) to prepay, borrow, continue or convert any Loan on the date or in the amount notified by the Borrower.

If any Lender sustains or incurs any such loss or expense, it shall from time to time notify the Borrower of the amount determined in good faith by such Lender (which determination may include such assumptions, allocations of costs and expenses and averaging or attribution methods as such Lender shall deem reasonable) to be necessary to indemnify such Lender for such loss or expense. Such notice shall specify in reasonable detail the basis for such determination. Such amount shall be due and payable by the Borrower to such Lender on the first Settlement Date occurring after such notice is given or, if such amount is payable due to clause (a) above, then on the date of such payment, prepayment, conversion, renewal or assignment so long as such notice has been given on or prior to such date.

SECTION 5.03. Taxes.

(a) Payments Free of Taxes. Any and all payments by or on account of any obligation of the Borrower under any Transaction Document shall be made without deduction or withholding for any Indemnified Taxes, except as required by Applicable Law. If any Applicable Law (as determined in the good faith discretion of the applicable withholding agent) requires the deduction or withholding of any Tax from any such payment by a withholding agent, then the applicable withholding agent shall be entitled to make such deduction or withholding and shall timely pay the full amount deducted or withheld to the relevant Governmental Authority in accordance with Applicable Law, and, if such Tax is an Indemnified Tax, then the sum payable by the Borrower shall be increased as necessary so that after such deduction or withholding has been made (including such deductions and withholdings applicable to additional sums payable under this Section), the applicable Credit Party receives an amount equal to the sum it would have received had no such deduction or withholding been made.

(b) Payment of Other Taxes by the Borrower. The Borrower shall timely pay to the relevant Governmental Authority in accordance with Applicable Law, or, at the option of the Administrative Agent, timely reimburse it for the payment of, any Other Taxes.

(c) Indemnification by the Borrower. To the extent not paid, reimbursed or compensated pursuant to Section 5.03(a) or (b), the Borrower shall indemnify each Credit Party, within ten days after demand therefor, for the full amount of any (I) Indemnified Taxes (including Indemnified Taxes imposed or asserted on or attributable to amounts payable under this Section) payable or paid by such Credit Party or required to be withheld or deducted from a payment to such Credit Party and any reasonable expenses arising therefrom or with respect thereto, whether or not such Indemnified Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority and (II) Taxes that arise because a Loan is not treated for U.S. federal, state, local or franchise tax purposes as intended under Section 5.03(j) (such indemnification will include any U.S. federal, state or local income and franchise taxes necessary to make such Credit Party whole on an after-tax basis taking into account the taxability of receipt of payments under this clause (II) and any reasonable expenses (other than Taxes) arising out of, relating to, or resulting from the foregoing).

Promptly upon having knowledge that any such Indemnified Taxes have been levied, imposed or assessed, and promptly upon notice by the Administrative Agent or any Affected Person, the Borrower shall pay such Indemnified Taxes directly to the relevant taxing authority or Governmental Authority or to the applicable Credit Party, as requested; provided that neither the Administrative Agent nor any Affected Person shall be under any obligation to provide any such notice to the Borrower. A certificate as to the amount of such payment or liability delivered to the Borrower by an Affected Person (with a copy to the Administrative Agent), or by the Administrative Agent on its own behalf or on behalf of an Affected Person, shall be conclusive absent manifest error.

(d) Indemnification by the Lenders. Each Lender shall severally indemnify the Administrative Agent, within ten days after demand therefor, for (i) any Indemnified Taxes attributable to such Lender or any of its respective Affiliates that are Affected Persons (but only to the extent that the Borrower and its Affiliates have not already indemnified the Administrative Agent for such Indemnified Taxes and without limiting any obligation of the Borrower, the Servicer or their Affiliates to do so), (ii) any Taxes attributable to the failure of such Lender or

any of its respective Affiliates that are Affected Persons to comply with Section 14.03(e) relating to the maintenance of a Participant Register and (iii) any Excluded Taxes attributable to such Lender or any of their respective Affiliates that are Affected Persons, in each case, that are payable or paid by the Administrative Agent in connection with any Transaction Document, and any reasonable expenses arising therefrom or with respect thereto, whether or not such Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to any Lender by the Administrative Agent shall be conclusive absent manifest error. Each Lender hereby authorizes the Administrative Agent to set off and apply any and all amounts at any time owing to such Lender or any of its respective Affiliates that are Affected Persons under any Transaction Document or otherwise payable by the Administrative Agent to such Lender or any of its respective Affiliates that are Affected Persons from any other source against any amount due to the Administrative Agent under this clause (d).

(e) Evidence of Payments. As soon as practicable after any payment of Taxes by the Borrower to a Governmental Authority pursuant to this Section 5.03, the Borrower shall deliver to the Administrative Agent the original or a certified copy of a receipt issued by such Governmental Authority evidencing such payment, a copy of the return reporting such payment or other evidence of such payment reasonably satisfactory to the Administrative Agent.

(f) Status of Credit Party. (i) Any Credit Party that is entitled to an exemption from or reduction of withholding Tax with respect to payments made under any Transaction Document shall deliver to the Borrower and the Administrative Agent, at the time or times reasonably requested by the Borrower or the Administrative Agent, such properly completed and executed documentation reasonably requested by the Borrower or the Administrative Agent as will permit such payments to be made without withholding or at a reduced rate of withholding. In addition, any Credit Party, if reasonably requested by the Borrower or the Administrative Agent, shall deliver such other documentation prescribed by Applicable Law or reasonably requested by the Borrower or the Administrative Agent as will enable the Borrower or the Administrative Agent to determine whether or not such Credit Party is subject to backup withholding or information reporting requirements.

Notwithstanding anything to the contrary in the preceding two sentences, the completion, execution and submission of such documentation (other than such documentation set forth in Sections 5.03(f)(ii)(A), 5.03(f)(ii)(B) and 5.03(g)) shall not be required if, in the Credit Party's reasonable judgment, such completion, execution or submission would subject such Credit Party to any material unreimbursed cost or expense or would materially prejudice the legal or commercial position of such Credit Party.

(ii) Without limiting the generality of the foregoing:

(A) any Credit Party that is a "United States Person" within the meaning of Section 7701(a)(30) of the Code, and not an exempt recipient described in Section 6049(b)(4) of the Code, shall deliver to the Borrower and the Administrative Agent from time to time upon the reasonable request of the Borrower or the Administrative Agent, executed originals of Internal Revenue Service Form W-9 or such other documentation or information prescribed by Applicable Laws or reasonably requested by the Borrower or the Administrative Agent as will enable the Borrower or the

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Administrative Agent, as the case may be, to determine whether or not such Credit Party is a United States Person and whether such Credit Party is subject to backup withholding or information reporting requirements;

(B) any Credit Party that is organized under the laws of a jurisdiction other than the United States (including each State thereof and the District of Columbia) (a "Foreign Credit Party") that is entitled under the Code or any applicable treaty to an exemption from or reduction of withholding tax with respect to payments hereunder shall deliver to the Borrower and the Administrative Agent (in such number of copies as shall be reasonably requested by the Borrower or the Administrative Agent) on or prior to the date on which such Foreign Credit Party becomes a Credit Party with respect to this Agreement (and from time to time thereafter upon the reasonable request of the Borrower or the Administrative Agent, but only if such Foreign Credit Party is legally entitled to do so), whichever of the following is applicable:

(1) in the case of such a Credit Party claiming the benefits of an income tax treaty to which the United States is a party, executed originals of Internal Revenue Service Form W-8BEN or Internal Revenue Service Form W-8BEN-E, as applicable;

(2) executed originals of Internal Revenue Service Form W-8ECI;

(3) in the case of a Foreign Credit Party claiming the benefits of the exemption for portfolio interest under Section 881(c) of the Code, (x) a certificate to the effect that such Foreign Credit Party is not a "bank" within the meaning of Section 881(c)(3)(A) of the Code, a "10 percent shareholder" of the Borrower within the meaning of Section 881(c)(3)(B) of the Code, or a "controlled foreign corporation" described in Section 881(c)

(3)(C) of the Code (a “U.S. Tax Compliance Certificate”) and (y) executed originals of Internal Revenue Service Form W-8BEN or Internal Revenue Service Form W-8BEN-E; or

(4) to the extent such Credit Party is not the beneficial owner, executed originals of Internal Revenue Service Form W-8IMY, accompanied by Internal Revenue Service Form W-8ECI, Internal Revenue Service Form W-8BEN, Internal Revenue Service Form W-8BEN-E, a U.S. Tax Compliance Certificate, Internal Revenue Service Form W-9, and/or other certification documents from each beneficial owner, as applicable; provided that, if such Credit Party is a partnership and one or more direct or indirect partners of such Credit Party are claiming the portfolio interest exemption, such Credit Party may provide a U.S.

Tax Compliance Certificate on behalf of each such direct and indirect partner; and

(C) any Foreign Credit Party, to the extent it is legally entitled to do so, shall deliver to the Borrower and the Administrative Agent (in such number of copies as shall be requested by the recipient), from time to time upon the reasonable request of the Borrower or the Administrative Agent, executed originals of any other form prescribed by Applicable Law as a basis for claiming exemption from or a reduction in U.S. federal withholding Tax, duly completed, together with such supplementary documentation as may be prescribed by Applicable Law to permit the Borrower or the Administrative Agent to determine the withholding or deduction required to be made.

(g) Documentation Required by FATCA. If a payment made to a Credit Party under any Transaction Document would be subject to U.S. federal withholding Tax imposed by FATCA if such Credit Party were to fail to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Code, as applicable), such Credit Party shall deliver to the Borrower and the Administrative Agent at the time or times prescribed by Applicable Law and at such time or times reasonably requested by the Borrower or the Administrative Agent such documentation prescribed by Applicable Law (including as prescribed by Section 1471(b) (3)(C)(i) of the Code) and such additional documentation reasonably requested by the Borrower or the Administrative Agent as may be necessary for the Borrower and the Administrative Agent to comply with their obligations under FATCA and to determine that such Credit Party has complied with such Credit Party's obligations under FATCA or to determine the amount to deduct and withhold from such payment. Solely for purposes of this clause (g), “FATCA” shall include any amendments made to FATCA after the date of this Agreement and any fiscal or regulatory legislation, rules or practices adopted pursuant to any intergovernmental agreement entered into in connection with FATCA.

(h) Survival. Each party's obligations under this Section 5.03 shall survive the resignation or replacement of the Administrative Agent or any assignment of rights by, or the replacement of, a Credit Party, the termination of the Commitments and the repayment, satisfaction or discharge of all the Borrower Obligations and the Servicer's obligations hereunder.

(i) Updates. Each Credit Party agrees that if any form or certification it previously delivered pursuant to this Section 5.03 expires or becomes obsolete or inaccurate in any respect, it shall update such form or certification or promptly notify the Borrower and the Administrative Agent in writing of its legal inability to do so.

(j) Intended Tax Treatment. Notwithstanding anything to the contrary herein or in any other Transaction Document, all parties to this Agreement covenant and agree to treat each Loan under this Agreement as debt (and all Interest as interest) for all U.S. federal, state, local and franchise tax purposes and agree not to take any position on any tax return inconsistent with the foregoing.

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(k) Tax Benefit. If any Credit Party determines, in its sole discretion exercised in good faith, that it has received a refund of any Taxes as to which it has been indemnified pursuant to this Section 5.03 (including by the payment of additional amounts pursuant to this Section 5.03 (any such refund, a “Tax Benefit”), it shall pay to the indemnifying party an amount equal to such Tax Benefit (but only to the extent of indemnity payments made under this Section with respect to the Taxes giving rise to such Tax Benefit), net of all out-of-pocket expenses (including Taxes) of such indemnified party and without interest (other than any interest paid by the relevant Governmental Authority with respect to such Tax Benefit). Such indemnifying party, upon the request of such indemnified party, shall repay to such indemnified party the amount paid over pursuant to this paragraph (k) in the event that such indemnified party is required to repay such Tax Benefit to such Governmental Authority. Notwithstanding anything to the contrary in this paragraph, in no event will the Credit Party be required to pay any amount to the indemnifying party pursuant to this paragraph the payment of which would place Credit Party in a less favorable net after-Tax position than the Credit Party would have been in if the Tax subject to indemnification and giving rise to such refund had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts with respect to such Tax had never been paid. This paragraph shall not be construed to require any indemnified party to make available its Tax returns (or any other information relating to its Taxes that it deems confidential) to the indemnifying party or any Person.

SECTION 5.04. [Reserved].

SECTION 5.05. Security Interest.

(a) As security for the performance by the Borrower of all the terms, covenants and agreements on the part of the Borrower to be performed under this Agreement or any other Transaction Document, including the punctual payment when due of the Aggregate Capital and all Interest in respect of the Loans and all other Borrower Obligations, the Borrower hereby grants to the Administrative Agent for its benefit and the ratable benefit of the Secured Parties, a continuing security interest in, all of the Borrower’s right, title and interest in, to and under all of the following, whether now or hereafter owned, existing or arising (collectively, the “Collateral”): (i) all Pool Receivables, (ii) all Related Security with respect to such Pool Receivables, (iii) all Collections with respect to such Pool Receivables, (iv) the Lock-Boxes and Lock-Box Accounts and all amounts on deposit therein, and all certificates and instruments, if any, from time to time evidencing such Lock-Boxes and Lock-Box Accounts and amounts on deposit therein, (v) all rights (but none of the obligations) of the Borrower under the Sale Agreements and (vi) all proceeds of, and all amounts received or receivable under any or all of, the foregoing.

The Administrative Agent (for the benefit of the Secured Parties) shall have, with respect to all the Collateral, and in addition to all the other rights and remedies available to the Administrative Agent (for the benefit of the Secured Parties), all the rights and remedies of a secured party under any applicable UCC. The Borrower hereby authorizes the Administrative Agent to file financing statements describing as the collateral covered thereby as "all of the debtor's personal property or assets" or words to that effect, notwithstanding that such wording may be broader in scope than the collateral described in this Agreement.

Immediately upon the occurrence of the Final Payout Date, the Collateral shall be automatically released from the lien created hereby, and this Agreement and all obligations (other than those expressly stated to survive such termination) of the Administrative Agent, the Lenders and the other Credit Parties hereunder shall terminate, all without delivery of any instrument or performance of any act by any party, and all rights to the Collateral shall revert to the Borrower; provided, however, that promptly following written request therefor by the Borrower delivered to the Administrative Agent following any such termination, and at the expense of the Borrower, the Administrative Agent shall deliver to the Borrower written authorization for the Borrower to file UCC-3 termination statements and such other documents as the Borrower shall reasonably request to evidence such termination.

SECTION 5.06. [Reserved].

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ARTICLE VI

CONDITIONS TO EFFECTIVENESS AND CREDIT EXTENSIONS

SECTION 6.01. Conditions Precedent to Effectiveness and the Initial Credit Extension. This Agreement shall become effective as of the Closing Date when (a) the Administrative Agent shall have received each of the documents, agreements (in fully executed form), opinions of counsel, lien search results, UCC filings, certificates and other deliverables listed on the closing memorandum attached as Exhibit H hereto, in each case, in form and substance acceptable to the Administrative Agent and (b) all fees and expenses payable by the Borrower on the Closing Date to the Credit Parties have been paid in full in accordance with the terms of the Transaction Documents.

SECTION 6.02. Conditions Precedent to All Credit Extensions. Each Credit Extension hereunder on or after the Closing Date shall be subject to the conditions precedent that:

(a) in the case of a Loan, the Borrower shall have delivered to the Administrative Agent and each Lender a Loan Request for such Loan, and in the case of a Letter of Credit, the Borrower shall have delivered to the Administrative Agent, each Lender and the LC Bank, a Letter of Credit Application and an LC Request, in each case, in accordance with Section 2.02(a) or Section 3.02(a), as applicable;

(b) the Servicer shall have delivered to the Administrative Agent and each Lender all Information Packages required to be delivered hereunder;

(c) the conditions precedent to such Credit Extension specified in Section 2.01(i) through (iii) and Section 3.01(a), as applicable, shall be satisfied; and

(d) on the date of such Credit Extension the following statements shall be true and correct (and upon the occurrence of such Credit Extension, the Borrower and the Servicer shall be deemed to have represented and warranted that such statements are then true and correct):

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(i) the representations and warranties of the Borrower and the Servicer contained in Sections 7.01 and 7.02 are true and correct in all material respects on and as of the date of such Credit Extension as though made on and as of such date unless such representations and warranties by their terms refer to an earlier date, in which case they shall be true and correct in all material respects on and as of such earlier date;

(ii) no Event of Default or Unmatured Event of Default has occurred and is continuing, and no Event of Default or Unmatured Event of Default would result from such Credit Extension;

(iii) no Borrowing Base Deficit exists or would exist after giving effect to such Credit Extension; and

(iv) the Termination Date has not occurred.

ARTICLE VII

REPRESENTATIONS AND WARRANTIES

SECTION 7.01. Representations and Warranties of the Borrower. The Borrower represents and warrants to each Credit Party as of the Closing Date, on each Settlement Date and on each day on which a Credit Extension shall have occurred:

(a) Organization and Good Standing. The Borrower is a limited liability company and validly existing in good standing under the laws of the State of Delaware and has full power and authority to own its properties and to conduct its business as such properties are currently owned and such business is presently conducted.

(b) Due Qualification. The Borrower is duly qualified to do business, is in good standing as a foreign entity and has obtained all necessary licenses and approvals in all jurisdictions in which the conduct of its business requires such qualification, licenses or approvals, except where the failure to do so could not reasonably be expected to have a Material Adverse Effect.

(c) Power and Authority; Due Authorization. The Borrower (i) has all necessary power and authority to (A) execute and deliver this Agreement and the other Transaction Documents to which it is a party, (B) perform its obligations under this Agreement and the other Transaction Documents to which it is a party and (C) grant a security interest in the Collateral to the Administrative Agent on the terms and subject to the conditions herein provided and (ii) has duly authorized by all necessary action such grant and the execution, delivery and performance of, and the consummation of the transactions provided for in, this Agreement and the other Transaction Documents to which it is a party.

(d) Binding Obligations. This Agreement and each of the other Transaction Documents to which the Borrower is a party constitutes legal, valid and binding obligations of the Borrower, enforceable against the Borrower in accordance with their respective terms, except (i) as such enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting the enforcement of creditors' rights generally and (ii)

as such enforceability may be limited by general principles of equity, regardless of whether such enforceability is considered in a proceeding in equity or at law.

(e) No Conflict or Violation. The execution, delivery and performance of, and the consummation of the transactions contemplated by, this Agreement and the other Transaction Documents to which it is a party, and the fulfillment of the terms hereof and thereof, will not (i) conflict with, result in any breach of any of the terms or provisions of, or constitute (with or without notice or lapse of time or both) a default under its organizational documents or any indenture, sale agreement, credit agreement, loan agreement, security agreement, mortgage, deed of trust, or other agreement or instrument to which the Borrower is a party or by which it or any of its properties is bound, (ii) result in the creation or imposition of any Adverse Claim upon any of the Collateral pursuant to the terms of any such indenture, credit agreement, loan agreement, security agreement, mortgage, deed of trust, or other agreement or instrument other than this Agreement and the other Transaction Documents or (iii) conflict with or violate any Applicable Law. Without limiting the foregoing, the receivables securitization program evidenced by this Agreement and the other Transaction Documents is (and has been at all times on and after January 13, 2023) permitted and incurred pursuant to Section 5.02(b)(xi) of the Credit Agreement.

(f) Litigation and Other Proceedings. (i) There is no action, suit, proceeding or investigation pending or, to the best knowledge of the Borrower, threatened, against the Borrower before any Governmental Authority and (ii) the Borrower is not subject to any order, judgment, decree, injunction, stipulation or consent order of or with any Governmental Authority that, in the case of either of the foregoing clauses (i) and (ii), (A) asserts the invalidity of this Agreement or any other Transaction Document, (B) seeks to prevent the grant of a security interest in any Collateral by the Borrower to the Administrative Agent, the ownership or acquisition by the Borrower of any Pool Receivables or other Collateral or the consummation of any of the transactions contemplated by this Agreement or any other Transaction Document, (C) seeks any determination or ruling that could materially and adversely affect the performance by the Borrower of its obligations under, or the validity or enforceability of, this Agreement or any other Transaction Document or (D) individually or in the aggregate for all such actions, suits, proceedings and investigations could reasonably be expected to have a Material Adverse Effect.

(g) Governmental Approvals. Except where the failure to obtain or make such authorization, consent, order, approval or action could not reasonably be expected to have a Material Adverse Effect, all authorizations, consents, orders and approvals of, or other actions by, any Governmental Authority that are required to be obtained by the Borrower in connection with the grant of a security interest in the Collateral to the Administrative Agent hereunder or the due execution, delivery and performance by the Borrower of this Agreement or any other Transaction Document to which it is a party and the consummation by the Borrower of the transactions contemplated by this

Agreement and the other Transaction Documents to which it is a party have been obtained or made and are in full force and effect.

(h) Margin Regulations. The Borrower is not engaged, principally or as one of its important activities, in the business of extending credit for the purpose of purchasing or

carrying margin stock (within the meanings of Regulations T, U and X of the Board of Governors of the Federal Reserve System).

(i) Taxes. The Borrower has timely filed all material Tax returns and reports required by Applicable Law to have been filed by it and has paid all material Taxes, assessments and governmental charges thereby shown to be owing by it, other than any such Taxes, assessments or charges that are being contested in good faith by appropriate proceedings and for which appropriate reserves in accordance with GAAP have been established.

(j) Solvency. After giving effect to the transactions contemplated by this Agreement and the other Transaction Documents, the Borrower is Solvent.

(k) Offices; Legal Name. The Borrower's sole jurisdiction of organization is the State of Delaware and such jurisdiction has not changed within four months prior to the date of this Agreement. The office of the Borrower is located at the applicable address specified on Schedule III hereto. The legal name of the Borrower is AROP Funding, LLC.

(l) Investment Company Act. The Borrower (i) is not, and is not controlled by an "investment company" registered or required to be registered under the Investment Company Act and (ii) is not a "covered fund" under the Volcker Rule. In determining that Borrower is not a "covered fund" under the Volcker Rule, Borrower is entitled to rely on the exemption from the definition of "investment company" set forth in Section 3(c)(5)(A) or (B) of the Investment Company Act.

(m) No Material Adverse Effect. Since the date of formation of the Borrower there has been no Material Adverse Effect with respect to the Borrower.

(n) Accuracy of Information. All Information Packages, Interim Reports, Loan Requests, LC Requests, Letter of Credit Applications, certificates, reports, statements, documents and other information furnished to the Administrative Agent or any other Credit Party by or on behalf of the Borrower pursuant to any provision of this Agreement or any other Transaction Document, or in connection with or pursuant to any amendment or modification of, or waiver under, this Agreement or any other Transaction Document, is, at the time the same are so furnished, complete and correct in all material respects on the date the same are furnished to the Administrative Agent or such other Credit Party, and does not contain any material misstatement of fact or omit to state a material fact or any fact necessary to make the statements contained therein not misleading (provided that with respect to any projected financial information, the Borrower represents only that such information was prepared in good faith based upon assumptions believed to be reasonable at the time).

(o) Sanctions and other Anti-Terrorism Laws. No: (a) Covered Entity, nor any employees, officers, directors, affiliates, consultants, brokers, or agents acting on a Covered Entity's behalf in connection with this Agreement: (i) is a Sanctioned Person; (ii) directly, or indirectly through any third party, is engaged in any transactions or other dealings with or for the benefit of any

Sanctioned Person or Sanctioned Jurisdiction, or any transactions or other dealings that otherwise are prohibited by any Anti-Terrorism Laws; (b) Collateral is Embargoed Property.

(p) Perfection Representations.

(i) This Agreement creates a valid and continuing security interest (as defined in the applicable UCC) in the Borrower's right, title and interest in, to and under the Collateral which (A) security interest has been perfected and is enforceable against creditors of and purchasers from the Borrower and (B) will be free of all Adverse Claims in such Collateral.

(ii) The Receivables constitute "accounts" (including, without limitation, "accounts" constituting "as-extracted collateral") or "general intangibles" within the meaning of Section 9-102 of the UCC.

(iii) The Borrower owns and has good and marketable title to the Collateral free and clear of any Adverse Claim of any Person.

(iv) All appropriate financing statements, financing statement amendments and continuation statements have been filed in the proper filing office in the appropriate jurisdictions under Applicable Law in order to perfect (and continue the perfection of) the sale of the Receivables and Related Security from each Originator to the Transferor pursuant to the Purchase and Sale Agreement, the sale and contribution of the Receivables and Related Security from the Transferor to the Borrower pursuant to the Sale and Contribution Agreement and the grant by the Borrower of a security interest in the Collateral to the Administrative Agent pursuant to this Agreement.

(v) Other than the security interest granted to the Administrative Agent pursuant to this Agreement, the Borrower has not pledged, assigned, sold, granted a security interest in, or otherwise conveyed any of the Collateral except as permitted by this Agreement and the other Transaction Documents. The Borrower has not authorized the filing of and is not aware of any financing statements filed against the Borrower that include a description of collateral covering the Collateral other than any financing statement (i) in favor of the Administrative Agent or (ii) that has been terminated. The Borrower is not aware of any judgment lien, ERISA lien or tax lien filings against the Borrower.

(vi) Notwithstanding any other provision of this Agreement or any other Transaction Document, the representations contained in this Section 7.01(p) shall be continuing and remain in full force and effect until the Final Payout Date.

(q) The Lock-Boxes and Lock-Box Accounts.

(i) Nature of Lock-Box Accounts. Each Lock-Box Account constitutes a "deposit account" within the meaning of the applicable UCC.

(ii) Ownership. Each Lock-Box and Lock-Box Account is in the name of the Borrower, and the Borrower owns and has good and marketable title to the Lock-Box Accounts free and clear of any Adverse Claim.

(iii) Perfection. The Borrower has delivered to the Administrative Agent a fully executed Lock-Box Agreement relating to each Lock-Box and Lock-Box Account, pursuant to which each applicable Lock-Box Bank has agreed to comply with the instructions originated by the Administrative Agent directing the disposition of funds in such Lock-Box and Lock-Box Account without further consent by the Borrower, the Servicer or any other Person. The Administrative Agent has "control" (as defined in Section 9-104 of the UCC) over each Lock-Box Account.

(iv) Instructions. Neither the Lock-Boxes nor the Lock-Box Accounts are in the name of any Person other than the Borrower. Neither the Borrower nor the Servicer has consented to the applicable Lock-Box Bank complying with instructions of any Person other than (i) the Administrative Agent or (ii) prior to the exercise of exclusive control over the applicable Lock-Box Accounts by the Administrative Agent, the Borrower or Servicer.

(r) Ordinary Course of Business. Each remittance of Collections by or on behalf of the Borrower to the Credit Parties under this Agreement will have been (i) in payment of a debt incurred by the Borrower in the ordinary course of business or financial affairs of the Borrower and (ii) made in the ordinary course of business or financial affairs of the Borrower.

(s) Compliance with Law. The Borrower has complied in all material respects with all Applicable Laws to which it may be subject.

(t) Bulk Sales Act. No transaction contemplated by this Agreement requires compliance by it with any bulk sales act or similar law.

(u) Eligible Receivables. Each Receivable included as an Eligible Receivable in the calculation of the Net Receivables Pool Balance as of any date is an Eligible Receivable as of such date.

(v) Opinions. The facts regarding the Borrower, the Receivables, the Related Security and the related matters set forth or assumed in each of the opinions of counsel delivered in connection with this Agreement and the Transaction Documents are true and correct in all material respects.

(w) Mortgages Covering As-Extracted Collateral. There are no mortgages that are effective as financing statements covering as-extracted collateral and that name any Originator as grantor, debtor or words of similar effect filed or recorded in any jurisdiction.

(x) Other Transaction Documents. Each representation and warranty made by the Borrower under each other Transaction Document to which it is a party is true and correct in all material respects as of the date when made.

(y) Reaffirmation of Representations and Warranties. On the date of each Credit Extension, on each Settlement Date and on the date each Information Package or Interim Report is delivered to the Administrative Agent or any Lender hereunder, the Borrower shall be deemed to have certified that (i) all representations and warranties of the Borrower hereunder are true and correct in all material respects on and as of such day as though made on and as of such day, except for representations and warranties which apply as to an earlier date (in which case such representations and warranties shall be true and correct in all material respects as of such date) and (ii) no Event of Default or an Unmatured Event of Default has occurred and is continuing or will result from such Credit Extension.

(z) Liquidity Coverage Ratio. The Borrower has not issued any LCR Securities, and the Borrower is a consolidated subsidiary of Parent under generally accepted accounting principles

(aa) Beneficial Ownership Rule. As of January 16, 2019 the Borrower is an entity that is organized under the laws of the United States or of any state and at least 51% of whose common stock or analogous equity interest is owned directly or indirectly by a company listed on the New York Stock Exchange or the American Stock Exchange or designated as a NASDAQ National Market Security listed on the NASDAQ stock exchange and is excluded on that basis from the definition of "Legal Entity Customer" as defined in the Beneficial Ownership Rule

(bb) Anti-Corruption Laws. Each Covered Entity has (a) conducted its business in compliance with all Anti-Corruption Laws and (b) has instituted and maintains policies and procedures designed to ensure compliance with such Laws.

Notwithstanding any other provision of this Agreement or any other Transaction Document, the representations contained in this Section shall be continuing, and remain in full force and effect until the Final Payout Date.

SECTION 7.02. Representations and Warranties of the Servicer. The Servicer represents and warrants to each Credit Party as of the Closing Date, on each Settlement Date and on each day on which a Credit Extension shall have occurred:

(a) Organization and Good Standing. The Servicer is a duly organized and validly existing limited liability company in good standing under the laws of the State of Delaware, with the power and authority under its organizational documents and under the laws of the State of Delaware to own its properties and to conduct its business as such properties are currently owned and such business is presently conducted.

(b) Due Qualification. The Servicer is duly qualified to do business, is in good standing as a foreign entity and has obtained all necessary licenses and approvals in all jurisdictions in which the conduct of its business or the servicing of the Pool Receivables as required by this Agreement requires such qualification, licenses or approvals, except where the failure to do so could not reasonably be expected to have a Material Adverse Effect.

(c) Power and Authority; Due Authorization. The Servicer has all necessary power and authority to (i) execute and deliver this Agreement and the other Transaction

Documents to which it is a party and (ii) perform its obligations under this Agreement and the other Transaction Documents to which it is a party and the execution, delivery and performance of, and the consummation of the transactions provided for in, this Agreement and the other Transaction Documents to which it is a party have been duly authorized by the Servicer by all necessary action.

(d) Binding Obligations. This Agreement and each of the other Transaction Documents to which it is a party constitutes legal, valid and binding obligations of the Servicer, enforceable against the Servicer in accordance with their respective terms, except (i) as such enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting the enforcement of creditors' rights generally and (ii) as such enforceability may be limited by general principles of equity, regardless of whether such enforceability is considered in a proceeding in equity or at law.

(e) No Conflict or Violation. The execution and delivery of this Agreement and each other Transaction Document to which the Servicer is a party, the performance of the transactions contemplated by this Agreement and the other Transaction Documents and the fulfillment of the terms of this Agreement and the other Transaction Documents by the Servicer will not (i) conflict with, result in any breach of any of the terms or provisions of, or constitute (with or without notice or lapse of time or both) a default under, the organizational documents of the Servicer or any indenture, sale agreement, credit agreement, loan agreement, security agreement, mortgage, deed of trust or other agreement or instrument to which the Servicer is a party or by which it or any of its property is bound, (ii) result in the creation or imposition of any Adverse Claim upon any of its properties pursuant to the terms of any such indenture, credit agreement, loan agreement, agreement, mortgage, deed of trust or other agreement or instrument, other than this Agreement and the other Transaction Documents or (iii) conflict with or violate any Applicable Law, except to the extent that any such conflict, breach, default, Adverse Claim or violation could not reasonably be expected to have a Material Adverse Effect on Servicer. Without limiting the foregoing, the receivables securitization program evidenced by this Agreement and the other Transaction Documents is (and has been at all times on and after January 13, 2023) permitted and incurred pursuant to Section 5.02(b)(xi) of the Credit Agreement.

(f) Litigation and Other Proceedings. There is no action, suit, proceeding or investigation pending, or to the Servicer's knowledge threatened, against the Servicer before any Governmental Authority: (i) asserting the invalidity of this Agreement or any of the other Transaction Documents; (ii) seeking to prevent the consummation of any of the transactions contemplated by this Agreement or any other Transaction Document; or (iii) seeking any determination or ruling that could materially and adversely affect the performance by the Servicer of its obligations under, or the validity or enforceability of, this Agreement or any of the other Transaction Documents.

(g) No Consents. The Servicer is not required to obtain the consent of any other party or any consent, license, approval, registration, authorization or declaration of or with any Governmental Authority in connection with the execution, delivery, or performance of this Agreement or any other Transaction Document to which it is a party that has not already been

obtained or the failure of which to obtain could not reasonably be expected to have a Material Adverse Effect.

(h) Compliance with Applicable Law. The Servicer (i) shall duly satisfy all obligations on its part to be fulfilled under or in connection with the Pool Receivables and the related Contracts, (ii) has maintained in effect all qualifications required under Applicable Law in order to properly service the Pool Receivables and (iii) has complied in all material respects with all Applicable Law in connection with servicing the Pool Receivables.

(i) Accuracy of Information. All Information Packages, Interim Reports, Loan Requests, LC Requests, Letter of Credit Applications, certificates, reports, statements, documents and other information furnished to the Administrative Agent or any other Credit Party by the Servicer pursuant to any provision of this Agreement or any other Transaction Document, or in connection with or pursuant to any amendment or modification of, or waiver under, this Agreement or any other Transaction Document, is, at the time the same are so furnished, complete and correct in all material respects on the date the same are furnished to the Administrative Agent or such other Credit Party, and does not contain any material misstatement of fact or omit to state a material fact or any fact necessary to make the statements contained therein not misleading (provided that with respect to any projected financial information, the Servicer represents only that such information was prepared in good faith based upon assumptions believed to be reasonable at the time).

(j) Location of Records. The offices where the initial Servicer keeps all of its records relating to the servicing of the Pool Receivables are located at 1717 S. Boulder Ave., Suite 400, Tulsa, Oklahoma (or such other locations within the United States that have been notified by the Servicer to the Administrative Agent in writing and consented to in writing by the Administrative Agent, such consent not to be unreasonably withheld or delayed).

(k) Credit and Collection Policy. The Servicer has complied in all material respects with the Credit and Collection Policy with regard to each Pool Receivable and the related Contracts.

(l) Eligible Receivables. Each Receivable included as an Eligible Receivable in the calculation of the Net Receivables Pool Balance as of any date is an Eligible Receivable as of such date.

(m) Servicing Programs. No license or approval is required for the Administrative Agent's use of any software or other computer program used by the Servicer, the Transferor, any Originator or any Sub-Servicer in the servicing of the Pool Receivables, other than those which have been obtained and are in full force and effect.

(n) Servicing of Pool Receivables. Since the Closing Date there has been no material adverse change in the ability of the Servicer or any Sub-Servicer to service and collect the Pool Receivables and the Related Security.

(o) Other Transaction Documents. Each representation and warranty made by the Servicer under each other Transaction Document to which it is a party is true and correct in all material respects as of the date when made.

(p) No Material Adverse Effect. Since June 30, 2014 there has been no Material Adverse Effect on the Servicer.

(q) Investment Company Act. The Servicer is not an "investment company," or a company "controlled" by an "investment company," within the meaning of the Investment Company

Act.

(r) Sanctions and other Anti-Terrorism Laws. No: (a) Covered Entity, nor any employees, officers, directors, affiliates, consultants, brokers, or agents acting on a Covered Entity's behalf in connection with this Agreement: (i) is a Sanctioned Person; (ii) directly, or indirectly through any third party, is engaged in any transactions or other dealings with or for the benefit of any Sanctioned Person or Sanctioned Jurisdiction, or any transactions or other dealings that otherwise are prohibited by any Anti-Terrorism Laws; (b) Collateral is Embargoed Property.

(s) Financial Condition. The consolidated balance sheets of the Servicer and its consolidated Subsidiaries as of June 30, 2014 and the related statements of income and shareholders' equity of the Servicer and its consolidated Subsidiaries for the fiscal quarter then ended, copies of which have been furnished to the Administrative Agent and the Lenders, present fairly in all material respects the consolidated financial position of the Servicer and its consolidated Subsidiaries for the period ended on such date, all in accordance with GAAP.

(t) [Reserved].

(u) Taxes. The Servicer has (i) timely filed all tax returns (federal, state and local) required to be filed by it and (ii) paid, or caused to be paid, all taxes, assessments and other governmental charges, if any, other than taxes, assessments and other governmental charges being contested in good faith by appropriate proceedings and as to which adequate reserves have been provided in accordance with GAAP, except where the failure to file or pay could not reasonably be expected to result in a Material Adverse Effect on Servicer.

(v) Opinions. The facts regarding the Borrower, the Transferor, the Servicer, each Originator, the Performance Guarantor, the Receivables, the Related Security and the related matters set forth or assumed in each of the opinions of counsel delivered in connection with this Agreement and the Transaction Documents are true and correct in all material respects.

(w) Reaffirmation of Representations and Warranties. On the date of each Credit Extension, on each Settlement Date and on the date each Information Package or Interim Report is delivered to the Administrative Agent or any Lender hereunder, the Servicer shall be deemed to have certified that (i) all representations and warranties of the Servicer hereunder are true and correct in all material respects on and as of such day as though made on and as of such day, except for representations and warranties which apply as to an earlier date (in which case such representations and warranties shall be true and correct in all material respects as of such

date) and (ii) no Event of Default or an Unmatured Event of Default has occurred and is continuing or will result from such Credit Extension.

(x) Anti-Corruption Laws. Each Covered Entity has (a) conducted its business in compliance with all Anti-Corruption Laws and (b) has instituted and maintains policies and procedures designed to ensure compliance with such Laws.

Notwithstanding any other provision of this Agreement or any other Transaction Document, the representations contained in this Section shall be continuing, and remain in full force and effect until the Final Payout Date.

ARTICLE VIII

COVENANTS

SECTION 8.01. Covenants of the Borrower ~~Covenants of the Borrower~~. At all times from the Closing Date until the Final Payout Date:

(a) Payment of ~~Principal~~ Capital and Interest. The Borrower shall duly and punctually pay Capital, Interest, Fees and all other amounts payable by the Borrower hereunder in accordance with the terms of this Agreement.

(b) Existence. The Borrower shall keep in full force and effect its existence and rights as a limited liability company under the laws of the State of Delaware, and shall obtain and preserve its qualification to do business in each jurisdiction in which such qualification is or shall be necessary to protect the validity and enforceability of this Agreement, the other Transaction Documents and the Collateral.

(c) Financial Reporting. The Borrower will maintain a system of accounting established and administered in accordance with GAAP, and the Borrower (or the Servicer on its behalf) shall furnish to the Administrative Agent, the LC Bank and each Lender:

(i) Annual Financial Statements of the Borrower. Promptly upon completion and in no event later than 120 days after the close of each fiscal year of the Borrower, annual unaudited financial statements of the Borrower certified by a Financial Officer of the Borrower that they fairly present in all material respects, in accordance with GAAP, the financial condition of the Borrower as of the date indicated and the results of its operations for the periods indicated.

(ii) Quarterly Financial Statements of the Borrower. Promptly upon completion and in no event later than 60 days following the end of each of the first three fiscal quarters in each of the Borrower's fiscal years, quarterly unaudited financial statements of the Borrower certified by a Financial Officer of the Borrower that they fairly present in all material respects, in accordance with GAAP, the financial condition of the Borrower as of the date indicated and the results of its operations for the periods indicated.

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(iii) Information Packages and Interim Reports. (A) As soon as available and in any event not later than two (2) Business Days prior to each Settlement Date, an Information Package as of the most recently completed Fiscal Month; (B) at any time upon five (5) Business Days' prior written notice from the Administrative Agent, a Weekly Report on the second Business Day of each calendar week as of the most recently completed calendar week and (C) at any time upon five (5) Business Days' prior written notice from the Administrative Agent or during the continuance of an Event of Default, a Daily Report on each Business Day as of date that is one (1) Business Day prior to such date.

(iv) Other Information. Such other information (including non-financial information) as the Administrative Agent, the LC Bank or any Lender may from time to time reasonably request; provided, however, that at any time that no Minimum Fixed Charge

Coverage Ratio Period or Event of Default has occurred and is continuing, the Administrative Agent will not request an Interim Report be furnished with respect to the Pool Receivables.

(v)Quarterly Financial Statements of Parent. As soon as available and in no event later than 60 days following the end of each of the first three fiscal quarters in each of Parent's fiscal years, (A) a consolidated balance sheet of the Parent and its Subsidiaries as of the end of such quarter and a consolidated statement of income and a consolidated statement of cash flows of the Parent and its Subsidiaries for the period commencing at the end of the previous fiscal quarter and ending with the end of such fiscal quarter and a consolidated statement of income and a consolidated statement of cash flows of the Parent and its Subsidiaries for the period commencing at the end of the previous fiscal year and ending with the end of such quarter, setting forth in each case in comparative form the corresponding figures for the corresponding date or period of the preceding fiscal year, all in reasonable detail and duly certified (subject to normal year-end audit adjustments) by a Financial Officer of the Parent (or its managing general partner) as having been prepared in accordance with GAAP.

(vi)Annual Financial Statements of Parent. Within 120 days after the close of each of Parent's fiscal years, a copy of the annual audit report for such year for the Parent and its Subsidiaries, including therein a consolidated balance sheet of the Parent and its Subsidiaries as of the end of such fiscal year and a consolidated statement of income and a consolidated statement of cash flows of the Parent and its Subsidiaries for such fiscal year, in each case accompanied by an opinion of Deloitte & Touche LLP or other independent public accountants of recognized standing (without a "going concern" or like qualification or exception) to the effect that such consolidated financial statements present fairly in all material respects, in accordance with GAAP, the financial condition of Parent and its consolidated Subsidiaries as of the dates indicated and the results of their operations for the periods indicated.

(vii)Other Reports and Filings. Promptly (but in any event within ten days) after the filing or delivery thereof, copies of all financial information, proxy materials and reports, if any, which Parent or any of its consolidated Subsidiaries shall publicly file with the SEC or deliver to holders (or any trustee, agent or other

representative therefor) of any of its material Debt pursuant to the terms of the documentation governing the same.

(viii)Notwithstanding anything herein to the contrary, any financial information, proxy statements or other material required to be delivered pursuant to this paragraph (c) shall be deemed to have been furnished to each of the Administrative Agent, the LC Bank and each Lender on the date that such report, proxy statement or other material is posted on the SEC's website at www.sec.gov.

(d) Notices. The Borrower (or the Servicer on its behalf) will notify the Administrative Agent, the LC Bank and each Lender in writing of any of the following events promptly upon (but in no event later than five (5) Business Days after) a Financial Officer or other Responsible Officer learning of the occurrence thereof, with such notice describing the same, and if applicable, the steps being taken by the Person(s) affected with respect thereto:

(i)Notice of Events of Default or Unmatured Events of Default. A statement of a Financial Officer of the Borrower setting forth details of any Event of Default or Unmatured Event of Default that has occurred and is continuing and the action which the Borrower proposes to take with respect thereto.

(ii)Representations and Warranties. The failure of any representation or warranty made or deemed to be made by the Borrower under this Agreement or any other Transaction Document to be true and correct in any material respect when made.

(iii)Litigation. The institution of any litigation, arbitration proceeding or governmental proceeding on the Borrower, the Servicer, the Performance Guarantor, the Transferor, or any Originator, which with respect to any Person other than the Borrower, could reasonably be expected to have a Material Adverse Effect.

(iv)Adverse Claim. (A) Any Person shall obtain an Adverse Claim upon the Collateral or any portion thereof, (B) any Person other than the Borrower, the Servicer or the Administrative Agent shall obtain any rights or direct any action with respect to any Lock-Box Account (or related Lock-Box) or (C) any Obligor shall receive any change in payment instructions with respect to Pool Receivable(s) from a Person other than the Servicer or the Administrative Agent.

(v)Name Changes. Any change in any Originator's, the Transferor's or the Borrower's name, jurisdiction of organization or any other change requiring the amendment of UCC financing statements.

(vi)Change in Accountants or Accounting Policy. Any change in (i) the external accountants of the Borrower, the Servicer, any Originator, the Transferor, or the Parent, (ii) any accounting policy of the Borrower or (iii) any material accounting policy of any Originator that is relevant to the transactions contemplated by this Agreement or any other Transaction Document (it being understood that any change to the manner in which any Originator accounts for the Pool Receivables shall be deemed "material" for such purpose).

(vii)Termination Event. The occurrence of a Termination Event under any Sale Agreement.

(viii)Material Adverse Change. Any material adverse change in the business, operations, property or financial or other condition of the Borrower, any Originator, the Servicer, the Performance Guarantor or the Transferor.

(e) Conduct of Business. The Borrower will carry on and conduct its business in substantially the same manner and in substantially the same fields of enterprise as it is presently conducted and will do all things necessary to remain duly organized, validly existing and in good standing as a domestic organization in its jurisdiction of organization and maintain all requisite authority to conduct its business in each jurisdiction in which its business is conducted.

(f) Compliance with Laws. The Borrower will comply with all Applicable Laws to which it may be subject if the failure to comply could reasonably be expected to have a Material Adverse Effect.

(g) Furnishing of Information and Inspection of Receivables. The Borrower will furnish or cause to be furnished to the Administrative Agent, the LC Bank and each Lender from time to time such information with respect to the Pool Receivables and the other Collateral as the Administrative Agent, the LC Bank or any Lender may reasonably request. The Borrower will, at the Borrower's expense, during regular business hours with prior written notice (i) permit the Administrative Agent, the LC Bank and each Lender or their respective agents or representatives to (A) examine and make copies of and abstracts from all books and records relating to the Pool Receivables or other Collateral, (B) visit the offices and properties of the Borrower for the purpose of examining such books and records and (C) discuss matters relating to the Pool Receivables, the other Collateral or the Borrower's performance hereunder or under the other Transaction Documents to which it is a party with any of the officers, directors, employees or independent public accountants of the Borrower having knowledge of such matters and (ii) without limiting the provisions of clause (i) above, during regular business hours, at the Borrower's expense, upon prior written notice from the Administrative Agent, permit certified public accountants or other auditors acceptable to the Administrative Agent to conduct a review of its books and records with respect to such Pool Receivables and other Collateral; provided, that the Borrower shall be required to reimburse the Administrative Agent for only one (1) such review pursuant to clause (ii) above in any twelve-month period, unless an Event of Default has occurred and is continuing.

(h) Payments on Receivables, Lock-Box Accounts. The Borrower (or the Servicer on its behalf) will, and will cause each Originator to, at all times, instruct all Obligor to deliver payments on the Pool Receivables to a Lock-Box Account or a Lock-Box. The Borrower (or the Servicer on its behalf) will, and will cause each Originator to, at all times, maintain such books and records necessary to identify Collections received from time to time on Pool Receivables and to segregate such Collections from other property of the Servicer, the Transferor and the Originators. If any payments on the Pool Receivables or other Collections are received by the Borrower, the Servicer, the Transferor or an Originator, it shall hold such payments in trust for the benefit of the Administrative Agent and the other Secured Parties and promptly (but

in any event within two (2) Business Days after receipt) remit such funds into a Lock-Box Account. The Borrower (or the Servicer on its behalf) will, unless otherwise agreed in writing by the Administrative Agent, instruct each Originator, in its capacity as the beneficiary (or prospective beneficiary) of an Eligible Supporting Letter of Credit, to instruct the related Eligible Supporting Letter of Credit Provider to make payments in respect of Eligible Supporting Letters of Credit issued (or confirmed by) such Eligible Supporting Letter of Credit Provider directly to a Lock-Box Account if the Servicer fails to do so and, if an Eligible Supporting Letter of Credit Provider fails to so deliver payments to a Lock-Box Account, the Borrower (or the Servicer on its behalf) will, unless otherwise agreed in writing by the Administrative Agent, use all reasonable efforts to cause the applicable Originator to cause such Eligible Supporting Letter of Credit Provider to deliver subsequent payments (if any) in respect of Eligible Supporting Letters of Credit issued (or confirmed by) such Eligible Supporting Letter of Credit Provider directly to a Lock-Box Account if the Servicer fails to do so. The Borrower (or the Servicer on its behalf) will cause each Lock-Box Bank to comply with the terms of each applicable Lock-Box Agreement. The Borrower shall not permit funds other than (i) Collections on Pool Receivables and other Collateral and (ii) collections on Excluded Receivables or Subject Affiliate Receivables, to be deposited into any Lock-Box Account. If such funds (including any

collections on Excluded Receivables or Subject Affiliate Receivables) are nevertheless deposited into any Lock-Box Account, the Borrower (or the Servicer on its behalf) will within two (2) Business Days of receipt identify and transfer such funds to the appropriate Person entitled to such funds. The Borrower will not, and will not permit the Servicer, the Transferor, any Originator or any other Person to commingle Collections or other funds to which the Administrative Agent or any other Secured Party is entitled, with any other funds (other than the temporary commingling of Collections with collections on Excluded Receivables or Subject Affiliate Receivables provided that such collections on Excluded Receivables or Subject Affiliate Receivables are identified and removed from the applicable Lock-Box Account within two (2) Business Days following receipt thereof). The Borrower shall only add a Lock-Box Account (or a related Lock-Box) or a Lock-Box Bank to those listed on Schedule II to this Agreement, if the Administrative Agent has received notice of such addition and an executed and acknowledged (not to be unreasonably withheld, conditioned or delayed) copy of a Lock-Box Agreement (or an amendment thereto) in form and substance reasonably acceptable to the Administrative Agent from the applicable Lock-Box Bank. The Borrower shall only terminate a Lock-Box Bank or close a Lock-Box Account (or a related Lock-Box) with the prior written consent of the Administrative Agent, not to be unreasonably withheld, conditioned or delayed. The Borrower shall, upon 30 days' prior written direction by the Administrative Agent, direct any Obligor of a Subject Affiliate Receivable to direct collections thereon to an account that is not a Lock-Box Account.

(i) Sales, Liens, etc. Except as otherwise provided herein, the Borrower will not sell, assign (by operation of law or otherwise) or otherwise dispose of, or create or suffer to exist any Adverse Claim upon (including, without limitation, the filing of any financing statement) or with respect to, any Pool Receivable or other Collateral, or assign any right to receive income in respect thereof.

(j) Extension or Amendment of Pool Receivables. Except as otherwise permitted in Section 9.02, the Borrower will not, and will not permit the Servicer to, alter the delinquency status or adjust the Outstanding Balance or otherwise modify the terms of any Pool

Receivable in any material respect, or amend, modify or waive, in any material respect, any term or condition of any related Contract (nothing herein preventing amending, modifying or waiving a Contract with respect to future Receivables so long as an Event of Default has not occurred and is continuing). The Borrower shall at its expense, timely and fully perform and comply in all material respects with all provisions, covenants and other promises required to be observed by it under the Contracts related to the Pool Receivables, and timely and fully comply with the Credit and Collection Policy with regard to each Pool Receivable and the related Contract.

(k) Change in Credit and Collection Policy. The Borrower will not make any material change in the Credit and Collection Policy without the prior written consent of the Administrative Agent and the Majority Lenders, not to be unreasonably withheld, conditioned or delayed. Promptly following any change in the Credit and Collection Policy, the Borrower will deliver a copy of the updated Credit and Collection Policy to the Administrative Agent and each Lender.

(l) Fundamental Changes. The Borrower shall not, without the prior written consent of the Administrative Agent and the Majority Lenders, permit itself (i) to merge or consolidate with or into, or convey, transfer, lease or otherwise dispose of (whether in one transaction or in a series of transactions) all or substantially all of its assets (whether now owned or hereafter acquired) to, any Person (except for a transfer of assets to Parent) or (ii) to be directly owned by any Person other than

the Transferor. The Borrower shall provide the Administrative Agent with at least 30 days' prior written notice before making any change in the Borrower's name or location or making any other change in the Borrower's identity or corporate structure that could impair or otherwise render any UCC financing statement filed in connection with this Agreement or any other Transaction Document "seriously misleading" as such term (or similar term) is used in the applicable UCC; each notice to the Administrative Agent pursuant to this sentence shall set forth the applicable change and the proposed effective date thereof.

(m) Books and Records. The Borrower shall maintain and implement (or cause the Servicer to maintain and implement) administrative and operating procedures (including (i) an ability to recreate records evidencing Pool Receivables and related Contracts in the event of the destruction of the originals thereof and (ii) procedures to identify and track sales with respect to, and collections on, Excluded Receivables and Subject Affiliate Receivables), and keep and maintain (or cause the Servicer to keep and maintain) all documents, books, records, computer tapes and disks and other information reasonably necessary or advisable for the collection of all Pool Receivables and the identification and reporting of all Excluded Receivables and Subject Affiliate Receivables (including records adequate to permit the daily identification of each Pool Receivable, Excluded Receivable and Subject Affiliate Receivable and all Collections of and adjustments to each existing Pool Receivable, Excluded Receivable and Subject Affiliate Receivable).

(n) Identifying of Records. The Borrower shall: (i) identify (or cause the Servicer to identify) its master data processing records relating to Pool Receivables and related Contracts with a legend that indicates that the Pool Receivables have been pledged in accordance with this Agreement and (ii) cause each Originator and the Transferor so to identify its master data processing records with such a legend.

(o) Change in Payment Instructions to Obligor. The Borrower shall not (and shall not permit the Servicer or any Sub-Servicer to) add, replace or terminate any Lock-Box Account (or any related Lock-Box) or make any change in its (or their) instructions to the Obligor regarding payments to be made to the Lock-Box Accounts (or any related Lock-Box), other than any instruction to remit payments to a different Lock-Box Account (or any related Lock-Box), unless the Administrative Agent shall have received (i) prior written notice of such addition, termination or change and (ii) a signed and acknowledged Lock-Box Agreement (or an amendment thereto) with respect to such new Lock-Box Accounts (or any related Lock-Box), and the Administrative Agent shall have consented to such change in writing (not to be unreasonably withheld, conditioned or delayed).

(p) Security Interest, Etc. The Borrower shall (and shall cause the Servicer to), at its expense, take all action necessary or reasonably desirable to establish and maintain a valid and enforceable first priority perfected security interest in the Collateral, in each case free and clear of any Adverse Claim, in favor of the Administrative Agent (on behalf of the Secured Parties), including taking such action to perfect, protect or more fully evidence the security interest of the Administrative Agent (on behalf of the Secured Parties) as the Administrative Agent or any Secured Party may reasonably request. In order to evidence the security interests of the Administrative Agent under this Agreement, the Borrower shall, from time to time take such action, or execute and deliver such instruments as may be necessary (including, without limitation, such actions as are reasonably

requested by the Administrative Agent) to maintain and perfect, as a first-priority interest, the Administrative Agent's security interest in the Receivables, Related Security and Collections. The Borrower shall, from time to time and within the time limits established by law, prepare and present to the Administrative Agent for the Administrative Agent's authorization and approval, all financing statements, amendments, continuations or initial financing statements in lieu of a continuation statement, or other filings necessary to continue, maintain and perfect the Administrative Agent's security interest as a first-priority interest. The Administrative Agent's approval of such filings shall authorize the Borrower to file such financing statements under the UCC without the signature of the Borrower, the Transferor, any Originator or the Administrative Agent where allowed by Applicable Law. Notwithstanding anything else in the Transaction Documents to the contrary, the Borrower shall not have any authority to file a termination, partial termination, release, partial release, or any amendment that deletes the name of a debtor or excludes collateral of any such financing statements filed in connection with the Transaction Documents, without the prior written consent of the Administrative Agent.

(q) Certain Agreements. Without the prior written consent of the Administrative Agent and the Lenders, the Borrower will not (and will not permit any Originator, the Transferor or the Servicer to) amend, modify, waive, revoke or terminate any Transaction Document to which it is a party or any provision of the Borrower's organizational documents which requires the consent of the "Independent Director" (as such term is used in the Borrower's Certificate of Formation and Limited Liability Company Agreement).

(r) Other Business. The Borrower will not: (i) engage in any business other than the transactions contemplated by the Transaction Documents, (ii) create, incur or permit to exist any Debt of any kind (or cause or permit to be issued for its account any letters of credit (excluding, for the avoidance of doubt, Letters of Credit issued hereunder) or bankers'

acceptances other than pursuant to this Agreement or the Subordinated Notes or (iii) form any Subsidiary or make any investments in any Person other than Parent.

(s) Use of Collections Available to the Borrower. The Borrower shall apply the Collections available to the Borrower to make payments in the following order of priority: (i) the payment of its obligations under this Agreement and each of the other Transaction Documents (other than the Subordinated Notes), (ii) the payment of accrued and unpaid interest on the Subordinated Notes and (iii) other legal and valid purposes.

(t) Further Assurances; Change in Name or Jurisdiction of Origination, etc. (i) The Borrower hereby authorizes and hereby agrees from time to time, at its own expense, promptly to execute (if necessary) and deliver all further instruments and documents, and to take all further actions, that may be necessary or desirable, or that the Administrative Agent may reasonably request, to perfect, protect or more fully evidence the security interest granted pursuant to this Agreement or any other Transaction Documents, or to enable the Administrative Agent (on behalf of the Secured Parties) to exercise and enforce the Secured Parties' rights and remedies under this Agreement and the other Transaction Document. Without limiting the foregoing, the Borrower hereby authorizes, and will, upon the request of the Administrative Agent, at the Borrower's own expense, execute (if necessary) and file such financing statements or continuation statements (including as-extracted collateral filings), or amendments thereto, and such other instruments and documents, that

may be necessary or desirable, or that the Administrative Agent may reasonably request, to perfect, protect or evidence any of the foregoing.

(ii) The Borrower authorizes the Administrative Agent to file financing statements, continuation statements and amendments thereto and assignments thereof, relating to the Receivables, the Related Security, the related Contracts, Collections with respect thereto and the other Collateral without the signature of the Borrower. A photocopy or other reproduction of this Agreement shall be sufficient as a financing statement where permitted by law.

(iii) The Borrower shall at all times be organized under the laws of the State of Delaware and shall not take any action to change its jurisdiction of organization.

(iv) The Borrower will not change its name, location, identity or corporate structure unless (x) the Borrower, at its own expense, shall have taken all action necessary or appropriate to perfect or maintain the perfection of the security interest under this Agreement (including, without limitation, the filing of all financing statements and the taking of such other action as the Administrative Agent may request in connection with such change or relocation) and (y) if requested by the Administrative Agent, the Borrower shall cause to be delivered to the Administrative Agent, an opinion, in form and substance satisfactory to the Administrative Agent as to such UCC perfection and priority matters as the Administrative Agent may request at such time.

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(u) Sanctions and other Anti-Terrorism Laws; Anti-Corruption Laws. The Borrower covenants and agrees that:

(i) it shall immediately notify the Administrative Agent and each of the Lenders in writing upon the occurrence of a Reportable Compliance Event;

(ii) if, at any time, any Collateral becomes Embargoed Property, then, in addition to all other rights and remedies available to the Administrative Agent and each of the Lenders, upon request by the Administrative Agent or any of the Lenders, the Borrower shall provide substitute Collateral acceptable to the Administrative Agent that is not Embargoed Property;

(iii) it shall, and shall require each other Covered Entity to, conduct its business in compliance with all Anti-Corruption Laws and maintain policies and procedures designed to ensure compliance with such Laws;

(iv) it and its Subsidiaries will not: (A) become a Sanctioned Person or allow any employees, officers, directors, affiliates, consultants, brokers, or agents acting on its behalf in connection with this Agreement to become a Sanctioned Person; (B) directly, or indirectly through a third party, engage in any transactions or other dealings with or for the benefit of any Sanctioned Person or Sanctioned Jurisdiction, including any use of the proceeds of the Loans to fund any operations in, finance any investments or activities in, or, make any payments to, a Sanctioned Person or Sanctioned Jurisdiction; (C) pay or repay any Borrower Obligations with Embargoed Property or funds derived from any unlawful activity; (D) permit any Collateral to become Embargoed Property; or (E) cause any Lender or the Administrative Agent to violate any Anti-Terrorism Law; and

(v) it will not, and will not permit any its Subsidiaries to, directly or indirectly, use the Loans or any proceeds thereof for any purpose which would breach any Anti-Corruption Laws in any jurisdiction in which any Covered Entity conducts business.

(v) The Borrower has not used and will not use the proceeds of any Credit Extension to fund any operations in, finance any investments or activities in or make any payments to, a Sanctioned Person or a Sanctioned Country.

(w) Borrower's Net Worth. The Borrower shall not permit the Borrower's Net Worth to be less than the Required Capital Amount.

(x) Borrower's Tax Status. The Borrower will remain a wholly-owned subsidiary of a United States person (within the meaning of Section 7701(a)(30) of the Code) and not be subject to withholding under Section 1446 of the Code. No action will be taken that would cause the Borrower to be treated as an association taxable as a corporation or a publicly traded partnership taxable as a corporation for U.S. federal income tax purposes.

(y) Liquid Coverage Ratio. The Borrower shall not issue any LCR Security.

(z) Beneficial Ownership Rule. Promptly following any change that would result in a change to the status as an excluded "Legal Entity Customer" under (and as defined in)

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the Beneficial Ownership Rule, the Borrower shall execute and deliver to the Administrative Agent a Certification of Beneficial Owner(s) complying with the Beneficial Ownership Rule, in form and substance reasonably acceptable to the Administrative Agent.

(aa) Credit Agreement Carve-Out. The Borrower shall at all times cause the receivables securitization program evidenced by this Agreement and the other Transaction Documents to be permitted and incurred pursuant to Section 5.02(b)(xi) of the Credit Agreement. The Borrower shall not permit Section 5.02(b)(xi) of the Credit Agreement to be amended, removed or otherwise modified, except with the Administrative Agent's prior written consent.

SECTION 8.02. Covenants of the Servicer ~~Covenants of the Servicer~~. At all times from the Closing Date until the Final Payout Date:

(a) Financial Reporting. The Servicer will maintain a system of accounting established and administered in accordance with GAAP, and the Servicer shall furnish to the Administrative Agent, the LC Bank and each Lender:

(i) Compliance Certificates. (a) A compliance certificate promptly upon completion of the annual report of the Parent and in no event later than 120 days after the close of the Servicer's fiscal year, in form and substance substantially similar to Exhibit G signed by a Financial Officer of the Servicer stating that no Event of Default or Unmatured Event of Default has occurred and is continuing, or if any Event of Default or Unmatured Event of Default has occurred and is continuing, stating the nature and status thereof, (b) within 60 days after the close of each fiscal quarter of the Servicer, a compliance certificate in form and substance substantially similar to Exhibit G signed by a Financial Officer of the Servicer stating that no Event of Default or Unmatured Event of Default has occurred and is continuing, or if any Event of Default or Unmatured Event of Default has occurred and is continuing, stating the nature and status thereof and (c) within 45 days after the close of each fiscal quarter of the

Parent, a certificate signed by a Financial Officer of the Servicer certifying that the location of any Originator's Mined Properties or mineheads is accurately set forth on Schedule V to this Agreement, as amended prior to the date thereof.

(ii)Information Packages and Interim Reports. (A) As soon as available and in any event not later than two (2) Business Days prior to each Settlement Date, an Information Package as of the most recently completed Fiscal Month; (B) at any time upon five (5) Business Days' prior written notice from the Administrative Agent, a Weekly Report on the second Business Day of each calendar week as of the most recently completed calendar week and (C) at any time upon five (5) Business Days' prior written notice from the Administrative Agent or during the continuance of an Event of Default, a Daily Report on each Business Day as of date that is one (1) Business Day prior to such date.

(iii)Other Information. Such other information (including non-financial information) as the Administrative Agent, the LC Bank or any Lender may from time to time reasonably request, including any information available to the Borrower, the Servicer, the Transferor or any Originator; provided, however, that at any

time that no Minimum Fixed Charge Coverage Ratio Period or Event of Default has occurred and is continuing, the Administrative Agent will not request an Interim Report be furnished with respect to the Pool Receivables.

(b) Notices. The Servicer will notify the Administrative Agent, the LC Bank and each Lender in writing of any of the following events promptly upon (but in no event later than five (5) Business Days after) a Financial Officer or other Responsible Officer learning of the occurrence thereof, with such notice describing the same, and if applicable, the steps being taken by the Person(s) affected with respect thereto:

(i)Notice of Events of Default or Unmatured Events of Default. A statement of a Financial Officer of the Servicer setting forth details of any Event of Default or Unmatured Event of Default that has occurred and is continuing and the action which the Servicer proposes to take with respect thereto.

(ii)Representations and Warranties. The failure of any representation or warranty made or deemed made by the Servicer under this Agreement or any other Transaction Document to be true and correct in any material respect when made.

(iii)Litigation. The institution of any litigation, arbitration proceeding or governmental proceeding which could reasonably be expected to have a Material Adverse Effect.

(iv)Adverse Claim. (A) Any Person shall obtain an Adverse Claim upon the Collateral or any portion thereof, (B) any Person other than the Borrower, the Servicer or the Administrative Agent shall obtain any rights or direct any action with respect to any Lock-Box Account (or related Lock-Box) or (C) any Obligor shall receive any change in payment instructions with respect to Pool Receivable(s) from a Person other than the Servicer or the Administrative Agent.

(v)Name Changes. At least thirty (30) days before any change in any Originator's, the Transferor's or the Borrower's name or any other change requiring the amendment of UCC financing statements, a notice setting forth such changes and the effective date thereof.

(vi)Change in Accountants or Accounting Policy. Any change in (i) the external accountants of the Borrower, the Servicer, any Originator, the Transferor or the Parent, (ii) any accounting policy of the Borrower or (iii) any material accounting policy of any Originator that is relevant to the transactions contemplated by this Agreement or any other Transaction Document (it being understood that any change to the manner in which any Originator accounts for the Pool Receivables shall be deemed "material" for such purpose).

(vii)Material Adverse Change. Promptly after the occurrence thereof, notice of any material adverse change in the business, operations, property or financial or other condition of any Originator, the Transferor, the Servicer, the Performance Guarantor, or the Borrower.

(c) Conduct of Business. The Servicer will carry on and conduct its business in substantially the same manner and in substantially the same fields of enterprise as it is presently conducted, and will do all things necessary to remain duly organized, validly existing and in good standing as a domestic organization in its jurisdiction of organization and maintain all requisite authority to conduct its business in each jurisdiction in which its business is conducted if the failure to have such authority could reasonably be expected to have a Material Adverse Effect.

(d) Compliance with Laws. The Servicer will comply with all Applicable Laws to which it may be subject if the failure to comply could reasonably be expected to have a Material Adverse Effect.

(e) Furnishing of Information and Inspection of Receivables. The Servicer will furnish or cause to be furnished to the Administrative Agent, the LC Bank and each Lender from time to time such information with respect to the Pool Receivables and the other Collateral as the Administrative Agent, the LC Bank or any Lender may reasonably request. The Servicer will, at the Servicer's expense, during regular business hours with prior written notice, (i) permit the Administrative Agent, the LC Bank and each Lender or their respective agents or representatives to (A) examine and make copies of and abstracts from all books and records relating to the Pool Receivables or other Collateral, (B) visit the offices and properties of the Servicer for the purpose of examining such books and records and (C) discuss matters relating to the Pool Receivables, the other Collateral or the Servicer's performance hereunder or under the other Transaction Documents to which it is a party with any of the officers, directors, employees or independent public accountants of the Servicer (provided that representatives of the Servicer are present during such discussions) having knowledge of such matters and (ii) without limiting the provisions of clause (i) above, during regular business hours, at the Servicer's expense, upon prior written notice from the Administrative Agent, permit certified public accountants or other auditors acceptable to the Administrative Agent to conduct a review of its books and records with respect to the Pool Receivables and other Collateral; provided, that the Servicer shall be required to reimburse the Administrative Agent for only one (1)

such review pursuant to clause (ii) above in any twelve-month period unless an Event of Default has occurred and is continuing.

(f) Payments on Receivables, Lock-Box Accounts. The Servicer will at all times, instruct (or cause a Sub-Servicer to instruct) all Obligor to deliver payments on the Pool Receivables to a Lock-Box Account or a Lock-Box. The Servicer will, at all times, maintain such books and records necessary to identify Collections received from time to time on Pool Receivables and to segregate such Collections from other property of the Servicer, the Transferor and the Originators. If any payments on the Pool Receivables or other Collections are received by the Borrower (other than into a Lock-Box Account), the Servicer, the Transferor or an Originator, it shall hold such payments in trust for the benefit of the Administrative Agent and the other Secured Parties and promptly (but in any event within two (2) Business Days after receipt) remit such funds into a Lock-Box Account. The Servicer will (on behalf of the Borrower), unless otherwise agreed in writing by the Administrative Agent, instruct each Originator, in its capacity as the beneficiary of an Eligible Supporting Letter of Credit, to instruct each Eligible Supporting Letter of Credit Provider to make payments in respect of Eligible Supporting Letters of Credit issued (or confirmed by) such Eligible Supporting Letter of Credit Provider directly to a Lock-Box Account if the applicable Originator fails to do so and, if an

Eligible Supporting Letter of Credit Provider fails to so deliver payments to a Lock-Box Account, the Servicer will, unless otherwise agreed in writing by the Administrative Agent, use all reasonable efforts to cause the applicable Originator to cause such Eligible Supporting Letter of Credit Provider to deliver subsequent payments (if any) in respect of Eligible Supporting Letters of Credit issued (or confirmed by) such Eligible Supporting Letter of Credit Provider directly to a Lock-Box Account if the applicable Originator fails to do so. The Servicer shall not permit funds other than (i) Collections on Pool Receivables and other Collateral and (ii) collections on Excluded Receivables and Subject Affiliate Receivables, to be deposited into any Lock-Box Account. If such funds or any collections (including on Excluded Receivables or Subject Affiliate Receivables) are nevertheless deposited into any Lock-Box Account, the Servicer will within two (2) Business Days of receipt identify and transfer such funds to the appropriate Person entitled to such funds. The Servicer will not, and will not permit the Borrower, any Originator or any other Person to commingle Collections or other funds to which the Administrative Agent or any other Secured Party is entitled, with any other funds (other than the temporary commingling of Collections with collections on Excluded Receivables and Subject Affiliate Receivables provided that such collections on Excluded Receivables or Subject Affiliate Receivables are identified and removed from the applicable Lock-Box Account within two (2) Business Days following receipt thereof). The Servicer shall only add a Lock-Box Account (or a related Lock-Box), or a Lock-Box Bank to those listed on Schedule II to this Agreement, if the Administrative Agent has received notice of such addition and an executed and acknowledged copy of a Lock-Box Agreement (or an amendment thereto) in form and substance acceptable to the Administrative Agent from the applicable Lock-Box Bank (not to be unreasonably withheld, conditioned or delayed). The Servicer shall only terminate a Lock-Box Bank or close a Lock-Box Account (or a related Lock-Box) with the prior written consent of the Administrative Agent. The Servicer shall, upon 30 days' prior written direction by the Administrative Agent, direct any Obligor of a Subject Affiliate Receivable to direct collections thereon to an account that is not a Lock-Box Account.

(g) Extension or Amendment of Pool Receivables. Except as otherwise permitted in Section 9.02, the Servicer will not alter the delinquency status or adjust the Outstanding Balance or

otherwise modify the terms of any Pool Receivable in any material respect, or amend, modify or waive, in any material respect, any term or condition of any related Contract (nothing herein preventing amending, modifying or waiving a Contract with respect to future Receivables so long as an Event of Default has not occurred and is continuing). The Servicer shall at its expense, timely and fully perform and comply in all material respects with all provisions, covenants and other promises required to be observed by it under the Contracts related to the Pool Receivables, and timely and fully comply with the Credit and Collection Policy with regard to each Pool Receivable and the related Contract.

(h) Change in Credit and Collection Policy. The Servicer will not make any material change in the Credit and Collection Policy without the prior written consent of the Administrative Agent and the Majority Lenders, not to be unreasonably withheld, conditioned or delayed. Promptly following any change in the Credit and Collection Policy, the Servicer will deliver a copy of the updated Credit and Collection Policy to the Administrative Agent and each Lender.

(i) Records. The Servicer will maintain and implement administrative and operating procedures (including an ability to recreate records evidencing Pool Receivables and related Contracts in the event of the destruction of the originals thereof), and keep and maintain all documents, books, records, computer tapes and disks and other information reasonably necessary or advisable for the collection of all Pool Receivables (including records adequate to permit the daily identification of each Pool Receivable and all Collections of and adjustments to each existing Pool Receivable).

(j) Identifying of Records. The Servicer shall identify its master data processing records relating to Pool Receivables and related Contracts with a legend that indicates that the Pool Receivables have been pledged in accordance with this Agreement.

(k) Change in Payment Instructions to Obligors. The Servicer shall not (and shall not permit any Sub-Servicer to) add, replace or terminate any Lock-Box Account (or any related Lock-Box) or make any change in its instructions to the Obligors regarding payments to be made to the Lock-Box Accounts (or any related Lock-Box), other than any instruction to remit payments to a different Lock-Box Account (or any related Lock-Box), unless the Administrative Agent shall have received (i) prior written notice of such addition, termination or change and (ii) a signed and acknowledged Lock-Box Agreement (or an amendment thereto) with respect to such new Lock-Box Accounts (or any related Lock-Box) and the Administrative Agent shall have consented to such change in writing, not to be unreasonably withheld, conditioned or delayed.

(l) Security Interest, Etc. The Servicer shall, at its expense, take all action necessary or reasonably desirable to establish and maintain a valid and enforceable first priority perfected security interest in the Collateral, in each case free and clear of any Adverse Claim in favor of the Administrative Agent (on behalf of the Secured Parties), including taking such action to perfect, protect or more fully evidence the security interest of the Administrative Agent (on behalf of the Secured Parties) as the Administrative Agent or any Secured Party may reasonably request. In order to evidence the security interests of the Administrative Agent under this Agreement, the Servicer shall, from time to time take such action, or execute and deliver such instruments as may be necessary (including, without limitation, such actions as are reasonably requested by the

Administrative Agent) to maintain and perfect, as a first-priority interest, the Administrative Agent's security interest in the Receivables, Related Security and Collections. The Servicer shall, from time to time and within the time limits established by law, prepare and present to the Administrative Agent for the Administrative Agent's authorization and approval, all financing statements, amendments, continuations or initial financing statements in lieu of a continuation statement, or other filings necessary to continue, maintain and perfect the Administrative Agent's security interest as a first-priority interest. The Administrative Agent's approval of such filings shall authorize the Servicer to file such financing statements under the UCC without the signature of the Borrower, any Originator, the Transferor or the Administrative Agent where allowed by Applicable Law. Notwithstanding anything else in the Transaction Documents to the contrary, the Servicer shall not have any authority to file a termination, partial termination, release, partial release, or any amendment that deletes the name of a debtor or excludes collateral of any such financing statements filed in connection with the Transaction Documents, without the prior written consent of the Administrative Agent.

(m) Sanctions and other Anti-Terrorism Laws; Anti-Corruption Laws. The Servicer covenants and agrees that:

(i) it shall immediately notify the Administrative Agent and each of the Lenders in writing upon the occurrence of a Reportable Compliance Event;

(ii) if, at any time, any Collateral becomes Embargoed Property, then, in addition to all other rights and remedies available to the Administrative Agent and each of the Lenders, upon request by the Administrative Agent or any of the Lenders, the Servicer shall cause the Borrower to provide substitute Collateral acceptable to the Administrative Agent that is not Embargoed Property;

(iii) it shall, and shall require each other Covered Entity to, conduct its business in compliance with all Anti-Corruption Laws and maintain policies and procedures designed to ensure compliance with such Laws;

(iv) it and its Subsidiaries will not: (A) become a Sanctioned Person or allow any employees, officers, directors, affiliates, consultants, brokers, or agents acting on its behalf in connection with this Agreement to become a Sanctioned Person; (B) directly, or indirectly through a third party, engage in any transactions or other dealings with or for the benefit of any Sanctioned Person or Sanctioned Jurisdiction, including any use of the proceeds of the Loans to fund any operations in, finance any investments or activities in, or, make any payments to, a Sanctioned Person or Sanctioned Jurisdiction; (C) pay or repay any Borrower Obligations with Embargoed Property or funds derived from any unlawful activity; (D) permit any Collateral to become Embargoed Property; or (E) cause any Lender or the Administrative Agent to violate any Anti-Terrorism Law; and

(v) it will not, and will not permit any its Subsidiaries to, directly or indirectly, use the Loans or any proceeds thereof for any purpose which would breach any Anti-Corruption Laws in any jurisdiction in which any Covered Entity conducts business.

(n) Mining Operations and Mineheads. The Servicer shall (and shall cause each applicable Originator to) promptly, and in any event not later than the later of (x) February 15, 2021

and (y) 5 days after any addition to the location of any Originator's Mined Properties or mineheads set forth on Schedule V to this Agreement, (i) notify the Administrative Agent of such addition, (ii) cause the filing or recording of such financing statements and amendments and/or releases to financing statements, mortgages or other instruments, if any, necessary to preserve and maintain the perfection and priority of the ownership and security interests of the Borrower and the Administrative Agent in the Collateral pursuant to the Purchase and Sale Agreement and this Agreement, in each case in form and substance satisfactory to the Administrative Agent, (iii) deliver to the Administrative Agent an updated Schedule V to this Agreement reflecting such change, deletion or addition and (iv) if requested by the Administrative Agent, cause to be delivered to the Administrative Agent, an opinion, in form and substance satisfactory to the Administrative Agent as to such UCC perfection matters as the Administrative Agent may request at such time.

(o) Credit Agreement Carve-Out. The Servicer shall at all times cause the receivables securitization program evidenced by this Agreement and the other Transaction Documents to be permitted and incurred pursuant to Section 5.02(b)(xi) of the Credit Agreement. The Servicer shall not permit Section 5.02(b)(xi) of the Credit Agreement to be amended, removed or otherwise modified, except with the Administrative Agent's prior written consent.

SECTION 8.03. Separate Existence of the Borrower. Each of the Borrower and the Servicer hereby acknowledges that the Secured Parties and the Administrative Agent are entering into the transactions contemplated by this Agreement and the other Transaction Documents in reliance upon the Borrower's identity as a legal entity separate from any Originator, the Transferor, the Servicer, the Performance Guarantor and their Affiliates. Therefore, each of the Borrower and Servicer shall take all steps specifically required by this Agreement or reasonably required by the Administrative Agent or any Lender to continue the Borrower's identity as a separate legal entity and to make it apparent to third Persons that the Borrower is an entity with assets and liabilities distinct from those of the Performance Guarantor, the Originators, the Transferor, the Servicer and any other Person, and is not a division of the Performance Guarantor, the Originators, the Transferor, the Servicer, its Affiliates or any other Person. Without limiting the generality of the foregoing and in addition to and consistent with the other covenants set forth herein, each of the Borrower and the Servicer shall take such actions as shall be required in order that:

(a) Special Purpose Entity. The Borrower will be a special purpose company whose primary activities are restricted in its Certificate of Formation to: (i) purchasing or otherwise acquiring from the Transferor, owning, holding, collecting, granting security interests or selling interests in, the Collateral, (ii) entering into agreements for the selling, servicing and financing of the Receivables Pool (including the Transaction Documents) and (iii) conducting such other activities as it deems necessary or appropriate to carry out its primary activities.

(b) No Other Business or Debt. The Borrower shall not engage in any business or activity except as set forth in this Agreement nor, incur any indebtedness or liability other than as expressly permitted by the Transaction Documents.

(c) Independent Director. Not fewer than one member of the Borrower's board of directors (the "Independent Director") shall be a natural person who (i) has never been, and shall at no time be, an equityholder, director, officer, manager, member, partner, officer, employee or

associate, or any relative of the foregoing, of any member of the Parent Group (as hereinafter defined) (other than his or her service as an Independent Director of the Borrower or an independent director of any other bankruptcy-remote special purpose entity formed for the sole purpose of securitizing, or facilitating the securitization of, financial assets of any member or members of the Parent Group), (ii) is not a customer or supplier of any member of the Parent Group (other than his or her service as an Independent Director of the Borrower or an independent director of any other bankruptcy-remote special purpose entity formed for the sole purpose of securitizing, or facilitating the securitization of, financial assets of any member or members of the Parent Group), (iii) is not any member of the immediate family of a person described in (i) or (ii) above, and (iv) has (x) prior experience as an independent director for a corporation or limited liability company whose organizational or charter documents required the unanimous consent of all independent directors thereof before such corporation or limited

liability company could consent to the institution of bankruptcy or insolvency proceedings against it or could file a petition seeking relief under any applicable federal or state law relating to bankruptcy and (y) at least three years of employment experience with one or more entities that provide, in the ordinary course of their respective businesses, advisory, management or placement services to issuers of securitization or structured finance instruments, agreements or securities. For purposes of this clause (c), “Parent Group” shall mean (i) the Parent, the Servicer, the Transferor, the Performance Guarantor and each Originator, (ii) each person that directly or indirectly, owns or controls, whether beneficially, or as a trustee, guardian or other fiduciary, five percent (5%) or more of the membership interests in the Parent, (iii) each person that controls, is controlled by or is under common control with the Parent and (iv) each of such person’s officers, directors, managers, joint venturers and partners. For the purposes of this definition, “control” of a person means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a person or entity, whether through the ownership of voting securities, by contract or otherwise. A person shall be deemed to be an “associate” of (A) a corporation or organization of which such person is an officer, director, partner or manager or is, directly or indirectly, the beneficial owner of ten percent (10%) or more of any class of equity securities, (B) any trust or other estate in which such person serves as trustee or in a similar capacity and (C) any relative or spouse of a person described in clause (A) or (B) of this sentence, or any relative of such spouse.

The Borrower shall (A) give written notice to the Administrative Agent of the election or appointment, or proposed election or appointment, of a new Independent Director of the Borrower, which notice shall be given not later than ten (10) Business Days prior to the date such appointment or election would be effective (except when such election or appointment is necessary to fill a vacancy caused by the death, disability, or incapacity of the existing Independent Director, or the failure of such Independent Director to satisfy the criteria for an Independent Director set forth in this clause (c), in which case the Borrower shall provide written notice of such election or appointment within one (1) Business Day) and (B) with any such written notice, certify to the Administrative Agent that the Independent Director satisfies the criteria for an Independent Director set forth in this clause (c).

The Borrower’s Limited Liability Company Agreement shall provide that: (A) the Borrower’s board of directors shall not approve, or take any other action to cause the filing of, a voluntary bankruptcy petition with respect to the Borrower unless the Independent Director shall approve the

taking of such action in writing before the taking of such action and (B) such provision and each other provision requiring an Independent Director cannot be amended without the prior written consent of the Independent Director.

The Independent Director shall not at any time serve as a trustee in bankruptcy for the Borrower, the Parent, the Performance Guarantor, any Originator, the Transferor, the Servicer or any of their respective Affiliates.

(d) Organizational Documents. The Borrower shall maintain its organizational documents in conformity with this Agreement, such that it does not amend, restate, supplement or otherwise modify its ability to comply with the terms and provisions of any of the Transaction Documents, including, without limitation, Section 8.01(p).

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(e) Conduct of Business. The Borrower shall conduct its affairs strictly in accordance with its organizational documents and observe all necessary, appropriate and customary company formalities, including, but not limited to, holding all regular and special members' and board of directors' meetings appropriate to authorize all company action, keeping separate and accurate minutes of its meetings, passing all resolutions or consents necessary to authorize actions taken or to be taken, and maintaining accurate and separate books, records and accounts, including, but not limited to, payroll and intercompany transaction accounts.

(f) Compensation. Any employee, consultant or agent of the Borrower will be compensated from the Borrower's funds for services provided to the Borrower, and to the extent that Borrower shares the same officers or other employees as the Servicer (or any other Affiliate thereof), the salaries and expenses relating to providing benefits to such officers and other employees shall be fairly allocated among such entities, and each such entity shall bear its fair share of the salary and benefit costs associated with such common officers and employees. The Borrower will not engage any agents other than its attorneys, auditors and other professionals, and a servicer and any other agent contemplated by the Transaction Documents for the Receivables Pool, which servicer will be fully compensated for its services by payment of the Servicing Fee.

(g) Servicing and Costs. The Borrower will contract with the Servicer to perform for the Borrower all operations required on a daily basis to service the Receivables Pool. The Borrower will not incur any indirect or overhead expenses for items shared with the Servicer (or any other Affiliate thereof) that are not reflected in the Servicing Fee. To the extent, if any, that the Borrower (or any Affiliate thereof) shares items of expenses not reflected in the Servicing Fee, such as legal, auditing and other professional services, such expenses will be allocated to the extent practical on the basis of actual use or the value of services rendered, and otherwise on a basis reasonably related to the actual use or the value of services rendered.

(h) Operating Expenses. The Borrower's operating expenses will not be paid by the Servicer, the Parent, the Performance Guarantor, any Originator or any Affiliate thereof.

(i) Stationary. The Borrower will have its own separate stationary.

(j) Books and Records. The Borrower's books and records will be maintained separately from those of the Servicer, the Parent, the Performance Guarantor, the Originators and

any of their Affiliates and in a manner such that it will not be difficult or costly to segregate, ascertain or otherwise identify the assets and liabilities of the Borrower.

(k) Disclosure of Transactions. All financial statements of the Servicer, the Parent, the Performance Guarantor, the Originators, the Transferor or any Affiliate thereof that are consolidated to include the Borrower will disclose that (i) the Borrower's sole business consists of the purchase or acceptance through capital contributions of the Receivables and Related Rights from the Transferor and the subsequent retransfer of or granting of a security interest in such Receivables and Related Rights to the Administrative Agent pursuant to this Agreement, (ii) the Borrower is a separate legal entity with its own separate creditors who will be entitled, upon its liquidation, to be satisfied out of the Borrower's assets prior to any assets or value in the Borrower becoming available to the Borrower's equity holders and (iii) the assets of

the Borrower are not available to pay creditors of the Servicer, the Parent, the Performance Guarantor, the Transferor, the Originators or any Affiliate thereof.

(l) Segregation of Assets. The Borrower's assets will be maintained in a manner that facilitates their identification and segregation from those of the Servicer, the Parent, the Performance Guarantor, the Transferor, the Originators or any Affiliates thereof.

(m) Corporate Formalities. The Borrower will strictly observe corporate formalities in its dealings with the Servicer, the Parent, the Performance Guarantor, the Originators, the Transferor or any Affiliates thereof, and funds or other assets of the Borrower will not be commingled with those of the Servicer, the Parent, the Performance Guarantor, the Transferor, the Originators or any Affiliates thereof except as permitted by this Agreement in connection with servicing the Pool Receivables. The Borrower shall not maintain joint bank accounts or other depository accounts to which the Servicer, the Parent, the Performance Guarantor, the Transferor, the Originators or any Affiliate thereof (other than the Servicer solely in its capacity as such) has independent access. The Borrower is not named, and has not entered into any agreement to be named, directly or indirectly, as a direct or contingent beneficiary or loss payee on any insurance policy with respect to any loss relating to the property of the Servicer, the Parent, the Performance Guarantor, the Transferor, the Originators or any Subsidiaries or other Affiliates thereof. The Borrower will pay to the appropriate Affiliate the marginal increase or, in the absence of such increase, the market amount of its portion of the premium payable with respect to any insurance policy that covers the Borrower and such Affiliate.

(n) Arm's-Length Relationships. The Borrower will maintain arm's-length relationships with the Servicer, the Parent, the Performance Guarantor, the Transferor, the Originators and any Affiliates thereof. Any Person that renders or otherwise furnishes services to the Borrower will be compensated by the Borrower at market rates for such services it renders or otherwise furnishes to the Borrower. Neither the Borrower on the one hand, nor the Servicer, the Parent, the Performance Guarantor, the Transferor, any Originator or any Affiliate thereof, on the other hand, will be or will hold itself out to be responsible for the debts of the other or the decisions or actions respecting the daily business and affairs of the other. The Borrower, the Servicer, the Parent, the Performance Guarantor, the Transferor, the Originators and their respective Affiliates will immediately correct any known misrepresentation with respect to the foregoing, and they will not operate or purport to operate as an integrated single economic unit with respect to each other or in their dealing with any other entity.

(o) **Allocation of Overhead.** To the extent that Borrower, on the one hand, and the Servicer, the Parent, the Performance Guarantor, the Transferor, any Originator or any Affiliate thereof, on the other hand, have offices in the same location, there shall be a fair and appropriate allocation of overhead costs between them, and the Borrower shall bear its fair share of such expenses, which may be paid through the Servicing Fee or otherwise.

(p) **No-Petition Letter.** The Borrower and Servicer shall cause the Credit Agreement Administrative Agent to enter into the No-Petition Letter not later than the earliest of any date occurring after June 14, 2018 on which the Credit Agreement is, with and pursuant to the consent of the 'Required Lenders' thereunder, amended, restated, amended and restated or

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otherwise modified. This paragraph (p) shall not apply if at such time the Credit Agreement Administrative Agent has no Adverse Claim on the issued and outstanding Capital Stock or other equity interests of Borrower.

ARTICLE IX

ADMINISTRATION AND COLLECTION OF RECEIVABLES

SECTION 9.01. Appointment of the Servicer.

(a) The servicing, administering and collection of the Pool Receivables shall be conducted by the Person so designated from time to time as the Servicer in accordance with this Section 9.01. Until the Administrative Agent gives notice to Alliance (in accordance with this Section 9.01) of the designation of a new Servicer, Alliance is hereby designated as, and hereby agrees to perform the duties and obligations of, the Servicer pursuant to the terms hereof. Upon the occurrence of an Event of Default and during its continuance, the Administrative Agent may (with the consent of the Majority Lenders) and shall (at the direction of the Majority Lenders) designate as Servicer any Person (including itself) to succeed Alliance or any successor Servicer, on the condition in each case that any such Person so designated shall agree to perform the duties and obligations of the Servicer pursuant to the terms hereof.

(b) Upon the designation of a successor Servicer as set forth in clause (a) above, Alliance agrees that it will terminate its activities as Servicer hereunder in a manner that the Administrative Agent reasonably determines will facilitate the transition of the performance of such activities to the new Servicer, and Alliance shall cooperate with and assist such new Servicer. Such cooperation shall include access to and transfer of records (including copies of all Contracts) related to Pool Receivables and use by the new Servicer of all licenses (or the obtaining of new licenses), hardware or software necessary or reasonably desirable to collect the Pool Receivables and the Related Security.

(c) Alliance acknowledges that, in making its decision to execute and deliver this Agreement, the Administrative Agent and each Credit Party have relied on Alliance's agreement to act as Servicer hereunder. Accordingly, Alliance agrees that it will not voluntarily resign as Servicer without the prior written consent of the Administrative Agent and the Majority Lenders.

(d) The Servicer may delegate its duties and obligations hereunder, in whole or part, to one or more subservicers (each a “Sub-Servicer”); provided, that, in each such delegation: (i) such Sub-Servicer shall agree in writing to perform the delegated duties and obligations of the Servicer pursuant to the terms hereof, (ii) the Servicer shall remain liable for the performance of the duties and obligations so delegated, (iii) the Borrower, the Administrative Agent, and each Credit Party shall have the right to look solely to the Servicer for performance, (iv) the terms of any agreement with any Sub-Servicer shall provide that the Administrative Agent may terminate such agreement upon the termination of the Servicer hereunder by giving notice of its desire to terminate such agreement to the Servicer (and the Servicer shall provide appropriate notice to each such Sub-Servicer) and (v) if such Sub-Servicer is not an Affiliate of

the Parent, the Administrative Agent and the Majority Lenders shall have consented in writing in advance to such delegation.

SECTION 9.02. Duties of the Servicer.

(a) The Servicer shall take or cause to be taken all such action as may be necessary or reasonably advisable to service, administer and collect each Pool Receivable from time to time, all in accordance with this Agreement and all Applicable Laws, with reasonable care and diligence, and in accordance with the Credit and Collection Policy and consistent with the past practices of the Originators. The Servicer shall set aside, for the accounts of each Credit Party, the amount of Collections to which each such Credit Party is entitled in accordance with Article IV hereof. The Servicer may, in accordance with the Credit and Collection Policy and consistent with past practices of the Originators, take such action, including modifications, waivers or restructurings of Pool Receivables and related Contracts, as the Servicer may reasonably determine to be appropriate to maximize Collections thereof or reflect adjustments expressly permitted under the Credit and Collection Policy or as expressly required under Applicable Laws or the applicable Contract; provided, that for purposes of this Agreement: (i) such action shall not, and shall not be deemed to, change the number of days such Pool Receivable has remained unpaid from the date of the original due date related to such Pool Receivable, (ii) such action shall not alter the status of such Pool Receivable as a Delinquent Receivable or a Defaulted Receivable or limit the rights of any Secured Party under this Agreement or any other Transaction Document and (iii) if an Event of Default has occurred and is continuing, the Servicer may take such action only upon the prior written consent of the Administrative Agent. The Borrower shall deliver to the Servicer and the Servicer shall hold for the benefit of the Administrative Agent (individually and for the benefit of each Credit Party), in accordance with their respective interests, all records and documents (including computer tapes or disks) with respect to each Pool Receivable. Notwithstanding anything to the contrary contained herein, if an Event of Default has occurred and is continuing, the Administrative Agent may direct the Servicer to commence or settle any legal action to enforce collection of any Pool Receivable that is a Defaulted Receivable or to foreclose upon or repossess any Related Security with respect to any such Defaulted Receivable.

(b) The Servicer shall, as soon as practicable following actual receipt of collected funds, turn over to the Borrower the collections for Borrower’s account of any indebtedness that is not a Pool Receivable, less, if Alliance or an Affiliate thereof is not the Servicer, all reasonable and appropriate out-of-pocket costs and expenses of such Servicer of servicing, collecting and administering such collections. The Servicer, if other than Alliance or an Affiliate thereof, shall, as

soon as practicable upon demand, deliver to the Borrower all records in its possession that evidence or relate to any indebtedness that is not a Pool Receivable, and copies of records in its possession that evidence or relate to any indebtedness that is a Pool Receivable.

(c) The Servicer's obligations hereunder shall terminate on the Final Payout Date. Promptly following the Final Payout date, the Servicer shall deliver to the Borrower all books, records and related materials that the Borrower previously provided to the Servicer, or that have been obtained by the Servicer, in connection with this Agreement.

SECTION 9.03. Lock-Box Account and LC Collateral Account Arrangements. Prior to the Closing Date, the Borrower shall have entered into Lock-Box Agreements with all of the Lock-Box Banks and delivered executed counterparts of each to the Administrative Agent. During the continuance of an Event of Default or during a Minimum Fixed Charge Ratio Period, the Administrative Agent may and shall (upon the direction of the Majority Lenders) at any time thereafter give notice to each Lock-Box Bank that the Administrative Agent is exercising its rights under the Lock-Box Agreements to do any or all of the following: (a) to have the exclusive ownership and control of the Lock-Box Accounts transferred to the Administrative Agent (for the benefit of the Secured Parties) and to exercise exclusive dominion and control over the funds deposited therein for application under Section 4.01, (b) to have the proceeds that are sent to the respective Lock-Box Accounts redirected pursuant to the Administrative Agent's instructions for application under Section 4.01 rather than deposited in the applicable Lock-Box Account and (c) to take any or all other actions permitted under the applicable Lock-Box Agreement. The Servicer and the Borrower each hereby agree that if the Administrative Agent at any time takes any action set forth in the preceding sentence, the Administrative Agent shall have exclusive control (for the benefit of the Secured Parties, Servicer and Borrower in accordance with Section 4.01) of the proceeds (including Collections) of all Pool Receivables and the Servicer and the Borrower hereby further agree to take any other action that the Administrative Agent may reasonably request to transfer such control or to ensure that the Administrative Agent maintains such control. Any proceeds of Pool Receivables received by the Borrower or the Servicer thereafter shall be sent immediately to, or as otherwise instructed by, the Administrative Agent to be applied under Section 4.01. The Borrower and the Servicer hereby irrevocably instruct the Administrative Agent, and the Administrative Agent agrees, on each Business Day during the Minimum Fixed Charge Ratio Period, so long as the Administrative Agent has taken exclusive dominion and control over each of the Lock-Box Accounts and no Event of Default or Unmatured Event of Default exists, to transfer all available amounts on deposit in the Lock-Box Accounts as of the end of each Business Day as required pursuant to Section 4.01(e) and, after giving effect to any distributions to the Servicer on such day pursuant to Section 4.01(e), to transfer all remaining available amounts to the LC Collateral Account, if applicable.

The Administrative Agent shall have exclusive dominion and control, including the exclusive right of withdrawal, over the LC Collateral Account and the Borrower hereby grants the Administrative Agent a security interest in the LC Collateral Account and all money or other assets on deposit therein or credited thereto. Other than any interest earned on the investment of such deposits, which investments shall be made at the option and sole discretion of the Administrative Agent and at the Borrower's risk and expense, such deposits shall not bear interest. Interest or profits, if any, on such investments shall accumulate in the LC Collateral Account. Moneys in the LC Collateral Account shall be applied by the Administrative Agent to reimburse the LC Bank for each drawing under a

Letter of Credit and for repayment of amounts owing by the Borrower hereunder and under each of the other Transaction Documents to each of the other Secured Parties, it being understood and agreed that certain amounts on deposit in the LC Collateral Account shall, from time to time, be remitted to the Servicer pursuant to Section 4.01(e). Amounts, if any, on deposit in the LC Collateral Account on the Final Payout Date shall be remitted by the Administrative Agent to the Borrower.

The Administrative Agent shall, on each Settlement Date (if such date occurs on or after the Termination Date), remove any available amounts then on deposit in the LC Collateral

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Account and (i) deposit such amounts into each Lender's account in accordance with the priorities set forth in Section 4.01(a), to the extent that any amounts are then due and owing after giving effect to the distribution, if any, by the Servicer on such date in accordance with Section 4.01(a) and (ii) remit the balance, if any, to the Borrower.

SECTION 9.04. Enforcement Rights.

(a) At any time following the occurrence and during the continuation of an Event of Default:

(i) the Administrative Agent (at the Borrower's expense) may direct the Obligors that payment of all amounts payable under any Pool Receivable is to be made directly to the Administrative Agent or its designee;

(ii) the Administrative Agent may instruct the Borrower or the Servicer to give notice of the Secured Parties' interest in Pool Receivables to each Obligor, which notice shall direct that payments be made directly to the Administrative Agent or its designee (on behalf of the Secured Parties), and the Borrower or the Servicer, as the case may be, shall give such notice at the expense of the Borrower or the Servicer, as the case may be; provided, that if the Borrower or the Servicer, as the case may be, fails to so notify each Obligor within two (2) Business Days following instruction by the Administrative Agent, the Administrative Agent (at the Borrower's or the Servicer's, as the case may be, expense) may so notify the Obligors;

(iii) the Administrative Agent may request the Servicer to, and upon such request the Servicer shall: (A) assemble all of the records necessary or desirable to collect the Pool Receivables and the Related Security, and transfer or license to a successor Servicer the use of all software necessary or desirable to collect the Pool Receivables and the Related Security, and make the same available to the Administrative Agent or its designee (for the benefit of the Secured Parties) at a place selected by the Administrative Agent and (B) segregate all cash, checks and other instruments received by it from time to time constituting Collections in a manner reasonably acceptable to the Administrative Agent and, promptly upon receipt, remit all such cash, checks and instruments, duly endorsed or with duly executed instruments of transfer, to the Administrative Agent or its designee;

(iv) notify the Lock-Box Banks that the Borrower and the Servicer will no longer have any access to the Lock-Box Accounts;

(v) the Administrative Agent may (or, at the direction of the Majority Lenders shall) replace the Person then acting as Servicer; and

(vi) the Administrative Agent may collect any amounts due from an Originator under the Purchase and Sale Agreement, the Transferor under the Sale and Contribution Agreement or the Performance Guarantor under the Performance Guaranty.

Following the cure of any Event of Default or, if such Event of Default is not cured, following the Final Payment Date, the Administrative Agent shall upon Borrower's request and at

Borrower's sole expense, return all records, rescind all notices redirecting payment and otherwise cooperate in instructing Obligors and Lock-Box Banks to make payments to and provide access to Lock-Box Accounts and cooperate with such Persons as Borrower may reasonably request.

(b) The Borrower hereby authorizes the Administrative Agent (on behalf of the Secured Parties), and irrevocably appoints the Administrative Agent as its attorney-in-fact with full power of substitution and with full authority in the place and stead of the Borrower, which appointment is coupled with an interest, to take any and all steps in the name of the Borrower and on behalf of the Borrower necessary or desirable, in the reasonable determination of the Administrative Agent, after the occurrence and during the continuation of an Event of Default, to collect any and all amounts or portions thereof due under any and all Collateral, including endorsing the name of the Borrower on checks and other instruments representing Collections and enforcing such Collateral. Notwithstanding anything to the contrary contained in this subsection, none of the powers conferred upon such attorney-in-fact pursuant to the preceding sentence shall subject such attorney-in-fact to any liability if any action taken by it shall prove to be inadequate or invalid, nor shall they confer any obligations upon such attorney-in-fact in any manner whatsoever.

(c) The Servicer hereby authorizes the Administrative Agent (on behalf of the Secured Parties), and irrevocably appoints the Administrative Agent as its attorney-in-fact with full power of substitution and with full authority in the place and stead of the Servicer, which appointment is coupled with an interest, to take any and all steps in the name of the Servicer and on behalf of the Servicer necessary or desirable, in the reasonable determination of the Administrative Agent, after the occurrence and during the continuation of an Event of Default, to collect any and all amounts or portions thereof due under any and all Collateral, including endorsing the name of the Servicer on checks and other instruments representing Collections and enforcing such Collateral. Notwithstanding anything to the contrary contained in this subsection, none of the powers conferred upon such attorney-in-fact pursuant to the preceding sentence shall subject such attorney-in-fact to any liability if any action taken by it shall prove to be inadequate or invalid, nor shall they confer any obligations upon such attorney-in-fact in any manner whatsoever.

SECTION 9.05. Responsibilities of the Borrower.

(a) Anything herein to the contrary notwithstanding, the Borrower shall: (i) perform all of its obligations, if any, under the Contracts related to the Pool Receivables to the same extent as if interests in such Pool Receivables had not been transferred hereunder, and the exercise by the Administrative Agent, or any other Credit Party of their respective rights hereunder shall not relieve the Borrower from such obligations and (ii) pay when due any taxes, including any sales taxes payable in connection with the Pool Receivables and their creation and satisfaction. None of the Credit Parties shall have any obligation or liability with respect to any Collateral, nor shall any of them

be obligated to perform any of the obligations of the Borrower, the Servicer or any Originator thereunder.

(b) Alliance hereby irrevocably agrees that if at any time it shall cease to be the Servicer hereunder, it shall act (if the then-current Servicer so requests) as the

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data-processing agent of the Servicer and, in such capacity, Alliance shall conduct the data-processing functions of the administration of the Receivables and the Collections thereon in substantially the same way that Alliance conducted such data-processing functions while it acted as the Servicer. In connection with any such processing functions, the Borrower shall pay to Alliance its reasonable out-of-pocket costs and expenses from the Borrower's own funds (subject to the priority of payments set forth in Section 4.01).

SECTION 9.06. Servicing Fee.

(a) Subject to clause (b) below, the Borrower shall pay the Servicer a fee (the "Servicing Fee") equal to 1.00% per annum (the "Servicing Fee Rate") of the daily average aggregate Outstanding Balance of the Pool Receivables. Accrued Servicing Fees shall be payable from Collections to the extent of available funds in accordance with Section 4.01.

(b) If the Servicer ceases to be Alliance or an Affiliate thereof, the Servicing Fee shall be the greater of: (i) the amount calculated pursuant to clause (a) above and (ii) an alternative amount specified by the successor Servicer not to exceed 110% of the aggregate reasonable costs and expenses incurred by such successor Servicer in connection with the performance of its obligations as Servicer hereunder.

ARTICLE X

EVENTS OF DEFAULT

SECTION 10.01. Events of Default. If any of the following events (each, an "Event of Default") shall occur:

(a) (i) the Borrower, the Transferor, any Originator, the Performance Guarantor or the Servicer shall fail to perform or observe any term, covenant or agreement under this Agreement or any other Transaction Document (other than any such failure which would constitute an Event of Default under clause (ii) or (iii) of this paragraph (a)), and such failure, solely to the extent capable of cure, shall continue for ten (10) Business Days, (ii) the Borrower, the Transferor, any Originator, the Performance Guarantor or the Servicer shall fail to make when due (x) any payment or deposit to be made by it under this Agreement or any other Transaction Document and such failure shall continue unremedied for two (2) Business Days, (iii) Alliance shall resign as Servicer, and no successor Servicer reasonably satisfactory to the Administrative Agent shall have been appointed or (iv) the Borrower, any Originator, the Performance Guarantor or the Servicer shall breach Sections 8.01(u) or 8.02(m);

(b) any representation or warranty made or deemed made by the Borrower, the Transferor, any Originator, the Performance Guarantor or the Servicer (or any of their respective officers) under or in connection with this Agreement or any other Transaction Document or any

information or report delivered by the Borrower, the Transferor, any Originator, the Performance Guarantor or the Servicer pursuant to this Agreement or any other Transaction Document, shall prove to have been incorrect or untrue in any material respect when made or deemed made or delivered; provided, however, that such breach shall not constitute an Event of Default pursuant to this clause (b), if such breach, solely to the extent capable of cure, is cured within ten (10)

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Business Days following the date that a Financial Officer or other Responsible Officer has knowledge or has received notice of such breach;

(c) the Borrower or the Servicer shall fail to deliver an Information Package pursuant to this Agreement, and such failure shall remain unremedied for two (2) Business Days;

(d) this Agreement or any security interest granted pursuant to this Agreement or any other Transaction Document shall for any reason cease to create, or for any reason cease to be, a valid and enforceable first priority perfected security interest in favor of the Administrative Agent with respect to the Collateral, free and clear of any Adverse Claim;

(e) the Borrower, the Transferor, any Originator, the Performance Guarantor or the Servicer shall generally not pay its debts as such debts become due, or shall admit in writing its inability to pay its debts generally, or shall make a general assignment for the benefit of creditors; or any Insolvency Proceeding shall be instituted by or against the Borrower, the Transferor, any Originator, the Performance Guarantor or the Servicer and, in the case of any such proceeding instituted against such Person (but not instituted by such Person), either such proceeding shall remain undismissed or unstayed for a period of 60 consecutive days, or any of the actions sought in such proceeding (including the entry of an order for relief against, or the appointment of a receiver, trustee, custodian or other similar official for, it or for any substantial part of its property) shall occur; or the Borrower, the Transferor, any Originator, the Performance Guarantor or the Servicer shall take any corporate or organizational action to authorize any of the actions set forth above in this paragraph;

(f) (i) the average for three consecutive Fiscal Months of: (A) the Default Ratio shall exceed 3.0%, (B) the Delinquency Ratio shall exceed 5.0% or (C) the Dilution Ratio shall exceed 3.0% or (ii) the Days' Sales Outstanding shall exceed 50 days; provided, that, an Excluded Calculation Obligor Receivable shall be excluded from each component of the calculations used to determine compliance with the tests set forth in this clause (f) during the continuation of an Excluded Calculation Obligor Ineligibility Period with respect to such Excluded Calculation Obligor;

(g) a Change in Control shall occur;

(h) a Borrowing Base Deficit shall occur, and shall not have been cured within two (2) Business Days following the date that a Financial Officer or other Responsible Officer has knowledge or has received notice of such Borrowing Base Deficit;

(i) (i) the Borrower shall fail to pay any principal of or premium or interest on any of its Debt when the same becomes due and payable (whether by scheduled maturity, required prepayment, acceleration, demand or otherwise), and such failure shall continue after the applicable grace period, if any, specified in the agreement, mortgage, indenture or instrument relating to such Debt (whether or not such failure shall have been waived under the related agreement); (ii) any

Originator, the Transferor, the Performance Guarantor or the Servicer, or any of their respective Subsidiaries, individually or in the aggregate, shall fail to pay any principal of or premium or interest on any of its Debt that is outstanding in a principal amount in excess of \$35,000,000 in the aggregate when the same becomes due and payable (whether by

scheduled maturity, required prepayment, acceleration, demand or otherwise), and such failure shall continue after the applicable grace period, if any, specified in the agreement, mortgage, indenture or instrument relating to such Debt (whether or not such failure shall have been waived under the related agreement); (iii) any other event shall occur or condition shall exist under any agreement, mortgage, indenture or instrument relating to any such Debt (as referred to in clause (i) or (ii) of this paragraph and shall continue after the applicable grace period, if any, specified in such agreement, mortgage, indenture or instrument (whether or not such failure shall have been waived under the related agreement), if the effect of such event or condition is to give the applicable debtholders the right (whether acted upon or not) to accelerate the maturity of such Debt (as referred to in clause (i) or (ii) of this paragraph) or to terminate the commitment of any lender thereunder, or (iv) any such Debt (as referred to in clause (i) or (ii) of this paragraph) shall be declared to be due and payable, or required to be prepaid (other than by a regularly scheduled required prepayment), redeemed, purchased or defeased, or an offer to repay, redeem, purchase or defease such Debt shall be required to be made or the commitment of any lender thereunder terminated, in each case before the stated maturity thereof;

(j) the Performance Guarantor shall fail to perform any of its obligations under the Performance Guaranty;

(k) the Borrower shall fail (x) at any time (other than for ten (10) Business Days following notice of the death or resignation of any Independent Director) to have an Independent Director who satisfies each requirement and qualification specified in Section 8.03(c) of this Agreement for Independent Directors, on the Borrower's board of directors or (y) to timely notify the Administrative Agent of any replacement or appointment of any director that is to serve as an Independent Director on the Borrower's board of directors as required pursuant to Section 8.03(c) of this Agreement;

(l) there shall have occurred any event which materially adversely impairs, in the reasonable discretion of Administrative Agent, the collectibility of the Pool Receivables generally or any material portion thereof (excluding any Excluded Calculation Obligor Receivable during the continuation of an Excluded Calculation Obligor Ineligibility Period with respect to such Excluded Calculation Obligor);

(m) any Letter of Credit is drawn upon and is not fully reimbursed by the Borrower within two (2) Business Days after a Financial Officer or other Responsible Officer has knowledge or has received notice of such draw;

(n) either (i) the Internal Revenue Service shall file notice of a lien pursuant to Section 6323 of the Code with regard to any assets of the Borrower, the Transferor, any Originator or the Parent or (ii) the PBGC shall file notice of a lien pursuant to Section 4068 of ERISA with regard to any of the assets of the Borrower, the Servicer, any Originator, the Transferor or the Parent;

(o) (i) the occurrence of a Reportable Event; (ii) the adoption of an amendment to a Pension Plan that would require the provision of security pursuant to Section 401(a)(29) of the Code or Section 307 of ERISA; (iii) the existence with respect to any Multiemployer Plan of an "accumulated funding deficiency" (as defined in Section 412 of the

Code or Section 302 of ERISA), whether or not waived; (iv) the failure to satisfy the minimum funding standard under Section 412 of the Code with respect to any Pension Plan (v) the incurrence of any liability under Title IV of ERISA with respect to the termination of any Pension Plan or the withdrawal or partial withdrawal of any of the Borrower, any Originator, the Transferor, the Servicer, the Parent or any of their respective ERISA Affiliates from any Multiemployer Plan; (vi) the receipt by any of the Borrower, any Originator, the Transferor, the Servicer, the Parent or any of their respective ERISA Affiliates from the PBGC or any plan administrator of any notice relating to the intention to terminate any Pension Plan or Multiemployer Plan or to appoint a trustee to administer any Pension Plan or Multiemployer Plan; (vii) the receipt by the Borrower, any Originator, the Transferor, the Servicer, the Parent or any of their respective ERISA Affiliates of any notice concerning the imposition of Withdrawal Liability or a determination that a Multiemployer Plan is, or is expected to be, insolvent or in reorganization, within the meaning of Title IV of ERISA; (viii) the occurrence of a prohibited transaction with respect to any of the Borrower, any Originator, the Transferor, the Servicer, the Parent or any of their respective ERISA Affiliates (pursuant to Section 4975 of the Code); (ix) the occurrence or existence of any other similar event or condition with respect to a Pension Plan or a Multiemployer Plan, with respect to each of clause (i) through (ix), either individually or in the aggregate, could reasonably be expected to result in a Material Adverse Effect;

(p) a Termination Event shall occur under any Sale Agreement;

(q) the Borrower shall be required to register as an "investment company" within the meaning of the Investment Company Act;

(r) any material provision of this Agreement or any other Transaction Document shall cease to be in full force and effect or any of the Borrower, the Transferor, any Originator, the Performance Guarantor or the Servicer (or any of their respective Affiliates) shall so state in writing;

(s) one or more judgments or decrees shall be entered against the Borrower, any Originator, the Transferor, the Performance Guarantor or the Servicer, or any Affiliate of any of the foregoing involving in the aggregate a liability (not paid or to the extent not covered by a reputable and solvent insurance company) and such judgments and decrees either shall be final and non-appealable or shall not be vacated, discharged or stayed or bonded pending appeal for any period of 45 consecutive days, and the aggregate amount of all such judgments equals or exceeds \$35,000,000 (or solely with respect to the Borrower, \$12,500); or

(t) the Borrower transfers or sells substantially all of its assets, other than with respect to (i) any payment required pursuant to the Sale and Contribution Agreement or (ii) any transfer of funds that have been distributed to the Borrower pursuant to Section 4.1 of this Agreement;

then, and in any such event, the Administrative Agent may (or, at the direction of the Majority Lenders shall) by notice to the Borrower (x) declare the Termination Date to have occurred (in which case the

Termination Date shall be deemed to have occurred), (y) declare the Final Maturity Date to have occurred (in which case the Final Maturity Date shall be deemed to have occurred) and (z) declare the Aggregate Capital and all other Borrower Obligations to be

immediately due and payable (in which case the Aggregate Capital and all other Borrower Obligations shall be immediately due and payable); provided that, automatically upon the occurrence of any event (without any requirement for the giving of notice) described in subsection (e) of this Section 10.01 with respect to the Borrower, the Termination Date shall occur and the Aggregate Capital and all other Borrower Obligations shall be immediately due and payable. Upon any such declaration or designation or upon such automatic termination, the Administrative Agent and the other Secured Parties shall have, in addition to the rights and remedies which they may have under this Agreement and the other Transaction Documents, all other rights and remedies provided after default under the UCC and under other Applicable Law, which rights and remedies shall be cumulative. Any proceeds from liquidation of the Collateral shall be applied in the order of priority set forth in Section 4.01.

ARTICLE XI

THE ADMINISTRATIVE AGENT

SECTION 11.01. Authorization and Action. Each Credit Party hereby appoints and authorizes the Administrative Agent to take such action as agent on its behalf and to exercise such powers under this Agreement as are delegated to the Administrative Agent by the terms hereof, together with such powers as are reasonably incidental thereto. The Administrative Agent shall not have any duties other than those expressly set forth in the Transaction Documents, and no implied obligations or liabilities shall be read into any Transaction Document, or otherwise exist, against the Administrative Agent. The Administrative Agent does not assume, nor shall it be deemed to have assumed, any obligation to, or relationship of trust or agency with, the Borrower or any Affiliate thereof or any Credit Party except for any obligations expressly set forth herein. Notwithstanding any provision of this Agreement or any other Transaction Document, in no event shall the Administrative Agent ever be required to take any action which exposes the Administrative Agent to personal liability or which is contrary to any provision of any Transaction Document or Applicable Law.

SECTION 11.02. Administrative Agent's Reliance, Etc. Neither the Administrative Agent nor any of its directors, officers, agents or employees shall be liable for any action taken or omitted to be taken by it or them as Administrative Agent under or in connection with this Agreement (including, without limitation, the Administrative Agent's servicing, administering or collecting Pool Receivables in the event it replaces the Servicer in such capacity pursuant to Section 9.01), in the absence of its or their own gross negligence or willful misconduct. Without limiting the generality of the foregoing, the Administrative Agent: (a) may consult with legal counsel (including counsel for any Credit Party or the Servicer), independent certified public accountants and other experts selected by it and shall not be liable for any action taken or omitted to be taken in good faith by it in accordance with the advice of such counsel, accountants or experts; (b) makes no warranty or representation to any Credit Party (whether written or oral) and shall not be responsible to any Credit Party for any statements, warranties or representations (whether written or oral) made by any other party in or in connection with this Agreement; (c) shall not have any duty to ascertain or to inquire as to the performance or

observance of any of the terms, covenants or conditions of this Agreement on the part of any Credit Party or to inspect the property (including the books and records) of any Credit Party; (d) shall not be responsible to any Credit Party for the due execution, legality, validity, enforceability, genuineness, sufficiency

or value of this Agreement or any other instrument or document furnished pursuant hereto; and (e) shall be entitled to rely, and shall be fully protected in so relying, upon any notice (including notice by telephone), consent, certificate or other instrument or writing (which may be by facsimile) believed by it to be genuine and signed or sent by the proper party or parties.

SECTION 11.03. Administrative Agent and Affiliates. With respect to any Credit Extension or interests therein owned by any Credit Party that is also the Administrative Agent, such Credit Party shall have the same rights and powers under this Agreement as any other Credit Party and may exercise the same as though it were not the Administrative Agent. The Administrative Agent and any of its Affiliates may generally engage in any kind of business with the Borrower or any Affiliate thereof and any Person who may do business with or own securities of the Borrower or any Affiliate thereof, all as if the Administrative Agent were not the Administrative Agent hereunder and without any duty to account therefor to any other Secured Party.

SECTION 11.04. Indemnification of Administrative Agent. Each Lender agrees to indemnify the Administrative Agent (to the extent not reimbursed by the Borrower or any Affiliate thereof), ratably according to the respective Percentage of such Lender, from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind or nature whatsoever which may be imposed on, incurred by, or asserted against the Administrative Agent in any way relating to or arising out of this Agreement or any other Transaction Document or any action taken or omitted by the Administrative Agent under this Agreement or any other Transaction Document; provided that no Lender shall be liable for any portion of such liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements resulting from the Administrative Agent's gross negligence or willful misconduct.

SECTION 11.05. Delegation of Duties. The Administrative Agent may execute any of its duties through agents or attorneys-in-fact and shall be entitled to advice of counsel concerning all matters pertaining to such duties. The Administrative Agent shall not be responsible for the negligence or misconduct of any agents or attorneys-in-fact selected by it with reasonable care.

SECTION 11.06. Action or Inaction by Administrative Agent. The Administrative Agent shall in all cases be fully justified in failing or refusing to take action under any Transaction Document unless it shall first receive such advice or concurrence of the Majority Lenders and assurance of its indemnification by the Lenders, as it deems appropriate. The Administrative Agent shall in all cases be fully protected in acting, or in refraining from acting, under this Agreement or any other Transaction Document in accordance with a request or at the direction of the Majority Lenders, and such request or direction and any action taken or failure to act pursuant thereto shall be binding upon all Credit Parties. The Credit Parties and the Administrative Agent agree that unless any action to be taken by the Administrative Agent under a Transaction Document (i) specifically requires the advice or concurrence of the Majority Lenders or (ii) may be taken by the Administrative Agent alone or

without any advice or concurrence of a Lender, then the Administrative Agent may take action based upon the advice or concurrence of the Majority Lenders.

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SECTION 11.07. Notice of Events of Default; Action by Administrative Agent. The Administrative Agent shall not be deemed to have knowledge or notice of the occurrence of any Unmatured Event of Default or Event of Default unless the Administrative Agent has received notice from any Credit Party or the Borrower stating that an Unmatured Event of Default or Event of Default has occurred hereunder and describing such Unmatured Event of Default or Event of Default. If the Administrative Agent receives such a notice, it shall promptly give notice thereof to each Credit Party. The Administrative Agent may (but shall not be obligated to) take such action, or refrain from taking such action, concerning an Unmatured Event of Default or Event of Default or any other matter hereunder as the Administrative Agent deems advisable and in the best interests of the Secured Parties.

SECTION 11.08. Non-Reliance on Administrative Agent and Other Parties. Each Credit Party expressly acknowledges that neither the Administrative Agent nor any of its directors, officers, agents or employees has made any representations or warranties to it and that no act by the Administrative Agent hereafter taken, including any review of the affairs of the Borrower or any Affiliate thereof, shall be deemed to constitute any representation or warranty by the Administrative Agent. Each Credit Party represents and warrants to the Administrative Agent that, independently and without reliance upon the Administrative Agent or any other Credit Party and based on such documents and information as it has deemed appropriate, it has made and will continue to make its own appraisal of and investigation into the business, operations, property, prospects, financial and other conditions and creditworthiness of the Borrower, each Originator, the Transferor, the Performance Guarantor or the Servicer and the Pool Receivables and its own decision to enter into this Agreement and to take, or omit, action under any Transaction Document. Except for items expressly required to be delivered under any Transaction Document by the Administrative Agent to any Credit Party, the Administrative Agent shall not have any duty or responsibility to provide any Credit Party with any information concerning the Borrower, any Originator, the Transferor, the Performance Guarantor or the Servicer that comes into the possession of the Administrative Agent or any of its directors, officers, agents, employees, attorneys-in-fact or Affiliates.

SECTION 11.09. Successor Administrative Agent.

(a) The Administrative Agent may, upon at least thirty (30) days' notice to the Borrower, the Servicer and each Credit Party, resign as Administrative Agent. Except as provided below, such resignation shall not become effective until a successor Administrative Agent is appointed by the Majority Lenders as a successor Administrative Agent and has accepted such appointment. If no successor Administrative Agent shall have been so appointed by the Majority Lenders, within thirty (30) days after the departing Administrative Agent's giving of notice of resignation, the departing Administrative Agent may, on behalf of the Secured Parties, appoint a successor Administrative Agent as successor Administrative Agent. If no successor Administrative Agent shall have been so appointed by the Majority Lenders within sixty (60) days after the departing Administrative Agent's giving of notice of resignation, the departing Administrative Agent may, on behalf of the Secured Parties, petition a court of competent jurisdiction to appoint a successor Administrative Agent.

(b) Upon such acceptance of its appointment as Administrative Agent hereunder by a successor Administrative Agent, such successor Administrative Agent shall

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succeed to and become vested with all the rights and duties of the resigning Administrative Agent, and the resigning Administrative Agent shall be discharged from its duties and obligations under the Transaction Documents. After any resigning Administrative Agent's resignation hereunder, the provisions of this Article XI and Article XIII shall inure to its benefit as to any actions taken or omitted to be taken by it while it was the Administrative Agent.

SECTION 11.10. Erroneous Payments.

(a) If the Administrative Agent notifies a Credit Party or Secured Party, or any Person who has received funds on behalf of a Credit Party or Secured Party such Credit Party (any Credit Party, Secured Party or other recipient, a "Payment Recipient") that the Administrative Agent has determined in its sole discretion (whether or not after receipt of any notice under immediately succeeding clause (b)) that any funds received by such Payment Recipient from the Administrative Agent or any of its Affiliates were erroneously transmitted to, or otherwise erroneously or mistakenly received by, such Payment Recipient (whether or not known to such Lender, Credit Party, Secured Party or other Payment Recipient on its behalf) (any such funds, whether received as a payment, prepayment or repayment of principal, interest, fees, distribution or otherwise, individually and collectively, an "Erroneous Payment") and demands the return of such Erroneous Payment (or a portion thereof), such Erroneous Payment shall at all times remain the property of the Administrative Agent and shall be segregated by the Payment Recipient and held in trust for the benefit of the Administrative Agent, and such Lender, Credit Party or Secured Party shall (or, with respect to any Payment Recipient who received such funds on its behalf, shall cause such Payment Recipient to) promptly, but in no event later than two Business Days thereafter, return to the Administrative Agent the amount of any such Erroneous Payment (or portion thereof) as to which such a demand was made, in same day funds (in the currency so received), together with interest thereon in respect of each day from and including the date such Erroneous Payment (or portion thereof) was received by such Payment Recipient to the date such amount is repaid to the Administrative Agent in same day funds at the greater of the Overnight Bank Funding Rate and a rate determined by the Administrative Agent in accordance with banking industry rules on interbank compensation from time to time in effect. A notice of the Administrative Agent to any Payment Recipient under this clause (a) shall be conclusive, absent manifest error.

(b) Without limiting immediately preceding clause (a), each Lender, Credit Party or Secured Party, or any Person who has received funds on behalf of a Lender, Credit Party or Secured Party such Credit Party, hereby further agrees that if it receives a payment, prepayment or repayment (whether received as a payment, prepayment or repayment of principal, interest, fees, distribution or otherwise) from the Administrative Agent (or any of its Affiliates) (x) that is in a different amount than, or on a different date from, that specified in a notice of payment, prepayment or repayment sent by the Administrative Agent (or any of its Affiliates) with respect to such payment, prepayment or repayment, (y) that was not preceded or accompanied by a notice of payment, prepayment or repayment sent by the Administrative Agent (or any of its Affiliates), or (z) that such Lender, Credit Party or Secured Party, or other such recipient, otherwise becomes aware was transmitted, or received, in error or by mistake (in whole or in part) in each case:

(i)(A) in the case of immediately preceding clauses (x) or (y), an error shall be presumed to have been made (absent written confirmation from the Administrative Agent to the contrary) or (B) an error has been made (in the case of immediately preceding clause (z)), in each case, with respect to such payment, prepayment or repayment; and

(ii) such Lender, Credit Party or Secured Party shall (and shall cause any other recipient that receives funds on its respective behalf to) promptly (and, in all events, within one Business Day of its knowledge of such error) notify the Administrative Agent of its receipt of such payment, prepayment or repayment, the details thereof (in reasonable detail) and that it is so notifying the Administrative Agent pursuant to this Section 11.10(b).

(c) Each Lender, Credit Party or Secured Party hereby authorizes the Administrative Agent to set off, net and apply any and all amounts at any time owing to such Lender, Credit Party or Secured Party under any Transaction Document, or otherwise payable or distributable by the Administrative Agent to such Lender, Credit Party or Secured Party from any source, against any amount due to the Administrative Agent under immediately preceding clause (a) or under the indemnification provisions of this Agreement.

(d) In the event that an Erroneous Payment (or portion thereof) is not recovered by the Administrative Agent for any reason, after demand therefor by the Administrative Agent in accordance with immediately preceding clause (a), from any Credit Party that has received such Erroneous Payment (or portion thereof) (and/or from any Payment Recipient who received such Erroneous Payment (or portion thereof) on its respective behalf) (such unrecovered amount, an "Erroneous Payment Return Deficiency"), upon the Administrative Agent's notice to such Credit Party at any time, (i) such Credit Party shall be deemed to have assigned its Loans (but not its Commitments) in an amount equal to the Erroneous Payment Return Deficiency (or such lesser amount as the Administrative Agent may specify) (such assignment of the Loans (but not Commitments) the "Erroneous Payment Deficiency Assignment") at par plus any accrued and unpaid interest (with the assignment fee to be waived by the Administrative Agent in such instance), and is hereby (together with the Borrower) deemed to execute and deliver an Assignment and Assumption with respect to such Erroneous Payment Deficiency Assignment, and such Credit Party shall deliver any Notes evidencing such Loans to the Borrower or the Administrative Agent, (ii) the Administrative Agent as the assignee Lender shall be deemed to acquire the Erroneous Payment Deficiency Assignment, (iii) upon such deemed acquisition, the Administrative Agent as the assignee Lender shall become a Credit Party, as applicable, hereunder with respect to such Erroneous Payment Deficiency Assignment and the assigning Lender or assigning Credit Party shall cease to be a Credit Party, as applicable, hereunder with respect to such Erroneous Payment Deficiency Assignment, excluding, for the avoidance of doubt, its obligations under the indemnification provisions of this Agreement and its applicable Commitments which shall survive as to such assigning Lender or assigning Credit Party and (iv) the Administrative Agent may reflect in the Register its ownership interest in the Loans subject to the Erroneous Payment Deficiency Assignment. The Administrative Agent may, in its discretion, sell any Loans acquired pursuant to an Erroneous Payment Deficiency Assignment and upon receipt of the proceeds of such sale, the Erroneous Payment Return Deficiency owing by the applicable Credit Party shall be reduced

by the net proceeds of the sale of such Loan (or portion thereof), and the Administrative Agent shall retain all other rights, remedies and claims against such Credit Party (and/or against any recipient that receives funds on its respective behalf). For the avoidance of doubt, no Erroneous Payment Deficiency Assignment will reduce the Commitments of any Credit Party and such Commitments shall remain available in accordance with the terms of this Agreement. In addition, each party hereto agrees that, except to the extent that the Administrative Agent has sold a Loan (or portion thereof) acquired pursuant to an Erroneous Payment Deficiency Assignment, and irrespective of whether the Administrative Agent may be equitably subrogated, the Administrative Agent shall be contractually subrogated to all the rights and interests of the applicable Lender, Credit Party or Secured Party under the Transaction Documents with respect to each Erroneous Payment Return Deficiency (the "Erroneous Payment Subrogation Rights").

(e) The parties hereto agree that an Erroneous Payment shall not pay, prepay, repay, discharge or otherwise satisfy any Obligations owed by the Borrower, the Parent, the Originators, the Servicer, the Performance Guarantor or their respective Affiliates, except, in each case, to the extent such Erroneous Payment is, and solely with respect to the amount of such Erroneous Payment that is, comprised of funds received by the Administrative Agent from the Borrower, the Parent, the Originators, the Servicer, the Performance Guarantor or their respective Subsidiaries for the purpose of making such Erroneous Payment. In no event shall this Section be interpreted to increase (or accelerate the due date for), or have the effect of increasing (or accelerating the due date for), the amounts payable by the Borrower, the Transferor, any Originator, the Performance Guarantor or the Servicer under this Agreement or the other Transaction Documents relative to the amount (and/or timing for payment) that would have been payable had such Erroneous Payment not been made by the Administrative Agent.

(f) To the extent permitted by Applicable Law, no Payment Recipient shall assert any right or claim to an Erroneous Payment, and hereby waives, and is deemed to waive, any claim, counterclaim, defense or right of set-off or recoupment with respect to any demand, claim or counterclaim by the Administrative Agent for the return of any Erroneous Payment received, including without limitation waiver of any defense based on "discharge for value" or any similar doctrine

(g) Each party's obligations, agreements and waivers under this Section 11.10 shall survive the resignation or replacement of the Administrative Agent, the termination of the Commitments and/or the repayment, satisfaction or discharge of all Obligations (or any portion thereof) under any Transaction Document.

ARTICLE XII

[RESERVED]

ARTICLE XIII

INDEMNIFICATION

SECTION 13.01. Indemnities by the Borrower

(a) Without limiting any other rights that the Administrative Agent, the Credit Parties, the Affected Persons and their respective assigns, officers, directors, agents and employees (each, a "Borrower Indemnified Party") may have hereunder or under Applicable Law, the Borrower hereby agrees to indemnify each Borrower Indemnified Party from and against any and all claims, losses and liabilities (including Attorney Costs) (all of the foregoing being collectively referred to as "Borrower Indemnified Amounts") arising out of or resulting from this Agreement or any other Transaction Document or the use of proceeds of the Credit Extensions or the security interest in respect of any Pool Receivable or any other Collateral; excluding, however, (a) Borrower Indemnified Amounts to the extent a final judgment of a court of competent jurisdiction holds that such Borrower Indemnified Amounts resulted solely from the gross negligence or willful misconduct by the Borrower Indemnified Party seeking indemnification or any of its Controlled Related Parties and (b) Taxes that are covered by Section 5.03. Without limiting or being limited by the foregoing, the Borrower shall pay on demand (it being understood that if any portion of such payment obligation is made from Collections, such payment will be made at the time and in the order of priority set forth in Section 4.01), to each Borrower Indemnified Party any and all amounts necessary to indemnify such Borrower Indemnified Party from and against any and all Borrower Indemnified Amounts relating to or resulting from any of the following (but excluding Borrower Indemnified Amounts and Taxes described in clauses (a) and (b) above):

(i) any Pool Receivable which the Borrower or the Servicer includes as an Eligible Receivable as part of the Net Receivables Pool Balance but which is not an Eligible Receivable at such time;

(ii) any representation, warranty or statement made or deemed made by the Borrower (or any of its respective officers) under or in connection with this Agreement, any of the other Transaction Documents, any Information Package or any other information or report delivered by or on behalf of the Borrower pursuant hereto which shall have been untrue or incorrect when made or deemed made;

(iii) the failure by the Borrower to comply with any Applicable Law with respect to any Pool Receivable or the related Contract; or the failure of any Pool Receivable or the related Contract to conform to any such Applicable Law;

(iv) the failure to vest in the Administrative Agent a first priority perfected security interest in all or any portion of the Collateral, in each case free and clear of any Adverse Claim;

(v) the failure to have filed, or any delay in filing, financing statements (including as-extracted collateral filings), financing statement amendments, continuation statements or other similar instruments or documents under the UCC of any applicable

jurisdiction or other Applicable Laws with respect to any Pool Receivable and the other Collateral and Collections in respect thereof, whether at the time of any Credit Extension or at any subsequent time;

(vi) any dispute, claim or defense (other than discharge in bankruptcy) of an Obligor to the payment of any Pool Receivable (including, without limitation, a defense based on such Pool Receivable or the related Contract not being a legal, valid and binding obligation of such Obligor enforceable against it in accordance with its terms), or any other claim resulting from or relating to collection activities with respect to such Pool Receivable;

(vii) any failure of the Borrower to perform any its duties or obligations in accordance with the provisions hereof and of each other Transaction Document related to Pool Receivables or to timely and fully comply with the Credit and Collection Policy in regard to each Pool Receivable;

(viii) any products liability, environmental or other claim arising out of or in connection with any Pool Receivable or other merchandise, goods or services which are the subject of or related to any Pool Receivable;

(ix) the commingling of Collections of Pool Receivables at any time with other funds;

(x) any investigation, litigation or proceeding (actual or threatened) related to this Agreement or any other Transaction Document or the use of proceeds of any Credit Extensions or in respect of any Pool Receivable or other Collateral or any related Contract;

(xi) any failure of the Borrower to comply with its covenants, obligations and agreements contained in this Agreement or any other Transaction Document;

(xii) any setoff with respect to any Pool Receivable;

(xiii) any claim brought by any Person other than a Borrower Indemnified Party arising from any activity by the Borrower or any Affiliate of the Borrower in servicing, administering or collecting any Pool Receivable;

(xiv) the failure by the Borrower to pay when due any taxes, including, without limitation, sales, excise or personal property taxes;

(xv) any failure of a Lock-Box Bank to comply with the terms of the applicable Lock-Box Agreement or any amounts payable by the Administrative Agent to a Lock-Box Bank under any Lock-Box Agreement;

(xvi) any dispute, claim, offset or defense (other than discharge in bankruptcy of the Obligor) of the Obligor to the payment of any Pool Receivable (including, without limitation, a defense based on such Pool Receivable or the related

Contract not being a legal, valid and binding obligation of such Obligor enforceable against it in accordance with its terms), or any other claim resulting from the sale of goods or the rendering of services related to such Pool Receivable or the furnishing or failure to furnish any such

goods or services or other similar claim or defense not arising from the financial inability of any Obligor to pay undisputed indebtedness;

(xvii) any action taken by the Administrative Agent as attorney-in-fact for the Borrower, any Originator, the Transferor or the Servicer pursuant to this Agreement or any other Transaction Document;

(xviii) the use of proceeds of any Credit Extension or the usage of any Letter of Credit; or

(xix) any reduction in Capital as a result of the distribution of Collections if all or a portion of such distributions shall thereafter be rescinded or otherwise must be returned for any reason.

(b) Notwithstanding anything to the contrary in this Agreement, solely for purposes of the Borrower's indemnification obligations in clauses (ii), (iii), (vii) and (xi) of this Article XIII, any representation, warranty or covenant qualified by the occurrence or non-occurrence of a material adverse effect or similar concepts of materiality shall be deemed to be not so qualified.

(c) If for any reason the foregoing indemnification is unavailable to any Borrower Indemnified Party or insufficient to hold it harmless, then the Borrower shall contribute to such Borrower Indemnified Party the amount paid or payable by such Borrower Indemnified Party as a result of such loss, claim, damage or liability in such proportion as is appropriate to reflect the relative economic interests of the Borrower and its Affiliates on the one hand and such Borrower Indemnified Party on the other hand in the matters contemplated by this Agreement as well as the relative fault of the Borrower and its Affiliates and such Borrower Indemnified Party with respect to such loss, claim, damage or liability and any other relevant equitable considerations. The reimbursement, indemnity and contribution obligations of the Borrower under this Section shall be in addition to any liability which the Borrower may otherwise have, shall extend upon the same terms and conditions to each Borrower Indemnified Party, and shall be binding upon and inure to the benefit of any successors, assigns, heirs and personal representatives of the Borrower and the Borrower Indemnified Parties.

(d) Any indemnification or contribution under this Section shall survive the termination of this Agreement.

SECTION 13.02. Indemnification by the Servicer

(a) The Servicer hereby agrees to indemnify and hold harmless the Borrower, the Administrative Agent, the Credit Parties, the Affected Persons and their respective assigns, officers, directors, agents and employees (each, a "Servicer Indemnified Party"), from and against any loss, liability, expense, damage or injury suffered or sustained by reason of any acts, omissions or alleged acts or omissions arising out of activities of the Servicer pursuant to this Agreement or any other Transaction Document, including any judgment, award, settlement,

Attorney Costs and other costs or expenses incurred in connection with the defense of any actual or threatened action, proceeding or claim (all of the foregoing being collectively referred to as, "Servicer Indemnified Amounts"); excluding (i) Servicer Indemnified Amounts to the extent a final judgment of a court of competent jurisdiction holds that such Servicer Indemnified Amounts resulted solely from the

gross negligence or willful misconduct by the Servicer Indemnified Party seeking indemnification or any of its Controlled Related Parties, (ii) Taxes that are covered by Section 5.03 and (iii) Servicer Indemnified Amounts to the extent the same includes losses in respect of Pool Receivables that are uncollectible solely on account of the insolvency, bankruptcy or other credit related reasons with respect to the relevant Obligor. Without limiting or being limited by the foregoing, the Servicer shall pay on demand, to each Servicer Indemnified Party any and all amounts necessary to indemnify such Servicer Indemnified Party from and against any and all Servicer Indemnified Amounts relating to or resulting from any of the following (but excluding Servicer Indemnified Amounts described in clauses (i), (ii) and (iii) above):

(i) any representation, warranty or statement made or deemed made by the Servicer (or any of its respective officers) under or in connection with this Agreement, any of the other Transaction Documents, any Information Package or any other information or report delivered by or on behalf of the Servicer pursuant hereto which shall have been untrue or incorrect when made or deemed made;

(ii) the failure by the Servicer to comply with any Applicable Law with respect to any Pool Receivable or the related Contract; or

(iii) any failure of the Servicer to comply with its covenants, obligations and agreements contained in this Agreement or any other Transaction Document.

(b) If for any reason the foregoing indemnification is unavailable to any Servicer Indemnified Party or insufficient to hold it harmless, then the Servicer shall contribute to the amount paid or payable by such Servicer Indemnified Party as a result of such loss, claim, damage or liability in such proportion as is appropriate to reflect the relative economic interests of the Servicer and its Affiliates on the one hand and such Servicer Indemnified Party on the other hand in the matters contemplated by this Agreement as well as the relative fault of the Servicer and its Affiliates and such Servicer Indemnified Party with respect to such loss, claim, damage or liability and any other relevant equitable considerations. The reimbursement, indemnity and contribution obligations of the Servicer under this Section shall be in addition to any liability which the Servicer may otherwise have, shall extend upon the same terms and conditions to Servicer Indemnified Party, and shall be binding upon and inure to the benefit of any successors, assigns, heirs and personal representatives of the Servicer and the Servicer Indemnified Parties.

(c) Any indemnification or contribution under this Section shall survive the termination of this Agreement.

ARTICLE XIV

MISCELLANEOUS

SECTION 14.01. Amendments, Etc.

(a) No failure on the part of any Credit Party to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof; nor shall any single or partial exercise of any right hereunder preclude any other or further exercise thereof or the exercise of any other right. No

amendment or waiver of any provision of this Agreement or consent to any departure by any of the Borrower or any Affiliate thereof shall be effective unless in a writing signed by the Administrative Agent, the LC Bank and the Majority Lenders (and, in the case of any amendment, also signed by the Borrower), and then such amendment, waiver or consent shall be effective only in the specific instance and for the specific purpose for which given; provided, however, that (A) no amendment, waiver or consent shall, unless in writing and signed by the Servicer, affect the rights or duties of the Servicer under this Agreement; (B) no amendment, waiver or consent shall, unless in writing and signed by the Administrative Agent, Borrower and each Credit Party:

(i)change (directly or indirectly) the definitions of, Borrowing Base Deficit, Defaulted Receivable, Delinquent Receivable, Eligible Receivable, Facility Limit, Final Maturity Date, Minimum Fixed Charge Ratio Period, Net Receivables Pool Balance or Total Reserves contained in this Agreement, or increase the then existing Concentration Percentage for any Obligor or change the calculation of the Borrowing Base;

(ii)reduce the amount of Capital or Interest that is payable on account of any Loan or with respect to any other Credit Extension or delay any scheduled date for payment thereof;

(iii)change any Event of Default;

(iv)change any of the provisions of this Section 14.01 or the definition of "Majority Lenders"; or

(v)change the order of priority in which Collections are applied pursuant to Section 4.01.

Notwithstanding the foregoing, (A) no amendment, waiver or consent shall increase any Lender's or LC Participant's Commitment hereunder without the consent of such Lender or LC Participant, as applicable and (B) no amendment, waiver or consent shall reduce any Fees payable by the Borrower to any Credit Party or delay the dates on which any such Fees are payable, in either case, without the consent of such Credit Party.

SECTION 14.02. Notices, Etc. All notices and other communications hereunder shall, unless otherwise stated herein, be in writing (which shall include facsimile communication) and faxed or delivered, to each party hereto, at its address set forth under its name on Schedule III hereto or at such other address as shall be designated by such party in a written notice to the

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other parties hereto. Notices and communications by facsimile shall be effective when sent (and shall be followed by hard copy sent by regular mail), and notices and communications sent by other means shall be effective when received.

SECTION 14.03. Assignability; Addition of Lenders.

(a) Assignment by Lenders. Each Lender may assign to any Eligible Assignee or to any other Lender all or a portion of its rights and obligations under this Agreement (including, without limitation, all or a portion of its Commitment and any Loan or interests therein owned by it); provided, however that

(i) except for an assignment by a Lender to either an Eligible Assignee or any other Lender, each such assignment shall require the prior written consent of the Borrower (such consent not to be unreasonably withheld, conditioned or delayed; provided, however, that such consent shall not be required if an Event of Default or an Unmatured Event of Default has occurred and is continuing);

(ii) each such assignment shall be of a constant, and not a varying, percentage of all rights and obligations under this Agreement;

(iii) the amount being assigned pursuant to each such assignment (determined as of the date of the Assignment and Acceptance Agreement with respect to such assignment) shall in no event be less than the lesser of (x) \$5,000,000 and (y) all of the assigning Lender's Commitment; and

(iv) the parties to each such assignment shall execute and deliver to the Administrative Agent, for its acceptance and recording in the Register, an Assignment and Acceptance Agreement.

Upon such execution, delivery, acceptance and recording from and after the effective date specified in such Assignment and Acceptance Agreement, (x) the assignee thereunder shall be a party to this Agreement, and to the extent that rights and obligations under this Agreement have been assigned to it pursuant to such Assignment and Acceptance Agreement, have the rights and obligations of a Lender hereunder and (y) the assigning Lender shall, to the extent that rights and obligations have been assigned by it pursuant to such Assignment and Acceptance Agreement, relinquish such rights and be released from such obligations under this Agreement (and, in the case of an Assignment and Acceptance Agreement covering all or the remaining portion of an assigning Lender's rights and obligations under this Agreement, such Lender shall cease to be a party hereto).

(b) Register. The Administrative Agent shall, acting solely for this purpose as an agent of the Borrower, maintain at its address referred to on Schedule III of this Agreement (or such other address of the Administrative Agent notified by the Administrative Agent to the other parties hereto) a copy of each Assignment and Acceptance Agreement delivered to and accepted by it and a register for the recordation of the names and addresses of the Lenders, the Commitment of each Lender and the aggregate outstanding Capital (and stated interest) of the Loans of each Lender from time to time (the "Register"). The entries in the Register shall be conclusive and binding for all purposes, absent manifest error, and the Borrower, the Servicer,

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the Administrative Agent, and the other Credit Parties may treat each Person whose name is recorded in the Register as a Lender under this Agreement for all purposes of this Agreement. The Register shall be available for inspection by the Borrower, the LC Bank, or any Lender at any reasonable time and from time to time upon reasonable prior notice.

(c) Procedure. Upon its receipt of an Assignment and Acceptance Agreement executed and delivered by an assigning Lender and an Eligible Assignee or assignee Lender in accordance with Section 14.03(a), the Administrative Agent shall, if such Assignment and Acceptance Agreement has been duly completed, (i) accept such Assignment and Acceptance Agreement, (ii) record the information contained therein in the Register and (iii) give prompt notice thereof to the Borrower and the Servicer.

(d) Participations. Each Lender may sell participations to one or more Eligible Assignees (each, a “Participant”) in or to all or a portion of its rights and/or obligations under this Agreement (including, without limitation, all or a portion of its Commitment and the interests in the Loans owned by it); provided, however, that

(i) such Lender’s obligations under this Agreement (including, without limitation, its Commitment to the Borrower hereunder) shall remain unchanged, and

(ii) such Lender shall remain solely responsible to the other parties to this Agreement for the performance of such obligations.

The Administrative Agent, the LC Bank, the LC Participants, the Lenders, the Borrower and the Servicer shall have the right to continue to deal solely and directly with such Lender in connection with such Lender’s rights and obligations under this Agreement.

(e) Participant Register. Each Lender that sells a participation shall, acting solely for this purpose as an agent of the Borrower, maintain a register on which it enters the name and address of each Participant and the principal amounts (and stated interest) of each Participant’s interest in the Loans or other obligations under this Agreement (the “Participant Register”); provided that no Lender shall have any obligation to disclose all or any portion of the Participant Register (including the identity of any Participant or any information relating to a Participant’s interest in any Commitments, Loans, Letters of Credit or its other obligations under any this Agreement) to any Person except to the extent that such disclosure is necessary to establish that such Commitment, Loan, Letter of Credit or other obligation is in registered form under Section 5f.103-1(c) of the United States Treasury Regulations. The entries in the Participant Register shall be conclusive absent manifest error, and such Lender shall treat each Person whose name is recorded in the Participant Register as the owner of such participation for all purposes of this Agreement notwithstanding any notice to the contrary. For the avoidance of doubt, the Administrative Agent (in its capacity as Administrative Agent) shall have no responsibility for maintaining a Participant Register.

(f) Assignments by Administrative Agent. This Agreement and the rights and obligations of the Administrative Agent herein shall be assignable by the Administrative Agent and its successors and assigns; provided that in the case of an assignment to a Person that is

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neither an Affiliate of the Administrative Agent nor a Lender hereunder, so long as no Event of Default or Unmatured Event of Default has occurred and is continuing, such assignment shall require the Borrower’s consent (not to be unreasonably withheld, conditioned or delayed).

(g) Assignments by the Borrower or the Servicer. Neither the Borrower nor, except as provided in Section 9.01, the Servicer may assign any of its respective rights or obligations hereunder or any interest herein without the prior written consent of the Administrative Agent, the LC Bank and each Lender (such consent to be provided or withheld in the sole discretion of such Person).

(h) Addition of New Lenders and LC Participants. Subject to Section 2.02(c), the Borrower may, with the prior written consent of the Administrative Agent and the LC Bank, add additional Persons as Lenders and LC Participants. Each new Lender and LC Participant shall become a party hereto, by executing and delivering to the Administrative Agent, the LC Bank and the

Borrower, an assumption agreement (each, an “Assumption Agreement”) in the form of Exhibit C hereto.

(i) Pledge to a Federal Reserve Bank. Notwithstanding anything to the contrary set forth herein, (i) any Credit Party or any of their respective Affiliates may at any time pledge or grant a security interest in all or any portion of its interest in, to and under this Agreement (including, without limitation, rights to payment of Capital and Interest) and any other Transaction Document to secure its obligations to a Federal Reserve Bank, without notice to or the consent of the Borrower, the Servicer, any Affiliate thereof or any Credit Party; provided, however, that that no such pledge shall relieve such assignor of its obligations under this Agreement.

SECTION 14.04. Costs and Expenses. In addition to the rights of indemnification granted under Section 13.01 hereof and except as otherwise provided within this Agreement, the Borrower agrees to pay on demand all reasonable out-of-pocket costs and expenses in connection with the preparation, negotiation, execution, delivery and administration of this Agreement and the other Transaction Documents (together with all amendments, restatements, supplements, consents and waivers, if any, from time to time hereto and thereto), including, without limitation, (i) the reasonable Attorney Costs for the Administrative Agent and the other Credit Parties and any of their respective Affiliates with respect thereto and with respect to advising the Administrative Agent and the other Credit Parties and their respective Affiliates as to their rights and remedies under this Agreement and the other Transaction Documents and (ii) reasonable accountants', auditors' and consultants' fees and expenses for the Administrative Agent and the other Credit Parties and any of their respective Affiliates incurred in connection with the administration and maintenance of this Agreement or advising the Administrative Agent or any other Credit Party as to their rights and remedies under this Agreement or as to any actual or reasonably claimed breach of this Agreement or any other Transaction Document. In addition, the Borrower agrees to pay on demand all reasonable out-of-pocket costs and expenses (including reasonable Attorney Costs), of the Administrative Agent and the other Credit Parties and their respective Affiliates, incurred in connection with the enforcement of any of their respective rights or remedies under the provisions of this Agreement and the other Transaction Documents. Notwithstanding the foregoing, the Attorney Costs for preparation, negotiation, execution and delivery of this Agreement and the other Transaction Documents on and prior to

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the Closing Date shall be limited to the extent set forth in that certain letter agreement, dated September 11, 2014, by and between PNC Capital Markets LLC and Alliance Resource Partners, L.P.

SECTION 14.05. No Proceedings ~~No Proceedings~~. The Servicer hereby covenants and agrees that it will not institute against, or join any other Person in instituting against, the Borrower any Insolvency Proceeding until one year and one day after the Final Payout Date.

SECTION 14.06. Confidentiality.

(a) Each of the Borrower and the Servicer covenants and agrees to hold in confidence, and not disclose to any Person, either (i) the Fee Letter or any of the contents thereof or (ii) any fees, interest, costs or expenses paid or payable in connection with this Agreement or any other Transaction Document, except as the Administrative Agent and each Lender may have

consented to in writing prior to any proposed disclosure; provided, however, that it may disclose such information (i) to its Advisors and Representatives, (ii) to the extent such information has become available to the public other than as a result of a disclosure by or through the Borrower, the Servicer or their Advisors and Representatives or (iii) to the extent it or its Affiliates should be (A) required by Applicable Law, the rules of any securities exchange, or in connection with any legal or regulatory proceeding or (B) requested by any Governmental Authority to disclose such information; provided, that, in the case of clause (iii) above, the Borrower and the Servicer will use reasonable efforts to maintain confidentiality and will (unless otherwise prohibited by Applicable Law) notify the Administrative Agent and the affected Credit Party of its intention to make any such disclosure prior to making such disclosure. Each of the Borrower and the Servicer agrees to be responsible for any breach of this Section by its Representatives and Advisors and agrees that its Representatives and Advisors will be advised by it of the confidential nature of such information and shall agree to comply with this Section. Notwithstanding the foregoing, it is expressly agreed that each of the Borrower, the Servicer and their respective Affiliates may publish a press release or otherwise publicly announce, including by filing of this Agreement as an exhibit to registration statements and periodic reports filed with the SEC, the existence and principal amount of the Commitments under this Agreement and the transactions contemplated hereby. Notwithstanding the foregoing, the Borrower consents to the publication by the Administrative Agent or any other Credit Party of a tombstone or similar advertising material relating to the financing transactions contemplated by this Agreement.

(b) Each of the Administrative Agent and each other Credit Party, severally and with respect to itself only, agrees to hold in confidence, and not disclose to any Person, any confidential and proprietary information concerning the Borrower, the Servicer and their respective Affiliates and their businesses or the terms of this Agreement (including any fees payable in connection with this Agreement or the other Transaction Documents), except as the Borrower or the Servicer may have consented to in writing prior to any proposed disclosure; provided, however, that it may disclose such information (i) to its Advisors and Representatives, (ii) to its assignees and Participants and potential assignees and Participants and their respective counsel if they agree in writing to hold it confidential, (iii) to the extent such information has become available to the public other than as a result of a disclosure by or through it or its Representatives or Advisors, (iv) at the request of a bank examiner or other regulatory authority or in connection with an examination of any of the Administrative Agent or any Lender or their

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respective Affiliates or (v) to the extent it should be (A) required by Applicable Law, or in connection with any legal or regulatory proceeding or (B) requested by any Governmental Authority to disclose such information; provided, that, in the case of clause (v) above, the Administrative Agent and each Lender will use reasonable efforts to maintain confidentiality and will (unless otherwise prohibited by Applicable Law) notify the Borrower and the Servicer of its making any such disclosure as promptly as reasonably practicable thereafter. Each of the Administrative Agent and each Lender, severally and with respect to itself only, agrees to be responsible for any breach of this Section by its Representatives and Advisors and agrees that its Representatives and Advisors will be advised by it of the confidential nature of such information and shall agree to comply with this Section.

(c) As used in this Section, (i) “Advisors” means, with respect to any Person, such Person’s accountants, attorneys and other confidential advisors and (ii) “Representatives” means, with respect to any Person, such Person’s Affiliates, Subsidiaries, directors, managers, officers,

employees, members, investors, financing sources, insurers, professional advisors, representatives and agents; provided that such Persons shall not be deemed to be Representatives of a Person unless (and solely to the extent that) confidential information is furnished to such Person.

SECTION 14.07. GOVERNING LAW ~~GOVERNING LAW~~. THIS AGREEMENT, INCLUDING THE RIGHTS AND DUTIES OF THE PARTIES HERETO, SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK (INCLUDING SECTIONS 5-1401 AND 5-1402 OF THE GENERAL OBLIGATIONS LAW OF THE STATE OF NEW YORK, BUT WITHOUT REGARD TO ANY OTHER CONFLICTS OF LAW PROVISIONS THEREOF, EXCEPT TO THE EXTENT THAT THE PERFECTION, THE EFFECT OF PERFECTION OR PRIORITY OF THE INTERESTS OF ADMINISTRATIVE AGENT OR ANY LENDER IN THE COLLATERAL IS GOVERNED BY THE LAWS OF A JURISDICTION OTHER THAN THE STATE OF NEW YORK).

SECTION 14.08. Execution in Counterparts. This Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and all of which when taken together shall constitute one and the same agreement. Delivery of an executed counterpart hereof by facsimile or other electronic means shall be equally effective as delivery of an originally executed counterpart.

SECTION 14.09. Integration; Binding Effect; Survival of Termination. This Agreement and the other Transaction Documents contain the final and complete integration of all prior expressions by the parties hereto with respect to the subject matter hereof and shall constitute the entire agreement among the parties hereto with respect to the subject matter hereof superseding all prior oral or written understandings. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns. This Agreement shall create and constitute the continuing obligations of the parties hereto in accordance with its terms and shall remain in full force and effect until the Final Payout Date; provided, however, that the provisions of Sections 3.08, 3.09, 3.10, 5.01, 5.02, 5.03, 11.04,

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11.06, 13.01, 13.02, 14.04, 14.05, 14.06, 14.09, 14.10, and 14.12 shall survive any termination of this Agreement.

SECTION 14.10. CONSENT TO JURISDICTION. (a) EACH PARTY HERETO HEREBY IRREVOCABLY SUBMITS TO (I) WITH RESPECT TO THE BORROWER AND THE SERVICER, THE EXCLUSIVE JURISDICTION, AND (II) WITH RESPECT TO EACH OF THE OTHER PARTIES HERETO, THE NON-EXCLUSIVE JURISDICTION, IN EACH CASE, OF ANY NEW YORK STATE OR FEDERAL COURT SITTING IN NEW YORK CITY, NEW YORK IN ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT, AND EACH PARTY HERETO HEREBY IRREVOCABLY AGREES THAT ALL CLAIMS IN RESPECT OF SUCH ACTION OR PROCEEDING (I) IF BROUGHT BY THE BORROWER, THE SERVICER OR ANY AFFILIATE THEREOF, SHALL BE HEARD AND DETERMINED, AND (II) IF BROUGHT BY ANY OTHER PARTY TO THIS AGREEMENT, MAY BE HEARD AND DETERMINED, IN EACH CASE, IN SUCH NEW YORK STATE COURT OR, TO THE EXTENT PERMITTED BY LAW, IN SUCH FEDERAL COURT. NOTHING IN THIS SECTION 14.10 SHALL AFFECT THE RIGHT OF THE ADMINISTRATIVE AGENT OR ANY OTHER CREDIT PARTY TO BRING ANY ACTION OR

PROCEEDING AGAINST THE BORROWER OR THE SERVICER OR ANY OF THEIR RESPECTIVE PROPERTY IN THE COURTS OF OTHER JURISDICTIONS. EACH OF THE BORROWER AND THE SERVICER HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT IT MAY EFFECTIVELY DO SO, THE DEFENSE OF AN INCONVENIENT FORUM TO THE MAINTENANCE OF SUCH ACTION OR PROCEEDING. THE PARTIES HERETO AGREE THAT A FINAL JUDGMENT IN ANY SUCH ACTION OR PROCEEDING SHALL BE CONCLUSIVE AND MAY BE ENFORCED IN OTHER JURISDICTIONS BY SUIT ON THE JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY LAW.

(b) EACH OF THE BORROWER AND THE SERVICER CONSENTS TO THE SERVICE OF ANY AND ALL PROCESS IN ANY SUCH ACTION OR PROCEEDING BY THE MAILING OF COPIES OF SUCH PROCESS TO IT AT ITS ADDRESS SPECIFIED IN SECTION 9.14.02. NOTHING IN THIS Section Headings SECTION 14.10 SHALL AFFECT THE RIGHT OF THE ADMINISTRATIVE AGENT OR ANY OTHER CREDIT PARTY TO SERVE LEGAL PROCESS IN ANY OTHER MANNER PERMITTED BY LAW.

SECTION 14.11. WAIVER OF JURY TRIAL. EACH PARTY HERETO HEREBY WAIVES, TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, TRIAL BY JURY IN ANY JUDICIAL PROCEEDING INVOLVING, DIRECTLY OR INDIRECTLY, ANY MATTER (WHETHER SOUNDING IN TORT, CONTRACT OR OTHERWISE) IN ANY WAY ARISING OUT OF, RELATED TO, OR CONNECTED WITH THIS AGREEMENT OR ANY OTHER TRANSACTION DOCUMENT.

SECTION 14.12. ~~Ratable Payments~~ ~~Ratable Payments~~. If any Credit Party, whether by setoff or otherwise, has payment made to it with respect to any Borrower Obligations in a greater proportion than that received by any other Credit Party entitled to receive a ratable share of such Borrower Obligations, such Credit Party agrees, promptly upon demand, to purchase for cash without recourse or warranty a portion of such Borrower Obligations held by the other Credit Parties so that after such purchase each Credit Party will hold its ratable proportion of such

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Borrower Obligations; provided that if all or any portion of such excess amount is thereafter recovered from such Credit Party, such purchase shall be rescinded and the purchase price restored to the extent of such recovery, but without interest.

SECTION 14.13. ~~Limitation of Liability~~.

(a) No claim may be made by the Borrower or any Affiliate thereof or any other Person against any Credit Party or their respective Affiliates, members, directors, officers, employees, incorporators, attorneys or agents for any special, indirect, consequential or punitive damages in respect of any claim for breach of contract or any other theory of liability arising out of or related to the transactions contemplated by this Agreement or any other Transaction Document, or any act, omission or event occurring in connection herewith or therewith; and each of the Borrower and the Servicer hereby waives, releases, and agrees not to sue upon any claim for any such damages, whether or not accrued and whether or not known or suspected to exist in its favor. None of the Credit Parties and their respective Affiliates shall have any liability to the Borrower or any Affiliate thereof or any other Person asserting claims on behalf of or in right of the Borrower or any Affiliate thereof in connection with or as a result of this Agreement or any other Transaction Document or the transactions contemplated hereby or thereby, except to the extent that any losses,

claims, damages, liabilities or expenses incurred by the Borrower or any Affiliate thereof result from the breach of contract, gross negligence or willful misconduct of such Credit Party in performing its duties and obligations hereunder and under the other Transaction Documents to which it is a party.

(b) The obligations of the Administrative Agent and each of the other Credit Parties under this Agreement and each of the Transaction Documents are solely the corporate obligations of such Person. No recourse shall be had for any obligation or claim arising out of or based upon this Agreement or any other Transaction Document against any member, director, officer, employee or incorporator of any such Person.

SECTION 14.14. Intent of the Parties ~~Intent of the Parties~~. The Borrower has structured this Agreement with the intention that the Loans and the obligations of the Borrower hereunder will be treated under United States federal, and applicable state, local and foreign tax law as debt (the "Intended Tax Treatment"). The Borrower, the Servicer, the Administrative Agent and the other Credit Parties agree to file no tax return, or take any action, inconsistent with the Intended Tax Treatment unless required by law. Each assignee and each Participant acquiring an interest in a Credit Extension, by its acceptance of such assignment or participation, agrees to comply with the immediately preceding sentence.

SECTION 14.15. USA Patriot Act. Each of the Administrative Agent and each of the other Credit Parties hereby notifies the Borrower and the Servicer that pursuant to the requirements of the USA PATRIOT Act, Title III of Pub. L. 107-56 (signed into law October 26, 2001) (the "PATRIOT Act"), the Administrative Agent and the other Credit Parties may be required to obtain, verify and record information that identifies the Borrower, the Transferor, the Originators, the Servicer and the Performance Guarantor, which information includes the name, address, tax identification number and other information regarding the Borrower, the Transferor, the Originators, the Servicer and the Performance Guarantor that will allow the Administrative Agent and the other Credit Parties to identify the Borrower, the Transferor, the Originators, the

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Servicer and the Performance Guarantor in accordance with the PATRIOT Act. This notice is given in accordance with the requirements of the PATRIOT Act. Each of the Borrower and the Servicer agrees to provide the Administrative Agent and each other Credit Parties, from time to time, with all documentation and other information required by bank regulatory authorities under "know your customer" and anti-money laundering rules and regulations, including, without limitation, the PATRIOT Act.

SECTION 14.16. Right of Setoff. Each Credit Party is hereby authorized (in addition to any other rights it may have), at any time during the continuance of an Event of Default, to setoff, appropriate and apply (without presentment, demand, protest or other notice which are hereby expressly waived) any deposits and any other indebtedness held or owing by such Credit Party (including by any branches or agencies of such Credit Party) to, or for the account of, the Borrower against amounts owing by the Borrower hereunder or to, or for the account of, the Servicer against amounts owing by the Servicer hereunder; provided that such Credit Party shall notify the Borrower or the Servicer, as applicable, promptly following such setoff.

SECTION 14.17. Severability ~~Severability~~. Any provisions of this Agreement which are prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent

of such prohibition or unenforceability without invalidating the remaining provisions hereof, and any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction.

SECTION 14.18. Mutual Negotiations ~~Mutual Negotiations~~. This Agreement and the other Transaction Documents are the product of mutual negotiations by the parties thereto and their counsel, and no party shall be deemed the draftsman of this Agreement or any other Transaction Document or any provision hereof or thereof or to have provided the same. Accordingly, in the event of any inconsistency or ambiguity of any provision of this Agreement or any other Transaction Document, such inconsistency or ambiguity shall not be interpreted against any party because of such party's involvement in the drafting thereof.

SECTION 14.19. Captions and Cross References. The various headings captions (including the table of contents) in this ~~Amendment~~ Agreement are ~~included~~ provided solely for convenience only of reference and shall not affect the meaning or interpretation of ~~this Amendment, the Receivables Financing Agreement or any provision hereof~~ of this Agreement. Unless otherwise indicated, references in this Agreement to any Section, Schedule or ~~thereof~~ Exhibit are to such Section Schedule or Exhibit to this Agreement, as the case may be, and references in any Section, subsection, or clause to any subsection, clause or subclause are to such subsection, clause or subclause of such Section, subsection or clause.

SECTION 14.20. Structuring Agent ~~Structuring Agent~~. Each of the parties hereto hereby acknowledges and agrees that the Structuring Agent shall not have any right, power, obligation, liability, responsibility or duty under this Agreement, other than the Structuring Agent's right to receive fees pursuant to Section ~~2.09~~ 2.03. Each party acknowledges that it has not relied, and will not rely, on the Structuring Agent in deciding to enter into this Agreement and to take, or omit to take, any action under the Transaction Documents.

[SIGNATURE PAGES FOLLOW] Signature Pages Follow]

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IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their respective officers thereunto duly authorized, as of the date first above written.

AROP FUNDING, LLC

By: _____
Name: R. Eberley Davis
Title: Senior Vice President, General Counsel and Secretary

ALLIANCE COAL, LLC,
as the Servicer

By: _____

Name: R. Eberley Davis
Title: Senior Vice President, General Counsel and Secretary

S-1 Receivables Financing Agreement

PNC BANK, NATIONAL ASSOCIATION,
as Administrative Agent

By: _____
Name: _____
Title: _____

PNC BANK, NATIONAL ASSOCIATION,
as LC Bank and as an LC Participant

By: _____
Name: _____
Title: _____

PNC BANK, NATIONAL ASSOCIATION,
as a Lender

By: _____
Name: _____
Title: _____

S-2 Receivables Financing Agreement

PNC CAPITAL MARKETS LLC,
as Structuring Agent

By: _____
Name: _____
Title: _____

S-3

Receivables Financing Agreement

EXHIBIT A
Form of [Loan Request] [LC Request]

[Letterhead of Borrower]

[Date]

[Administrative Agent]

Re: [Loan Request] [LC Request]

Ladies and Gentlemen:

Reference is hereby made to that certain Receivables Financing Agreement, dated as of December 5, 2014 among AROP Funding, LLC (the "Borrower"), Alliance Coal, LLC, as Servicer (the "Servicer"), the Lenders party thereto, the LC Participants party thereto and PNC Bank, National Association, as Administrative Agent (in such capacity, the "Administrative Agent") and as the LC Bank (as amended, supplemented or otherwise modified from time to time, the "Agreement"). Capitalized terms used in this [Loan Request] [LC Request] and not otherwise defined herein shall have the meanings assigned thereto in the Agreement.

[This letter constitutes a Loan Request pursuant to Section 2.02(a) of the Agreement. The Borrower hereby request a Loan in the amount of [\$_____] to be made on [_____, 20__] (of which \$[_____] will be funded by PNC and \$[_____] will be funded by the [_____]. The proceeds of such Loan should be deposited to [Account number], at [Name, Address and ABA Number of Bank]. After giving effect to such Loan, the Aggregate Capital will be [\$_____.]

[This letter constitutes an LC Request pursuant to Section 3.02(a) of the Agreement. The Borrower hereby request that the LC Bank issue a Letter of Credit with a face amount of [\$_____] on [_____, 20__]. After giving effect to such issuance, the LC Participation Amount will be [\$_____].

The Borrower hereby represents and warrants as of the date hereof, and after giving effect to such Credit Extension, as follows:

(i) the representations and warranties of the Borrower and the Servicer contained in Sections 7.01 and 7.02 of the Agreement are true and correct in all material respects on and as of the date of such Credit Extension as though made on and as of such date unless such representations and warranties by their terms refer to an earlier date, in which case they shall be true and correct in all material respects on and as of such earlier date;

(ii) no Event of Default or Unmatured Event of Default has occurred and is continuing, and no Event of Default or Unmatured Event of Default would result from such Credit Extension;

Exhibit A-1

(iii)no Borrowing Base Deficit exists or would exist after giving effect to such Credit Extension; and

(iv)the Termination Date has not occurred.

IN WITNESS WHEREOF, the undersigned has executed this letter by its duly authorized officer as of the date first above written.

Very truly yours,

AROP FUNDING, LLC

By: _____
Name: _____
Title: _____

EXHIBIT B

Form of Assignment and Acceptance Agreement

Dated as of _____, 20__

Section 1.

Commitment assigned:	\$()
Assignor's remaining Commitment:	\$()
Capital allocable to Commitment assigned:	\$()
Assignor's remaining Capital:	\$()
Interest (if any) allocable to Capital assigned:	\$()
Interest (if any) allocable to Assignor's remaining Capital:	\$()

Section 2.

Effective Date of this Assignment and Acceptance Agreement: []

Upon execution and delivery of this Assignment and Acceptance Agreement by the assignee and the assignor and the satisfaction of the other conditions to assignment specified in Section 14.03(b) of the Agreement (as defined below), from and after the effective date specified above, the assignee shall become a party to, and, to the extent of the rights and obligations thereunder being assigned to it pursuant to this Assignment and Acceptance Agreement, shall have the rights and obligations of a Lender under that certain Receivables Financing Agreement, dated as of December 5, 2014 among AROP Funding, LLC, Alliance Coal, LLC, as Servicer, the Lenders party thereto, the LC Participants party thereto and PNC Bank, National Association, as Administrative Agent and as the LC Bank (as amended, supplemented or otherwise modified from time to time, the "Agreement").

(Signature Pages Follow)

Exhibit B-1

ASSIGNOR:

□

By:

Name:

Title

ASSIGNEE:

□

By:

Name:

Title:

[Address]

Accepted as of date first above
written:

PNC BANK, NATIONAL ASSOCIATION,
as Administrative Agent

By:

Name:

Title:

AROP FUNDING, LLC,
as Borrower

By: _____
Name: _____
Title: _____

Exhibit B-2

EXHIBIT C
Form of Assumption Agreement

THIS ASSUMPTION AGREEMENT (this "Agreement"), dated as of [], is between AROP FUNDING, LLC (the "Borrower") and [], as lender (the "Lender").

BACKGROUND

The Borrower and various others are parties to a certain Receivables Financing Agreement, dated as of December 5, 2014 (as amended through the date hereof and as the same may be amended, amended and restated, supplemented or otherwise modified from time to time, the "Receivables Financing Agreement"). Capitalized terms used and not otherwise defined herein have the respective meaning assigned to such terms in the Receivables Financing Agreement.

NOW, THEREFORE, the parties hereto hereby agree as follows:

SECTION 1. This letter constitutes an Assumption Agreement pursuant to Section 14.03(h) of the Receivables Financing Agreement. The Borrower desires the Lender to [become a party to] [increase its existing Commitment under] the Receivables Financing Agreement, and upon the terms and subject to the conditions set forth in the Receivables Financing Agreement, the [] Lenders] agree[s] to [become Lenders thereunder] [increase its Commitment to the amount set forth as its "Commitment" under the signature of such [] Lender hereto].

The Borrower hereby represents and warrants to the [] Lenders and the [] Administrative Agent as of the date hereof, as follows:

(i) the representations and warranties of the Borrower contained in Section 7.01 of the Receivables Financing Agreement are true and correct in all material respects on and as of such date as though made on and as of such date;

(ii) no Event of Default or Unmatured Event of Default has occurred and is continuing, or would result from the assumption contemplated hereby; and

(iii) the Termination Date shall not have occurred.

SECTION 2. Upon execution and delivery of this Agreement by the Borrower and [] (including the written consent of the Administrative Agent and the LC Bank) and receipt by the Administrative Agent of counterparts of this Agreement (whether by facsimile or otherwise) executed by each of the parties hereto, [the [] Lender shall become a party to, and have the rights and obligations of a Lender under, the Receivables Financing Agreement and a "Commitment" as shall be as set forth under the signature of each such Lender hereto].

SECTION 3. THIS AGREEMENT, INCLUDING THE RIGHTS AND DUTIES OF THE PARTIES HERETO, SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK (INCLUDING SECTIONS 5-1401 AND 5-1402 OF THE GENERAL OBLIGATIONS LAW OF THE STATE

Exhibit C-1

OF NEW YORK, BUT WITHOUT REGARD TO ANY OTHER CONFLICTS OF LAW PROVISIONS THEREOF. This Agreement may not be amended or supplemented except pursuant to a writing signed by each of the parties hereto and may not be waived except pursuant to a writing signed by the party to be charged. This Agreement may be executed in counterparts, and by the different parties on different counterparts, each of which shall constitute an original, but all together shall constitute one and the same agreement.

(Signature Pages Follow)

Exhibit C-2

IN WITNESS WHEREOF, the parties hereto have executed this Amendment Agreement by their duly authorized officers as of the date first above written.

AROP FUNDING, LLC

By: _____
Name: Cary P.
Marshall Name
Printed: _____
Title: Vice
President –
Corporate
Finance and
Treasurer _____

[], as a Lender

By: _____
Name: Cary P.
Marshall Name
Printed: _____

Title: Vice
President –
Corporate
Finance and
Treasurer

[Address]

Eleventh Amendment to Receivables Financing Agreement Exhibit C-3

EXHIBIT D

Form of Letter of Credit Application

(Attached)

Exhibit D-1

EXHIBIT E

Credit and Collection Policy

(Attached)

Exhibit E-1

EXHIBIT F

Form of Information Package

(Attached)

Exhibit F

EXHIBIT G

Form of Compliance Certificate

To: PNC Bank, National Association, as Administrative Agent

This Compliance Certificate is furnished pursuant to Section 8.02(a)(i) of that certain Receivables Financing Agreement, dated as of December 5, 2014 among AROP Funding, LLC (the "Borrower"), Alliance Coal, LLC, as Servicer (the "Servicer"), the Lenders party thereto, the LC Participants party thereto and PNC Bank, National Association, as Administrative Agent (in such capacity, the "Administrative Agent") and as the LC Bank (as amended, supplemented or otherwise modified from time to time, the "Agreement"). Capitalized terms used herein and not otherwise defined herein shall have the meanings assigned to them in the Agreement.

THE UNDERSIGNED HEREBY CERTIFIES THAT:

1. I am the duly elected _____ of the Servicer.
2. I have reviewed the terms of the Agreement and each of the other Transaction Documents and I have made, or have caused to be made under my supervision, a detailed review of the transactions and condition of the Borrower during the accounting period covered by the attached financial statements.
3. The examinations described in paragraph 2 above did not disclose, and I have no knowledge of, the existence of any condition or event which constitutes an Event of Default or an Unmatured Event of Default, as each such term is defined under the Agreement, during or at the end of the accounting period covered by the attached financial statements or as of the date of this Certificate[, except as set forth in paragraph 5 below].
4. Schedule I attached hereto sets forth financial statements of the Parent and its Subsidiaries for the period referenced on such Schedule I.
- [5. Described below are the exceptions, if any, to paragraph 3 above by listing, in detail, the nature of the condition or event, the period during which it has existed and the action which Borrower has taken, is taking, or proposes to take with respect to each such condition or event:]

Exhibit G-1

The foregoing certifications are made and delivered this _____ day of _____, 20__.

ALLIANCE COAL, LLC

By:

Name: Deric Bradford
Title: Senior Vice President

/s/ DERIC
BRADFORD

Name: PNC BANK, NATIONAL ASSOCIATION,
as LC Bank and as an LC Participant

Title: By: /s/ DERIC BRADFORD
Name: Deric Bradford
Title: Senior Vice President

PNC BANK, NATIONAL ASSOCIATION,
as a Lender
By: /s/ DERIC BRADFORD
Name: Deric Bradford
Title: Senior Vice President

Eleventh Amendment to Receivables Financing Agreement Exhibit G-2

SCHEDULE I TO COMPLIANCE CERTIFICATE

A. Schedule of Compliance as of _____, 20__ with Section 8.02(a) of the Agreement. Unless otherwise defined herein, the terms used in this Compliance Certificate have the meanings ascribed thereto in the Agreement.

This schedule relates to the month ended: _____.

B. The following financial statements of the Parent and its Subsidiaries for the period ending on _____, 20__, are attached hereto:

Exhibit G-3

EXHIBIT H Closing Memorandum

(Attached)

Exhibit H

EXHIBIT I-1
Weekly Report

Exhibit I-1

EXHIBIT I-2
Daily Report

Exhibit I-2

SCHEDULE I
Commitments

Party	PNC CAPITAL MARKETS LLC, as a Structuring AgentCapacity	Commitment
PNC	Lender	\$60,000,00090,000,000
PNC	By: LC Participant	/s/ DERIC BRADFORD\$60,000,00090,000,000
PNC	Name: Deric Bradford	
	Title: Managing Director\$60,000,00090,000,000	

Eleventh Amendment Schedule I-1

SCHEDULE II
Lock-Boxes, Lock-Box Accounts and Lock-Box Banks

Lock-Box Bank	Lock-Box	Lock-Box Account
Fifth Third Bank	633905	07021290650

Exhibit II-2

SCHEDULE III
Notice Addresses

(A) in the case of the Borrower, at the following address:

1717 South Boulder Avenue
Tulsa, Oklahoma 74119
Facsimile: 918-295-7361
Attn: Cary P. Marshall

with a copy to:

1146 Monarch St.
Lexington, Kentucky 40513
Facsimile: 859-223-3057
Attn: R. Eberley Davis

(B) in the case of the Servicer, at the following address:

1717 South Boulder Avenue
Tulsa, Oklahoma 74119
Facsimile: 918-295-7361
Attn: Cary P. Marshall

with a copy to:

1146 Monarch St.
Lexington, Kentucky 40513
Facsimile: 859-223-3057
Attn: R. Eberley Davis

(C) in the case of the Administrative Agent, at the following address:

PNC Bank, National Association
The Tower at PNC Plaza
300 Fifth Avenue, 11th Floor
Pittsburgh, PA 15222
Attention: Brian Stanley
Telephone: 412-768-2001
Facsimile: 412-803-7142
Email: brian.stanley@pnc.com
ABFAdmin@pnc.com

(D) in the case of the LC Bank, at the following address:

PNC Bank, National Association

Schedule III-1

The Tower at PNC Plaza
300 Fifth Avenue, 11th Floor
Pittsburgh, PA 15222
Attention: Brian Stanley

Telephone: 412-768-2001
Facsimile: 412-803-7142
Email: brian.stanley@pnc.com
ABFAdmin@pnc.com

(E) in the case of any other Person, at the address for such Person specified in the other Transaction Documents; in each case, or at such other address as shall be designated by such Person in a written notice to the other parties to this Agreement.

Exhibit III-2

SCHEDULE IV

Excluded Receivables Financing Agreement

LOCATION OF MINING OPERATIONS

MINEHEAD	STATE	COUNTY
MC Mining	KY	Pike

Schedule IV-1

SCHEDULE V

Mining Location

[Separately Provided]

Schedule V-1

SCHEDULE VI

Excluded Calculation Obligor and Excluded Calculation Obligor Ineligibility Period

Excluded Calculation Obligor	Excluded Calculation Obligor Ineligibility Period
Reliance Bulk Trading DMCC or any Affiliate thereof	On and after April 20, 2023

Xcoal Energy & Resources LLC or any Affiliate thereof	On or after October 22, 2019

Schedule VI-1

EXHIBIT 21.1

LIST OF SUBSIDIARIES

First Tier Subsidiary:

Alliance Holdings GP, L.P. ("AHGP") (100% limited partnership interest)

Alliance Resource Operating Partners, L.P. ("AROP") (98.9899% limited partner interest)

AllRoy GP, LLC ("AllRoy") (100% membership interest)

New AHGP GP, LLC (100% membership interest)

Second Tier Subsidiaries:

AD Minerals III, LP (AllRoy holds a 100% general partner interest)

AllDale Minerals, LP (AllRoy holds a 0.01% general partner interest; Alliance Royalty holds a 28.33% limited partner interest; Cavalier holds a 71.66% limited partner interest)

AllDale Minerals II, LP (AllRoy holds a 0.01% general partner interest; Alliance Royalty holds a 27.18% limited partner interest; Cavalier holds a 72.81% limited partner interest)

Alliance Coal, LLC ("Alliance Coal") (AROP holds a 99.999% non-managing membership interest)

Alliance Minerals, LLC ("Alliance Minerals") (AROP holds a 100% membership interest)

Alliance Resource Finance Corporation ("Alliance Finance") (AROP holds a 100% membership interest)

Alliance Resource Properties, LLC ("Alliance Resource Properties") (AROP holds a 100% membership interest)

AR Midland, LP (AllRoy holds a 0.01% general partner interest; Alliance Royalty holds a 99.99% limited partner interest)

ARM GP Holdings, Inc. (AHGP holds 100% of the outstanding capital stock)

AROP Funding, LLC (AROP holds a 100% membership interest)

AROP II, LLC (AROP holds a 100% membership interest)

CavMM, LLC (AllRoy holds a 100% membership interest)

MGP II, LLC (AHGP holds 99.999% interest; ARM GP Holdings, Inc. holds 0.001% interest)

UC Coal, LLC ("UC Coal") (AROP holds a 100% membership interest)

Wildcat Insurance, LLC (AROP holds a 100% membership interest)

Third Tier Subsidiaries:

(Alliance Coal holds a 100% membership interest in each of the following third-tier subsidiaries)

Alliance Design Group, LLC

Alliance Land, LLC

Backbone Mountain, LLC

CR Services, LLC
Excel Mining, LLC
Gibson County Coal, LLC
Hamilton County Coal, LLC
Hopkins County Coal, LLC
MC Mining, LLC
Mettiki Coal, LLC
Mettiki Coal (WV), LLC
Mid-America Carbonates, LLC
Mt. Vernon Transfer Terminal, LLC
Penn Ridge Coal, LLC

Pontiki Coal, LLC
River View Coal, LLC
Rough Creek Mining, LLC
Sebree Mining, LLC
Steamport, LLC
Tunnel Ridge, LLC
Warrior Coal, LLC
Webster County Coal, LLC
White County Coal, LLC

Cavalier Minerals JV, LLC (CavMM holds a 0% managing interest; Alliance Minerals holds a 96% non-managing interest)

Alliance Royalty, LLC ("Alliance Royalty") (Alliance Minerals holds a 100% membership interest)

(Alliance Resource Properties holds a 100% membership interest in each of the following third-tier subsidiaries)

ARP Sebree, LLC
ARP Sebree South, LLC
Alliance WOR Properties, LLC

AROP II Investments, LLC (AROP II, LLC holds a 100% interest)

(UC Coal holds a 100% membership interest in each of the following third-tier subsidiaries)

UC Mining, LLC
UC Processing, LLC

Fourth Tier Subsidiaries:

Alliance Service, Inc. (AROP II Investments, LLC holds 100% of the outstanding capital stock)

Bitiki-KY, LLC (AROP II Investments, LLC holds a 100% interest)
CR Machine Shop, LLC (CR Services, LLC holds a 100% interest)
WOR Land 6, LLC (Alliance WOR Properties, LLC holds a 100% interest)

Fifth Tier Subsidiary:

Matrix Design Group, LLC (Alliance Service, Inc. holds a 100% interest)

Sixth Tier Subsidiary:

Matrix Design International, LLC (Matrix Design Group, LLC holds a 100% interest)

Seventh Tier Subsidiaries:

Matrix Design Africa (PTY) LTD (Matrix Design International, LLC holds a 100% interest)

Matrix Design (Australia) PTY LTD (Matrix Design International, LLC holds a 100% interest)

All of the above entities are formed or incorporated, as the case may be, under the laws of the State of Delaware except for the following which are formed or incorporated in the following jurisdictions:

Wildcat Insurance, LLC – Oklahoma
Steamport, LLC – Kentucky
Matrix Design Africa (PTY) LTD – South Africa
Matrix Design (Australia) PTY LTD – Australia
AllDale Minerals, LP – Texas
AllDale Minerals II, LP – Texas

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our reports dated February 24, 2023 February 23, 2024, with respect to the consolidated financial statements and internal control over financial reporting included in the Annual Report of Alliance Resource Partners, L.P. on Form 10-K for the year ended December 31, 2022 December 31, 2023. We consent to the incorporation by reference of said reports in the Registration Statements of Alliance Resource Partners, L.P. on Form S-3 (File No. 333-263016) and Forms S-8 (File No. 333-269997, File No. 333-165168 and File No. 333-85258).

/s/ GRANT THORNTON LLP

Tulsa, Oklahoma
February 24, 2023 23, 2024

Exhibit 23.2

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement (Form S-3 No. 333-263016) of Alliance Resource Partners, L.P.,
- (2) Registration Statement (Form S-8 No. 333-165168) pertaining to the 2000 Long-Term Incentive Plan of Alliance Coal, LLC, and
- (3) Registration Statement (Form S-8 No. 333-85258) pertaining to the Alliance Resource Management GP, LLC Long-Term Incentive Plan, the Supplemental Executive Retirement Plan and the Deferred Compensation Plan for Directors;

of our report dated February 23, 2021, except for Note 25, as to which the date is February 25, 2022, with respect to the consolidated financial statements and schedule of Alliance Resource Partners, L.P. included in this Annual Report (Form 10-K) of Alliance Resource Partners, L.P. for the year ended December 31, 2022.

/s/ Ernst & Young LLP

Tulsa, Oklahoma
February 24, 2023

Exhibit 23.3



CONSENT OF INDEPENDENT PETROLEUM ENGINEERS AND GEOLOGISTS

Netherland, Sewell Cawley, Gillespie & Associates, Inc. has issued an audit letter, as of December 31, 2022 December 31, 2023, of the Alliance Royalty, LLC estimates of reserves and future revenue in certain oil and gas properties located in the United States. Netherland, Sewell Cawley, Gillespie & Associates, Inc. consents to the reference in Form 10-K to Netherland, Sewell Cawley, Gillespie & Associates, Inc.'s audit letter dated January 5, 2023 December 7, 2023, and to the incorporation by reference of our Firm's name and letter into Alliance's previously filed Registration Statements on Form S-3 (No. 333-263016) and Form S-8 (File No. 333-269997, 333-165168 and 333-85258).

NETHERLAND, SEWELL CAWLEY, GILLESPIE & ASSOCIATES, INC.

By: /s/ Eric J. Stevens Jonathan Schmit
Eric J. Stevens, P.E. Jonathan Schmit
President and Chief Operating Officer Sr.
Engineer/Owner

Dallas, Fort Worth Texas

CERTIFICATION

I, Joseph W. Craft III certify that:

1. I have reviewed this Annual Report on Form 10-K of Alliance Resource Partners, L.P.;
2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and we have:
 - a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
 - b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusion about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual report based on such evaluation; and
 - d. disclosed in this annual report any change in the registrant's internal control over financial reporting that occurred during the quarterly period ended December 31, 2022 December 31, 2023, that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting;
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 24, 2023 February 23, 2024

/s/ Joseph W. Craft III

Joseph W. Craft III

President, Chief Executive

Officer and Chairman

CERTIFICATION

I, **Brian L. Cantrell**, **Cary P. Marshall**, certify that:

1. I have reviewed this Annual Report on Form 10-K of Alliance Resource Partners, L.P.;
2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and we have:
 - a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
 - b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusion about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual report based on such evaluation; and
 - d. disclosed in this annual report any change in the registrant's internal control over financial reporting that occurred during the quarterly period ended **December 31, 2022** **December 31, 2023**, that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting;
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: **February 24, 2023** **February 23, 2024**

/s/ **Brian L. Cantrell** **Cary P. Marshall**

Brian L. Cantrell **Cary P. Marshall**

Senior Vice President and

Chief Financial Officer

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Alliance Resource Partners, L.P. (the "Partnership") on Form 10-K for the year ended **December 31, 2022** **December 31, 2023** as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Joseph W. Craft III, President and Chief Executive Officer of Alliance Resource Management GP, LLC, the general partner of the Partnership, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Partnership.

By: /s/ Joseph W. Craft III
Joseph W. Craft III
*President, Chief Executive Officer and
Chairman
of Alliance Resource Management GP, LLC
(the general partner of Alliance Resource
Partners, L.P.)*

Date: **February 24, 2023** **February 23, 2024**

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate document. A signed original of this written statement required by Section 906 has been provided to the Partnership and will be retained by the Partnership and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

CERTIFICATION PURSUANT TO

18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Alliance Resource Partners, L.P. (the "Partnership") on Form 10-K for the year ended **December 31, 2022** **December 31, 2023** as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, **Brian L. Cantrell**, **Cary P. Marshall**, Senior Vice President and Chief Financial Officer of Alliance Resource Management GP, LLC, the general partner of the Partnership, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Partnership.

By: **/s/ Brian L. Cantrell** **Cary P. Marshall**

Brian L. Cantrell **Cary P. Marshall**

*Senior Vice President and
Chief Financial Officer
of Alliance Resource Management
GP, LLC
(the general partner of Alliance
Resource Partners, L.P.)*

Date: **February 24, 2023** **February 23, 2024**

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate document. A signed original of this written statement required by Section 906 has been provided to the Partnership and will be retained by the Partnership and furnished to the Securities and Exchange Commission or its staff upon request.

EXHIBIT 95.1

Federal Mine Safety and Health Act Information

Our mining operations are subject to extensive and stringent compliance standards established pursuant to the Federal Mine Safety and Health Act of 1977, as amended by the Federal Mine Improvement and New Emergency Response Act of 2006 (as amended, the "Mine Act"). MSHA monitors and rigorously enforces compliance with these standards, and our mining operations are inspected frequently. Citations and orders are issued by MSHA under Section 104 of the Mine Act for violations of the Mine Act or any mandatory health or safety standard, rule, order or regulation promulgated under the Mine Act. A Section 104(a) "Significant and Substantial" or "S&S" citation is generally issued in a situation where the conditions created by the violation do not

cause imminent danger, but in the opinion of the MSHA inspector could significantly and substantially contribute to the cause and effect of a mine safety or health hazard. During 2022, 2023, our mines were subject to 5,573 5,661 MSHA inspection days with an average of only 0.08 S&S citations written per inspection day.

The Mine Act has been construed as authorizing MSHA to issue citations and orders pursuant to the legal doctrine of strict liability, or liability without regard to fault. If, in the opinion of an MSHA inspector, a condition exists that violates the Mine Act or regulations promulgated thereunder, then a citation or order will be issued regardless of whether we had any knowledge of, or fault in, the existence of that condition. Many of the Mine Act standards include one or more subjective elements, so that issuance of a citation often depends on the opinions or experience of the MSHA inspector involved and the frequency of citations will vary from inspector to inspector.

If we disagree with the assertions of an MSHA inspector, we may exercise our right to challenge those findings by "contesting" the citation or order pursuant to the procedures established by the Mine Act and its regulations. During 2022, 2023, our operating subsidiaries contested approximately 4.6% 7.1% of all citations and 17.7% 23.5% of S&S citations issued by MSHA inspectors. These contest proceedings frequently result in the dismissal or modification of previously issued citations, substantial reductions in the penalty amounts originally assessed by MSHA, or both.

The Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank Act") requires issuers to include in periodic reports filed with the SEC certain information relating to citations or orders for violations of standards under the Mine Act. The following tables include information required by the Dodd-Frank Act for the twelve months ended December 31, 2022 December 31, 2023. The mine data retrieval system maintained by MSHA may show information that is different than what is provided herein. Any such difference may be attributed to the need to update that information on MSHA's system and/or other factors.

Subsidiary Name / MSHA Identification	Total Dollar Value of										
	Section 104(a)	Section	Section 104(d)	Section	Section	MSHA Assessments	Section 104(a)	Section	Section 104(d)	Section	Section
	S&S	104(b)	Citations and	110(b)(2)	107(a)	Proposed	S&S	104(b)	Citations and	110(b)(2)	107(a)
Number (1)	Citations (2)	Orders (3)	Orders (4)	Violations (5)	Orders (6)	(in thousands) (7)	Citations (2)	Orders (3)	Orders (4)	Violations (5)	Orders (6)
Illinois Basin Operations											
Webster County Coal, LLC (KY)											
1502132	-	-	-	-	-	\$ -	-	-	-	-	-
1511935	-	-	-	-	-	\$ 0.1	-	-	-	-	-
Warrior Coal, LLC (KY)											
1505230	-	-	-	-	-	\$ -	-	-	-	-	-
1512083	-	-	-	-	-	\$ -	-	-	-	-	-
1513514	-	-	-	-	-	\$ -	-	-	-	-	-
1516460	-	-	-	-	-	\$ -	-	-	-	-	-

1517216	115	-	-	-	-	\$	227.0	132	-	-	-	-
1517232	-	-	-	-	-	\$	-	-	-	-	-	-
1517678	-	-	-	-	-	\$	-	-	-	-	-	-
1517740	-	-	-	-	-	\$	-	-	-	-	-	-
1517758	-	-	-	-	-	\$	-	-	-	-	-	-
1514335	-	-	-	-	-	\$	0.8	-	-	-	-	-
Hopkins County Coal, LLC (KY)												
1502013	-	-	-	-	-	\$	-	-	-	-	-	-
1517377	-	-	-	-	-	\$	-	-	-	-	-	-
1517515	-	-	-	-	-	\$	-	-	-	-	-	-
1518826	-	-	-	-	-	\$	-	-	-	-	-	-
1517378	-	-	-	-	-	\$	-	-	-	-	-	-
River View Coal, LLC (KY)												
1503178	10	-	-	-	-	\$	14.6	5	-	-	-	-
1519374	190	-	-	-	-	\$	490.1	171	-	2	-	-
1502709								8	-	-	-	-
White County Coal, LLC (IL)												
1102662	-	-	-	-	-	\$	-	-	-	-	-	-
1103058	-	-	-	-	-	\$	-	-	-	-	-	-
Hamilton County Coal, LLC (IL)												
1103242	1	-	-	-	-	\$	0.3	2	-	-	-	-
1103203	32	-	2	-	-	\$	75.3	28	-	1	-	-
Gibson County Coal, LLC (IN)												
1202388	29	-	-	-	-	\$	41.8	25	-	-	-	-
1202215	-	-	-	-	-	\$	-	-	-	-	-	-
1202494	-	-	-	-	-	\$	0.1	-	-	-	-	-
Sebree Mining, LLC (KY)												
1519264	-	-	-	-	-	\$	-	-	-	-	-	-
1518547	-	-	-	-	-	\$	-	-	-	-	-	-
1517044	-	-	-	-	-	\$	-	-	-	-	-	-
<u>Appalachia Operations</u>												
MC Mining, LLC (KY)												
1508079	-	-	-	-	-	\$	-	-	-	-	-	-
1517733	5	-	-	-	-	\$	4.8	2	-	-	-	-
1519515	-	-	-	-	-	\$	-	-	-	-	-	-
1519838	34	-	-	-	-	\$	75.5	54	-	13	-	-
Mettiki Coal, LLC (MD)												
1800621	-	-	-	-	-	\$	-	-	-	-	-	-
1800671	1	-	-	-	-	\$	6.7	1	-	-	-	-
1800761	-	-	-	-	-	\$	-	-	-	-	-	-
Mettiki Coal (WV), LLC												

4609028	20	-	-	-	-	\$	57.2	18	-	1	-	-
Tunnel Ridge, LLC (PA/WV)												
4608864	11	-	1	-	-	\$	37.0	15	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-
4403236	-	-	-	-	-	\$	-	-	-	-	-	-
4403255	-	-	-	-	-	\$	-	-	-	-	-	-
4406630	-	-	-	-	-	\$	-	-	-	-	-	-
4406867	-	-	-	-	-	\$	-	-	-	-	-	-
1502709	-	-	-	-	-	\$	-					
Mid-America Carbonates, LLC (IL)	-	-	-	-	-	\$	-	-	-	-	-	-
1103176	-	-	-	-	-	\$	0.4	-	-	1	-	-
Rough Creek Mining, LLC	-	-	-	-	-	\$	-	-	-	-	-	-
1502129	-	-	-	-	-	\$	0.1	-	-	-	-	-

Subsidiary Name / MSHA Identification Number (1)	Total	Received Notice	Legal	Legal	Legal	Total	Received Notice	Legal	Legal	Legal
	Number of	of Pattern of	Actions	Actions	Actions	Number of	of Pattern of	Actions	Actions	Actions
	Mining	Violations Under	Pending as of	Initiated	Resolved	Mining	Under	Pending as of	Initiated	Resolved
	Related	Section 104(e)	Last Day of	During	During	Related	Section 104(e)	Last Day of	During	During
	Fatalities	(yes/no) (8)	Period (9)	Period	Period	Fatalities	(yes/no) (8)	Period (9)	Period	Period
Illinois Basin Operations										
Webster County Coal, LLC (KY)										
1502132	-	No	-	-	-	-	No	-	-	-
1511935	-	No	-	-	-	-	No	-	-	-
Warrior Coal, LLC (KY)										
1505230	-	No	-	-	-	-	No	-	-	-
1512083	-	No	-	-	-	-	No	-	-	-
1513514	-	No	-	-	-	-	No	-	-	-
1516460	-	No	-	-	-	-	No	-	-	-
1517216	-	No	5	14	13	-	No	5	11	11
1517232	-	No	-	-	-	-	No	-	-	-
1517678	-	No	-	-	-	-	No	-	-	-
1517740	-	No	-	-	-	-	No	-	-	-
1517758	-	No	-	-	-	-	No	-	-	-
1514335	-	No	-	-	-	-	No	-	-	-
Hopkins County Coal, LLC (KY)										
1502013	-	No	-	-	-	-	No	-	-	-
1517377	-	No	-	-	-	-	No	-	-	-
1517515	-	No	-	-	-	-	No	-	-	-
1518826	-	No	-	-	-	-	No	-	-	-
1517378	-	No	-	-	-	-	No	-	-	-

River View Coal, LLC (KY)												
1503178	-	No	1	3	2	-	No	-	-	1		
1519374	-	No	3	12	13	-	No	7	13	12		
1502709	-	No				-	No	-	-	-		
White County Coal, LLC (IL)												
1102662	-	No	-	-	-	-	No	-	-	-		
1103058	-	No	-	-	-	-	No	-	-	-		
Hamilton County Coal, LLC (IL)												
1103242	-	No	-	-	-	-	No	1	1	-		
1103203	-	No	4	6	2	1	No	3	9	10		
Gibson County Coal, LLC (IN)												
1202388	-	No	3	6	3	-	No	-	4	7		
1202215	-	No	-	-	-	-	No	-	-	-		
1202494	-	No	-	-	-	-	No	-	-	-		
Sebree Mining, LLC (KY)												
1519264	-	No	-	-	-	-	No	-	-	-		
1518547	-	No	-	-	-	-	No	-	-	-		
1517044	-	No	-	-	-	-	No	-	-	-		
Appalachia Operations												
MC Mining, LLC (KY)												
1508079	-	No	-	-	-	-	No	-	-	-		
1517733	-	No	-	-	-	-	No	-	-	-		
1519515	-	No	-	-	-	-	No	-	-	-		
1519838	-	No	-	2	3	-	No	4	4	-		
Mettiki Coal, LLC (MD)												
1800621	-	No	-	-	-	-	No	-	-	-		
1800671	-	No	-	-	-	-	No	-	-	-		
1800761	-	No	-	-	-	-	No	-	-	-		
Mettiki Coal (WV), LLC												
4609028	-	No	1	1	-	-	No	-	-	1		
Tunnel Ridge, LLC (PA/WV)												
4608864	1	No	-	1	1	-	No	4	5	1		
Other												
4403236	-	No	-	-	-	-	No	-	-	-		
4403255	-	No	-	-	-	-	No	-	-	-		
4406630	-	No	-	-	-	-	No	-	-	-		
4406867	-	No	-	-	-	-	No	-	-	-		
Mid-America Carbonates, LLC (IL)												
1103176	-	No	-	-	-	-	No	-	-	-		
Rough Creek Mining, LLC												
1502129	-	No	-	-	-	-	No	-	-	-		

The number of legal actions pending before the Federal Mine Safety and Health Review Commission as of **December 31, 2022** **December 31, 2023** that fall into each of the following categories is as follows:

Subsidiary Name / MSHA Identification Number (1)	Complaints of Applications						Complaints of Applications					
	Contests of	Contests of	Complaints	Discharge/	for	Appeals of	Contests of	Contests of	Complaints	Discharge/	for	Appeals of
	Citations	Proposed	for	Discrimination	Temporary	Judges	Citations	Proposed	for	Discrimination	Temporary	Judges
	and Orders	Penalties (10,11)	Compensation	/Interference	Relief	Rulings	and Orders	Penalties(10,11,12)	Compensation	/Interference	Relief	Rulings
Illinois Basin												
Operations												
Webster County												
Coal, LLC (KY)												
1502132	-	-	-	-	-	-	-	-	-	-	-	-
1511935	-	-	-	-	-	-	-	-	-	-	-	-
Warrior Coal, LLC												
(KY)												
1505230	-	-	-	-	-	-	-	-	-	-	-	-
1512083	-	-	-	-	-	-	-	-	-	-	-	-
1513514	-	-	-	-	-	-	-	-	-	-	-	-
1516460	-	-	-	-	-	-	-	-	-	-	-	-
1517216	-	5	-	-	-	-	-	5	-	-	-	-
1517232	-	-	-	-	-	-	-	-	-	-	-	-
1517678	-	-	-	-	-	-	-	-	-	-	-	-
1517740	-	-	-	-	-	-	-	-	-	-	-	-
1517758	-	-	-	-	-	-	-	-	-	-	-	-
1514335	-	-	-	-	-	-	-	-	-	-	-	-
Hopkins County												
Coal, LLC (KY)												
1502013	-	-	-	-	-	-	-	-	-	-	-	-
1517377	-	-	-	-	-	-	-	-	-	-	-	-
1517515	-	-	-	-	-	-	-	-	-	-	-	-
1518826	-	-	-	-	-	-	-	-	-	-	-	-
1517378	-	-	-	-	-	-	-	-	-	-	-	-
River View Coal,												
LLC (KY)												
1503178	-	1	-	-	-	-	-	-	-	-	-	-
1519374	-	3	-	-	-	-	-	7	-	-	-	-
1502709							-	-	-	-	-	-
White County Coal,												
LLC (IL)												
1102662	-	-	-	-	-	-	-	-	-	-	-	-
1103058	-	-	-	-	-	-	-	-	-	-	-	-
Hamilton County												
Coal, LLC (IL)												
1103242	-	-	-	-	-	-	-	1	-	-	-	-
1103203	-	4	-	-	-	-	-	3	-	-	-	-
Gibson County Coal,												
LLC (IN)												
1202388	-	3	-	-	-	-	-	-	-	-	-	-
1202215	-	-	-	-	-	-	-	-	-	-	-	-
1202494	-	-	-	-	-	-	-	-	-	-	-	-
Sebree Mining, LLC												
(KY)												

1519264	-	-	-	-	-	-	-	-	-	-	-	-
1518547	-	-	-	-	-	-	-	-	-	-	-	-
1517044	-	-	-	-	-	-	-	-	-	-	-	-
Appalachia												
Operations												
MC Mining, LLC (KY)												
1508079	-	-	-	-	-	-	-	-	-	-	-	-
1517733	-	-	-	-	-	-	-	-	-	-	-	-
1519515	-	-	-	-	-	-	-	-	-	-	-	-
1519838	-	-	-	-	-	-	-	4	-	-	-	-
Mettiki Coal, LLC (MD)												
1800621	-	-	-	-	-	-	-	-	-	-	-	-
1800671	-	-	-	-	-	-	-	-	-	-	-	-
1800761	-	-	-	-	-	-	-	-	-	-	-	-
Mettiki Coal (WV), LLC												
4609028	-	1	-	-	-	-	-	-	-	-	-	-
Tunnel Ridge, LLC (PA/WV)												
4608864	-	-	-	-	-	-	-	4	-	-	-	-
Other												
4403236	-	-	-	-	-	-	-	-	-	-	-	-
4403255	-	-	-	-	-	-	-	-	-	-	-	-
4406630	-	-	-	-	-	-	-	-	-	-	-	-
4406867	-	-	-	-	-	-	-	-	-	-	-	-
Mid-America Carbonates, LLC (IL)												
1103176	-	-	-	-	-	-	-	-	-	-	-	-
Rough Creek Mining, LLC												
1502129	-	-	-	-	-	-	-	-	-	-	-	-

-
- (1) The statistics reported for each of our subsidiaries listed above are segregated into specific MSHA identification numbers.
- (2) Mine Act section 104(a) S&S citations shown above are for alleged violations of mandatory health or safety standards that could significantly and substantially contribute to a coal mine health and safety hazard. It should be noted that, for purposes of this table, S&S citations that are included in another column, such as Section 104(d) citations, are not also included as Section 104(a) S&S citations in this column.
- (3) Mine Act section 104(b) orders are for alleged failures to totally abate a citation within the time period specified in the citation.
- (4) Mine Act section 104(d) citations and orders are for an alleged unwarrantable failure (*i.e.*, aggravated conduct constituting more than ordinary negligence) to comply with mandatory health or safety standards.
- (5) Mine Act section 110(b)(2) violations are for an alleged "flagrant" failure (*i.e.*, reckless or repeated) to make reasonable efforts to eliminate a known violation of a mandatory safety or health standard that substantially and proximately caused, or reasonably could have been expected to cause, death or serious bodily injury.
- (6) Mine Act section 107(a) orders are for alleged conditions or practices which could reasonably be expected to cause death or serious physical harm before such condition or practice can be abated and result in orders of immediate withdrawal from the area of the mine affected by the condition.

- (7) Amounts shown include assessments proposed by MSHA during the twelve months ended **December 31, 2022** **December 31, 2023** on all citations and orders, including those citations and orders that are not required to be included within the above chart.
- (8) Mine Act section 104(e) written notices are for an alleged pattern of violations of mandatory health or safety standards that could significantly and substantially contribute to a coal mine safety or health hazard.
- (9) Pursuant to the Procedural Rules of the Federal Mine Safety and Health Review Commission, mine operators may contest the underlying validity and fact of an alleged citation or order, as well as any special findings of an alleged citation or order, including a significant and substantial or unwarrantable failure designation, as part of any proceeding contesting a proposed penalty assessment.
- (10) On May 11, 2022, a Federal Administrative Law Judge ("ALJ") issued an Order of Reallocation for MSHA Docket KENT 2022-0033, which was initiated on March 28, 2022. In the Order for Reallocation, the ALJ divided the 27 citations contested in the KENT 2022-0033 docket between two dockets, leaving fourteen in KENT 2022-0033, and moving thirteen into a new docket captioned as KENT 2022-0067. Both actions were resolved as of December 31, 2022.
- (11) ~~(00)~~ **August 5, 2022** **February 13, 2023**, a Federal Administrative Law Judge ("ALJ") issued an Order of Reallocation for MSHA Docket KENT **2022-0065, 2023-0011**, which was initiated on **June 21, 2022** **December 5, 2022**. In the Order for Reallocation, the ALJ divided the **27** **29** citations contested in the KENT **2022-0065 2023-0011** docket between two dockets, leaving **fourteen** **fifteen** in KENT **2022-0065, 2023-0011**, and moving **thirteen** **fourteen** into a new docket captioned as KENT **2022-0112, 2023-0042**. Both actions were resolved as of **December 31, 2022** **December 31, 2023**.
- (11) On April 26, 2023, a Federal Administrative Law Judge ("ALJ") issued an Order of Reallocation for MSHA Docket KENT 2023-0034, which was initiated on March 7, 2023. In the Order for Reallocation, the ALJ divided the 34 citations contested in the KENT 2023-0034 docket between two dockets, leaving seventeen in KENT 2023-0034, and moving seventeen into a new docket captioned as KENT 2023-0077. Both actions were resolved as of December 31, 2023.
- (12) On April 26, 2023, a Federal Administrative Law Judge ("ALJ") issued an Order of Reallocation for MSHA Docket KENT 2023-0049, which was initiated on March 30, 2023. In the Order for Reallocation, the ALJ divided the 30 citations contested in the KENT 2023-0049 docket between two dockets, leaving fifteen in KENT 2023-0049, and moving fifteen into a new docket captioned as KENT 2023-0085. Both actions were resolved as of December 31, 2023.
-

Exhibit **96.5** **96.1**



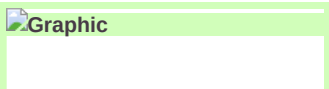
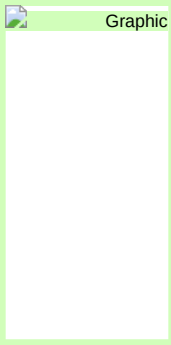
TUNNEL RIDGE MINE HENDERSON/UNION RESOURCES SEC S-K 1300 TECHNICAL REPORT SUMMARY



PREPARED FOR

Tunnel Ridge, Alliance Resource Properties, LLC
1146 Monarch Street
Suite 350
Lexington, Kentucky 40513

FEBURARY 2024



HENDERSON/UNION RESOURCES SFC S-K 1300 TECHNICAL REPORT SUMMARY



PREPARED BY

RESPEC
146 East Third Street
Lexington, Kentucky 40508

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1146 Monarch Street
Suite 350
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FEBURARY 2024

Project Number M0062.21001



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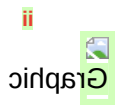
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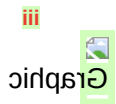


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1.0 EXECUTIVE SUMMARY

1.1 PROPERTY DESCRIPTION

Alliance Resource Properties, LLC (ARP) has mineral interests in over 104,000 gross acres of coal resources in Union and Henderson Counties, Kentucky. The property is controlled through both fee ownership and leases of the coal. Surface facilities are controlled through ownership or lease.

1.2 GEOLOGY AND MINERALIZATION

The West Kentucky No.6 seam (WKY6), West Kentucky No.7 seam (WKY7), and the West Kentucky No.11 seam (WKY11) are located in the Illinois Basin, more specifically the southeastern flank of the Illinois Basin. The Illinois Basin is an interior cratonic basin that formed from numerous subsidence and uplift events. The Illinois Basin extends approximately 80,000 square miles, covering Illinois, southern Indiana, and western Kentucky. The primary coal-bearing strata is of Carboniferous age in the Pennsylvanian system.

1.3 STATUS OF EXPLORATION

The Henderson Union Resources (HUR) have been extensively explored through drilling conducted by several companies. Drilling records are the primary dataset used in the evaluation of the reserve. Drill records have been compiled into a geologic database which includes location, elevation, detailed lithologic information, and coal quality data.

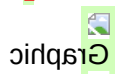
1.4 MINERAL RESOURCE ESTIMATES

This information is used to generate geologic models that identify potential adverse mining conditions, define areas of thinning or thickening coal, and predict coal quality for marketing purposes. This information is used to create a resource model using Carlson's Geology module, part of an established software suite for the mining industry. In addition to coal thickness and quality data, seam recovery is modeled. Classification of the resources is based on distances from drill data. Carlson then estimates in-place tonnages, qualities, and average seam recovery within a set of polygons. These polygons are the result of the intersection of polygons outlining property boundaries, adverse mining conditions, and resource classification boundaries. These results are exported to a database which then applies the appropriate percent ownership, mine recovery and seam recovery. Table 1-1 is a summary of the coal resources. None of the resources are converted to reserves.

Table 1-1. Summary of Controlled Coal Resources Estimates as of December 31, 2023

Seam	Controlled Recoverable (1,000 tons)
WKY11	93,620
WKY7	170,184
WKY6	148,924
Total Measured, Indicated & Inferred	412,728

1





1.5 PERMITTING REQUIREMENTS

The Kentucky Department of Natural Resources (KYDNR), Division of Mine Permits (DMP) is responsible for review and issuance of all permits relative to coal mining and reclamation activities, and financial assurance of comprehensive environmental protection performance standards related to surface and underground coal mining operations. In conjunction with the KYDNR coal mining permit, the Clean Air Act and Clean Water Act laws and regulations are administered by the Kentucky Department of Environmental Protection (KYDEP). KYDEP is responsible for permit issuance and compliance monitoring for all activities which have the potential to impact air or water quality.

1.6 QUALIFIED PERSON'S CONCLUSIONS AND RECOMMENDATIONS

It is the Qualified Person's (QP) opinion the risk of this resource is low. There is little risk of material impact to the resource estimates. Access to the HUR is available from an active operation or through the redevelopment of inactive mine sites. Mining practices are well established.

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2.0 INTRODUCTION

2.1 ISSUER OF REPORT

ARP has retained RESPEC Company, LLC (RESPEC) to prepare this Technical Report Summary (TRS) for the Henderson/Union Resource (HUR).

2.2 TERMS OF REFERENCE AND PURPOSE

The purpose of this TRS is to support the disclosure in the annual report on Form 10-K of Alliance Resource Partners, L.P. (ARLP 10-K) of Mineral Resource and Mineral Reserve estimates for the HUR as of 12/31/2023. This report is intended to fulfill 17 Code of Federal Regulations (CFR) §229, "Standard Instructions for Filing Forms Under Securities Act of 1933, Securities Exchange Act of 1934 and Energy Policy and Conservation Act of 1975 – Regulation S-K," subsection 1300, "Disclosure by Registrants Engaged in Mining Operations." The mineral resource and mineral reserve estimates presented herein are classified according to 17 CFR§229.133 – Item (1300) Definitions.

Unless otherwise stated, all measurements are reported in U.S. imperial units and currency in U.S. dollars (\$).

This TRS for the HUR was prepared by RESPEC and updates the TRS for the HUR dated July 2022, which updated the TRS for the HUR dated February 2022.

2.3 SOURCES OF INFORMATION

During the preparation of the TRS, discussions were had with several Alliance personnel.

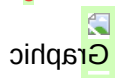
The following information was provided by ARP and Alliance:

- / Property History
- / Property Data
- / Laboratory Protocols
- / Sampling Protocols
- / Mining Methods
- / Processing and Recovery Methods

2.4 PERSONAL INSPECTION

No site visit was performed specifically regarding this report. However, the RESPEC QP is familiar with this resource area. The QP has been to several of the facilities multiple times for permitting projects related to the refuse plans, pond modifications, and slurry injection. The QP has visited the facilities associated with UC Processing. The QP generated an estimate of mine closure costs to determine the reclamation bond amount for those facilities. These facilities were inactive at the time of the last site visit. The QP has also been on-site at the UC Mining portal and the River View facilities that overlie the resource. The UC Mining portal site is currently active for the development of the Henderson County

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mine. The QP has not conducted a site visit of the Hamilton facilities associated with this resource. However, the QP is familiar with this resource area and the Hamilton facilities are not critical in the designation of these coal seams as resources.



3.0 PROPERTY DESCRIPTION

3.1 PROPERTY DESCRIPTION AND LOCATION

The HUR is located in Henderson and Union counties, Kentucky. HUR has full or partial control of over 1,380 tracts encompassing over 104,000 gross acres. Though there is a geographic overlap with the existing River View operation, the resources are associated with different coal seams (WKY7 and WKY6) or, if the same seam, (which occurs in the WKY11), separated by old works and geologic features into distinct areas. Though separated by old works, the West Kentucky No.9 resources previously included in the HUR have been designated for development as part of the existing River View operation as the Henderson County mine and will share preparation and loadout facilities. Both TRS's have been updated and there is no overlap in the resource / reserve estimation. General locations for each resource area are:

West Kentucky No.11 Seam (WKY11)

- Hamilton 1 Area: 37°44'02" N, -88°02'00" W
- Hamilton 2 Area: 37°41'25" N, -87°57'08" W
- Corydon Area: 37°42'54" N, -87°46'13" W

West Kentucky No.7 Seam (WKY7)

- 37°44'56" N, -87°56'17" W

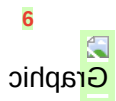
West Kentucky No.6 Seam (WKY6)

- 37°47'20" N, -87°44'16" W

Figure 3-1 shows the general location of the HUR.



Figure 3-1. General Location Map





3.2 MINERAL RIGHTS

Through a series of transactions in 2009, ARP acquired a significant portion of the HUR from affiliated companies consisting of owned and leased coal interests. Since that time, ARP has acquired significant additional coal properties and coal leases in Union and Henderson Counties from various companies and individuals. A portion of these properties represent the reserves for the River View Complex (RVC). The rest are held in the HUR for future development.

The HUR are currently not assigned to an operation and are held at ARP through a mixture of fee ownership and leases. The base leases are with private owners and generally provide for a term that can be extended until exhaustion of the leased coal. The resource tonnages are adjusted to the percentage controlled for the tracts that ARP owns or leases less than 100%.

3.3 SIGNIFICANT ENCUMBRANCES OR RISKS TO PERFORM WORK ON PERMITS

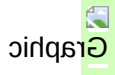
ARLP's revolving credit facility is secured by, among other things, liens against certain HUR surface properties, coal leases and owned coal. Documentation of such liens is of record in the Office of Union County and Henderson County clerks. Refer to the ARLP 10-K "Item [8.] Financial Statements and Supplementary Data—Note 8 – Long-term Debt" for more information on the revolving credit facility.

The Kentucky Department of Natural Resources (KYDNR), Division of Mine Permits (DMP) is responsible for review and issuance of all permits relative to coal mining and reclamation activities, and financial assurance of comprehensive environmental protection performance standards related to surface and underground coal mining operations. In conjunction with the KYDNR coal mining permit, the Clean Air Act and Clean Water Act laws and regulations are administered by the Kentucky Department of Environmental Protection (KYDEP). KYDEP is responsible for permit issuance and compliance monitoring for all activities which have the potential to impact air or water quality.

Most applicable permits for underground mining, coal preparation and related facilities, and other incidental activities have been obtained and remain in good standing. A significant portion of the HUR is currently permitted by various operating subsidiaries of Alliance Coal, LLC. Permits are held by River View Coal, LLC, Rough Creek Mining, LLC, UC Mining, LLC, and UC Processing, LLC. Multiple mining permits held by the various entities include mining in the WKY11. While the WKY6 and WKY7 are not currently permitted, these coal seams can be added to the existing permits via revision(s). Further, the existing permits can be revised to include additional mining areas in the WKY11. Permit revisions to add the unpermitted seams as well as expansion of currently permitted seams historically have been obtained in a timely manner.

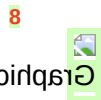
Surface effects necessary for resource extraction are currently permitted at the various mining sites. These permits include facilities such as a preparation plant, conveyors, access roads, water control structures, refuse disposal facilities, mine access portals, and other appurtenances necessary for each site. Existing infrastructure, including waste disposal, is adequate for the initial development of the HUR. Expanded mining activities would necessarily require additional surface disturbance. The existing permits may require revision to allow additional surface impacts.





Expansion of a permit may require a water user inventory and additional baseline groundwater and/or surface water sampling. If required, these items are typically completed through the permitting process. Permit expansions that include additional surface disturbance may require additional bonds to be posted with the appropriate regulatory authority.

Permit expansion or revision may require additional water discharge points. This will require a permit modification to any existing KPDES permit(s). The addition of any coal preparation, conveyors, or roads may require a permit modification to any existing DAQ permit(s).



4.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

4.1 TOPOGRAPHY AND VEGETATION

The HUR is located in the Green River – Southern Wabash Lowlands physiographic region of Kentucky per USEPA. This region is unglaciated, consisting of broad, nearly level bottomlands and low hills. It is drained by meandering, low gradient streams and rivers with wide floodplains. The possible surface facilities and access points are located to the west-southwest of Henderson, KY, and to the south of the Ohio River. The elevation ranges across the HUR area between about 340 and 640 feet above mean sea level. The vegetation across the HUR area consists primarily of cropland, with some pastureland and woodland.

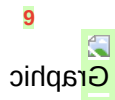
4.2 ACCESSIBILITY AND LOCAL RESOURCES

The HUR contains resources in three coal seams: WKY6, WKY7, and WKY11.

For the WKY6, the coal seam can be developed within the boundary of inactive facilities held by UC Mining (UCM). UCM (37°44'24" N, -87°46'08" W) is located at 530 French Rd, Waverly, KY 42462. It is accessible from Henderson, KY, via US-60 to Coburn Ln to French Rd, or from Waverly, KY, via US-60 to Hwy-760 to Coburn Ln to French Rd. Interstate 69 is a major transportation artery passing through Henderson, KY, about 13.6 miles due east of UCM. At its closest point, the Ohio River lies about 7.9 miles to the northeast of UCM. The nearest FAA-designated commercial service airport is Evansville Regional Airport (EVV) located about 25 miles to the northeast of UCM across the Ohio River in Evansville, IN.

For the WKY7, the coal seam can be developed at the active facilities of the RVM (37°44'35" N, -87°53'19" W). It is accessible from Henderson, KY, via US-60 to KY-1180/KY-359 to KY-1179, or from Uniontown, KY, via KY-130 to KY-141 to KY-1179. Interstate 69 is a major transportation artery passing through Henderson, KY, about 20 miles due east of RVM. At its closest point, the Ohio River lies about 3.8 miles to the northeast. The nearest FAA-designated commercial service airport is Evansville Regional Airport (EVV) located about 29 miles to the northeast of RVM (Portal 1) across the Ohio River in Evansville, IN.

For the Hamilton 1 area of the WKY11, the coal seam can be developed at the inactive facilities of the Hamilton 1 Mine (H1M). H1M (37°43'34" N, -88°02'16" W) is located at 393 Hamilton Mine Rd, Morganfield, KY 42437. It is accessible from Uniontown, KY, via KY-360 to Minerva Limp Rd to Hite Speece Rd to Hamilton Mine Rd, or from Morganfield, KY, via KY-56 to KY-360 to Hwy 871 to Hite Speece Rd to Hamilton Mine Rd. Interstate 69 is a major transportation artery passing through Henderson, KY, about 28 miles due east of H1M. At its closest point, the Ohio River lies about 1.3 miles to the northwest of H1M, passing by Henderson, KY, and Uniontown, KY. The nearest FAA-designated commercial service airport is Evansville Regional Airport (EVV) located about 37 miles to the northeast of H1M across the Ohio River in Evansville, IN.



For the Hamilton 2 area of the WKY11, the coal seam can be developed at the inactive facilities of the Hamilton 2 Mine (H2M). H2M (37°41'44" N, -88°00'24" W) is located at 651 KY-360, Morganfield, KY 42437. It is accessible from Uniontown, KY, via KY-360, or from Morganfield, KY, via KY-56 to KY-360. Interstate 69 is a major transportation artery passing through Henderson, KY, about 27 miles due east of H2M. At its closest point, the Ohio River lies about 4.0 miles to the northwest of H2M, passing by Henderson, KY, and Uniontown, KY. The nearest FAA-designated commercial service airport is Evansville Regional Airport (EVV) located about 36 miles to the northeast of H2M across the Ohio River in Evansville, IN.

For the Corydon area of the WKY11, the coal seam can be developed at the inactive facilities at UCM. UCM (37°44'24" N, -87°46'08" W) is located at 530 French Rd, Waverly, KY 42462. It is accessible from Henderson, KY, via US-60 to Coburn Ln to French Rd, or from Waverly, KY, via US-60 to Hwy-760 to Coburn Ln to French Rd. Interstate 69 is a

major transportation artery passing through Henderson, KY, about 13.6 miles due east of UCM. At its closest point, the Ohio River lies about 7.9 miles to the northeast of UCM, passing by Henderson, KY, and Uniontown, KY. The nearest FAA-designated commercial service airport is Evansville Regional Airport (EVV) located about 25 miles to the northeast of UCM across the Ohio River in Evansville, IN.

4.3 CLIMATE

The HUR and surrounding Henderson, KY, area has four distinct seasons with average annual precipitation of 44.8 inches according to U.S. Climate Data. The average annual high temperature is 67°F and the average annual low temperature is 47°F. The average annual snowfall is 13 inches. The climate of the area would have little to no effect on possible underground and surface facilities. The mine facilities in this area have the ability to work year-round.

4.4 INFRASTRUCTURE

The various mine sites that can be modified or redeveloped to access the HUR have the ability to source potable water from local water districts in the area, such as the Henderson County Water District and the Union County Water District. These facilities will have the ability to source water for underground operations from underground collection sources and other natural groundwater sources. Water used for coal processing on the surface can be sourced from the Ohio River. The present electricity providers in the area include Kenergy Corporation and Kentucky Utilities Company (KU). Employment in the area is competitive. However, RVC has been able to attract a mixture of skilled and unskilled labor with its competitive pay package and benefits and we expect new operations in the area will have the same ability to attract labor. We expect mine personnel will primarily come from the surrounding Kentucky counties of Union, Henderson, and Webster. Some mine personnel may come from southern Illinois counties just across the Ohio River. The city of Henderson, KY, lies to the east-northeast of the HUR. Its population is 27,981 according to the 2020 U.S. Census, making it the 10th most populous city in Kentucky. Henderson is the county seat of Henderson County, KY and is considered part of the Evansville Metropolitan Area. Most supplies can be trucked to any of the new mine facilities from regional vendors.

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5.0 HISTORY

5.1 PRIOR OWNERSHIP

Island Creek Coal Company (ICCC), currently a subsidiary of CONSOL Energy Inc. (CONSOL), operated mines in the area and previously controlled a portion of the property. Under a joint venture with CONSOL, Texas Gas also controlled a large interest in the mineral rights. Peabody Energy Corporation and its successor, Patriot Coal Corporation (Peabody-Patriot), operated the Camp Complex (WKY11) and Highland #11 (WKY11) mine in the area and previously controlled a portion of the resources. ICCC operated the Ohio #11 (WKY11).

5.2 EXPLORATION HISTORY

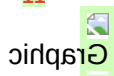
5.2.1 WEST KENTUCKY NO. 11 SEAM

Approximately 640 exploration holes penetrate the WKY11 within and adjacent to the HUR area to assess thickness, quality, and mineability of the seam. In general, holes are cased through the alluvium, rotary drilled to an interval above the coal seam, and then cored to collect roof, coal, and floor samples. Most cores range from approximately 3 to 4 inches in diameter. Coal quality was analyzed on over 130 holes in the WKY11. Some later holes included geophysical logs to verify core thicknesses and strata in rotary intervals. ICCC and CONSOL drilled about 180 holes in the area from 1950 to 1997. Quality was analyzed for around 50% of the holes and the U-series has geophysical logs after 1986. Peabody-Patriot drilled over 380 holes intersecting the WKY11. Coal quality was analyzed on 40 holes, and some have geophysical logs. About 60 other holes were drilled by miscellaneous companies within the area which provide similar information as described above. River View has drilled 18 holes on the property to supplement the historical data. Over 50 oil and gas well geophysical logs have been interpreted to supplement the exploration information. The drilling and resultant geological data show a highly consistent coal seam of mineable thickness and quality for the thermal utility market.

5.2.2 WEST KENTUCKY NO. 7 SEAM

Over 170 exploration holes penetrate the WKY7 within and adjacent to the HUR area to assess thickness, quality, and mineability of the seam. In general, holes are cased through the alluvium, rotary drilled to an interval above the coal seam, and then cored to collect roof, coal, and floor samples. Most cores range from approximately 3 to 4 inches in diameter. Coal quality was analyzed on over 100 holes in the WKY7. Some holes include geophysical logs which verify core thicknesses and strata in rotary intervals. ICCC and CONSOL drilled about 140 holes in the area from 1950 to 1997. Coal quality was analyzed for approximately 75% of the holes and there are geophysical logs for the holes drilled after 1986. About 20 holes were drilled by miscellaneous companies within the area which provide similar information as described above. River View has drilled 14 holes on the property to supplement the historical data. Over 130 oil/gas well geophysical logs have been interpreted to supplement the exploration information. The drilling and resultant geologic data show a highly consistent coal seam of mineable thickness and quality for the thermal utility market.

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Graphic



5.2.3 WEST KENTUCKY NO. 6 SEAM

Over 80 exploration holes penetrate the WKY6 within and adjacent to the HUR area to assess thickness, quality, and mineability of the seam. In general, holes are cased through the alluvium, rotary drilled to an interval above the coal seam, and then cored to collect roof, coal, and floor samples. Most cores range from approximately 3 to 4 inches in diameter. Coal quality was analyzed on about 60 holes in the WKY6. Some holes included geophysical logs which verify core thicknesses and strata in rotary intervals. ICCC and CONSOL drilled about 25 holes in the area from 1950 to 1997. Coal quality was analyzed for approximately 70% of the holes and there are geophysical logs for the holes

drilled after 1986. Peabody-Patriot drilled over 25 holes intersecting the WKY6. Quality was analyzed on over 20 holes in these series, and some have geophysical logs. About 30 holes were drilled by miscellaneous companies within the area which provide similar information as described above. Over 70 oil/gas well geophysical logs have been interpreted to supplement the exploration information. The drilling and resultant geologic data show a highly consistent coal seam of mineable thickness and quality for the thermal utility market.

See Appendix A for a map showing all drill hole locations.

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Graphic

Graphic

Graphic

6.0 GEOLOGICAL SETTING, MINERALIZATION AND DEPOSIT

6.1 REGIONAL GEOLOGY

The HUR includes the WKY11, WKY7 and WKY6 seams located in the Illinois Basin, more specifically the southeastern flank of the Illinois Basin. The WKY11 correlates regionally to the Herrin No.6 seam, the WKY7 to the Dekoven seam, and the WKY6 to the Davis seam.

The Illinois Basin is an interior cratonic basin that formed from numerous subsidence and uplift events. The Illinois Basin extends approximately 80,000 square miles, covering Illinois, southern Indiana and western Kentucky.

Primary coal-bearing strata, including the WKY11, WKY7 and WKY6 are in formations of Pennsylvanian aged rocks, which were deposited about 325 to 290 million years ago. The Pennsylvanian System is characterized by many vertical changes in lithology. There are over five hundred distinct beds of shale, sandstone, sandy shale, limestone, and coal in the Pennsylvanian System in Illinois. Many beds are laterally extensive and can be correlated across much of the Illinois Basin because of their position in relation to distinct marker beds, such as coals and limestones.

Pennsylvanian rocks in the region consist of shale, sandstone, siltstone, coal, and limestone, and are largely alluvial or deltaic in origin. Sandstones and siltstones make up between 50 and 80 percent of the coal-bearing sequence, while shales make up between 20 and 40 percent.

The Carbondale formation, which is not defined in a particular Group, accounts for just a quarter of the rocks in the Pennsylvanian System in Kentucky. However, the Carbondale formation contains more than two-thirds of the coal resources in the state.

See Figure 6-1 for a stratigraphic column.

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Figure 6-1. Generalized Stratigraphic Column of Pennsylvanian Rocks in Kentucky

6.2 LOCAL GEOLOGY

6.2.1 WEST KENTUCKY NO. 11 SEAM

The immediate roof over the WKY11 reserve is a dark gray to black fossiliferous shale that averages about 0.5 feet thick, commonly called “gob”. Above the gob is the Providence Limestone. This



limestone varies in thickness from zero to seven feet; but typically, is three to four feet thick. The West Kentucky No.12 (WKY12) seam occurs sporadically throughout the reserve above the Providence Limestone. The Providence Limestone and WKY12 are overlain by a silty gray shale of variable thickness and the Anvil Rock Sandstone (Anvil Rock). The Anvil Rock is the primary aquifer in the region. This sandstone is known to scour into the WKY11 immediate roof and in localized areas the WKY11. When this occurs water from the Anvil Rock may be released into the mine. Mining is avoided in areas where the Anvil Rock is within five feet of the WKY11. The floor of the WKY11 is predominantly a fireclay underlain by a limey claystone.

6.2.2 WEST KENTUCKY NO. 7 SEAM

The WKY7 immediate roof varies between carbonaceous black shale, gray shale, or sandy shale. The immediate roof is overlain by sandstone, which can locally scour into the seam. The floor is generally a dark gray, silty claystone that is underlain by a sandy shale containing limestone nodules. In some areas of the WKY7, the claystone-shale immediate floor is replaced by sandstone.

6.2.3 WEST KENTUCKY NO. 6 SEAM

The immediate roof for the WKY6 seam is typically a carbonaceous black shale ranging between one to two feet thick. Above this black shale is a dark gray shale with siderite nodules or a silty gray shale. The immediate floor is normally a sandy claystone.

See Figure 6-1 for a stratigraphic column and Figures 6-2 and 6-3 for geologic cross sections representing the local geology. See Appendix A for a plan view showing the locations of the cross sections.

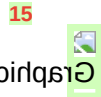
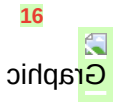




Figure 6-2. Geological Cross-Section A-A'



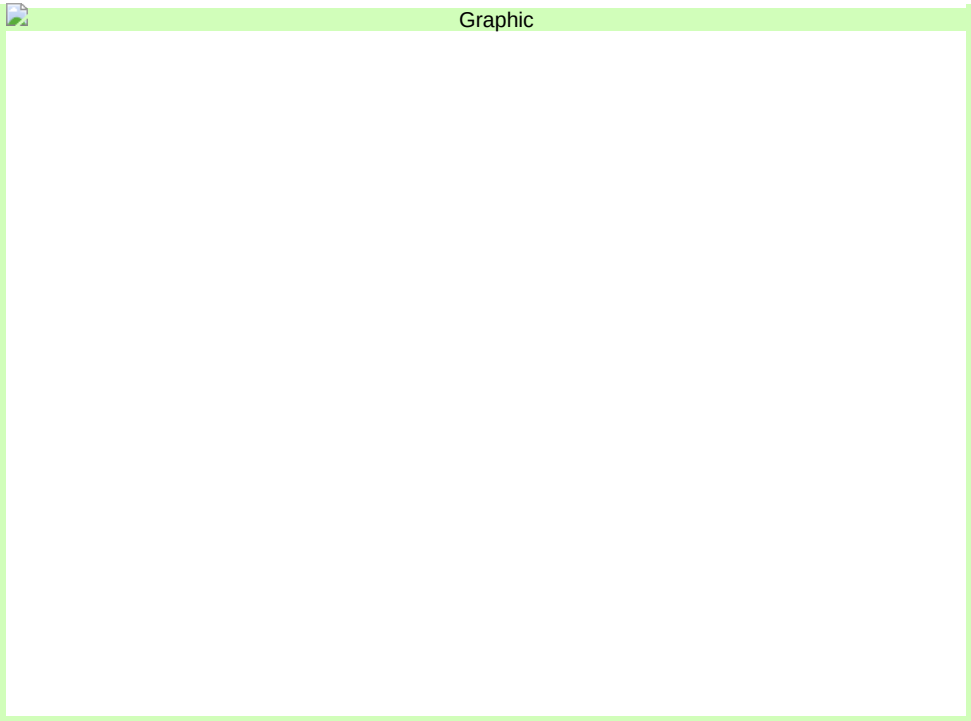


Figure 6-3. Geological Cross-Section B-B'



6.3 PROPERTY GEOLOGY AND MINERALIZATION

The HUR includes the WKY11, WKY7, and WKY6. The seams range between 100 and 800 feet in depth.

The HUR is bound to the north and west by the Ohio River and sets of northeast-southwest trending faults of the Rough Creek-Shawneetown system. The south is bound by previous mining and faulting. It is bound to the east by conditions related to the Anvil Rock sandstone (WKY11 only), as well as previous mining. In addition to these resource defining parameters, the WKY11, WKY7, and WKY6 resources are defined by areas where the coal is thin or absent. The coal-bearing strata dips gently to the north and east across the resource area.

The mineral deposit types in the HUR area are high volatile bituminous coal. The primary coal-bearing strata is of Carboniferous age, in the Pennsylvanian system.

The geologic model developed to explore the HUR is a bedded sedimentary deposit model. This is generally described as a continuous, non-complex, typical cyclothemic sequence that follows a bedded sedimentary sequence. The geology continues to be verified as new data is received.

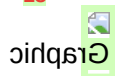
A stratigraphic column (Figure 6-1) and geologic cross sections (Figure 6-2 & Figure 6-3) representing the local geology, are included in this report.

6.4 STRATIGRAPHY

6.4.1 CARBONDALE FORMATION

The lower Carbondale Formation boundary is placed at the bottom of the Davis (WKY6) seam. When this coal is absent, the lower Carbondale is placed at the top of the Yeargins Limestone. The upper boundary is placed at the base of the Providence Limestone. Where this limestone is absent, it is placed at the top of the Herrin (WKY11) seam. The Carbondale Formation makes up about a quarter of the rocks in the Pennsylvanian System and contains two-thirds of the coal resources in Kentucky.

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7.0 EXPLORATION

7.1 DRILLING EXPLORATION

The HUR has been explored extensively through drilling and information gathered by previous companies. Drilling records are the primary dataset used in the evaluation of the resource. Drill records have been compiled into a geologic database which includes location, elevation, detailed lithologic data, and coal quality. This information is used to generate geologic models that identify potential adverse mining conditions, define areas of thinning or thickening coal, and predict coal quality for marketing purposes. The drilling density on the controlled property is sufficient to identify and predict geological trends within the resource area.

The geologic database is supplemented using oil and gas well data from the petroleum industry. Oil and gas well geophysical logs are acquired from the Kentucky Geological Survey. The most common geophysical log available is the induction log, which has the spontaneous potential curve and various resistivity and conductivity curves. These logs are beneficial in identifying sandstones, coals, and shales. Though less common, geophysical logs that have natural gamma, density and resistivity curves are available. These logs are identified in the geologic database as a "high quality" well. These logs provide more detail and differentiate the strata within the lithology in greater detail. Oil and gas well data are used to verify thickness, identify faulting, and delineate areas with adverse mining conditions.

Drilling on the property for the WKY11, WKY7, and WKY6 seams and has been conducted using industry standard methods by a third-party contractor or a company owned drill rig using qualified personnel. Drilling methods include

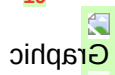
continuous diamond coring, mud rotary, air rotary and spot coring. Spot coring is a method that uses either mud or air rotary drilling to reach a specific depth, usually twenty or thirty feet above the target seam. Once this depth is reached, the drill string is removed, and the rig sets up for core drilling. The core barrel is advanced to the bottom of the hole where coring commences. Core is advanced to about ten feet below the target seam. Once drilling is completed on a hole, a suite of geophysical parameters is collected for the entire borehole. Parameters such as naturally occurring gamma, resistivity, high resolution density and caliper data are collected. This information is used to verify the driller's log and the geologist's log, and to verify the thickness of the coal and core recovery. The geophysical log is helpful if core isn't collected, such as when only rotary drilling is conducted. The information from the geophysical log is used to determine coal thickness and identify critical strata in the boring.

Continuous coring on the property is generally limited to locations where potential shafts, slopes or other critical infrastructure will be located. All core is described by a geologist, photographed for future reference, and stored until it is no longer needed.

7.2 HYDROGEOLOGIC INVESTIGATIONS

The Kentucky Department of Natural Resources (KDNR), Department of Mine Permits (DMP) requires a groundwater user survey to be conducted in and within 1,000' of the permitted boundary. Issuance of the permit requires DMP to write a Cumulative Hydrologic Impact Assessment (CHIA). These items were completed for permitted areas within the HUR.

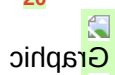
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7.3 GEOTECHNICAL INFORMATION

No geotechnical data is available for the HUR area.

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8.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

8.1 SAMPLE PREPARATION AND ANALYSIS

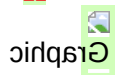
Prior to sending samples to the laboratory for analysis, company representatives prepare samples for transport. This includes a sample request form, which has information such as sample ID, depths and requested analyses to be performed. The sample request form is placed securely inside the sample container. If the sample is rock core, the core remains sealed in plastic bags inside the core box provided by the drilling contractor. The core box is secured using heavy duty packing tape. Company representatives then arrange for sample pick up by a representative of the laboratory selected to perform the analyses. Rigorous quality control and quality assurance standards are strictly adhered to throughout the sampling and analysis process.

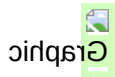
Sample analysis for the HUR is currently conducted by either of two laboratories: Standard Laboratories and SGS, North America, Inc. Standard Laboratories has two facilities that analyze samples from the HUR. One laboratory is located in Evansville, Indiana and the other in Freeburg, Illinois. The laboratory in Freeburg, Illinois is an ISO/IEC 17025 accredited laboratory. The laboratory in Evansville, Indiana, while not accredited, according to a formal statement from its senior management “operates in compliance with International Standard ISO/IEC 17025 General Requirements for Competence and Testing and Calibration Laboratories.” SGS North America, Inc. has an office in Henderson, Kentucky and is accredited by A2LA under ISO/IEC 17025. Their certification number is 3482.03.

Both laboratories prepare, assay, and analyze samples in accordance with approved ASTM international standards. Previous drilling programs used Commercial Testing and Engineering, Dickinson Laboratories, and others for coal quality analyses.

Typical coal quality analyses include the following:

- / Ultimate Analysis using ASTM Method D5373 for percent nitrogen, carbon and hydrogen and ASTM D3176 for the determination of percent oxygen.
- / Mineral Analysis of Ash using ASTM Method D4326 or D6349 for measuring percent silicon dioxide, aluminum dioxide, ferric oxide, calcium oxide, magnesium oxide, potassium oxide, sodium oxide, titanium dioxide, phosphorus pentoxide, magnesium dioxide, barium oxide, strontium oxide, sulfur trioxide.
- / Proximate Analysis using ASTM Method D5865 for the determination of thermal caloric value in BTU/LB. ASTM Method D3174/D7582 is used for the determination of percent ash. ASTM Method D4239 is used for measuring percent sulfur. Method D3175 is used to determine percent volatiles and ASTM D3172 is used to determine percentage of fixed carbon. Total Moisture is determined by ASTM Method D3302.
- / Ash Fusion Temperatures are determined using ASTM Method D1857, Sulfur Forms are determined using ASTM Method D2492 and Water-Soluble Alkalis are determined using ASTM Method C114 Mod. The Free Swelling Index is determined using ASTM Method D720.
- / The Hardgrove Grindability Index (HGI) is measured using ASTM Method D409 (M) and the percent Equilibrium Moisture is determined using ASTM Method D1412.





Trace element analysis to include Antimony, Arsenic, Barium, Beryllium, Boron, Bromine, Cadmium, Chlorine, Chromium, Cobalt, Copper, Fluorine, Germanium, Iodine, Lead, Lithium, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc and Zirconium. ASTM Method D6357, D4208, D3761, D3684 or D6722 are typically used.

Other parameters include Silica Value, Base/Acid Ratio, T250 Temperature, Slagging/Fouling Index, and Alkalis as Sodium Oxide, Dry basis.

The HUR has sufficient drilling across the extent of the resource to identify general trends in coal quality. Most of the data comes from samples collected from core drilling.

8.2 QUALITY CONTROL/QUALITY ASSURANCE (QA/QC)

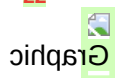
No significant disruptions, issues, or concerns have ever arisen as a result of processing or laboratory error. Therefore, it's reasonable to assume that the quality assurance actions employed by these laboratories are adequate to provide reliable results for the requested parameters.

8.3 OPINION OF THE QUALIFIED PERSON ON ADEQUACY OF SAMPLE PREPARATION

No significant disruptions, issues, or concerns have ever arisen as a result of sample preparation. Therefore, it's reasonable to assume that sample preparation, security, and analytical procedures in place are adequate to provide a reliable sample in which requested parameters can be analyzed.

The QP is of the opinion that the sample preparation, security, and analytical procedures for the samples supporting the resource estimation work are adequate for the statement of mineral resources. Results from different laboratories show consistency and nothing in QA/QC demonstrates consistent bias in the results.

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9.0 DATA VERIFICATION

9.1 SOURCE MATERIAL

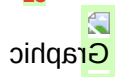
A detailed geologic database is maintained for the HUR and is used to develop several types of maps used to predict the mineability and coal quality of the WKY11, WKY7, and WKY6. Data verification of the accuracy of this database is conducted on a regular basis by company engineers and geologists. This includes a detailed review of seam correlation, coal quality data, and lithologic information of all exploration drill holes.

RESPEC was provided with e-log data for all new holes or data obtained since 2016. RESPEC compared 20% of those e-logs to the Carlson database. RESPEC also verified the thickness and quality grids. As part of the verification process, a new thickness grid was created from the database, and that resultant grid compared to the HUR model using Carlson grid file utilities.

9.2 OPINION OF THE QUALIFIED PERSON ON DATA ADEQUACY

Based on the verification of the HUR data by the QP and the review of prior database audits, the QP deems the adequacy of the HUR data to be reasonable for the purposes of developing a resource model and estimating resources and subsequent reserves.

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10.0 MINERAL PROCESSING AND METALLURGICAL TESTING

10.1 ANALYTICAL PROCEDURES

There is sufficient drilling across the extent of the HUR to identify general trends in coal quality. Most of the data comes from samples collected from core drilling.

10.2 REPRESENTATIVE SAMPLES

The parameters analyzed for the HUR are adequate to define the characteristics necessary to support the marketability of the coal.

10.3 TESTING LABORATORIES

The samples collected during previous drilling programs conducted by various companies were analyzed at various regional laboratories including Commercial Testing and Engineering and the Island Creek Coal Western Kentucky Division-laboratory.

Currently, samples are analyzed for the HUR by either of two laboratories, Standard Laboratories and SGS, North America, Inc. Standard Laboratories has two facilities that analyze samples from the HUR. One laboratory is located in Evansville, Indiana and the other in Freeburg, Illinois. The laboratory in Freeburg, Illinois is an ISO/IEC 17025 accredited laboratory. The laboratory in Evansville, Indiana, while not accredited, according to a formal statement from

its senior management “operates in compliance with International Standard ISO/IEC 17025 General Requirements for Competence and Testing and Calibration Laboratories.”

SGS North America, Inc. has an office in Henderson, Kentucky and is accredited by A2LA under ISO/IEC 17025. Their certification number is 3482.03. Both laboratories provide unbiased, third-party results and operate on a contractual basis.

No significant disruptions, issues, or concerns have ever arisen as a result of processing or laboratory error. Therefore, it's reasonable to assume that using these laboratories should provide assurance that the data processing and reporting procedures are reliable.

A series of washability tests were performed for the HUR to develop washability curves. These curves predict coal qualities and recoveries at different specific gravities. The results from the coal quality sampling program are adequate to determine the specification requirements for customers located in both the domestic and export markets.

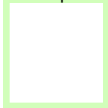
10.4 OPINION OF QUALIFIED PERSON ON DATA ADEQUACY

It is the opinion of the QP that the coal processing data collected from these analyses is adequate for modeling the resources for marketing purposes. All analyses are derived using standard industry practices by laboratories that are leaders in their industry.

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Graphic



11.0 MINERAL RESOURCE ESTIMATES

11.1 DEFINITIONS

A mineral resource is an estimate of mineralization, considering relevant factors such as cut-off grade, likely mining dimensions, location, or continuity, that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable.

Mineral resources are categorized based on the level of confidence in the geologic evidence. According to 17 CFR § 229.1301 (2021), the following definitions of mineral resource categories are included for reference:

An inferred mineral resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. An inferred mineral resource has the lowest level of geological confidence of all mineral resources, which prevents the application of the modifying factors in a manner useful for evaluation of economic viability. An inferred mineral resource, therefore, may not be converted to a mineral reserve.

An indicated mineral resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of adequate geological evidence and sampling. An indicated mineral resource has a lower level of confidence than the level of confidence of a measured mineral resource and may only be converted to a probable

mineral reserve. As used in this subpart, the term adequate geological evidence means evidence that is sufficient to establish geological and grade or quality continuity with reasonable certainty.

A measured mineral resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of conclusive geological evidence and sampling. As used in this subpart, the term conclusive geological evidence means evidence that is sufficient to test and confirm geological and grade or quality continuity.

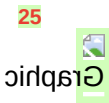
11.2 LIMITING FACTORS IN RESOURCE DETERMINATION

Resources in the WKY6, WKY 7, and WKY11 seams are delineated based on the following limitations:

- / Mineable thickness
- / Marketable quality
- / Structural limits, such as faults or sandstone channels, existing mining, and subsidence protection zones
- / Government and social approval

11.2.1 MINEABLE THICKNESS

Thicknesses are extracted from the database to create a geologic model. Grids are created using an inverse distance algorithm using a weighting factor of three. The ranges of coal seam thickness within



the resource area are as follows: WKY11 from 3.2 feet to 6.0 feet, WKY7 from 3.9 feet to 6.0 feet, and the WKY6 from 4.0 to 5.9 feet.

11.2.2 MARKETABLE QUALITY

The primary source coal quality data is from core holes drilled for the purpose of coal exploration. The qualities that are of primary interest are ash, sulfur, and BTU. These qualities affect the value of the coal. The table below summarized the values and ranges of each in the geologic database. The range of critical qualities in the database indicates that the coal in all four seams is within marketable limits. The potential resource areas are considered to meet the quality standard and no further consideration or analyses of these parameters are made. All resource estimates include average anticipated values for ash, sulfur, and BTU.

Values in Table 11-1 are dry basis qualities based on laboratory analysis of core samples. Marketable qualities will reflect moisture and adjustments for plant variability.

Table 11-1. Qualities at 1.5 Specific Gravity – Dry Basis

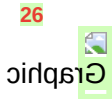
Seam	Quality	Number of samples	Average	Minimum	Maximum	Standard Deviation
WKY11	Ash	132	7.12	5.39	11.36	1.09
WKY11	Sulfur	132	3.24	2.59	4.22	0.30
WKY11	BTU	132	13,376	12,667	13,728	181.97
WKY7	Ash	60	8.07	6.01	10.15	0.83
WKY7	Sulfur	60	2.38	1.08	3.16	0.40
WKY7	BTU	60	13,399	13,037	13,752	154.71
WKY6	Ash	35	7.61	5.99	9.38	0.88
WKY6	Sulfur	35	2.65	2.01	4.02	0.42
WKY6	BTU	35	13,483	13,062	13,902	189.93

Marketable qualities are expected to range around 7.2-9.0% ash, 2.5-3.2% sulfur, and 11,400-11,700 BTU on an as received basis.

Significant faulting is identified in the region and creates the boundary of the resource in some areas. Coal thicknesses throughout the entire resource area are considered to be of mineable thickness for the room and pillar methods.

The northern boundary for the seams in the resource is the Ohio River. The WKY6 resource is bound on the east by the Ohio River and on the south and southwest by the cutoff minimum mining thickness of four feet. The northwest boundary of the WKY6 resource is stopped to protect the overlying WKY7 resources.

The WKY7 resource is bound on the north and west by the Ohio River. The southern boundary is defined by a set of faults running east-west. The eastern boundary is based on the cutoff minimum mining thickness of four feet.



The WKY11 resource is bound on the west by the Ohio River and along the south by a set of mostly east-west faults. The eastern boundary is based on the cutoff minimum mining thickness of four feet.

There are several existing underground mines that limit the interior extent of the resource.

11.2.3 GOVERNMENT AND SOCIAL APPROVAL

There are no known limitations to obtaining any required permits within the HUR area. There are several existing mining permits within the HUR area. Modifications or revisions may be required to any existing permits under which future coal operations are conducted within the HUR area. Historically, mining permits within the HUR area can be obtained, amended, or revised as needed. The public is notified of significant permitting actions and may participate in the permitting process.

11.3 CLASSIFICATION RESOURCES

11.3.1 CLASSIFICATION CRITERIA

The identified resources are divided into three categories of increasing confidence: inferred, indicated, and measured. The delineation of these categories is based on the distance from a known measurement point of the coal. The distances used are presented in USGS Bulletin 1450-B, "Coal Resource Classification System of the U.S. Bureau of Mines and U.S. Geological Survey." These distances are presented in Table 11-2.

Table 11-2. Coal Resource Classification System

Classification	Distance from measurement point
Measured	<1,320'
Indicated	1,320' – 3,960'
Inferred	3,960' – 15,840'

These distances for classification division are not mandatory. However, these values have been used since 1976, have proven reliable in the estimation of coal resources, and are considered reasonable by the QP.

11.3.2 USE OF SUPPLEMENTAL DATA

Due to the continuity of coal seams in the Illinois Basin, mineability limits are the most important factor in resource assessment. Information from oil and gas well e-logs in the vicinity are used as supplemental data to confirm thickness trends, identify structural limits, and characterize adverse geologic conditions. Coal thickness grids are generated from drill hole information, mine measurements, channel samples, and a subset of high-quality oil and gas well e-logs. These are data points in which the company has a high degree of confidence in thickness measurement. This is the data used to generate the model for planning. The combined information increases the overall reliability of the resource estimate, and all data points are included within the classification system.

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11.4 ESTIMATION OF RESOURCES

Resource estimates are based on a database of geologic information gathered from various sources. The sources of this data are presented in Section 7 of this report. Thickness and quality data are extracted from the database to create a model using Carlson's Geology module. The model consists of a set of grids, generated using an inverse distance algorithm with a weighting factor of three. In addition to the thickness and quality data, seam recovery is modeled. Quality data and recovery rates are determined through a set of tests generating washability curves. The qualities and seam yield are based on a specific gravity of 1.5. This is consistent with the wash gravity at the nearby River View operation. The qualities and recovery at a 1.5 specific gravity are added as attributes to the applicable drill holes from

which samples were collected. Those values are then modeled using Carlson, gridding these attributes using the inverse distance algorithm with a weighting factor of three.

Extraction of the resources is expected to be by room and pillar methods. The approved ground control plan in the adjacent mine results in a 48% mining recovery of the in-place reserves. This mining recovery is applied to the in-place coal estimates for the WKY11. The mining recovery in the WKY7 and WKY6 seams is reduced to 45% to account for larger pillar sizes which will be required to provide adequate roof support at the increased depth of these seams.

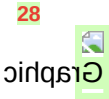
The coal testing included density calculations. The average in-situ density of 82.6 lbs/cubic foot for these seams was used for resource estimation. This value is within the expected range of coal density.

All coal tonnages are reported as clean controlled coal. Carlson's Surface Mine Module is used to estimate in-place tonnages, qualities, and average seam recovery within a set of polygons. These polygons are the result of the intersection of polygons outlining property boundaries, adverse mining conditions, mining method, mine plan boundaries, and resource classification boundaries. The Carlson results are exported to a database, which then applies the appropriate percent ownership, mine recovery, and seam recovery. The basic calculation is:

$$\text{Tons} = \text{Area} * \text{Thickness} * \text{Density} * \text{Mine Recovery} * \text{Seam Recovery} * \text{Percent Ownership}$$

Table 11-3. Summary of Recoverable Coal Resources as of December 31, 2023

Reserve Category / Seam	Controlled Recoverable (1,000 tons)	Sulfur (%)	Ash (%)	BTU
WKY11 Seam				
Measured	53,865	3.29	7.30	13,339
Indicated	39,457	3.16	7.74	13,309
Inferred	298	3.10	8.20	13,274
WKY11 Total	93,620	3.24	7.49	13,326
WKY7 Seam				
Measured	50,028	2.42	8.04	13,329
Indicated	89,623	2.34	7.98	13,340
Inferred	30,532	2.10	7.76	13,432



WKY7 Total	170,184	2.32	7.96	13,353
WKY6 Seam				
Measured	23,392	2.89	8.02	13,293
Indicated	98,848	2.94	8.13	13,275

Inferred	26,684	3.09	8.21	13,257
WKY6 Total	148,924	2.96	8.13	13,275
Total Resources	412,728			

Values in Table 11-3 are on a washed, dry basis.

The EIA reported the average weekly coal commodity spot price range in 2023 for Illinois Basin coal (the EIA price) of \$44.25/ton to \$140.00/ton (11,800 Btu, 5.0 lbs. SO2 basis). The reference price used in the economic analysis is \$58.80 which is based on the QP’s review of historical pricing and proprietary third-party coal price forecasts provided by Alliance. Mining and processing costs along with general and administrative costs were estimated. Table 11.4 shows the economic basis for the estimate of each seam in real 2023 U.S. dollars.

Table 11-4. Economic Basis for Estimates (US\$/ton)

Seam	No.11	No.7	No.6
Revenues	\$58.80	\$58.80	\$58.80
Mining and Processing Costs	\$38.40	\$35.95	\$38.40
General & Administrative Costs	\$0.62	\$0.55	\$0.62

11.5 OPINION OF QUALIFIED PERSON

It is the QP’s opinion that the risk of material impacts on the Resource estimate is low. Access to the HUR is available from an active operation or through the redevelopment of inactive mine sites. Mining practices for operations of the type anticipated are well established.

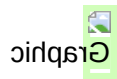
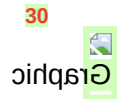
Please refer to Item 1A of the ARLP 10-K regarding the significant risks involved in investment in Alliance, including HUR, and the coal industry in general. It is the QP’s opinion that the following technical and economic factors have the most potential to influence the economic extraction of the resource:

- / Skilled labor – This site is located near a populated area, which has a history of coal mining.
- / Environmental Matters
 - » Greenhouse gas emission Federal or State regulations/legislation
 - » Regulatory changes related to the Waters of the US
 - » Air quality standards



Regional supply and demand – Although the US electric utility market has moved to natural gas and renewables to provide a higher percentage of electricity production, coal will continue to serve as baseload fuel source. US coal companies are also now more actively competing in the export market.

The potential for changes in the circumstances relating to these factors influencing the prospect of economic extraction exists and could materially adversely impact economic extraction of the resource.



12.0 MINERAL RESERVES ESTIMATES

This section is not applicable. No reserves are reported.

13.0 MINING METHODS

Though no reserves are reported, conceptual underground mining operations would use room and pillar methods similar to other mines in the area.

14.0 PROCESSING AND RECOVERY METHODS

Though no reserves are reported, conceptional processing methods would use heavy media separation similar to other mines in the area.

15.0 INFRASTRUCTURE

This section is not applicable. No reserves are reported.

16.0 MARKET STUDIES

This section is not applicable. No reserves are reported.

17.0 ENVIRONMENTAL

This section is not applicable. No reserves are reported.

18.0 CAPITAL AND OPERATING COSTS

This section is not applicable. No reserves are reported.

19.0 ECONOMIC ANALYSIS

This section is not applicable. No reserves are reported.



Graphic



Graphic

20.0 ADJACENT PROPERTIES

20.1 WEST KENTUCKY NO. 11 SEAM

The Ohio 11 mine lies to the north and east of the WKY11 resources associated with the Hamilton areas, with the River View No.11 mine to the northeast. The Corydon resources are bounded by the closed Camp mines to the south and the closed Highland No.11 mine to the southwest. The active River View No.11 mine lies to the west.

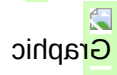
20.2 WEST KENTUCKY NO. 7 SEAM

There are no adjacent mines or properties to the WKY7.

20.3 WEST KENTUCKY NO. 6 SEAM

There are no adjacent mines or properties to the WKY6.

There are no active properties in the area other than the RVC.



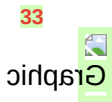
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21.0 OTHER RELEVANT DATA AND INFORMATION

All data relevant to the supporting studies and estimates of mineral resources have been included in the sections of this TRS. No additional information or explanation is necessary to make this TRS understandable and not misleading.



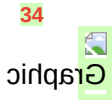
22.0 INTERPRETATION AND CONCLUSIONS

22.1 INTERPRETATIONS AND CONCLUSIONS

The QP has reached a conclusion concerning the HUR resource based on data and analysis summarized in this TRS that the coal seams have reasonable prospects for economic extraction when considering relevant factors such as cut-off grade, likely mining dimensions, location, and continuity, that, with the assumed and justifiable technical and economic conditions, are likely to, in whole or in part, become economically extractable. HUR contains an estimated 412.7 million clean tons of resources.

22.2 RISKS AND UNCERTAINTIES

It is the QP's opinion that risks to resource estimate are low. The analysis of the resources used the same methodology used in the past. Given the reliability of past mining plans within and adjacent to the resource area, it is a reasonable conclusion that future mining plans can be developed and executed. However, market uncertainty associated with government regulations could result in earlier retirements of coal-fired electric generating units and delay or prevent development of the HUR. This could negatively affect the demand and pricing for coal. Please refer to Alliance Resource Partners, L.P. Form 10-K 1A, for a complete listing of risk factors that may affect this resource.



23.0 RECOMMENDATIONS

The recommendations for HUR are as follows:

- Continue acquiring mining rights where advantageous to do so
- Continued maintenance of existing permits
- Continue current exploration plan



24.0 REFERENCES

Greb, Stephen F; Williams, David A; and Williamson, Allen D. (1992)" Geology and Stratigraphy of the Western Kentucky Coal Field". Kentucky Geological Survey Bulletin. 3

https://uknowledge.uky.edu/kgs_b/3

U.S. Energy Information Administration (EIA). (2023). Coal Markets. Retrieved from <https://www.eia.gov/coal/markets/>





25.0 RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

Table 25-1 summarizes the information provided by the registrant for matters discussed in this report, as permitted under §229.1302(f) of the SEC S-K 1300 Final Rule.

Table 25-1. Summary of Information Provided by Registrant

Category	Report Item/ Portion	Disclose why the Qualified Person considers it reasonable to rely upon the registrant
Macroeconomic trends	Section 19	N/A This section is not applicable. No reserves are reported.
Marketing information	Section 16	N/A This section is not applicable. No reserves are reported.
Legal matters	Section 17	N/A This section is not applicable. No reserves are reported.
Environmental matters	Section 17	N/A This section is not applicable. No reserves are reported.
Local area commitments	Section 17	N/A This section is not applicable. No reserves are reported.
Governmental factors	N/A	N/A

37



Graphic

APPENDIX A
RESOURCE MAP

Graphic

A-1

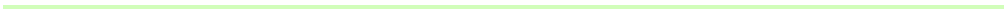
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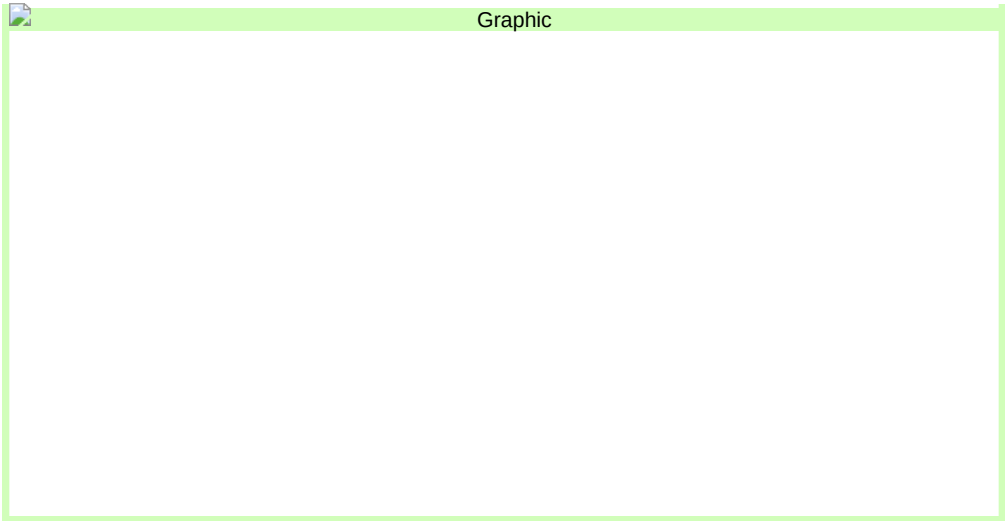
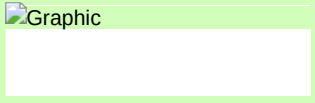


Exhibit 96.2



**RIVER VIEW COMPLEX
SFC S-K 1300
TECHNICAL REPORT SUMMARY**



PREPARED FOR
River View Coal, LLC
1146 Monarch Street
Suite 350
Lexington, Kentucky 40513

FEBRUARY 2023 2024



Graphic



TUNNEL RIDGE MINE RIVER VIEW COMPLEX SEC S-K 1300 TECHNICAL REPORT SUMMARY



PREPARED BY

RESPEC
146 East Third Street
Lexington, Kentucky 40508

PREPARED FOR

Tunnel Ridge, River View Coal, LLC
1146 Monarch Street
Suite 350
Lexington, Kentucky 40513

FEBRUARY 2023 2024

Project Number M0062.21001



Graphic



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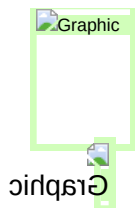
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1.0 EXECUTIVE SUMMARY

1.1 PROPERTY DESCRIPTION

River View Coal, LLC (River View) owns and operates the River View Complex (RVC) consisting of the River View (Mine #1) and Henderson County (Mine #2) mines. Both mines will utilize the existing preparation plant, refuse disposal, and loadout facilities. River View is a wholly owned subsidiary of Alliance Coal, LLC (Alliance). RVC is an underground coal mining operation located in Union County, Kentucky and currently has access to approximately 93,200 permitted underground acres. The mine property is controlled through both fee ownership and leases of the coal. Surface facilities are controlled through ownership or lease.

1.2 GEOLOGY AND MINERALIZATION

The West Kentucky No. 9 seam (WKY9) and the West Kentucky No. 11 seam (WKY11) are mined through room and pillar methods. The WKY9 and WKY11 are located in the Illinois Basin, more specifically the southeastern flank of the Illinois Basin. The WKY9 correlates regionally to the Springfield No. 5 coal and the WKY11 to the Herrin No. 6 coal. The Illinois Basin is an interior cratonic basin that formed from numerous subsidence and uplift events. The Illinois Basin extends approximately 80,000 square miles, covering Illinois, southern Indiana, and western Kentucky. The primary coal-bearing strata is of Carboniferous age in the Pennsylvanian system.

1.3 STATUS OF EXPLORATION

River View has extensively explored both the WKY11 and WKY9 through drilling it has conducted and previous developers. Drilling records are the primary dataset used in the evaluation of the resource/reserve. Drill records have been compiled into a geologic database which includes location, elevation, lithologic information, and coal quality data.

1.4 MINERAL RESOURCE AND RESERVE ESTIMATES

This information is used to generate geologic models that identify potential adverse mining conditions, define areas of thinning or thickening coal and predict coal quality for marketing purposes. This information is used to create a resource model using Carlson Software's Geology module, part of an established software suite for the mining industry. In addition to coal thickness and quality data, seam recovery is modeled. Classification of the resources is based on distances from drill data. Carlson then estimates in-place tonnages, qualities, and average seam recovery within a set of polygons. These polygons are the result of the intersection of polygons outlining property boundaries, adverse mining conditions, mining method, mine plan boundaries, and resource/reserve classification boundaries. These results are exported to a database which then applies the appropriate percent ownership, mine recovery and seam recovery. Table 1-1 is a summary of the coal reserves and resources based on a 33-year life-of-reserve plan. All resources converted to reserves are removed from the resource estimate.

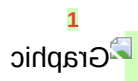




Table 1-1. Summary of Controlled Coal Reserves and Resources Estimates as of December 31, 2023

Seam	Reserves Controlled Recoverable (1,000 tons)	Resources Controlled Recoverable (1,000 tons)
WKY11	117,535	22
WKY9	192,892	244
Total	310,427	266

1.5 CAPITAL AND OPERATING COST ESTIMATES

RVC is an on-going operating coal mining operation; therefore, the capital and operating cost estimates were prepared with consideration of historical operating performance. The coal operation is not subject to federal and state income taxes as it is held by a partnership for tax purposes and not taxed as a corporation. Table 1-2 shows the estimated average capital and mining and processing costs for the life of reserve plan.

Table 1-2. Capital and Operating Costs

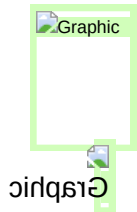
Category	Life of Reserve Estimate 2024-2056 Costs (US\$ 000's)
Capital Costs	1,785,003
Mining and Processing Costs	13,266,499
TOTAL	15,051,502

1.6 PERMITTING REQUIREMENTS

Kentucky Department of Natural Resources (KYDNR), Division of Mine Permits (DMP) is responsible for review and issuance of all permits relative to coal mining and reclamation activities, and financial assurance of comprehensive environmental protection performance standards related to surface and underground coal mining operations. In addition to state mining and reclamation laws, operators must comply with various federal laws relevant to mining. All applicable permits for underground mining, coal preparation, related facilities, and other incidental activities have been obtained. They remain in good standing and will be expanded as needed.

1.7 QUALIFIED PERSON'S CONCLUSIONS AND RECOMMENDATIONS

It is the Qualified Person's (QP) opinion the operating risks of the mine are low. The mining operation, processing facilities, and the site infrastructure are in place for Mine #1 and development of Mine #2 from a combination of new and existing facilities is underway. Mining practices are well established. All required permits are issued and remain in good standing for current operations. Given River View's ability to obtain and retain permits, it is reasonably likely that future required permits will be acquired in a timely fashion to facilitate additional mining. Market risk is discussed in Section 16.1 and could materially impact resource and reserve estimates.



2.0 INTRODUCTION

2.1 ISSUER OF REPORT

River View has retained RESPEC Company, LLC (RESPEC) to prepare this Technical Report Summary (TRS). The RVC is operated by River View. River View is a wholly owned subsidiary of Alliance.

2.2 TERMS OF REFERENCE AND PURPOSE

The purpose of this TRS is to support the disclosure in the annual report on Form 10-K of Alliance Resource Partners, L.P. (ARLP 10-K) of Mineral Resource and Mineral Reserve estimates for the RVC as of 12/31/2023. This report is intended to fulfill 17 Code of Federal Regulations (CFR) §229, "Standard Instructions for Filing Forms Under Securities Act of 1933, Securities Exchange Act of 1934 and Energy Policy and Conservation Act of 1975 – Regulation S-K," subsection 1300, "Disclosure by Registrants Engaged in Mining Operations." The mineral resource and mineral reserve estimates presented herein are classified according to 17 CFR§229.133 – Item (1300) Definitions.

Unless otherwise stated, all measurements are reported in U.S. imperial units and currency in U.S. dollars (\$).

This TRS for the River View Complex was prepared by RESPEC and updates the TRS for the River View Mine dated July 2022, which updated the TRS for the River View Mine dated February 2022.

2.3 SOURCES OF INFORMATION

During the preparation of the TRS, discussions were had with several Alliance personnel.

The following information was provided by River View and Alliance:

- / Property History
- / Property Data
- / Laboratory Protocols
- / Sampling Protocols
- / Topographic Data
- / Mining Methods
- / Processing and Recovery Methods
- / Site Infrastructure information
- / Environmental permits and related data/information
- / Historic and forecast capital and operating costs.





Graphic

2.4 PERSONAL INSPECTION

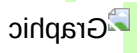
A RESPEC QP and Alliance representative conducted a site visit on January 31, 2022. During the site visit, the RESPEC QP visited the preparation plant, the raw coal stockpile, the clean coal stockpile, barge loading facility, and the refuse impoundment.

The Mine #1 access slope is located approximately three miles southeast of the preparation plant. The RESPEC QP viewed the slope, the shaft, and a raw coal stockpile at this location.

Discussions were held with the mine engineer regarding several items including permitting issues and the expansion of the current refuse disposal capacity.

A subsequent site visit was conducted by a RESPEC QP and an Alliance representative on January 23, 2024. The mine infrastructure is actively being expanded to open Mine #2. The RESPEC QP visited the recently updated slope associated with Mine #2; the ongoing construction of the shaft for Mine #2 Portal 1; the refurbish of several miles of conveyor from the Mine #2 slope to the raw coal storage at the Mine #1 slope; and the preparation plant. The target completion date for the Mine #2 portal is mid-year of 2025. The conveyor from Mine #2 slope to the raw coal storage at the Mine #1 slope is expected to be operating in 1 to 2 weeks. These features are shown on the "General Location Map."

4



Graphic

3.0 PROPERTY DESCRIPTION

3.1 PROPERTY DESCRIPTION AND LOCATION

The RVC is in Union County, Kentucky (37°45'37" N, -87°56'42" W) and currently has access to approximately 93,200 permitted underground acres. Though there is geographic overlap with the Henderson Union resource area, the resources are associated with different seams (West Kentucky No. 7 and West Kentucky No. 6) or, if the same seam (which occurs in the WKY11), separated by old works and geologic features into distinct areas. The Henderson Union WKY9 seam resources have been moved to River View as part of the Mine #2 development. Development of the underground corridor from the UC Mining site using the existing slope to the proposed portal facilities commenced in 2023 and first production from the WKY9 is expected to begin in 2024. There is no overlap in the resource / reserve estimation between River View and the Henderson Union properties.

Figure 3-1 shows the general location of the RVC.

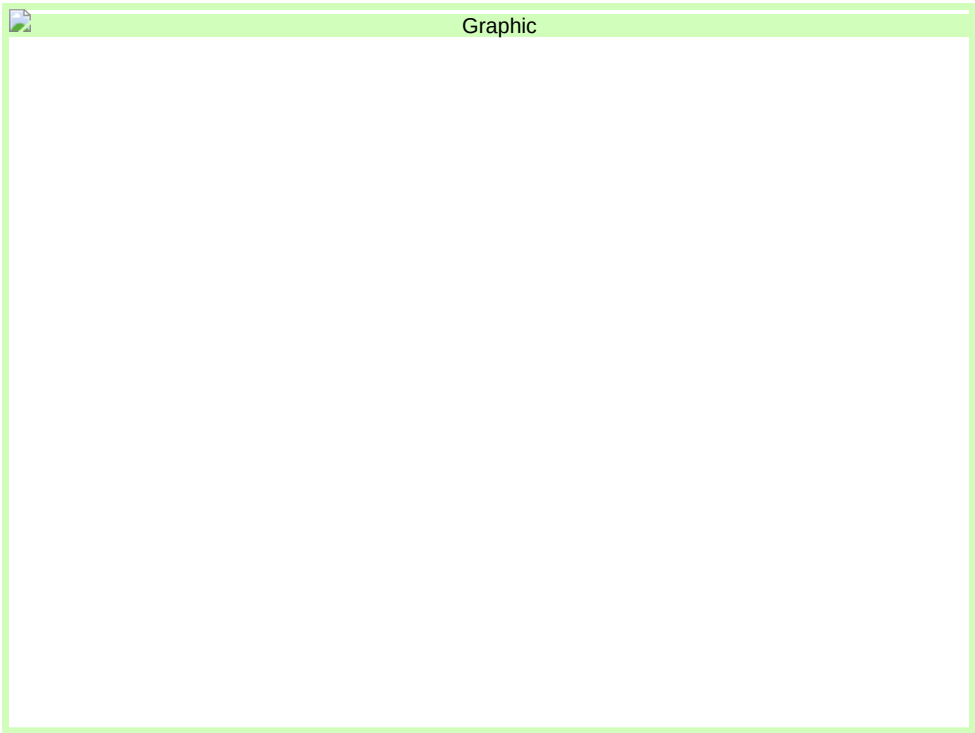
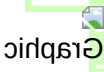


Figure 3-1. General Location Map



3.2 MINERAL RIGHTS

The coal reserves are leased or held for lease to River View by Alliance Resource Properties, LLC (ARP). River View has the right to extend the term of the lease through exhaustion of the reserves. The lease requires a production royalty to be paid to ARP for each ton of coal sold from the RVC, and River View is required to comply with all terms of the underlying base leases from third parties held by ARP and subleased to River View, including the payment of all rents and royalties.

For some tracts, River View has partial control of mineral rights. The estimated saleable tonnage for each tract is reduced appropriately where control is less than 100%.

The raw coal produced from the RVC is transported by overland belt to the coal processing and loading facilities which include a barge loading facility on the Ohio River.

3.3 SIGNIFICANT ENCUMBRANCES OR RISKS TO PERFORM WORK ON PERMITS

ARLP's revolving credit facility is secured by, among other things, liens against certain River View surface properties, coal leases and owned coal. Documentation of such liens is of record in the Office of Union County Clerk. Please refer to "Item [8.] Financial Statements and Supplementary Data—Note 8 – Long-term Debt" of the ARLP 10-K for more information on the revolving credit facility.

Accounts receivable generated from the sale of coal mined from this property are collateral for ARLP's accounts receivable securitization facility, evidenced by financing statement of record in the Office of Union County Clerk. Please refer to "Item [8.] Financial Statements and Supplementary Data—Note 8 – Long-term Debt" of the ARLP 10-K for more information on the accounts receivable securitization facility.

Kentucky Department of Natural Resources (KYDNR), Division of Mine Permits (DMP) is responsible for oversight of active coal mining and reclamation activities. In addition to state mining and reclamation laws, operators must comply with various federal laws relevant to mining. All applicable permits for underground mining, coal preparation, and related facilities and other incidental activities have been obtained and remain in good standing for current operations. Given River View's ability to obtain and retain permits, it is reasonably likely that future required permits will be acquired in a timely fashion to facilitate additional mining.



4.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

4.1 TOPOGRAPHY AND VEGETATION

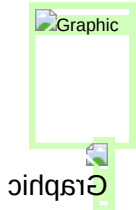
The RVC is located in the Green River – Southern Wabash Lowlands physiographic region of Kentucky per USEPA. This region is unglaciated, consisting of broad, nearly level bottomlands and low hills. It is drained by meandering, low gradient streams and rivers with wide floodplains. The surface facilities and mine access are located just to the south of Uniontown, KY, which sits on the banks of the Ohio River. The elevation ranges across the complex permit area between 340 and 450 feet above mean sea level. The vegetation across the mine permit area consists primarily of cropland, with some pastureland and woodland.

4.2 ACCESSIBILITY AND LOCAL RESOURCES

The primary Mine #1 shaft access (Portal 1 -37°44'35" N, -87°53'19" W) to the RVC is located at 835 KY-1179, Waverly, KY 42462. It is accessible from Henderson, KY, via US-60 to KY-1180/KY-359 to KY-1179, or from Uniontown, KY, via KY-130 to KY-141 to KY-1179. The secondary Mine#1 shaft access (Portal 2 - 37°43'26" N, -87°51'04" W) to Mine #1 is located at the intersection of KY-359 and KY-1179, Waverly, KY 42462. Interstate 69 is a major transportation artery passing through Henderson, KY, about 20 miles due east of the primary Mine #1 access. The town of Uniontown, KY, lies about 3.2 miles to the northwest of Mine #1, the town of Morganfield, KY, lies about 4.4 miles to the southwest of Mine #1, and the town of Waverly, KY, lies about 4.7 miles to the southeast. The Ohio River lies about 3.8 miles to the northwest of the primary Mine #1 access location, passing by Henderson, KY, and Uniontown, KY. Coal is transported by belt from the underground mine to the surface at the Mine #1 slope access (37°44'43" N, -87°53'40" W) located just northwest of the primary Mine #1 shaft access. The coal is transported by belt from the Mine #1 slope access to the complex's processing and coal loading facilities (37°45'37" N, -87°56'42" W) located about 3.0 miles northwest of the Mine #1 slope access. From the processing facilities, the processed coal is transported by belt about 0.6 miles to the mine's barge loading facility (37°46'07" N, -87°56'54" W) on the Ohio River (mile marker 843). Coal will move from the Mine #2 slope (37°44'24" N, -87°46'09" W) on an overland conveyor that will tie into the raw coal storage at the Mine #1 slope for transport to the shared processing facilities. The Mine #2 portal (37°41'52" N, -87°42'30" W) will be connected to the Mine #2 slope through an underground corridor. The nearest FAA-designated commercial service airport is Evansville Regional Airport (EVV) located about 24 miles to the northeast of the mine across the Ohio River in Evansville, IN.

4.3 CLIMATE

The RVC and surrounding Henderson, KY, area has four distinct seasons with average annual precipitation of 44.8 inches according to U.S. Climate Data. The average annual high temperature is 67°F and the average annual low temperature is 47°F. The average annual snowfall is 13 inches. The climate of the area has little to no effect on underground and surface operations at the mine. The mine operates year-round with exceptions for holiday and vacation shutdowns.



4.4 INFRASTRUCTURE

The RVC gets its potable water from the Union County Water District and Henderson County Water District. Water used for underground operations is reclaimed and filtered from underground collection sources as well. Water used for coal processing is sourced directly from the Ohio River and nearby tributaries. Electricity is provided by Kentucky Utilities. Employment in the area is competitive. However, the complex has been able to attract a mixture of skilled and unskilled labor with its competitive pay package and benefits. Mine personnel primarily come from the surrounding Kentucky counties of Union, Henderson, and Webster and southern Illinois. The city of Henderson, KY, lies about 17.6 miles to the northeast of Mine #1. Its population is 27,981 according to the 2020 U.S. Census, making it the 10th most populous city in Kentucky. Henderson is the county seat of Henderson County, KY; it is part of the Evansville Metropolitan Area, and is considered the southernmost suburb of Evansville, IN. Most supplies are trucked to the mines from regional vendors.



5.0 HISTORY

5.1 PRIOR OWNERSHIP

Island Creek Coal Company (ICCC), currently a subsidiary of CONSOL Energy Inc. (CONSOL), operated mines in the area and controlled a portion of the property. Under a joint venture, Texas Gas Transmission controlled a large interest in the mineral rights. Peabody Energy Corporation (Peabody) and its successor, Patriot Coal Corporation, operated mines in the area and, in the past, controlled a portion of the reserves. ARP acquired control of the majority of the property through multiple transactions from 2005 to 2015. ICCC operated the Ohio #11 (WKY11) and Uniontown #9 (WKY9) mines to the west of the RVC. ICCC also operated the Hamilton #1 and Hamilton #2 mines in the WKY9 to the southwest. Peabody and Patriot Coal operated the Camp complex and Highland mines in the area, operating in both seams.

5.2 EXPLORATION HISTORY

Over 1100 holes penetrate the WKY9 and about 450 holes penetrate the WKY11 within and adjacent to the RVC to assess thickness, quality, and mineability of the seams. In general, holes are cased through the alluvium, rotary drilled to an interval above the coal(s), and then cored to collect roof, coal, and floor samples. Most cores range from approximately 3 to 4 inches in diameter. Coal quality was analyzed on nearly 160 holes in the WKY11 and nearly 300 holes in the WKY9. Some later holes included geophysical logs to verify core thicknesses and strata in rotary intervals. ICCC, CONSOL, Peabody, and Patriot Coal are responsible for most of the historic drilling which accounts for over 1000 of the drillholes. River View has drilled over 80 holes (RV-series) on the property to supplement the historical data and collected over 50,000 in-mine coal thickness measurements. Further, over 500 oil/gas well geophysical logs drilled by various companies have been interpreted to supplement the exploration drilling. In general, all drilling has shown highly consistent coal seams of mineable thickness and quality for the thermal utility market.

See Appendix A for a map showing all drill hole locations.



6.0 GEOLOGICAL SETTING, MINERALIZATION AND DEPOSIT

6.1 REGIONAL GEOLOGY

The RVC extracts coal from both the WKY9 and the WKY11 located in the Illinois Basin, more specifically the southeastern flank of the Illinois Basin. The WKY9 correlates regionally to the Springfield No.5 coal and the WKY11 to the Herrin No. 6 coal. The Illinois Basin is an interior cratonic basin that formed from numerous subsidence and uplift events. The Illinois Basin extends approximately 80,000 square miles, covering Illinois, southern Indiana, and western Kentucky.

Primary coal-bearing strata, including the WKY9 and WKY11, are in formations of Pennsylvanian aged rocks, which were deposited about 325 to 290 million years ago. The Pennsylvanian System is characterized by many vertical changes in lithology. There are over five hundred distinct beds of shale, sandstone, sandy shale, limestone, and coal in

the Pennsylvanian System. Many beds are laterally extensive and can be correlated across much of the Illinois Basin because of their position in relation to distinct marker beds, such as coals and limestones.

Pennsylvanian rocks in the region consist of shale, sandstone, siltstone, coal, and limestone and are largely alluvial or deltaic in origin. Sandstones and siltstones make up between 50 and 80 percent of the coal-bearing sequence, while shales make up between 20 and 40 percent.

The Carbondale Formation accounts for just a quarter of the rocks in the Pennsylvanian System in Kentucky. However, it contains more than two-thirds of the coal resources in the state. The WKY11 and WKY9 are within the Carbondale Formation.

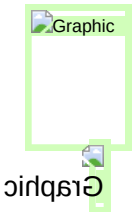


Figure 6-1. Generalized Stratigraphic Column of Pennsylvanian Rocks in Kentucky

6.2 LOCAL GEOLOGY

6.2.1 WEST KENTUCKY NO. 11 SEAM

The immediate roof over the WKY11 is a dark gray to black fossiliferous shale that averages about 0.5 feet thick, commonly call "gob". Above this is the Providence Limestone. This limestone varies in

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Graphic

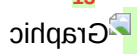
thickness from zero to as much as about seven feet; but is generally around 3 to 4 feet thick over much of the WKY11. Sporadically throughout the reserve, the very thin West Kentucky No. 12 seam occurs just above the Providence Limestone. This is overlain by a silty gray shale of variable thickness due to erosion from the overlying Anvil Rock sandstone (Anvil Rock). The Anvil Rock is the primary aquifer in the region. This sandstone is known to scour the immediate roof and, on some occasions, into the coal itself. When the sandstone comes into close proximity to the WKY11, there's an increased risk of water inflow into the mine due to the Anvil Rock being an aquifer. In general, areas where the Anvil Rock is within five feet of the WKY11 are avoided during mining. The floor of the WKY11 is predominately a fireclay grading down into a limey claystone.

6.2.2 WEST KENTUCKY NO. 9 SEAM

The immediate roof over a vast majority of the WKY9 is a black, fissile shale, often containing fossils. This black shale is generally from one to two feet thick. The black shale is overlain by dark gray shale. The lower ten to twelve feet of the gray shale is very dark and often contains siderite nodules and bands. Above the gray shale typically grades to a silty and eventually sandy shale. Above this is a water-bearing sandstone that varies in thickness and extent. This sandstone can encroach on the immediate and main roof. Under these conditions, ground control issues can occur and require additional support to maintain stability. The WKY9 is underlain by a soft underclay that grades to a limey claystone containing limestone nodules.

See Figure 6-1 for a stratigraphic column and Figures 6-2 and 6-3 for geologic cross sections representing the local geology. See Appendix A for a plan view showing the locations of the cross sections.

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Graphic



Figure 6-2. Geological Cross-Section A-A'



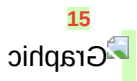
Graphic



Graphic



Figure 6-3. Geological Cross-Section B-B'



6.3 PROPERTY GEOLOGY AND MINERALIZATION

The RVC extracts coal from both the WKY9 and the WKY11. The WKY11 is about 200 to 400 feet deep and the WKY9 is about 200 to 500 feet deep. The resource area is bounded by the Ohio River, the Rough Creek-Shawneetown Fault System, previous mining, and influences associated with mineability discussed above. Strata dip gently to the north and east across the property.

The WKY9 and WKY11 are consistent in thickness over their respective resource boundaries with the seams averaging 4.62 feet (WKY9) and 4.64 feet WKY11 in thickness. On a 1.50 float, dry basis, the WKY9 averages about 8.9% ash, 3.2% sulfur, and 13,050 btu/lb. On a 1.50 float, dry basis, the WKY11 averages about 6.9% ash, 3.2% sulfur, and 13,360 btu/lb.

The mineral deposit type mined by the RVC is a high volatile bituminous coal. The primary coal-bearing strata is of Carboniferous age, in the Pennsylvanian system.

The geologic model developed to explore the resource and reserve is a bedded sedimentary deposit model. This is generally described as a continuous, non-complex, typical cyclothem sequence that follows a bedded sedimentary sequence. The geology continues to be verified by an extensive drilling program.

A stratigraphic column (Figure 6-1) and geologic cross sections (Figure 6-2 & Figure 6-3) representing the local geology, are included in this report.

6.4 STRATIGRAPHY

6.4.1 CARBONDALE FORMATION

The WKY11 and WKY9 are within the Carbondale Formation. The Carbondale Formation makes up about a quarter of the rocks in the Pennsylvanian System; but it contains two-thirds of the coal resources in Kentucky.

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Graphic



7.0 EXPLORATION

7.1 DRILLING EXPLORATION

The RVC has extensively explored both the WKY11 and the WKY9 through drilling it has conducted and through previous developers. Drilling records are the primary dataset used in the evaluation of the resource and reserve. Drill records have been compiled into a geologic database which includes location, elevation, detailed lithologic data, and coal quality. This information is used to generate geologic models that identify potential adverse mining conditions, define areas of thinning or thickening coal, and predict coal quality for marketing purposes. The drilling density on the controlled property is sufficient to identify and predict geological trends within the resource and reserve area.

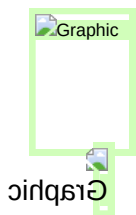
The geologic database is also supplemented using oil and gas well data from the petroleum industry. Oil and gas well geophysical logs are acquired from the Kentucky Geological Survey. The most common geophysical log available is the induction log, which has the spontaneous potential curve and various resistivity and conductivity curves on it. These logs are beneficial in identifying sandstones, coals and shales. Though less common, geophysical logs that have natural gamma, density and resistivity curves are available. These logs are identified in the geologic database as a "high quality" well. These logs provide much greater detail and can better differentiate between the various lithology. Oil and gas well data are used to verify thickness, identify faulting, and delineate areas with adverse mining conditions.

Exploration also includes channel sampling, mine sections from underground surveys, and underground geologic mapping conducted by geologists. Channel samples are samples collected from the coal seam within the coal mine. Once a suitable location is found within the mine, equal, representative portions of the coal seam are extracted using hand tools from the top of the seam to the bottom. The sample is placed within a heavy-duty plastic bag which is securely sealed with tape. The sample is then transported from the mine to the laboratory where they are analyzed.

Channel sample data and mine surveys are useful for thickness data and identifying any partings or anomalies within the coal seam. Underground geologic mapping is beneficial for identifying facies changes, poor roof trends, and supplementing hazards maps generated from drilling data.

The RVC has adequate drilling to define geological trends within the resource and reserve area. Despite this, exploration continues to be added to the geologic database on an annual basis. This occurs when adverse or unexpected mining conditions arise or when it is necessary to better define other parameters of the resource and reserve.

Drilling on the property targets the WKY11 and the WKY9 and has been conducted using industry standard methods by a third-party contractor or a company owned drill rig using qualified personnel. A geologist or other company representative oversees all drilling conducted on the property. Drilling methods include continuous diamond coring, mud rotary, air rotary and spot coring. Spot coring is a method that uses either mud or air rotary drilling to reach a specific depth, usually twenty or thirty feet above the target seam. Once this depth is reached, the drill string is removed, and the rig sets up for core drilling. The core barrel is advanced to the bottom of the hole where coring commences. Core is



advanced to about ten feet below the target seam. Once drilling is completed on a hole, a suite of geophysical parameters is collected. Parameters such as naturally occurring gamma, resistivity, high resolution density, and caliper data are collected. This information is used to verify the driller's log, geologist's description, and verify the thickness of the coal and core recovery. Also, the geophysical log is helpful when only rotary drilling is conducted. The information from the geophysical log is used to determine coal thickness and identify critical strata in the boring.

Continuous coring on the property is generally limited to locations where shafts, slopes or other critical infrastructure will be located. All core is described by a geologist, photographed for future reference, and stored until it is no longer needed.

7.2 HYDROGEOLOGIC INVESTIGATIONS

Kentucky Department of Natural Resources (KDNR), Department of Mine Permits (DMP) requires a groundwater user survey to be conducted in and within 1,000 feet of the permitted boundary. Issuance of the permit needs DMP to write a Cumulative Hydrologic Impact Assessment (CHIA). Groundwater inflow associated with mining has historically not been a significant issue and is dealt with as it is encountered.

7.3 GEOTECHNICAL INFORMATION

The rock mechanics data for the RVC is collected from core drilling as needed. Geotechnical data is derived from core sampling. Once the core is described and photographed by a geologist, the samples are prepared by a geologist or engineer and either an employee of the RVC or a representative from the laboratory transports the sample to the geotechnical laboratory for analysis. The following parameters have been tested by a third-party laboratory:

- / Uniaxial Compressive Strength using ASTM Standard D 7012 method
- / Brazilian Indirect Tensile Strength using ASTM Standard D 4543 and D 3967 methods
- / Point Load Index using ASTM Standard D 5731-05
- / Moisture Content using ASTM Standard D2216-05 method
- / Moisture Sensitivity, ASTM Standard not applicable
- / Bulk Density, ASTM Standard not applicable
- / Specific Gravity, ASTM Standard not applicable

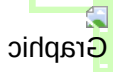
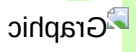
Rock mechanics data have been analyzed by two laboratories throughout the years, Kot F. Unrug, Ph.D, D.Sc and Appalachian Mining Engineering/Geolab Materials Testing.

No significant disruptions, issues, or concerns have ever arisen as a result of sampling processing or laboratory error. Therefore, it's reasonable to conclude that the quality assurance actions employed by these laboratories are adequate to provide reliable results for the requested parameters.

The results from the geotechnical sampling program are adequate to provide guidance for the design of ground control and other engineering applications.

Please see Appendix A for a map depicting the location of all drill holes. Channel samples and mine sections are not shown on the map due to legibility concerns.

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8.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

8.1 SAMPLE PREPARATION METHODS AND ANALYSIS

Company representatives prepare samples for transport to the laboratory for analyses. This includes a sample request form that has information such as sample ID, depths, and requested analyses that is placed securely inside the sample container. If the sample is a rock core, the core remains sealed in plastic bags and in the box provided by the drilling contractor. The box is secured using heavy duty packing tape. A channel sample is placed in a heavy-duty plastic bag. The bag is clearly labelled with the operation name, sample ID, and location where the sample was collected. Within the sample bag another, smaller plastic bag, contains a form that has the operation name, sample ID, date of sample collection, location where sample was collected and the requested analyses. Company representatives then arrange for sample pick up by a representative from the laboratory. Once the laboratory assumes possession of the sample, rigorous quality control and quality assurance standards are strictly adhered to.

The RVC has historically used two laboratories, Standard Laboratories and SGS, North America, Inc. Standard Laboratories has two facilities that analyze samples from the RVC. One laboratory is located in Evansville, Indiana and the other in Freeburg, Illinois. The laboratory in Freeburg, Illinois is an ISO/IEC 17025 accredited laboratory. The laboratory in Evansville, Indiana, while not accredited, according to a formal statement from its senior management "operates in compliance with International Standard ISO/IEC 17025 General Requirements for Competence and Testing and Calibration Laboratories."

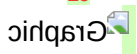
SGS North America, Inc. has an office in Henderson, Kentucky and is accredited by A2LA under ISO/IEC 17025. Their certification number is 3482.03.

Both laboratories prepare, assay, and analyze samples in accordance with approved ASTM international standards. Previous drilling programs used Commercial Testing and Engineering, Dickinson Laboratories, and others for coal quality analyses.

Typical coal quality analyses include the following:

- / Ultimate Analysis using ASTM Method D5373 for percent nitrogen, carbon and hydrogen and ASTM D3176 for the determination of percent oxygen.
- / Mineral Analysis of Ash using ASTM Method D4326 or D6349 for measuring percent silicon dioxide, aluminum dioxide, ferric oxide, calcium oxide, magnesium oxide, potassium oxide, sodium oxide, titanium dioxide, phosphorus pentoxide, magnesium dioxide, barium oxide, strontium oxide, sulfur trioxide.
- / Proximate Analysis using ASTM Method D5865 for the determination of thermal caloric value in BTU/LB. ASTM Method D3174/D7582 is used for the determination of percent ash. ASTM Method D4239 is used for measuring percent sulfur. Method D3175 is used to determine percent volatiles and ASTM D3172 is used to determine percentage of fixed carbon. Total Moisture is determined by ASTM Method D3302.

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- / Ash Fusion Temperatures are determined using ASTM Method D1857, Sulfur Forms are determined using ASTM Method D2492 and Water-Soluble Alkalis are determined using ASTM Method C114 Mod. The Free Swelling Index is determined using ASTM Method D720.

- / The Hardgrove Grindability Index (HGI) is measured using ASTM Method D409 (M) and the percent Equilibrium Moisture is determined using ASTM Method D1412.
- / Trace element analysis to include Antimony, Arsenic, Barium, Beryllium, Boron, Bromine, Cadmium, Chlorine, Chromium, Cobalt, Copper, Fluorine, Germanium, Iodine, Lead, Lithium, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc and Zirconium. ASTM Method D6357, D4208, D3761, D3684 or D6722 are typically used.

Other parameters include Silica Value, Base/Acid Ratio, T250 Temperature, Slagging/Fouling Index, and Alkalis as Sodium Oxide, Dry basis.

The RVC has sufficient drilling to identify general trends in coal quality. The majority of the data comes from samples collected from core drilling. Occasionally, it becomes necessary to collect channel samples to delineate local changes in coal quality. The procedure for collecting channel samples was described in a previous section.

8.2 QUALITY CONTROL/QUALITY ASSURANCE (QA/QC)

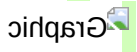
No significant disruptions, issues or concerns have ever arisen as a result of processing or laboratory error. Therefore, it's reasonable to conclude that the quality assurance actions employed by these laboratories are adequate to provide reliable results for the requested parameters.

8.3 OPINION OF THE QUALIFIED PERSON ON ADEQUACY OF SAMPLE PREPARATION

No significant disruptions, issues or concerns have ever arisen as a result of sample preparation and analysis. Therefore, it's reasonable to assume that sample preparation, security, and analytical procedures in place are adequate to provide a reliable sample from which requested parameters can be analyzed.

The qualified person is of the opinion that the sample preparation, security, and analytical procedures for the samples supporting the resource estimation work are adequate for the statement of mineral resources. Results from different laboratories show consistency and nothing in QA/QC demonstrates consistent bias in the results.

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9.0 DATA VERIFICATION

9.1 SOURCE MATERIAL

The RVC maintains a detailed geologic database used to develop several types of maps used to predict the mineability and coal quality of both the WKY11 and the WKY9. Data verification of the accuracy of this database is conducted on a regular basis by company engineers and geologists. This includes a detailed review of seam correlation, coal quality data and lithologic information of all exploration drill holes to what is found in the database. The verification process

also entails underground geologic mapping by a field geologist to verify the accuracy of compiled geologic models from drill hole data. Furthermore, maps generated from coal quality data are checked for accuracy against actual output from the preparation plant.

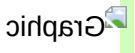
Alliance contracted Weir International (Weir) to conduct an audit of Alliance's reserve estimates prepared under Industry Guide 7. Weir submitted its findings in a report dated July 23, 2015. Weir's review included methodologies, accuracy of Carlson gridding, and drill hole data. A similar review was conducted by Weir in 2010. During the 2015 audit, 10% to 20% of the new drill hole data was reviewed and confirmed.

RESPEC was provided with information for all new holes or data acquired after 2015. RESPEC compared 20% of those e-logs to the Carlson database. RESPEC also verified the thickness and quality grids. As part of the verification process, a new thickness grid was created from the database, and that resultant grid compared to the RVC's model using Carlson grid file utilities.

9.2 OPINION OF THE QUALIFIED PERSON ON DATA ADEQUACY

Based on the verification of the RVC data by the QP and review of prior databases audits, the QP deems the adequacy of the RVC data to be reasonable for the purposes of developing a resource model and estimating resources and subsequent reserves.

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10.0 MINERAL PROCESSING AND METALLURGICAL TESTING

10.1 ANALYTICAL PROCEDURES

The RVC has sufficient drilling across the extent of the property to identify general trends in coal quality. The majority of the data comes from samples collected from core drilling. Occasionally, it becomes necessary to collect channel samples to delineate local changes in coal quality. The procedure for collecting channel samples was described in a previous section.

10.2 REPRESENTATIVE SAMPLES

The parameters that RVC analyses are adequate to define the characteristics necessary to support the marketability of the coal.

10.3 TESTING LABORATORIES

Previous drilling programs contracted with regional laboratories including Commercial Testing and Engineering or used in-house laboratory facilities (Island Creek Coal Western Kentucky Division).

Historically, the RVC has used two laboratories, Standard Laboratories and SGS, North America, Inc. Standard Laboratories has two facilities that analyze samples from the RVC. One laboratory is located in Evansville, Indiana and the other in Freeburg, Illinois. The laboratory in Freeburg, Illinois is an ISO/IEC 17025 accredited laboratory. The laboratory in Evansville, Indiana, while not accredited, according to a formal statement from its senior management "operates in compliance with International Standard ISO/IEC 17025 General Requirements for Competence and Testing and Calibration Laboratories."

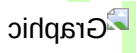
SGS North America, Inc. has an office in Henderson, Kentucky and is accredited by A2LA under ISO/IEC 17025. Their certification number is 3482.03. Both laboratories provide unbiased, third-party results and operate on a contractual basis.

No significant disruptions, issues or concerns have ever arisen as a result of processing or laboratory error. Therefore, it's reasonable to assume that using these laboratories should provide assurance that the data processing and reporting procedures are reliable.

10.4 RESULTS

The RVC performed a series of washability tests to develop washability curves. These curves predict coal qualities and recoveries at different specific gravities. The existing plant operates at a specific gravity of approximately 1.5 to 1.6. The results from the coal quality sampling program are adequate to determine the specification requirements for customers located in both the domestic and export markets.

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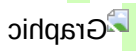
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10.5 OPINION OF QUALIFIED PERSON ON DATA ADEQUACY

It is the opinion of the QP that the coal processing data collected from these analyses is adequate for modeling the resources and reserves for marketing purposes. All analyses are derived using standard industry practices by laboratories that are leaders in their industry.

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Graphic

11.0 MINERAL RESOURCE ESTIMATES

11.1 DEFINITIONS

A mineral resource is an estimate of mineralization, considering relevant factors such as cut-off grade, likely mining dimensions, location, or continuity, that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable.

Mineral resources are categorized based on the level of confidence in the geologic evidence. According to 17 CFR § 229.1301 (2021), the following definitions of mineral resource categories are included for reference:

An inferred mineral resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. An inferred mineral resource has the lowest level of geological confidence of all mineral resources, which prevents the application of the modifying factors in a manner useful for evaluation of economic viability. An inferred mineral resource, therefore, may not be converted to a mineral reserve.

An indicated mineral resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of adequate geological evidence and sampling. An indicated mineral resource has a lower level of confidence than the level of confidence of a measured mineral resource and may only be converted to a probable mineral reserve. As used in this subpart, the term adequate geological evidence means evidence that is sufficient to establish geological and grade or quality continuity with reasonable certainty.

A measured mineral resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of conclusive geological evidence and sampling. As used in this subpart, the term conclusive geological evidence means evidence that is sufficient to test and confirm geological and grade or quality continuity.

11.2 LIMITING FACTORS IN RESOURCE DETERMINATION

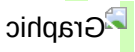
Resources in the WKY9 and WKY11 are delineated based on the following limitations:

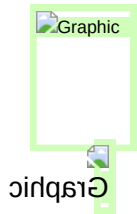
- / Mineable thickness
- / Marketable quality
- / Structural limits, such as faults or sandstone channels, existing mining, and subsidence protection zones
- / Government and social approval

11.2.1 MINEABLE THICKNESS

Thicknesses are extracted from the database to create a geologic model. Grids are created using an inverse distance algorithm using a weighting factor of three. The minimum WKY9 coal thickness in the database is 0 feet and the maximum thickness is 6.10 feet. The minimum WKY11 coal thickness in the

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database is zero feet with a maximum thickness of 6.55 feet. In general, a minimum mineable thickness of four feet is used in defining the resources. Small areas of the seam may not be excluded from resources if the thickness is near four feet and improves the mine plan in the vicinity of those areas.

11.2.2 MARKETABLE QUALITY

The primary source quality data is from core holes drilled for the purpose of coal exploration. The qualities that are of primary interest are ash, sulfur, and BTU. These qualities have limitations which affect the value of the coal. The table below summarizes the values and ranges of each in the geologic database. The range of critical qualities in the database indicates that all the coal in the WKY9 and WKY11 seams is within marketable limits. The potential resource areas are considered to meet the quality standard and no further consideration or analyses of these parameters are made. All resource estimates include average anticipated values for ash, sulfur, and BTU.

Table 11-1. Qualities at 1.5 Specific Gravity – Dry Basis

Seam	Quality	Number of samples	Average	Minimum	Maximum	Standard Deviation
WKY11	Ash	163	6.78	5.39	9.85	0.85
WKY11	Sulfur	163	3.19	2.19	4.31	0.31
WKY11	BTU	147	13,381	12,746	13,728	173
WKY9	Ash	300	8.80	7.08	11.96	0.81
WKY9	Sulfur	300	3.14	2.37	4.61	0.33
WKY9	BTU	286	13,128	12,534	13,128	165

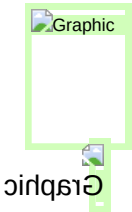
Values in Table 11-1 are dry basis qualities and do not represent marketable qualities with moisture and adjustments for plant variability. Typical as received quality specifications for the RVC product (depending on mixture of WKY11 and WKY9 are approximately:

- BTU – 11,350 to11,600
- Moisture – 11.0% to12.5%
- Ash – 8.0% to 9.5%
- Sulfur – 2.9% to 3.2%
- Volatile Matter – 35% to 37%

11.2.3 STRUCTURAL LIMITS

The resources of both seams are limited to the north and the west by the Ohio River. There is a significant set of faults that are oriented SW-NE and NW-SE. These faults create the limiting boundary of the resources along the southern and western edges. The eastern boundary is defined by thinning coal in the WKY11 and erosion of the WKY9 by the Henderson Paleochannel. The Anvil Rock sandstone unit is present in the roof of the WKY11 seam. The seam is

excluded from the resource when this stratum is within 5 feet of the WKY11 seam due to water concerns. This sandstone is described in section 6.2.1 of this report.



An approximate 500' buffer is maintained around existing underground mines in the WKY9 seam in the area: the Island Creek Coal Company's Hamilton No. 2 and Uniontown No. 9 mines along with Peabody and Patriot Coal's Camp and Highland mines.

An unmined block of both seams is left under a portion of the cities of Morganfield and Corydon.

11.2.4 GOVERNMENT AND SOCIAL APPROVAL

There are no signification limitations to RVC obtaining the permits required. RVC holds the necessary permits to mine, process, and transport coal from this area. Historically, the company has amended, or revised permits as needed. The public is notified of significant permitting actions and may participate in the permitting process.

11.3 CLASSIFICATION RESOURCES

11.3.1 CLASSIFICATION CRITERIA

The identified resources are divided into three categories of increasing confidence: inferred, indicated, and measured. The delineation of these categories is based on the distance from a known measurement point of coal. The distances used are presented in USGS Bulletin 1450-B, "Coal Resource Classification System of the U.S. Bureau of Mines and U.S. Geological Survey." These distances are presented in Table 11-2.

Table 11-2. Coal Resource Classification System

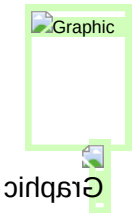
Classification	Distance from measurement point
Measured	<1,320'
Indicated	1,320' – 3,960'
Inferred	3,960' – 15,840'

These distances for classification division are not mandatory. However, these values have been used since 1976, have proven reliable in the estimation of coal resources, and are considered reasonable by the QP.

11.3.2 USE OF SUPPLEMENTAL DATA

Due to the continuity of coal seams in the Illinois Basin, mineability limits are the most important factor in resource assessment. Information from oil and gas well e-logs in the vicinity are used as supplemental data to confirm thickness

trends, identify structural limits, and characterize adverse geologic conditions. Coal thickness grids are generated from drill hole information, mine measurements, channel samples, and a subset of high-quality oil and gas well e-logs. These are data points in which the company has a high degree of confidence in thickness measurement. This is the data used by the company to generate the model for its internal planning. The combined information increases the overall reliability of the resource estimate, and all data points are included within the classification system.



11.4 ESTIMATION OF RESOURCES

Resource estimates are based on a database of geologic information gathered from various sources. The sources of this data are presented in Section 7 of this report. Thickness and quality data are extracted from the database to create a model using Carlson's Geology module. The model consists of a set of grids, generated using an inverse distance algorithm with a weighting factor of three. In addition to the thickness and quality data, seam recovery is modeled. Quality data and recovery rates are determined through a set of tests generating washability curves. The current operation washes the run-of-mine coal at a specific gravity of 1.5 to 1.6. The qualities and plant yield are based on this specific gravity.

Section 12 presents the modifying factors considered in determining whether resources qualify as reserves. Table 11.3 presents all resources. The tonnages are reported on a saleable basis and exclude resources that are converted to reserves.

Table 11-3. Summary of Resources as of December 31, 2023

Resource	WKY 11	WKY 9
Inferred	22	244
Total	22	244

The EIA reported the average weekly coal commodity spot price range in 2023 for Illinois Basin coal (the EIA price) of \$44.25/ton to \$140.00/ton (11,800 Btu, 5.0 lbs. SO₂ basis). The reference price used in the economic analysis is \$58.80 which is based on the QP's review of historical pricing and third-party forecasts. The revenue projection in the economic analysis is based on this estimate of coal price and is assumed to be real 2023 US dollars.

Mining and processing costs excluding depreciation along with general and administrative costs were estimated. Table 11.4 shows the economic basis for the estimate of each seam in real 2023 U.S. dollars.

Table 11-4. Economic Basis for Estimates (US\$/ton)

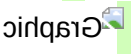
Seam	WKY 11	WKY 9

Revenues	\$58.80	\$58.80
Mining and Processing Costs	\$38.40	\$38.87
General & Administrative Costs	\$0.62	\$0.60

11.5 OPINION OF QUALIFIED PERSON

It is the QP's opinion that the risk of material impacts on the resource estimate is low. The mining operations, processing facility, and site infrastructure are in place for Mine #1 and development of Mine #2 from a combination of new and existing facilities is underway. Mining practices are well established. The operation has a good track record of HSE compliance.

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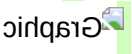


Please refer to Item 1A of the ARLP 10-K regarding the significant risks involved in investment in Alliance's operations including RVC, and the coal industry in general. It is the QP's opinion that the following technical and economic factors have the most potential to influence the economic extraction of the resource:

- / Skilled labor – This site is located near a populated area, which has a history of coal mining.
- / Environmental Matters
- / Greenhouse gas emission Federal or State regulations/legislation
- / Regulatory changes related to the Waters of the US.
- / Air quality standards
- / Regional supply and demand – Although the US electric utility market has moved to natural gas and renewals to provide a higher percentage of electricity production, coal will continue to serve as baseload fuel source. US coal companies are also now more actively competing in the export market.

The potential for changes in the circumstances relating to these factors influencing the prospect of economic extraction exists and could materially adversely impact economic extraction of the resource.

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12.0 MINERAL RESERVES ESTIMATES

12.1 DEFINITIONS

A mineral reserve is an estimate of tonnage and grade or quality of indicated and measured mineral resources that, in the opinion of the qualified person, can be the basis of an economically viable project. More specifically, it is the economically mineable part of a measured or indicated mineral resource, which includes diluting materials and allowances for losses that may occur when the material is mined or extracted. *Probable mineral reserves* comprise the economically mineable part of an indicated and, in some cases, a measured mineral resource. *Proven mineral reserves* represent the economically mineable part of a measured mineral resource and can only result from conversion of a measured mineral resource.

12.2 KEY ASSUMPTIONS, PARAMETERS AND METHODS

12.2.1 RESERVE CLASSIFICATION CRITERIA

The WKY9 and WKY11 seams have been successfully mined at this location and throughout the Illinois coal basin. Several other mines in the region are currently operating in these seams. Resources are identified as described in Section 11 of this report based on geologic conditions, mineability, and marketability of the coal seam. The two critical factors in converting indicated and measured mineral resources into the mineral reserves are inclusion in an economically feasible mine plan and government approval through the various environmental and operational permits.

Table 17-1 presents the various state and federal environmental permits currently held by the operation. These include the surface mining permit (required for surface operations), air quality permits, and water discharge permits. Approval has already been granted for the required surface disturbance, construction and operation of the preparation facilities, coal refuse disposal, and coal transport. It is noted that not all the anticipated underground mining areas are currently covered under the SMCRA permit. Shadow areas (underground only areas) are extended using permit revisions. This is a common practice for underground operations in the Illinois Basin. Given River View's ability to obtain and retain permits, it is reasonably likely that future required permits will be acquired in a timely fashion to facilitate additional mining.

12.2.2 NON-CONTIGUOUS PROPERTIES

The operation currently has mineral rights to approximately 2,160 properties, many containing both seams, yet to be mined. Some of these properties are non-contiguous. Securing additional mineral rights is a routine ongoing activity with an emphasis on obtaining rights to tracts to fill any gaps in the mine plan. Should the operation encounter a tract for which mineral rights cannot be obtained, modifications can be made to the mine plan to access controlled tracts. Due to the nature of the resource and the flexibility of the mining operation, isolated tracts are considered eligible for conversion to the Reserve Classification. It is also noted that due to the large number of tracts which define the reserve, should a controlled non-contiguous tract become isolated, it will not have a significant effect on the total reserve.



12.2.3 CUT-OFF GRADE

The coal bed consistently exhibits qualities that make the product marketable. No reduction is made to the resources or reserves due to quality.

12.2.4 MARKET PRICE

The EIA reported the average weekly coal commodity spot price range in 2023 for Illinois Basin coal (the EIA price) of \$44.25/ton to \$140.00/ton (11,800 Btu, 5.0 lbs. SO₂ basis). The reference price used in the economic analysis is \$58.80/ton which is based on the QP's review of historical pricing and proprietary third-party coal price forecasts provided by Alliance. The revenue projection in the economic analysis is based on this estimate of coal price and is assumed to be real 2023 US dollars.

12.3 MINERAL RESERVES

12.3.1 ESTIMATE OF MINERAL RESERVES

The existing plant operates at a specific gravity of approximately 1.5–1.6. The qualities and recovery at a 1.5 specific gravity are added as attributes to the applicable drill holes from which samples were collected. Those values are then modeled using Carlson, gridding these attributes using the inverse distance algorithm with a weighting factor of three.

The operation uses a room and pillar layout. The approved ground control plan results in a 48% mining recovery of the in-place reserves. The mining recovery applied to the in-place coal estimates the raw coal.

The coal testing included density calculations. The operation uses an average in-situ density of 82.6 lbs/cubic foot. This value is within the expected range of coal density.

All coal tonnages are reported as clean controlled coal. Carlson's Surface Mine Module is used to estimate in-place tonnages, qualities, and average seam recovery within a set of polygons. These polygons are the result of the intersection of polygons outlining property boundaries, adverse mining conditions, mining method, mine plan boundaries, and resource classification boundaries. The Carlson results are exported to a database, which then applies the appropriate percent ownership, mine recovery, and seam recovery. The basic calculation is:

$$\text{Tons} = \text{Area} * \text{Thickness} * \text{Density} * \text{Mine Recovery} * \text{Seam Recovery} * \text{Percent Ownership}$$

Table 12-1. Summary of Coal Reserves as of December 31, 2023

Reserve Category / Seam	Controlled Recoverable (1,000 tons)	Sulfur (%)	Ash (%)	BTU
WKY11 Seam				
Proven	67,150	3.22	6.80	13,376

Probable	50,385	3.19	6.94	13,337
WKY11 Total	117,535	3.21	6.86	13,359

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WKY9 Seam				
Proven	101,959	3.18	8.93	13,069
Probable	90,933	3.18	8.98	13,032
WKY9 Total	192,892	3.17	8.95	13,052
Total Reserves	310,427			

Values in Table 12-1 are based on a washed, dry basis.

12.4 OPINION OF QUALIFIED PERSON

It is the QP's opinion that the risk of material impacts on the reserve estimate is low. The mining operations, processing facility, and site infrastructure are in place. Mining practices are well established. The operation has a good track record of HSE compliance.

Please refer to Item 1A of the ARLP 10-K regarding the significant risks involved in investment in Alliance's operations including RVC, and the coal industry in general. It is the QP's opinion that the following technical and economic factors have potential to influence the economic extraction of the resource:

- / Extension of permitted area – Not all the reserves are currently permitted. Underground operations in Kentucky have traditionally been able to extend the permitted shadow areas as needed. No change is anticipated in the issuance of these permit modifications. It is expected that the shadow area of the permit will be expanded as needed.
- / Skilled labor – This site is located near a populated area, which has a history of coal mining. Although there is competition from other underground operators for skilled labor, RVC has been successful in attracting and retaining skilled staff and has programs for training less experienced miners. Should RVC not be able to maintain as skilled a labor pool as anticipated, this could impact productivity. However, economic evaluation indicates RVC remains economic with modest downturns in productivity.
- / Environmental Matters
 - » Greenhouse gas emission Federal or State regulations/legislation may impact the domestic electric utility market which is a major customer for RVC coal. While many proposed changes have been suggested, the horizon for these changes severely impacting the market is anticipated to be beyond the current planning horizon supporting the reserve estimate.
 - » Regulatory changes related to the Waters of the US (WOTUS). The interpretation of the regulation and enforcement of the Clean Water Act with respect to the jurisdictional waters of the US has been modified multiple times through regulatory actions and court decisions. It is likely that further reinterpretation will occur. This could affect future modifications such as new or expanded stockpile areas, transportation areas, and refuse disposal areas. The coal industry has become experienced in adapting to these regulatory changes.
 - » Miscellaneous regulatory changes. The coal industry has been subjected to many changes in regulation and enforcement in the recent past. In addition to new





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Graphic



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13.1 GEOTECHNICAL & HYDROLOGICAL MODELS

Geotechnical models of the RVC's coal seams have been compiled using Carlson Software. Geologic information from drillholes, underground channel samples, and past reserve studies is entered into the database and used to build stratigraphic grid models. Attributes including coal thickness, depth, recovery percentage, and quality are some of the parameters utilized to accurately model the RVC reserve.

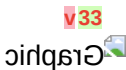
Data collection to support the models is performed as needed to ensure proper characterization of future mining areas. Core drilling is typically performed as needed to provide necessary geotechnical information for future permitting and design requirements. Underground channel sampling is performed concurrently with access being provided from development mining units. Laboratory analyses of both drill core and channel samples are performed in conjunction with collection and used to periodically update the geotechnical models. Commonly analyzed quality specifications include moisture, ash, sulfur, BTU, or other extended parameters when required.

No hydrologic models beyond the restrictions associated with the Anvil Rock sandstone have been developed in association with the mine plan. Water inflow is managed as encountered and mining is avoided within five feet of the Anvil Rock.

13.2 PRODUCTION RATES & EXPECTED MINE LIFE

The RVC has the capability to mine from both the WKY9 and WKY11. This is accomplished using the room and pillar mining method. There are currently ten operating split air super sections. These units will be transitioned between the two mines as needed. The super section arrangement allows for the operation of two continuous miners simultaneously. Infrastructure within the mines includes conveyors, electrical equipment, ventilation, and equipment necessary for water distribution, and can support up to twelve super sections. Empirical data gathered from previous mining in the same coal seams while using similar equipment and mining practices is compiled and considered when forecasting production rates. Predictable adverse geologic conditions are also taken into account during production forecasting.

Planned production varies according to contracted sales volume and expectations of market conditions. Table 13.1 provides historic raw tons mined before processing, preparation plant recovery, and clean recoverable tons. The forecasted raw tons mined before processing, preparation plant recovery, and clean recoverable tons contained in the economic analysis are shown in Table 13.2.



Graphic





Figure 13-1. Historic Production and Recovery (tons 1,000's)

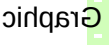




Figure 13-2. Life of Reserve Production Estimate (tons 1,000)

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There are approximately 310.4M clean tons remaining in the RVC reserve to be mined within the controlled properties. The current life of reserve plan anticipates exhausting the reserve in 2056. The lifespan of the complex is dependent on many factors and may vary materially from current projections. Please refer to Item 1A of the ARLP 10-K regarding the significant risks involved in investment in Alliance's operations including RVC, and the coal industry in general.

13.3 UNDERGROUND DEVELOPMENT

The RVC currently operates within the specifications of the approved permits and certifications required by all local, state, and federal regulatory agencies. Some of these permits and certifications are as follows:

- / Local: county road agreements, regulated drainage ditch permits
- / State: Underground permit boundary, surface affects permit, wastewater treatment permits, air permits, nuclear material license
- / Federal: ATF Explosives Permit, EPA injection permits, Army Corps of Engineers permits

In addition to the above-mentioned permits, all mining regulations found in Part 30 of the Code of Federal Regulations (CFR) must be followed. The Mine Safety and Health Administration (MSHA) is the federal regulatory agency who oversees compliance with the CFR. Also, plans uniquely specific to the RVC are required to be submitted, reviewed, and approved by MSHA prior to mining. Some of the approved MSHA required mine plans include:

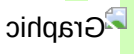
- / Roof Control Plan
- / Ventilation Plan
- / Emergency Response Plan
- / Mine Emergency Evacuation and Fire Fighting Program Instruction Plan
- / Oil Well Mine Through/Around Plan

13.4 EQUIPMENT FLEET, MACHINERY & PERSONNEL

Underground equipment required at the RVC includes, but is not limited to:

- / Continuous miner
- / Shuttle car
- / Double boom roof bolter
- / Truss bolter
- / Battery scoop
- / Fork trucks
- / Personnel carrier (mantrip)
- / Feeder breaker
- / Road grader
- / Belt conveyor

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- / Transformer/substation
- / Refuge Alternative chamber
- / Rock dusters
- / Miscellaneous dewatering pumps

Surface equipment required at the RVC includes, but is not limited to:

- / Dozers (various sizes)
- / Miscellaneous preparation plant equipment
- / End loader
- / Man and material hoisting equipment
- / Ventilation fan
- / Substation
- / Mobile crane
- / Belt conveyor
- / Tractor and dirt scraping pans
- / Side by side personnel carriers
- / Fresh water wells

Personnel required to operate and maintain the RVC is generally obtained through the hiring of both skilled and unskilled workers from the immediate area. Salaried positions at the RVC are made up of production managers, business managers, engineers, information technology, preparation plant operators, maintenance foreman, purchasing agents, and safety specialists. Hourly positions include equipment operators on the surface and underground, general laborers, dust sampling technicians, mechanics, examiners, warehouse clerks, etc. Total headcount numbers can vary depending on the market and demand for coal. Typical headcount ranges from between 750 to 1,000 workers, depending on the number of super sections operating.

13.5 MINE MAP

Please see Appendix A for a plan view of the mine map.

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Graphic

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14.0 PROCESSING AND RECOVERY METHODS

14.1 PLANT PROCESS

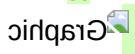
The plant consists of three (3) 1,000 raw tons per hour (tph) units with a total plant capacity of 3000 tph raw. Each unit consists of three circuits, a heavy media cyclone circuit (3"X1mm), a water only cyclone / spiral circuit (1mm X 100 mesh), and a flotation circuit (100mesh X 325mesh).

The heavy media (HM) cyclone circuit includes a heavy media sump, which is fed sized coal (3" X 1mm). The heavy media pump moves media and sized raw coal to the 48" heavy media cyclone. Heavy media cyclones make a gravity separation at a specific gravity of approximately 1.5 -1.6 (specific gravity is adjusted to meet the coal quality specification as needed). The heavy media cyclone overflow (clean coal) discharges from the cyclone to the clean coal flume boxes, to the clean coal drain, and rinse screens. The clean coal screens separate the coal into two sizes (plus ½" and minus ½") and remove media from the clean coal before discharging. The plus ½" clean coal is drained, rinsed, and discharged as final product onto the clean coal collect conveyor. The minus ½" clean coal is discharged into clean coal centrifuges for additional dewatering. The dewatered coal is discharged onto the clean coal collect conveyor, and the effluent from the clean coal centrifuges is discharged to the dilute media sump. The heavy media cyclone underflow (refuse) discharges from the cyclone to the HM refuse flume boxes and to the refuse drain-and-rinse screens. The refuse drain-and-rinse screens remove the magnetite from the refuse prior to discharging directly to the refuse collecting conveyor. The media that is drained from the heavy media screens is piped back to the HM sump. Media that is rinsed at the drain and rinse screens is piped to a dilute sump and pumped to magnetic separators. The magnetic separators remove the magnetite and return it back to the heavy media sump. The effluent from the separators is reused in the plant as process water in the water only cyclone/spiral circuit. The specific gravity in the heavy media sump is regulated by a magnetite screw and magnetite bin or make-up water.

The water only/spiral circuit includes a raw coal sump, which is fed sized coal (1mm X 0). The raw coal pump moves water and raw coal to the water-only cyclones. The overflow from the water-only cyclones is clean coal and is piped to a clean coal classifying sump. The underflow is reprocessed using spiral concentrators. The spiral concentrators make three products, refuse, middlings, and clean coal. The clean coal is piped to the clean coal classifying sump. The middlings are piped back to the raw coal sump for reprocessing, and the refuse is piped to a high-frequency refuse screen for dewatering and discharged to the refuse collect conveyor. The clean coal collected in the clean coal classifying sump is pumped to 15" clean coal classifying cyclones. The clean coal classifying cyclones make a size separation of approximately 100 mesh. The underflow of the clean coal classifying cyclone is plus 100 mesh and is piped to clean coal sieves for dewatering. The dewatered coal is discharged to screenbowl centrifuges for further dewatering. The screenbowl centrate is recycled back to the clean coal sump and the main effluent is piped to the thickener. The overflow of the clean coal classifying cyclones and the water from the clean coal sieves is piped to an ultrafine sump.

The flotation circuit includes the ultrafine sump, which is fed sized coal (100 mesh X 0). The ultrafine sump will pump water and the 100 mesh X 0 material to the 6" deslime cyclones and will make a nominal separation at approximately 325 mesh. The plus 325 mesh (underflow) will discharge and feed flotation columns. The minus 325 mesh (reject) will discharge and be piped to the thickener. Chemical and air is

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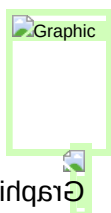


added to the columns, and clean coal will exit the top of the columns and be piped to the screenbowl centrifuges. The refuse from the columns exits the columns and is piped to the thickener.

The thickener feed is mixed with anionic and/or cationic chemicals that aid in the settling of the solids. The settled solids are concentrated and fed to the thickener underflow pumps. The thickener underflow pumps, pump the concentrated refuse away to a slurry disposal site. The clarified water that overflows from the thickener is collected and transferred to a clarified water sump for reuse as process water throughout the plant.

14.2 ENERGY, WATER, PROCESS MATERIALS & PERSONNEL

The RVC processing plant uses electrical energy from Kentucky Utilities, make-up water from the Ohio River and its nearby tributaries, magnetite, anionic and cationic chemicals, and frother for coal flotation. Potable water is provided by the Union County Water District. Labor consists of approximately 90 people hired from the local area.



15.0 INFRASTRUCTURE

Mine #1 has two existing portals where men and materials are transported underground. All necessary utilities are in place and working. Electricity is sourced from a 69 KV line to multiple substations ranging in size from 10-14 MVA located at the prep plant and the Mine #1 portal facilities. Similar support facilities are in place at the Mine #2 slope and will be constructed at the Mine #2 portal. Water is provided by a combination of the Ohio River, underground sources, the Union County Water District, and the Henderson County Water District.

Coal is transported from the processing plant via conveyor belt to River View's barge load out. The facility is capable of loading 30 barges a day for a total of 55,000 tons per day.

A fine refuse impoundment is located on the mine's property. Once construction is completed, the embankment style impoundment will cover approximately 500 acres. The impoundment embankment is constructed of coarse refuse, creating storage space for fine refuse within the impoundment.

Figures 15-1, 5-2, 15-3, 15-4, and 15-5 show the layout of RVC surface facilities.

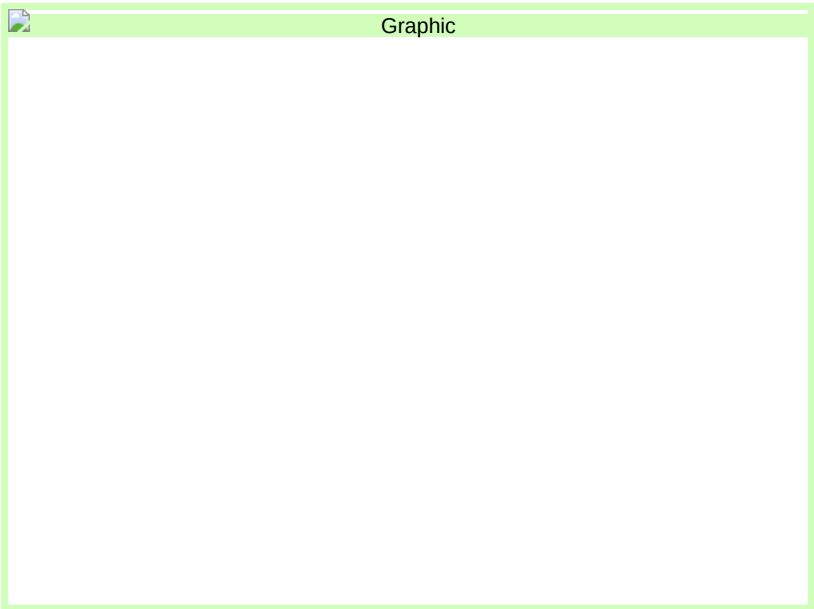
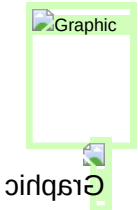


Figure 15-1. Infrastructure Layout: Prep Plant

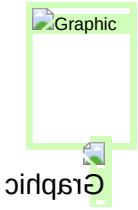




Figure 15-2. Location Map – Portal 1



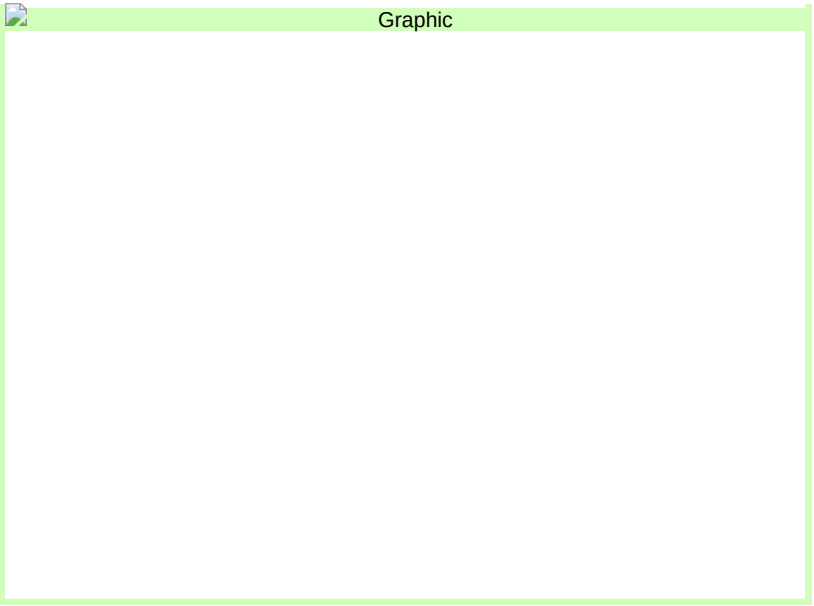
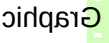


Figure 15-3. Location Map - Portal 2



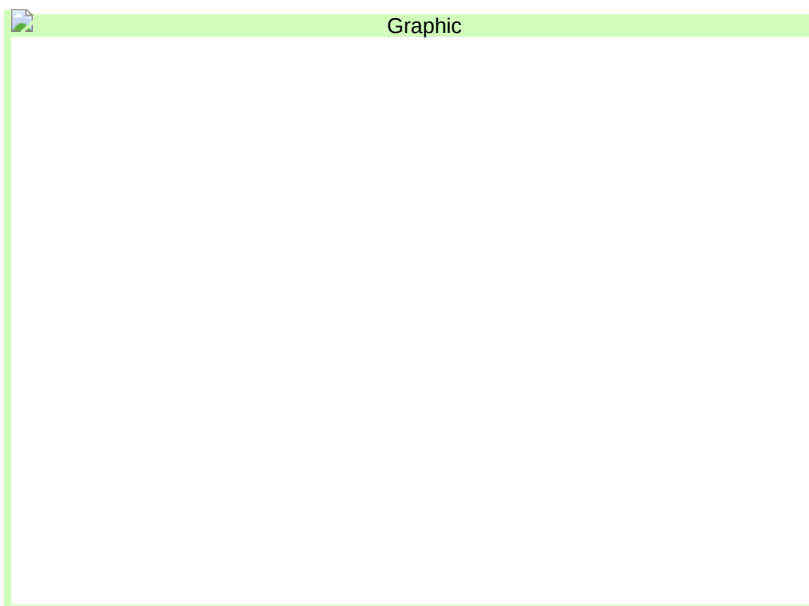


Figure 15-4. Location Map – Mine Access Slope

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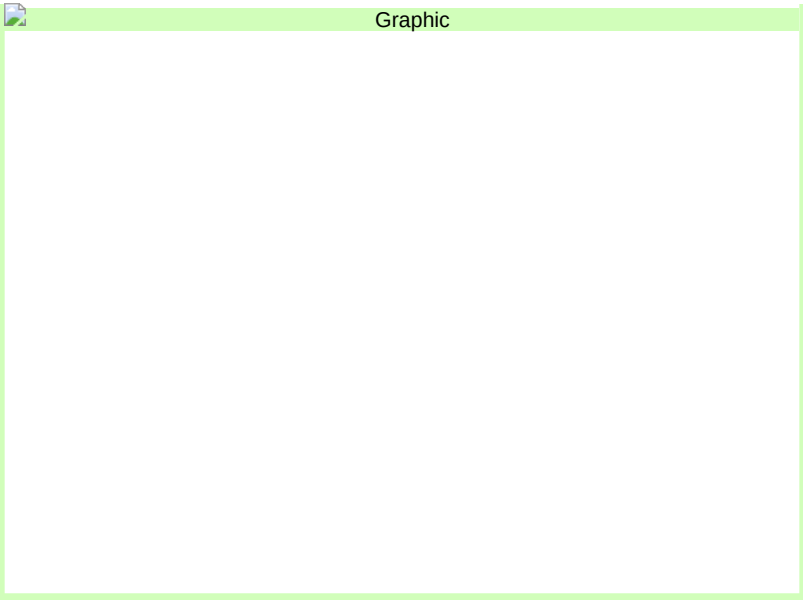


Figure 15-5. Location Map – Proposed Shaft Site

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16.0 MARKET STUDIES

16.1 MARKETS

The RVC produces a high sulfur coal that is sold to the domestic and international thermal coal markets. Production from the RVC is shipped by barge via the Ohio River directly to customers or to various transloading facilities.

The RVC participates in the Illinois Basin coal market, selling coal to a diverse customer base of various domestic utilities, industrial facilities, and Gulf Coast exporters. While coal demand in the US is expected to decline over the coming years, the Eastern US thermal coal demand in 2022 was over 180 million tons. With its low-cost position, exceptional location, and core domestic customer base, it is the QP’s opinion that the RVC should continue to have adequate market opportunities for its product.

Table 16-1. Economic Analysis Coal Price

Combined Historical and Forecasted Pricing ¹

Operation		5-Year	Minimum	Maximum	Economic	
		Average 2019-2023			Analysis Coal Price ²	Reserve Tons
RVC	Tons Sold ³	10,076	---	---	---	310,427
	Price per ton ²	---	\$36.00	\$103.18	\$58.80 ⁴	---

1. Combined published EIA historical pricing and proprietary third-party pricing forecast adjusted to 11,500 BTU, 5.0 lbs. SO₂ quality in real 2023 dollars on an annualized basis.
2. Price per ton is real 2023 dollars for the life of reserve economic analysis.
3. Tons reported in thousands.
4. The economic analysis coal price is based on the QP's review of -historical pricing as reported by EIA and proprietary third-party coal price forecasts provided by Alliance.

The demand for the RVC coal is closely linked to the demand for electricity, and any changes in coal consumption by United States or international electric power generators would likely impact the RVC demand. The domestic electric utility industry accounts for over 90% of domestic coal consumption. The amount of coal consumed by the domestic electric utility industry is affected primarily by the overall demand for electricity, environmental and other governmental regulations, and the price and availability of competing fuels for power plants such as nuclear, natural gas, and fuel oil as well as alternative sources of energy.

Future environmental regulation of GHG emissions could also accelerate the use by utilities of fuels other than coal. In addition, federal and state mandates for increased use of electricity derived from renewable energy sources could affect demand for coal. Such mandates, combined with other incentives to use renewable energy sources such as tax credits, could make alternative fuel sources more competitive with coal. A decrease in coal consumption by the domestic electric utility industry could adversely affect the price of coal.



17.0ENVIRONMENTAL

17.1 ENVIRONMENTAL STUDIES

No standalone environmental studies have been conducted for the properties. However, as part of the state and federal permitting process, various environmental assessments have been conducted throughout the permitting process. As disturbances are proposed for the operation, all relevant local, state, and federal agencies are contacted to

review the proposed project. Each agency reviews the project for impacts to lands, water, and ecology. All potential impacts have either been mitigated or avoided.

17.2 WASTE DISPOSAL & WATER MANAGEMENT

Waste from the coal preparation process generates a fine refuse waste stream and a coarse refuse waste stream. Coarse and fine refuse is disposed of within the refuse impoundments located near the preparation facilities. There are two active impoundments at the site (RV West and RV South), with another impoundment in abandonment status (RV East). Conceptual designs have been completed for a fourth impoundment and the permitting / approval process is ongoing.

In addition to the refuse impoundments at the RVC facility, RVC is approved to dispose of fine refuse at the nearby Hamilton 1 impoundments. The Hamilton 1 site is idled except for fine refuse disposal from RVC into the existing impoundments.

At current production, the existing refuse impoundments are expected to provide coarse and fine refuse disposal for approximately ten years. The French Farm impoundment, once approved, will provide refuse storage for an additional eighteen years. Beyond the twenty-eight years of approved and pending refuse disposal areas, additional design and permitting will be required.

All runoff from the site is managed by sediment control structures including diversions, sumps, and sediment basins. Prior to discharge from the permitted areas, water must meet compliance standards as defined in the NPDES permits. Water samples at discharge locations are collected in accordance with the approved permit and analyzed by an independent laboratory. Any water that is substandard will either be recycled through the site or will be treated prior to discharge.

Water sampling timeframes and constituents are dictated by the approved NPDES permit and will continue through final bond release.

17.3 PERMITTING REQUIREMENTS

KYDNR, DMP is responsible for oversight of active coal mining and reclamation activities, and financial assurance of comprehensive environmental protection performance standards related to surface and underground coal mining operations. The Division of Mine Reclamation and Enforcement (DMRE) is responsible for compliance verification and enforcement.

In addition to the state mining and reclamation laws, operators must comply with various other federal laws relevant to mining. The federal laws include:



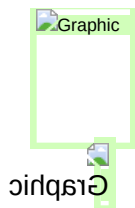
- / Clean Air Act
- / Clean Water Act
- / Surface Mining Control and Reclamation Act
- / Federal Coal Mine Safety and Health Act
- / Endangered Species Act
- / Fish and Wildlife Coordination Act
- / National Historic Preservation Act
- / Archaeological and Historic Preservation Act

In conjunction with the KYDNR coal mining permit, the Clean Air Act and Clean Water Act laws and regulations are administered by the Kentucky Department of Environmental Protection (KYDEP). KYDEP is responsible for permit issuance and compliance monitoring for all activities which have the potential to impact air or water quality.

All applicable permits for underground mining, coal preparation and related facilities, and other incidental activities have been obtained and remain in good standing. A listing of all current state mining permits is provided in Table 17-1. Permits generally require that the permittee post a performance bond in an amount established by the agency to provide assurance that any disturbance or liability created by the mining operations is properly restored to an approved post-mining land use and that all regulations and requirements of the permit are satisfied before the bond is returned to the permittee.

Table 17-1. Current State Permits

Regulatory Agency	Permit No.	Permitted Surface Area (Acres)	Permitted Underground Area (Acres)	Bond
KYDNR	913-0014	30.04	---	YES
KYDNR	913-0015	317.37	34,924.70	YES
KYDNR	913-0029	39.07	010.00	YES
KYDNR	091-0012	3.30	39,927.10	YES
KYDNR	913-0003	1,109.90	---	YES
KYDNR	913-0013	300.00	---	YES
KYDNR	091-0009	43.10	---	YES
KYDEP	NPDES: R13W40001	---	---	---
KYDEP	NPDES: R13W40002	---	---	---
KYDEP	NPDES: R13W40003	---	---	---
KYDEP	NPDES: R13W40007	---	---	---
KYDEP	Att. V-17-024	---	---	---
KYDEP	NPDES: R13W40010	---	---	---
KYDEP	NPDES: R13W40030	---	---	---
KYDEP	Att. 3-23-032	---	---	---



17.4 PLANS, NEGOTIATIONS OR AGREEMENTS

New permits and certain permit amendments/revisions require public notification. The public is made aware of pending permits by an advertisement in the local newspaper. A 30-day comment period follows the last advertisement date to allow the public to submit comments to the regulatory authority.

In certain instances, additional opportunities are provided to the public for comment. These instances include operations within 100 feet of a public road, operations within 300 feet of a dwelling, and operations within 300 feet of a public building, school, church, or community building. In all instances, approval must be granted by the regulatory authority as well as individuals or groups who own or provide oversight for a particular facility.

17.5 MINE CLOSURE

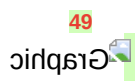
A detailed plan for reclamation activities upon completion of mining required at the properties has been prepared. Reclamation costs have been estimated based on internal project costs and publicly available heavy construction databases. Estimated River View reclamation costs at the end of the year 2023 totaled approximately \$18.3 million.

17.6 LOCAL PROCUREMENT & HIRING

There are no commitments for local procurement or hiring. However, efforts are made to source supplies and materials from regional vendors. The workforce is likewise located in the regional area.

17.7 OPINION OF THE QUALIFIED PERSON ON DATA ADEQUACY

The approved permits and certifications are adequate for continued operation of the facility. Waste disposal facilities are in place for current mining operations, with plans to expand them to provide life of reserve storage. Water control structures are in place and function as required by regulatory agencies. In the QP's opinion, the estimated reclamation liability is adequate to estimate mine closure and reclamation costs at the property.



18.0 CAPITAL AND OPERATING COSTS

RESPEC reviewed capital and operating costs required for the coal mining operations at the RVC. Historic capital and operating expenditures were supplied to RESPEC by River View. The site is an operating coal mine; therefore, the capital and operating cost estimates were prepared with consideration of recent operating performance. The cost estimates are accurate to within +/-25%. RESPEC considers these cost estimates to be reasonable. All costs in this section are expressed in US dollars.

18.1 CAPITAL COSTS

Capital costs were estimated with the costs classified as routine operating necessity (sustaining capital), capital required for major infrastructure additions or replacement. As discussed in Item 12.3, the reserve for RVC is 310.4M tons. The current production schedule estimates approximately 310.4M tons will be mined by 2056. The estimated capital costs for the reserve tons are provided in Table 18-1.

18.2 OPERATING COSTS

Operating cost inputs for the life of reserve economic analysis such as labor, benefits, consumables, maintenance, royalties, taxes, transportation, and general and administrative expenses were based on recent operating data. A summary of the estimated operating costs, including depreciation expense (the Mining and Processing Cost) for the life of the reserve are provided in Table 18-2.

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Table 18-1. Capital Cost Estimate (US\$, 000's)

Category	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Routine Operating Necessity	94,944	48,221	48,985	54,124	71,293	69,408	66,491	46,537	52,675	68,249	66,254	48,652	54,926	50,010	70,306	77,009
Major Infrastructure Investment	27,454	—	575	—	—	—	3,875	—	5,000	—	—	—	—	—	—	—

Category	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056
Routine Operating Necessity	42,991	42,593	60,774	67,081	65,205	52,006	42,344	45,527	62,655	51,274	37,805	33,811	38,616	34,666	27,897	16,381	2,390
Major Infrastructure Investment	15,000	15,000	—	—	—	—	—	—	6,000	—	—	—	—	—	—	—	—

Table 18-2. Operating Cost Estimate (US\$, 000's)

Category	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Cash Operating Costs	348,821	343,938	341,475	339,180	339,572	333,927	335,380	335,988	335,187	345,613	343,948	345,637	344,595	343,514	346,058	349,903
Royalties	32,162	33,956	34,355	34,397	34,199	33,320	32,863	32,975	32,625	32,194	31,859	31,294	30,053	30,398	31,502	32,140
Depreciation	58,163	55,444	32,642	27,733	22,436	14,869	20,834	23,160	39,230	51,542	46,480	36,502	27,126	38,276	52,333	46,203
Mining and Processing Costs	439,147	433,338	408,473	401,310	396,208	382,116	389,077	392,123	407,042	429,349	422,287	413,433	401,774	412,188	429,893	428,246

Category	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056
Cash Operating Costs	350,929	353,771	357,454	355,537	356,331	354,281	351,796	344,493	343,151	339,393	342,836	340,586	336,303	334,976	337,864	340,460	223,054
Royalties	31,193	29,741	29,820	29,051	29,063	29,239	29,820	29,820	29,820	29,900	30,295	29,765	29,317	29,170	29,642	29,727	18,050
Depreciation	34,650	29,400	31,951	46,121	43,376	24,628	26,508	44,448	44,506	37,617	21,454	11,694	9,027	6,483	4,845	4,409	2,730
Mining and Processing Costs	416,772	412,912	419,225	430,708	428,771	408,148	408,124	418,761	417,477	406,910	394,585	382,045	374,646	370,629	372,352	374,596	243,834



19.0 ECONOMIC ANALYSIS

RESPEC completed an economic analysis based on the cash flow developed from the production plan and capital and operating costs previously discussed. The average per ton sold revenue estimate used for the life of reserve economic evaluation was \$58.80.

19.1 KEY PARAMETERS AND ASSUMPTIONS

The economic analysis has been based on production, revenue, capital, and operating costs estimates. The coal operation is not subject to federal and state income taxes as it is held by a partnership for tax purposes and not taxed as a corporation. Table 19-1 provides the annual cash flow of the life of reserve economic analysis for RVC.

Table 19-1. Cash Flow Summary (US\$, 000's)

Category	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Revenues	584,703	609,217	613,809	614,254	611,906	599,005	592,873	595,858	586,239	580,722	574,694	564,493	542,132	548,346	568,249	579,754
Cash Operating Costs	(348,821)	(343,938)	(341,475)	(339,180)	(339,572)	(333,927)	(335,380)	(335,988)	(335,187)	(345,613)	(343,948)	(345,637)	(344,595)	(343,514)	(346,058)	(349,903)
Royalties	(32,162)	(33,956)	(34,355)	(34,397)	(34,199)	(33,320)	(32,863)	(32,975)	(32,625)	(32,194)	(31,859)	(31,294)	(30,053)	(30,398)	(31,502)	(32,140)
Capital Expenditures	(122,397)	(48,221)	(49,560)	(54,124)	(71,293)	(69,408)	(70,366)	(46,537)	(57,675)	(68,249)	(66,254)	(48,652)	(54,926)	(50,010)	(70,306)	(77,009)
Working Capital Changes	(5,003)	9,378	(5,809)	170	1,314	(291)	(553)	(1,775)	1,462	1,158	1,566	923	3,655	(29)	174	374
Cash Flow	76,319	192,480	182,610	186,723	168,156	162,059	153,712	178,582	162,213	135,824	134,198	139,834	116,213	124,395	120,557	121,077

Category	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056
Revenues	562,680	536,498	537,931	524,056	524,277	527,445	537,931	537,931	537,931	539,363	546,491	536,930	528,853	526,202	534,720	536,252	325,727
Cash Operating Costs	(350,929)	(353,771)	(357,454)	(355,537)	(356,331)	(354,281)	(351,796)	(344,493)	(343,151)	(339,393)	(342,836)	(340,586)	(336,303)	(334,976)	(337,864)	(340,460)	(223,054)
Royalties	(31,193)	(29,741)	(29,820)	(29,051)	(29,063)	(29,239)	(29,820)	(29,820)	(29,820)	(29,900)	(30,295)	(29,765)	(29,317)	(29,170)	(29,642)	(29,727)	(18,050)
Capital Expenditures	(57,991)	(57,593)	(60,774)	(67,081)	(65,205)	(52,006)	(42,344)	(45,527)	(68,655)	(51,274)	(37,805)	(33,811)	(38,616)	(34,666)	(27,897)	(16,381)	(2,390)
Working Capital Changes	1,500	(3,724)	(455)	2,023	144	(965)	(2,569)	(2,687)	(1,266)	(2,358)	(1,849)	24	846	(241)	(998)	(389)	(1,014)
Cash Flow	124,067	91,669	89,428	74,410	73,822	90,954	111,401	115,403	95,039	116,439	133,707	132,793	125,463	127,150	138,319	149,295	81,219



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19.2 ECONOMIC VIABILITY

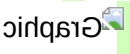
The economic viability of the operation is reliable based on various factors. This is an on-going operation and has already established the economic benefits outweigh the economic costs. The economic analysis utilized the same parameters and assumptions used in past financial models. Therefore, it is reasonable to expect similar benefits and costs. Since this is an on-going operation with no major up front capital expenditures, there is no calculation of NPV, internal rate of return or payback period of capital.

We have tested the economic viability of the life of reserve economic analysis by conducting sensitivity analysis with respect to the revenue and operating and capital cost. In the independent sensitivity analysis, the revenue was reduced by 15% and the operating and capital cost was increased by 20%. The summary of the sensitivity analysis is shown in Table 19.2.

Table 19-2. Sensitivity Analysis

Life of Reserve Estimate 2024-2056 (US\$ 000's)				
Category	Annual Minimum	Annual Maximum	Annual Average	Total
Revenue Reduced 15% - Cash Flow	(6,562)	106,191	49,620	1,637,465
Operating & Capital Costs increased 20% - Cash Flow	(17,924)	114,048	49,131	1,621,336

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20.0 ADJACENT PROPERTIES

The WKY11 mining is bounded to the west by old works of the Ohio #11 mine. Per the Kentucky Department of Mines and Minerals (KDMM), Ohio #11 produced from WKY11 from 1972 until 1996. The mine map shows very successful room and pillar extraction with a maximum annual production of just over 1.5 million tons in 1987. Per KDMM, The Highland 11 and Camp 11 mines were operated by Peabody Coal. Highland 11 operated for only two years and mined less than a million tons. Camp 11 operated in the WKY11 until 1990 and then transitioned to the WKY9 seam. At peak production in the WKY11, it mined about 2.4 million tons in 1984. The mine maps show successful room and pillar extraction though influenced by faulting and some adverse conditions. Other small mines in the area operated in the early to middle of the 20th century with little known data beyond workings. Conditions at all mines in the area look to be good with some roof problems associated with roof water from the overlying sandstone as the mine moved to the east. Some faulting was encountered.

The WKY9 mining is bounded to the west by old works of the Uniontown mine of Island Creek. The mine was officially closed in 1971. KDMM records are unclear, but production may have peaked in 1967 at about 1.5 million tons. The Hamilton #2 mine lies to the southwest and produced from 1970 until 1992. Maximum production occurred from the WKY9 seam in 1990 at about 1.34 million tons. The Highland #9/Camp complex mines operated from about 1971 until 2014. Production peaked in about 2007 at 3.9 million tons. All mines show very successful room and pillar mining with only minor issues associated with faulting and roof conditions related to water from an overlying sandstone.



21.0 OTHER RELEVANT DATA AND INFORMATION

All data relevant to the supporting studies and estimates of mineral resources and reserves have been included in the sections of this TRS. No additional information or explanation is necessary to make this TRS understandable and not misleading.





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22.0 INTERPRETATION AND CONCLUSIONS

22.1 INTERPRETATIONS AND CONCLUSION

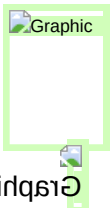
The QP has reached a conclusion concerning the RVC operation based on data and analysis summarized in this TRS that the operation is currently viable based on the reserves that remain, the economic benefits for River View and the market needs of this product. RVC contains an estimated 310.4 million clean tons of reserves.

22.2 RISKS AND UNCERTAINTIES

It is the QP's opinion the mine operating risks are low. This is an on-going operation that has proven to be a viable and profitable business. The analyses of the reserves and resources used the same methodology the operation has used in the past. Given the reliability of past mining plans, it is a reasonable conclusion that future mining plans would continue to be reliable. However, market uncertainty associated with government regulations could result in earlier retirements of coal-fired electric generating units. This could negatively affect the demand and pricing for the RVC product. Please refer to Alliance Resource Partners, L.P. Form 10-K 1A, for a complete listing of risk factors that may affect this operation.



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Graphic



Graphic

23.0 RECOMMENDATIONS

The recommendations for RVC are as follows:

- Continue acquiring mining rights in the extended mine plan to support future production.
- Continued research into a new impoundment location and commence negotiations with landowners as required.
- Continue current exploration plan.



24.0 REFERENCES

Greb, Stephen F; Williams, David A; and Williamson, Allen D. (1992)" Geology and Stratigraphy of the Western Kentucky Coal Field". Kentucky Geological Survey Bulletin. 3
https://uknowledge.uky.edu/kgs_b/3

U.S. Energy Information Administration (EIA). (2023). Coal Markets. Accessed throughout 2023. Retrieved from <https://www.eia.gov/coal/markets/>



25.0 RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

Table 25-1 summarizes the information provided by the registrant for matters discussed in this report, as permitted under §229.1302(f) of the SEC S-K 1300 Final Rule.

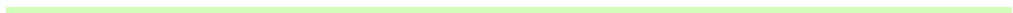
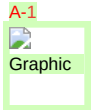
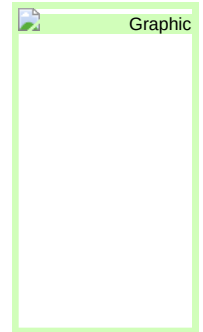
Table 25-1. Summary of Information Provided by Registrant

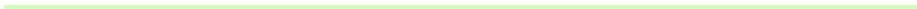
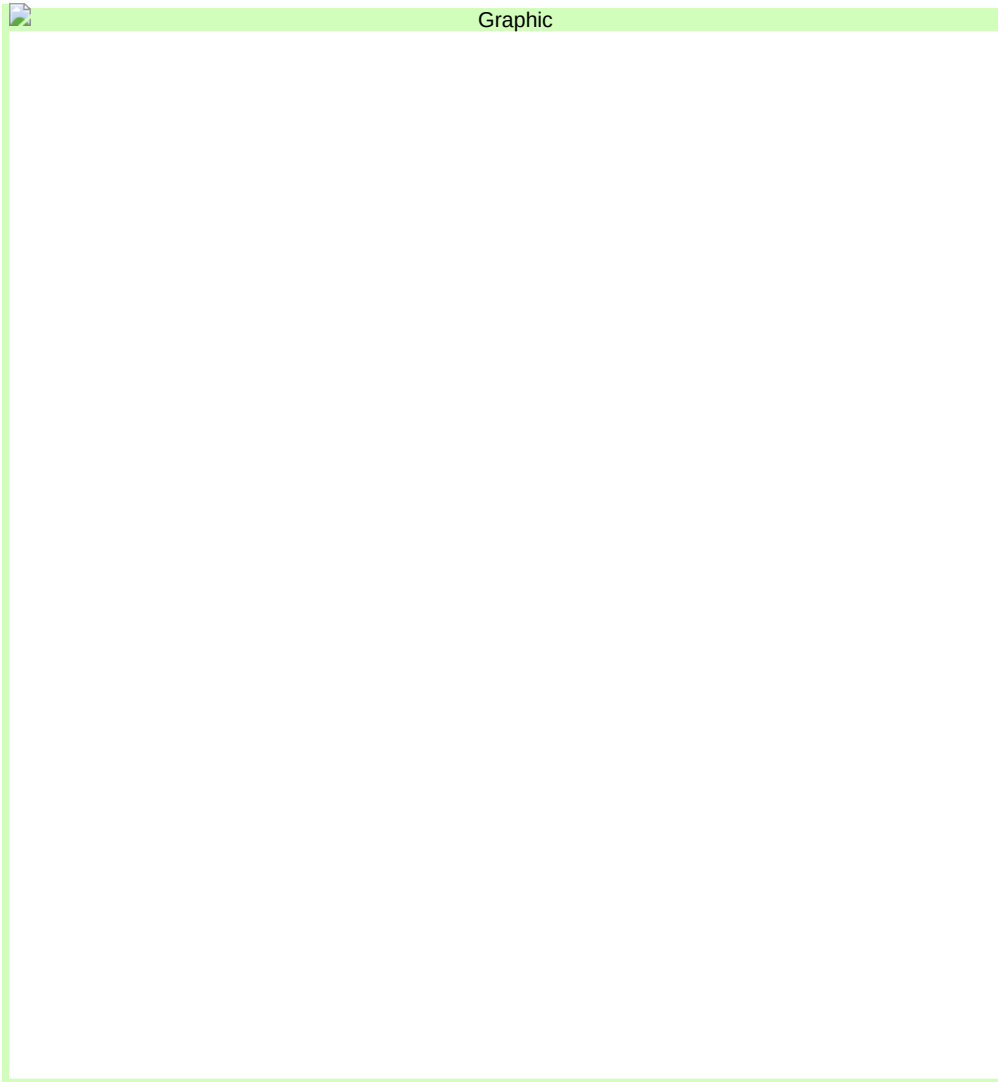
Category	Report Item/ Portion	Disclose why the Qualified Person considers it reasonable to rely upon the registrant
Macroeconomic trends	Section19	N/A
Marketing information	Section16	The market trends were provided by River View personnel. The QP's experience evaluating similar projects leads them to opine that the market trends are representative of the expected trends of an on-going coal mining operation in the United States
Legal matters	Section17	The legal matters involving statutory and regulatory interpretations affecting the mine plan were provided by River View personnel. The QP's experience with statutory and regulatory issues leads them to opine the mining plan meets all statutory and regulatory requirements of an on-going coal mining operation in the United States
Environmental matters	Section17	The environmental permits and matters were provided by River View permitting group. The QP's experience with permitting and environmental issues leads them to opine the information provided is representative of what is required of an on-going coal mining operation in the United States
Local area commitments	Section17	N/A
Governmental factors	N/A	N/A



APPENDIX A

MINE MAP







Graphic



Exhibit 96.5

 Graphic

**TUNNEL RIDGE MINE
SEC S-K 1300
TECHNICAL REPORT SUMMARY**

 Graphic

PREPARED FOR
Tunnel Ridge, LLC
1146 Monarch Street
Suite 350
Lexington, Kentucky 40513

FEBRUARY 2023

 Graphic

 Graphic

 Graphic

**TUNNEL RIDGE MINE
SEC S-K 1300
TECHNICAL REPORT SUMMARY**

 Graphic

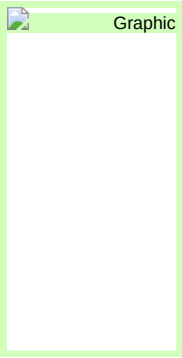
PREPARED BY
RESPEC
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Lexington, Kentucky 40508

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Lexington, Kentucky 40513

FEBRUARY 2023

Project Number M0062.21001



Graphic

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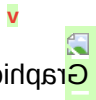
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1.0 EXECUTIVE SUMMARY

1.1 PROPERTY DESCRIPTION

Tunnel Ridge, LLC (Tunnel Ridge) owns and operates the Tunnel Ridge Mine (TRM). Tunnel Ridge is a wholly owned subsidiary of Alliance Coal, LLC. TRM is an underground coal mining operation located in Ohio County, West Virginia and Washington County, Pennsylvania and currently has approximately 20,890 acres permitted. The mine property is controlled through both fee ownership and leases of the coal. Surface facilities are controlled through ownership or lease.

1.2 GEOLOGY AND MINERALIZATION

The Pittsburgh No. 8 seam is mined through longwall mining and room and pillar methods. The seam is located in the Appalachian Basin, specifically, the northern portion of the Appalachian Basin. The Appalachian Basin is an elongated synclinal structure that contains a large volume of predominantly sedimentary stratified rocks and encompasses an area of about 207,000 square miles. The primary coal-bearing strata is of Carboniferous age in the Pennsylvanian system.

1.3 STATUS OF EXPLORATION

The TRM reserve block has been extensively explored through drilling conducted by Tunnel Ridge and previous developers. Drilling records are the primary dataset used in the evaluation of the reserve. Drill records have been compiled into a geologic database which includes location, elevation, detailed lithologic data and, when available, coal quality data.

1.4 MINERAL RESOURCE AND RESERVE ESTIMATES

This information is used to generate geologic models that identify potential adverse mining conditions, define areas of thinning or thickening coal and predict coal quality for marketing purposes. This information is used to create a resource model using Carlson's Geology module, part of an established software suite for the mining industry. In addition, to coal thickness and quality data, seam recovery is modeled. Classification of the resources is based on distances from drill data. Carlson then estimates in-place tonnages, qualities, and average seam recovery within a set of polygons. These polygons are the result of the intersection of polygons outlining property boundaries, adverse mining conditions, mining method, mine plan boundaries, and resource classification boundaries. These results are exported to a database which then applies the appropriate percent ownership, mine recovery and seam recovery. Table 1-1 is a summary of the coal reserves based on a life-of-reserve plan.

Table 1-1. Summary of Controlled Coal Reserves Estimates as of December 31, 2022

Reserve Category	Controlled Recoverable (1,000 tons)
Pittsburg No. 8 Seam	
Proven	61,732
Probable	58,254
Total Proven and Probable	119,986

1



1.5 CAPITAL AND OPERATING COST ESTIMATES

TRM is an on-going operating coal mine; therefore, the capital and operating cost estimates were prepared with consideration of historical operating performance. Table 1-2 shows the estimated average capital costs and mining and processing costs for the life of reserve plan. The coal operation is not subject to federal and state income taxes as it is held by a partnership for tax purposes and not taxed as a corporation.

Table 1-2. Capital and Operating Costs

Category	Life of Reserve Estimate 2023-2038 (US\$ 000's) 000's
Capital Costs	847,114
Mining and Processing Cost	5,050,286
TOTAL	5,897,400

1.6 PERMITTING REQUIREMENTS

TRM is located on the border of West Virginia and Pennsylvania and operates in each state. Thus, regulatory requirements for each state must be met pertaining to mining operations and facilities located in each respective state.

For operations and facilities in West Virginia, the West Virginia Department of Environmental Protection (WVDEP) is the regulatory authority over mining activities. Within the WVDEP, the Division of Mining and Reclamation (DMR) is responsible for review and issuance of all permits relative to coal mining and reclamation activities.

For operations and facilities in Pennsylvania, the Pennsylvania Department of Environmental Protection (PADEP) is the regulatory authority over mining activities. Within the PADEP, the Bureau of District Mining Operations (DMO) is responsible for review and issuance of all permits relative to coal mining and reclamation activities.

All applicable permits for the current operation's underground mining, coal preparation and related facilities and other incidental activities have been obtained, remain in good standing, and will be expanded as needed.

1.7 QUALIFIED PERSON'S CONCLUSIONS AND RECOMMENDATIONS

It is the Qualified Person's (QP) opinion that the mine operating risks are low. The mining operation, processing facilities, and the site infrastructure are in place. Mining practices are well established. All required permits for current operations are issued and remain in good standing. Given the operation's ability to obtain and retain permits, it is reasonably likely that future required permits will be acquired in a timely fashion to facilitate additional mining. Market Risk is discussed in Section 16.1 and could materially impact the reserve.

2.0 INTRODUCTION

2.1 ISSUER OF REPORT

Tunnel Ridge has retained RESPEC Company, LLC (RESPEC) to prepare this Technical Report Summary (TRS). TRM is operated by Tunnel Ridge. Tunnel Ridge is a wholly owned subsidiary of Alliance.

2.2 TERMS OF REFERENCE AND PURPOSE

The purpose of this TRS is to support the disclosure in the annual report on Form 10-K of Alliance Resource Partners, L.P., (ARLP 10-K) of Mineral Resource and Mineral Reserve estimates for the TRM as of 12/31/2022. This report is intended to fulfill 17 Code of Federal Regulations (CFR) §229, "Standard Instructions for Filing Forms Under Securities Act of 1933, Securities Exchange Act of 1934 and Energy Policy and Conservation Act of 1975 – Regulation S-K," subsection 1300, "Disclosure by Registrants Engaged in Mining Operations." The mineral resource and mineral reserve estimates presented herein are classified according to 17 CFR§229.133 – Item (1300) Definitions.

Unless otherwise stated, all measurements are reported in U.S. imperial units and currency in U.S. dollars (\$).

This TRS for the Tunnel Ridge Mine was prepared by RESPEC. A prior RESPEC and updates the TRS was prepared in for the Tunnel Ridge Mine dated July 2022, by RESPEC, which updated the TRS for the Tunnel Ridge Mine dated February 2022.

2.3 SOURCES OF INFORMATION

During the preparation of the TRS, discussions were held with several Alliance personnel.

The following information was provided by Tunnel Ridge and Alliance:

- / Property history
- / Property Data
- / Laboratory Protocols
- / Sampling Protocols
- / Topographic Data
- / Mining Methods
- / Processing and Recovery Methods
- / Site Infrastructure information
- / Environmental permits and related data/information
- / Historic and forecast capital and operating costs.

2.4 PERSONAL INSPECTION

A RESPEC QP and a company representative conducted a site visit on February 9, 2022. During the site visit, the RESPEC QP visited the river barge load-out, the preparation plant, the raw coal stockpile, the clean coal stockpile, the mine slope, the mine shafts, load-out structure, and the refuse impoundments.

Graphic

Graphic

3.0 2. PROPERTY DESCRIPTION PERSONAL INSPECTION

3.1 PROPERTY DESCRIPTION AND LOCATION

The TRM (40°09'17" N, -80°39'26" W), an underground longwall A RESPEC QP and a company representative conducted a site visit on February 9, 2022. During the site visit, the RESPEC QP visited the river barge load-out, the preparation plant, the raw coal stockpile, the clean coal stockpile, the mine in slope, the Pittsburgh No. 8 seam, currently has approximately 20,890 underground acres permitted.

Figure 3-1 shows mine shafts, load-out structure, and the general location of the TRM surface facilities and underground reserve areas.

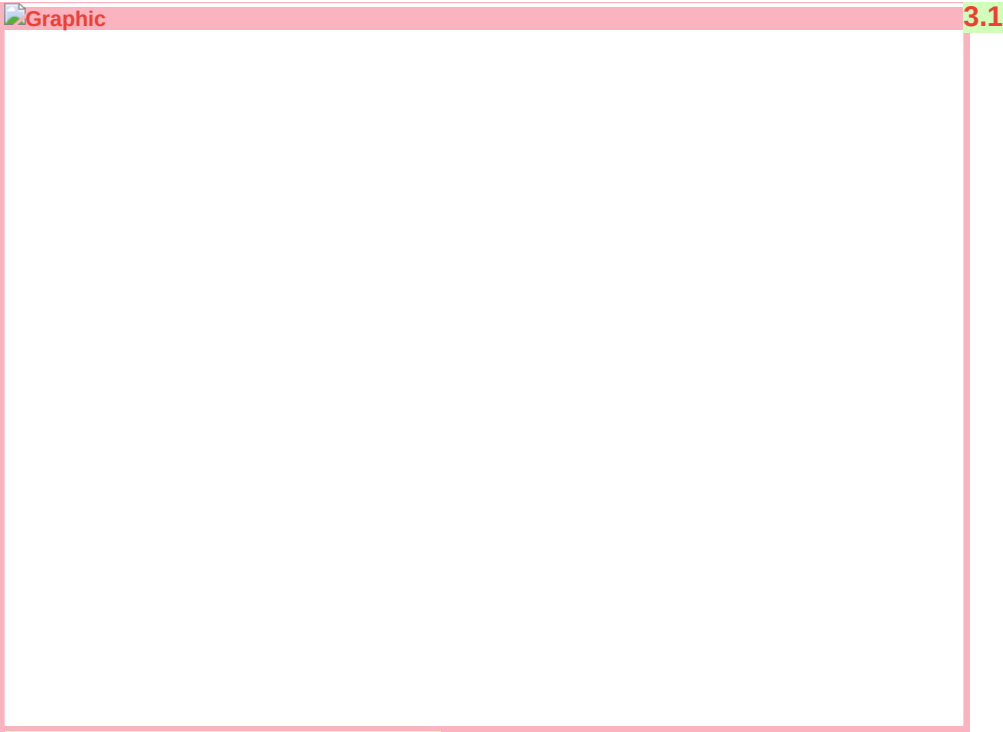
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Graphic

3.0 PROPERTY DESCRIPTION



PROPERTY DESCRIPTION AND LOCATION

The TRM (40°09'17" N, -80°39'26" W), an underground longwall coal mine in the Pittsburgh No. 8 seam, currently has approximately 20,890 underground acres permitted.

Figure 3-1. General Location Map3-1 shows the general location of the TRM surface facilities and underground reserve areas.

5

Graphic

Graphic

Graphic

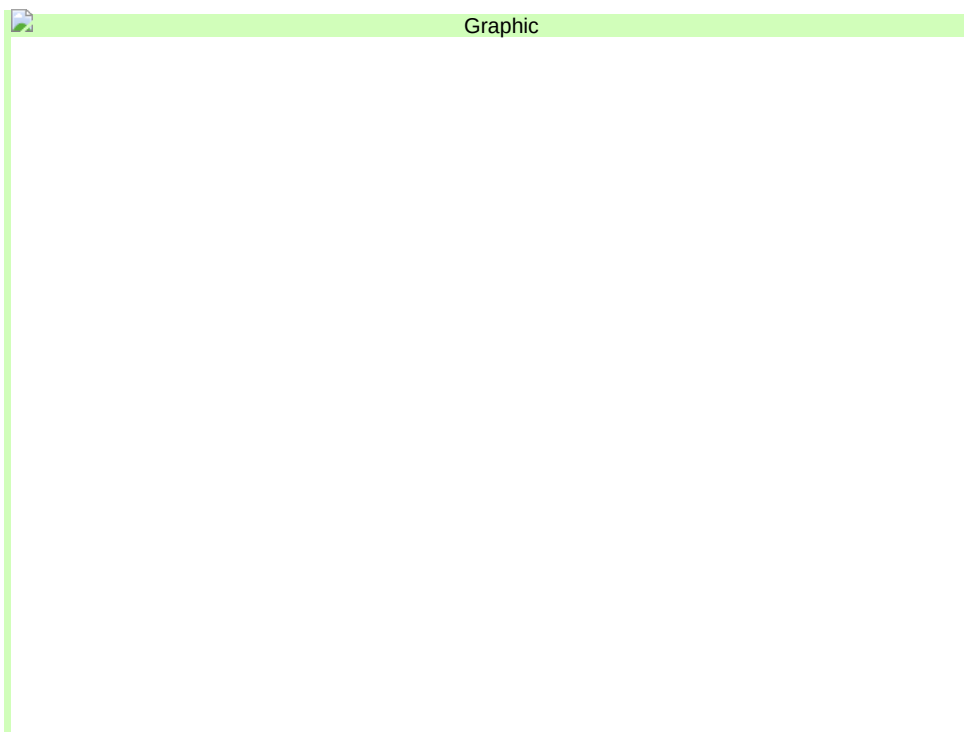


Figure 3-1. General Location Map

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Graphic



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3.2 MINERAL RIGHTS

Tunnel Ridge has mining rights to 70,516 acres through ownership and lease, of which 17,925 acres are identified as reserve and resource areas. The majority of the property is controlled through leases with the Joseph W. Craft III Foundation, the Kathleen S. Craft Foundation, Natural Resource Partners, L.P., and an affiliated company, Alliance Resource Properties. Historically, adverse tracts encountered within the mine area are leased or acquired as needed. It is reasonable to assume this will continue in the normal course of business.

Beginning in 2005, Tunnel Ridge began acquiring surface properties for slope and shaft development, overland conveyors construction, refuse disposal facilities and other ancillary surface facilities. TRM continues to acquire additional surface properties as needed to support mining operations.

Coal produced from the TRM is transported by conveyor belt to a barge loading facility on the Ohio River that is owned by Tunnel Ridge.

3.3 SIGNIFICANT ENCUMBRANCES OR RISKS TO PERFORM WORK ON PERMITS

ARLP's revolving credit facility is secured by, among other things, liens against certain Tunnel Ridge surface properties, coal leases and owned coal. Documentation of such liens is of record in the Office of the Recorder of County Commission of Ohio County, West Virginia and the Office of the Recorder of Deeds of Washington County, Pennsylvania. Please refer to Item [8.] Financial Statements and Supplementary Data—Note 8 – Long-term Debt" of the ARLP 10-K for more information on the revolving credit facility.

Accounts receivable generated from the sale of coal mined from this property are collateral for ARLP's accounts receivable securitization facility, evidenced by financing statement of record in the Office of the Recorder of County Commission of Ohio County, West Virginia and the Office of the Recorder of Deeds of Washington County, Pennsylvania. Please refer to -K, "Item [8.] Financial Statements and Supplementary Data—Note 8 – Long-term Debt" of the ARLP 10-K for more information on the accounts receivable securitization facility.

TRM is located on the border of West Virginia and Pennsylvania, operating in each state. The regulatory requirements for each state must be met pertaining to mining operations and facilities located in each respective state.

In addition to state mining and reclamation laws, operators must comply with various federal laws relevant to mining. All applicable permits for underground mining operations, coal preparation, and related facilities and other incidental activities have been obtained and remain in good standing.



Graphic

Graphic

Graphic

4.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

4.1 TOPOGRAPHY AND VEGETATION

The TRM is located in the Permian Hills physiographic region of West Virginia per USEPA. This region is mostly unglaciated and hilly, consisting of a dissected plateau with 200 to 750 feet of local relief. It is composed of horizontally bedded sedimentary rock. The surface facilities and mine access are located to the northeast of Wheeling, WV, which sits on the Ohio River, and to the southwest of Pittsburgh, PA. The elevation ranges across the mine permit area from about 800 to 1500 feet above mean sea level. The vegetation across the mine permit area consists primarily of pastureland, deciduous forest, and mixed forest.

4.2 ACCESSIBILITY AND LOCAL RESOURCES

The primary access shaft (Schoolhouse Portal) to TRM (40°05'47" N, -80°33'13" W) is located at 184 Schoolhouse Ln, Valley Grove, WV 26060. It is accessible from Wheeling, WV, via Interstate 70 E to US-40 E to Trestlework Rd to

Schoolhouse Ln. The secondary access shaft (Battle Run Portal) to TRM (40°07'18" N, -80°35'19" W) is located at 2596 Battle Run Rd, Triadelphia, WV 26059. Interstate 70 is a major transportation artery passing through the area located 0.9 miles to the southeast of the mine's primary access shaft. The city of Wheeling, WV is 9.1 miles to the southwest of the mine and the city of Washington, PA, is 17.1 miles to the east of the mine. The Ohio River is 8.3 miles due west of the mine. Raw coal is transported by belt from the underground mine to the surface at the slope access (40°08'04" N, -80°38'44" W) located 5.5 miles northwest of the primary access shaft. The raw coal is transported by overland belt from the slope to the mine's processing facilities (40°09'17" N, -80°39'26" W) located 1.5 miles to the northwest of the slope access. The processed coal is transported by belt from the processing facilities through an underground corridor to the barge loading facility (40°10'30" N, -80°41'06" W) on the Ohio River (mile marker 82) 1.9 miles to the northwest of the processing facilities. The nearest large FAA-designated commercial service airport is Pittsburgh International Airport (PIT) located 32 miles to the northeast of the mine near Pittsburgh, PA.

4.3 CLIMATE

The TRM and surrounding Wheeling, WV, area has four distinct seasons with average annual precipitation of 40.4 inches according to U.S. Climate Data. The average annual high temperature is 63°F and the average annual low temperature is 43°F. The average annual snowfall is 20 inches. The climate of the area has little to no effect on underground and surface operations at the mine. The mine operates year-round with exceptions for holiday and vacation shutdowns.

4.4 INFRASTRUCTURE

The TRM obtains its potable water from various municipal water districts. Water used for underground operations is pumped overland from the Ohio River. Water used for coal processing is sourced from a combination of collection ponds and the Ohio River. Electricity is provided to the TRM by American Electric Power (AEP) through a 138 kV transmission line from Brilliant, OH. and West Penn Power (WPP)

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through 3 phase residential transmission lines. Employment in the area is competitive given the established mining and manufacturing industries. However, the mine has been able to attract a mixture of skilled and unskilled labor with its competitive pay package and benefits. Mine personnel primarily come from Ohio, Marshall, and Brooke Counties, West Virginia, Belmont County, Ohio and Washington County, Pennsylvania. The city of Wheeling, WV, is 9.1 miles southwest of the mine. Its population is 27,052 according to the 2020 U.S. Census, making it the 5th most populous city in West Virginia. Wheeling is the principal city of the Wheeling, WV-OH Metropolitan Statistical Area, which has a population of 147,950 according to the 2010 U.S. Census. Most supplies are trucked to the mine from regional vendors.

8



 Graphic


Graphic

through 3 phase residential transmission lines. Employment in the area is competitive given the established mining and manufacturing industries. However, the mine has been able to attract a mixture of skilled and unskilled labor with its competitive pay package and benefits. Mine personnel primarily come from Ohio, Marshall, and Brooke Counties, West Virginia, Belmont County, Ohio and Washington County, Pennsylvania. The city of Wheeling, WV, is 9.1 miles southwest of the mine. Its population is 27,052 according to the 2020 U.S. Census, making it the 5th most populous city in West Virginia. Wheeling is the principal city of the Wheeling, WV-OH Metropolitan Statistical Area, which has a population of 147,950 according to the 2010 U.S. Census. Most supplies are trucked to the mine from regional vendors.

9

Graphic


Graphic

5.0 HISTORY

5.1 PRIOR OWNERSHIP

Valley Camp Coal Company (VCCC) operated mines on the property.

5.2 EXPLORATION HISTORY

VCCC drilled 25 of a 40-hole exploration program (1959 to 1977) in and adjacent to the reserve area to check thickness, quality, and mineability of the Pittsburgh No. 8 seam. In general, holes are cased through the surface material and then continuously cored to collect roof, coal, and floor samples for the target seam. Core diameter is typically 2" from NX core drilling equipment. Coal quality was performed on almost all the Pittsburgh No. 8 seam samples with varying combinations of the top split. No geophysical work was available for the holes. TRM (WTR-series) accounts for over 80 of the remaining holes drilled from 2001 to present. Nearly all of these holes have quality and geophysical logs. About 115 other exploration holes or thickness points were obtained from various other companies that had previously conducted exploration within the area. Tunnel Ridge has collected over 680 channel samples from the TRM to supplement the exploration drilling. In general, all drilling has shown a highly consistent coal seam of mineable thickness and marketable quality for the thermal utility market.

See Appendix A for a map showing all drillhole locations.

6.0 GEOLOGICAL SETTING, MINERALIZATION AND DEPOSIT

6.1 REGIONAL GEOLOGY

The TRM extracts coal from the Pittsburgh No. 8 seam in a reserve block located in northern West Virginia and western Pennsylvania. The TRM is located in the Appalachian Basin, specifically, the northern portion of the Appalachian Basin. The Appalachian Basin is an elongated synclinal structure that contains a large volume of predominantly sedimentary stratified rocks and encompasses an area of about 207,000 square miles. Primary coal-bearing strata, including the Pittsburgh No. 8 seam, are in formations of Pennsylvanian aged rocks, which were deposited about 325 to 290 million years ago. In the Appalachian Basin, Pennsylvanian aged rocks constitute a thick wedge of relatively coarse-grained clastic debris that is thickest along the eastern side of the basin. Pennsylvanian sediments in the region consist of shales, sandstones, conglomerates, siltstones, coals, and limestones and are largely alluvial deltaic in origin. The Pittsburgh No. 8 coal seam extends over 11,000 square miles across four states, including Ohio, West Virginia, Pennsylvania, and Maryland.

See Figure 6-1 for a stratigraphic column.

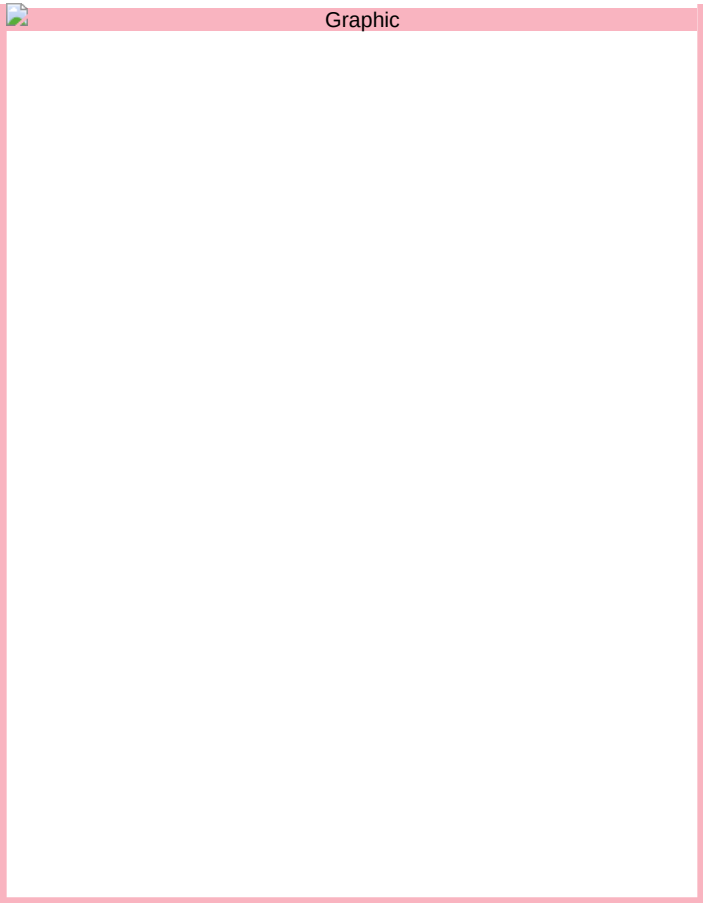


Figure 6-1. Generalized Stratigraphic Column of Pennsylvanian Coal Beds, Marine Zones and Other Units

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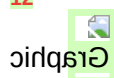
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Figure 6-1. Generalized Stratigraphic Column of Pennsylvanian Coal Beds, Marine Zones and Other Units

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6.2 LOCAL GEOLOGY

The TRM resource block is located in the Appalachian Plateau province in northern West Virginia and southwestern Pennsylvania. This area is characterized by generally flat lying strata. The primary economic coal-bearing strata in northern West Virginia and southwestern Pennsylvania is comprised of the Monongahela Formation, including the Pittsburgh No. 8 seam. Structurally, the seam is gently folded with a series of synclines and anticlines crossing the eastern portion of the reserve that trends in a northeast-southwest direction.

The Pittsburgh No. 8 seam varies in thickness throughout the resource area. The Pittsburgh No. 8 seam is broken into a main bench, a variably thick parting and a rider coal of inferior quality. The main bench averages about 5.0 feet thick. The claystone parting varies from about zero to 1.6 feet thick. The upper bench, or rider, varies from zero to over two

feet thick and is typically high ash, high sulfur, lower quality coal. Depending on its thickness and the overall seam thickness, the rider is either left for roof coal or mined with the rest of the seam. The immediate roof within the TRM reserve block is generally a dark gray shale or claystone, overlain by a shaley limestone that has thin shale partings. Though it's uncommon in the TRM reserve, a thin, discontinuous sandstone can be found in the main roof. The floor varies between a thin, shaley limestone to a gray-green claystone that transitions to a sandy shale.

See Figure 6-1 for a stratigraphic column and Figures 6-2 and 6-3 for geologic cross sections representing the local geology. See Appendix A for a plan view showing the locations of the cross sections.

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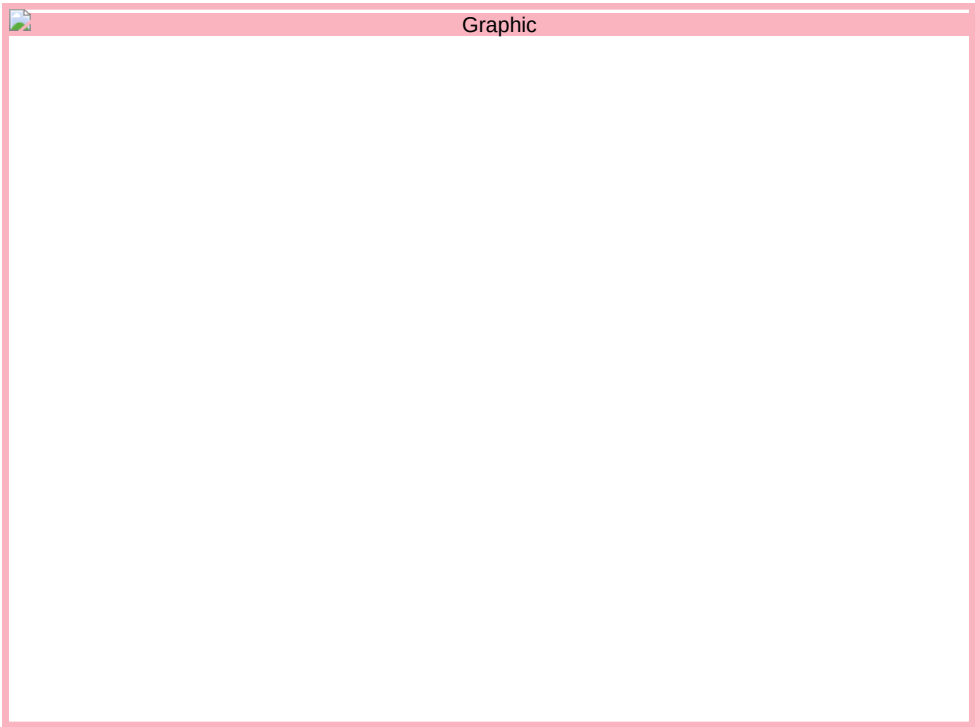


Figure 6-2. Geological Cross-Section A-A'

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Figure 6-3.6-2. Geological Cross-Section B-B' A-A'

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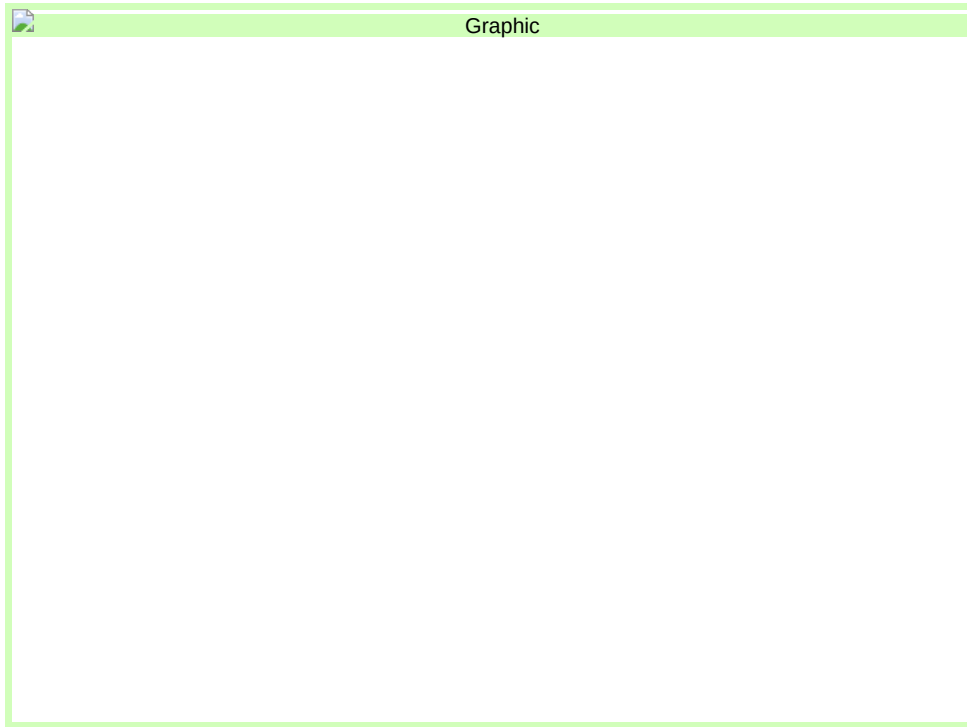


Figure 6-3. Geological Cross-Section B-B'

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6.3 PROPERTY GEOLOGY AND MINERALIZATION

The TRM extracts coal from the Pittsburgh No. 8 seam. The seam is mainly mined in northern West Virginia and southwestern Pennsylvania. The depth of cover depends on if the seam lies under a hill or valley. This results in a depth of cover that ranges from about 300 feet to over 950 feet. The area is bounded to the west, southwest, and south by previous mining. Coal-bearing strata dip toward the southeast at less than one percent grade.

The Pittsburgh No. 8 seam varies in thickness over the reserve area and averages about 7.2 feet thick, including the parting and upper bench. Coal thickness averages about 6.4 feet (including the rider)

The mineral deposit type mined at the TRM property is bituminous coal. The primary coal-bearing strata is of Carboniferous age, in the Pennsylvanian system.

The geologic model developed to explore the reserve is a bedded sedimentary deposit model. This is generally described as a continuous, non-complex, typical cyclothemic sequence that follows a bedded sedimentary sequence. The geology continues to be verified by an extensive drilling program.

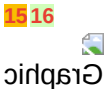
A stratigraphic column (Figure 6-1) and geologic cross sections (Figure 6-2 & Figure 6-3) representing the local geology, are included in this report.

6.4 STRATIGRAPHY

Pennsylvanian rocks are composed of shale, sandy shale, sandstone, limestones, and coal. The TRM extracts coal from the Pittsburgh No. 8 seam in the Monongahela Formation.

6.4.1 THE MONONGAHELA FORMATION

The Monongahela Formation overlies the Conemaugh Group and extends from the base of the Pittsburgh No. 8 Coal to the base of the Waynesburg Coal. The Formation ranges in thickness from 250 to 400 feet. It was deposited in vast deltas, large rivers flowing through coastal lowlands, numerous lakes, and wetlands where sea level change allowed the development of large peat mires. The Pennsylvanian System in northern West Virginia and southwestern Pennsylvania is broken into five distinct Groups and Formations. The five Groups and Formations in ascending order are the Pottsville Group, the Allegheny Formation, the Conemaugh Group, the Monongahela Formation, and the Dunkard Group.



7.0 EXPLORATION

7.1 DRILLING EXPLORATION

The TRM resource has been extensively explored through drilling conducted by Tunnel Ridge and previous developers. Drilling records are the primary dataset used in the evaluation of the property. Drill records have been

compiled into a geologic database which includes location, elevation, detailed lithologic information and coal quality data. This information is used to generate geologic models that identify potential adverse mining conditions, define areas of thinning or thickening coal, and predict coal quality for marketing purposes. The drilling density on the property is sufficient to identify and predict geological trends.

Exploration also includes an extensive channel sampling program, mine sections from underground surveys and underground geologic mapping conducted by geologists. Channel samples are samples collected from the coal seam within the coal mine. Once a suitable location is found within the mine, equal, representative portions of the coal seam are extracted using hand tools from the top of the seam to the bottom. The sample is placed within a heavy-duty plastic bag which is securely sealed with tape. The sample is then transported from the mine to the lab where the requested analyses are conducted.

Channel sample data and mine surveys are useful for thickness data and identifying any partings or anomalies within the coal seam. Underground geologic mapping is beneficial for identifying facies changes, poor roof trends, and supplementing hazards maps generated from drilling data.

The TRM property has adequate drilling to define geological trends. Exploration continues to be added to the geologic database on an annual basis.

Drilling on the property targets the Pittsburgh No.8 seam and is conducted using industry standard methods by a third-party contractor. A geologist or other company representative oversees all drilling conducted on the property. The most common method of drilling is continuous, wireline core. This method provides the most efficient core sample extraction from the rock mass. The rock core sample is removed from the bottom of the hole in the inner barrel assembly by a device on the wireline cable. Spot coring is a method that uses either mud or air rotary drilling to reach a specific depth, usually twenty or thirty feet above the target seam. Once this depth is reached, the drill string is removed, and the rig sets up for core drilling. The core barrel is advanced to the bottom of the hole where coring commences. Core is advanced to about ten feet below the target seam.

Once drilling is completed on a hole, a suite of geophysical parameters is collected for the entire borehole. Parameters such as naturally occurring gamma, resistivity, high resolution density and caliper data are collected. This information is used to verify the driller's log, geologist's log, thickness of the coal, and core recovery. Geophysical logs are helpful when core is not collected. The information from the geophysical log can be used to determine coal thickness and identify critical strata. All core is described by a geologist, photographed for future reference, and stored until it is no longer needed.

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7.2 HYDROGEOLOGIC INVESTIGATIONS

WVDEP and PADEP require a groundwater users' survey in and within 1,000' of the permitted boundary. Issuance of permit needs the respective agencies to complete a Cumulative Hydrologic Impact Assessment (CHIA). Both items were completed for this site and indicated groundwater issues would not be significant or require any sort of aquifer characterization. Groundwater inflow associated with mining has historically not been a significant issue and is dealt with as encountered.

7.3 GEOTECHNICAL INFORMATION

Due to the well-established history of mining in the Pittsburgh No. 8 seam and the relatively consistent nature of the overlying and underlying rock strata no rock mechanics data has been collected thus far for the TRM reserve block. Keystone Mining Services (a division of Jennmar) has conducted evaluations of horizontal stress and adverse roof conditions in the TRM.

To comply with state and federal requirements regarding the construction of refuse impoundments, geotechnical data is gathered and analyzed on a continuous basis. C.T.L. Engineering of West Virginia, Inc. performs daily compaction testing of refuse placed during construction of the TRM refuse impoundments. Proctor tests are performed in conjunction with compaction testing to ensure material compaction requirements are met. Compaction testing performed in the field is reviewed with mine management on a daily basis. Standard penetration testing is performed during various phases of construction to calculate the load bearing capability of the subsurface.



8.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

8.1 SAMPLE PREPARATION AND ANALYSIS

Prior to sending any type of sample to the laboratory for analysis, company representatives prepare samples for transport. This includes a sample request form, which has information such as sample ID, depths, and requested analyses to be performed, that is placed securely inside the sample container. If the sample is rock core, the core remains sealed in plastic bags and in the box provided by the drilling contractor. The box is secured using heavy duty packing tape. Channel samples are placed in a heavy-duty plastic bag. The bag is clearly labelled with the operation name, sample ID and location where the sample was collected. Within the sample bag, another smaller plastic bag contains a form that has the operation name, sample ID, date of sample collection, and the requested analyses. Company representatives then arrange for sample delivery to a representative from the laboratory. Once the laboratory assumes possession of the sample, rigorous quality control and quality assurance standards are strictly adhered to.

Tunnel Ridge contracts with Miltech Analytical Services (MAS), Inc. located in Hunker, PA. Miltech is ISO 9002 Compliant, and USEPA PA10462, PA DEP 65-03568 certified. Miltech uses ASTM D7448 for Laboratory Practice and Quality Management. Tunnel Ridge has historical information from other regional laboratories including Commercial Testing and Engineering, Dickinson Laboratories, Standard Laboratories, and Precision Testing.

All laboratories, both past and present, prepare, assay, and analyze samples in accordance with ASTM international standards.

Typical coal quality analyses include the following:

- / Channel samples are processed using ASTM D4596.
- / Core samples are processed using ASTM D5192.
- / Ultimate Analysis using ASTM Method D5291 for percent nitrogen, carbon, and hydrogen and for the determination of percent oxygen.
- / Mineral Analysis of Ash (major and minor metals by ICP) using ASTM Method D6349 for measuring percent silicon dioxide, aluminum dioxide, ferric oxide, calcium oxide, magnesium oxide, potassium oxide, sodium oxide, titanium dioxide, phosphorus pentoxide, magnesium dioxide, barium oxide, strontium oxide, sulfur trioxide.
- / Proximate Analysis using ASTM Method D5865 for the determination of thermal caloric value in BTU/LB. ASTM Method D3174 is used for the determination of percent ash. ASTM Method D5016 is used for measuring percent sulfur. Method D3175 is used to determine percent volatiles and ASTM D3172 is used to determine percentage of fixed carbon.
- / Ash Fusion Temperatures are determined using ASTM Method D1857, Sulfur Forms are determined using ASTM Method 8214. The Hardgrove Grindability Index (HGI) is measured using ASTM Method D409 (M) and the Total Moisture is determined using ASTM Method D3173 and D2961. The Mercury value, measured in parts per million is determined using ASTM

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Method D6722 and chlorine is determined using method D8247. The Free Swelling Index is determined by ASTM Method D720. The Equilibrium Moisture is determined using ASTM Method D1419. Water Soluble Alkalis are determined using ASTM Method D 8014.

- / Trace element analysis to include Antimony, Arsenic, Barium, Beryllium, Boron, Bromine, Cadmium, Chromium, Cobalt, Copper, Fluorine, Lead, Lithium, Manganese, Molybdenum, Nickel, Selenium, Silver, Strontium, Thallium, Tin, Vanadium, Zinc, determined by ICP ASTM Method D6357.

The TRM has sufficient drilling across the extent of the property to identify general trends in coal quality. The majority of the data comes from samples collected from core drilling. However, on occasion it becomes necessary to collect channel samples in order to delineate local changes in coal quality. The procedure for collecting channel samples was described in a previous section.

8.2 QUALITY CONTROL/QUALITY ASSURANCE (QA/QC)

No significant disruptions, issues or concerns have ever arisen as a result of processing or laboratory error. Therefore, it's reasonable to conclude that the quality assurance actions employed by these laboratories is adequate to provide reliable results for the requested parameters.

8.3 OPINION OF THE QUALIFIED PERSON ON ADEQUACY OF SAMPLE PREPARATION

No significant disruptions, issues or concerns have ever arisen as a result of sample preparation. Therefore, it's reasonable to assume that sample preparation, security, and analytical procedures in place are adequate to provide a reliable sample from which requested parameters can be analyzed.

The qualified person is of the opinion that the sample preparation, security, and analytical procedures for the samples supporting the resource estimation work are adequate for the statement of mineral resources. Results from different laboratories show consistency and nothing in QA/QC demonstrates consistent bias in the results.

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9.0 DATA VERIFICATION

9.1 SOURCE MATERIAL

TRM maintains a detailed geologic database used to develop several types of models used to predict the mineability and coal quality of the Pittsburgh No. 8 seam. Data verification of the accuracy of this database is conducted on a regular basis by company engineers and geologists. This includes a detailed review of drilling data, coal quality data and coal seam correlation of all exploration drillholes to what is found in the database. The verification process also entails underground geologic mapping by a geologist to field verify the accuracy of compiled geologic models from drillhole data. Furthermore, maps generated from coal quality data to predict the coal quality across the reserve are checked for accuracy against actual output from the preparation plant.

Alliance contracted Weir International (Weir) to conduct an audit of Alliance's reserve estimates prepared under Industry Guide 7. Weir submitted its findings in a report dated July 23, 2015. Weir's review included methodologies, accuracy of Carlson gridding, and drillhole data. A similar review was conducted by Weir in 2010. During the 2015 audit, 10% to 20% of the new drillhole data was reviewed and confirmed.

RESPEC was provided with e-log data for all new holes or data obtained in 2016 and more recently. RESPEC compared 20% of those e-logs to the Carlson database. RESPEC also verified the thickness and quality grids. As part of the verification process, a new thickness grid was created from the database, and that resultant grid compared to TRM's model using Carlson grid file utilities.

9.2 OPINION OF THE QUALIFIED PERSON ON DATA ADEQUACY

Based on the verification of TRM data by the QP and review of prior database audits, the QP deems the adequacy of TRM data to be reasonable for the purposes of developing a resource model and estimating resources and subsequently reserves.

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10.0 MINERAL PROCESSING AND METALLURGICAL TESTING

10.1 ANALYTICAL PROCEDURES

The TRM has sufficient drilling across the extent of the reserve to identify general trends in coal quality. The majority of the data comes from samples collected from core drilling. However, on occasion it becomes necessary to collect channel samples in order to delineate local changes in coal quality. The procedure for collecting channel samples was described in a previous section.

10.2 REPRESENTATIVE SAMPLES

The parameters that the TRM analyze are adequate to define the characteristics necessary to support the marketability of the coal.

10.3 TESTING LABORATORIES

Currently, Tunnel Ridge contracts with Miltech Analytical Services (MAS), Inc. located in Hunker, PA. Miltech is ISO 9002 Compliant and USEPA PA10462, PA DEP 65-03568 certified. Miltech uses ASTM D7448 for Laboratory Practice and Quality Management. This laboratory provides unbiased, third-party results and operates on a contractual basis.

No significant disruptions, issues, or concerns have ever arisen as a result of processing or laboratory error. Therefore, it's reasonable to assume that this laboratory should provide assurance that the data processing and reporting procedures are reliable.

10.4 RESULTS

Tunnel Ridge performed a series of washability tests to develop washability curves. These curves predict coal qualities and recoveries at different specific gravities. The existing plant operates at a specific gravity of approximately 1.5 -1.65. The results from the coal quality sampling program are adequate to determine the specification requirements for customers located in both the domestic and export markets.

10.5 OPINION OF QUALIFIED PERSON ON DATA ADEQUACY

It is the opinion of the QP that the coal processing data collected from these analyses is adequate for modeling the resources and reserves for marketing purposes. All analyses are derived using standard industry practices by laboratories that are leaders in their industry.

11.0 MINERAL RESOURCE ESTIMATES

11.1 DEFINITIONS

A mineral resource is an estimate of mineralization, considering relevant factors such as cut-off grade, likely mining dimensions, location, or continuity, that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable.

Mineral resources are categorized based on the level of confidence in the geologic evidence. According to 17 CFR § 229.1301 (2021), the following definitions of mineral resource categories are included for reference:

An inferred mineral resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. An inferred mineral resource has the lowest level of geological confidence of all mineral resources, which prevents the application of the modifying factors in a manner useful for evaluation of economic viability. An inferred mineral resource, therefore, may not be converted to a mineral reserve.

An indicated mineral resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of adequate geological evidence and sampling. An indicated mineral resource has a lower level of confidence than the level of confidence of a measured mineral resource and may only be converted to a probable mineral reserve. As used in this subpart, the term "adequate geological evidence" means evidence that is sufficient to establish geological and grade or quality continuity with reasonable certainty.

A measured mineral resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of conclusive geological evidence and sampling. As used in this subpart, the term conclusive geological evidence means evidence that is sufficient to test and confirm geological and grade or quality continuity.

11.2 LIMITING FACTORS IN RESOURCE DETERMINATION

Resources in the Pittsburgh No. 8 seam are delineated based on the following limitations:

- / Mineable thickness
- / Marketable quality
- / Structural limits, such as faults or sandstone channels, existing mining, and subsidence protection zones
- / Government and social approval

11.2.1 MINEABLE THICKNESS

Thicknesses are extracted from the database to create a geologic model. Grids are created using an inverse distance algorithm using a weighting factor of three. The minimum Pittsburgh No. 8 coal

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thickness within the resource area is 4.58 feet. The average coal thickness (including the rider) in the geologic database is 6.42 feet.

11.2.2 MARKETABLE QUALITY

The primary source quality data is from core holes drilled for the purpose of coal exploration. The qualities that are of primary interest are ash, sulfur, and BTU. These qualities have limitations which affect the value of the coal. The table below summarized the values and ranges of each in the geologic database. The range of critical qualities in the database indicates that the coal in the Pittsburgh No. 8 seam is within marketable limits. The potential resource areas are considered to meet the quality standard and no further consideration or analyses of these parameters are made. All resource estimates include average anticipated values for ash, sulfur, and BTU.

Table 11-1. Qualities at 1.5 Specific Gravity – Dry Basis

Seam	Quality	Number of samples	Average	Minimum	Maximum	Standard Deviation
Pittsburgh No. 8	Ash	818	8.57	6.12	12.59	1.02
Pittsburgh No. 8	Sulfur	818	3.17	1.63	4.88	0.44
Pittsburgh No. 8	BTU	817	13,617	12,971	14,068	179

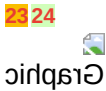
Values in Table 11-1 are dry basis qualities based on laboratory analysis of core or channel samples. Marketable qualities reflect moisture and adjustments for plant variability. Typical as received quality specifications for the TRM product are approximately:

- / BTU – 12,500 to 12,700
- / Moisture – 6.0% to 7.0%
- / Ash – 8.0% to 9.5%
- / Sulfur – 2.6% to 3.8%
- / Volatile Matter - 38.0% to 39.0%

11.2.3 STRUCTURAL LIMITS

There are no identified geologic limits to the resource boundary. No faulting is identified in the region. Coal thicknesses throughout the entire resource area are considered mineable using the operation's current operational limit.

The southern and southwestern boundaries of the resource are defined by the existing Pittsburgh No. 8 seam underground mines: Old Valley Camp #1 and Valley Camp mines. A buffer of approximately 200 feet is maintained around previously mined areas. The small Masten Mine is located along the eastern edge of the resource boundary with a buffer of approximately 500 feet. The Bailey and Enlow Fork mines border the area to the southeast.



A subsidence protection zone is maintained near the northwestern corner of the resource. This zone protects the Castleman Run Public Fishing Area.

11.2.4 GOVERNMENT AND SOCIAL APPROVAL

There are no significant limitations to the TRM obtaining the permits required. The TRM holds the necessary permits to mine, process, and transport coal. Historically, the company has been able to amend, or revise permits as needed. The public is notified of significant permitting actions and may participate in the process.

11.3 CLASSIFICATION RESOURCES

11.3.1 CLASSIFICATION CRITERIA

The identified resources are divided into three categories of increasing confidence: inferred, indicated, and measured. The delineation of these categories is based on the distance from a known measurement point of the coal. The distances used are presented in USGS Bulletin 1450-B, "Coal Resource Classification System of the U.S. Bureau of Mines and U.S. Geological Survey." These distances are presented in Table 11-2.

Table 11-2. Coal Resource Classification System

Classification	Distance from measurement point
Measured	<1,320' 1,320'
Indicated	1,320' 1,320' - 3,960' 3,960'
Inferred	3,960' 3,960' - 15,840' 15,840'

These distances for classification division are not mandatory. However, these values have been used since 1976, have proven reliable in the estimation of coal resources, and are considered reasonable by the QP.

11.3.2 USE OF SUPPLEMENTAL DATA

Due to the continuity of coal seams in the Appalachian Basin, mineability limits are the most important factor in resource assessment. The limits of the adjacent underground mines are used as supplemental data to confirm thickness trends and identify structural limits. Coal thickness grids are generated from drillhole information, mine measurements, and channel samples. These are data points in which the company has a high degree of confidence in

thickness measurement. This data is used by the company to generate the model for its internal planning. The combined information increases the overall reliability of the resource estimate, and all data points are included within the classification system.

11.4 ESTIMATION OF RESOURCES

Resource estimates are based on a database of geologic information gathered from various sources. The sources of this data are presented in Section 7 of this report. Thickness and quality data are extracted from the database to create a model using Carlson's Geology module. The model consists of

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a set of grids, generated using an inverse distance algorithm with a weighting factor of three. In addition to the thickness and quality data, plant recovery is modeled. Quality data and recovery rates are determined through a set of tests generating washability curves. The current operation washes the run-of-mine coal at a specific gravity of approximately 1.5-1.65. The qualities and plant yield are based on this specific gravity.

Section 12 presents the modifying factors considered in determining whether resources qualify as reserves. Table 11.3 presents all resources. The tonnages are reported on a saleable basis and exclude resources that are converted to reserves.

Table 11 3. Summary of Resources as of December 31, 2022

Resource	Pittsburgh No. 8 Seam
Inferred	703
Total	703

The EIA reported the average weekly coal commodity spot price for Northern Appalachia coal (the EIA price) on January 6, 2023, to be \$115.00/ton (13,000 BTU, <3.0 lbs. SO₂ basis). The reference price used in the economic analysis is \$71.62/ton, which is based on the QP's review of historical pricing and proprietary third-party coal price forecasts. The revenue projection in the economic analysis is based on this estimate of coal price and is assumed to be real 2022 US dollars.

Mining and processing costs along with general and administrative costs were estimated. Table 11.4 shows the economic basis for the estimate of each seam in real 2022 U.S. dollars.

Table 11 4. Economic Basis for Estimates (US\$/ton)

Seam	Pittsburgh No. 8 Seam

Revenues	\$71.62
Mining and Processing Costs	\$42.09
General & Administrative Costs	\$0.40

11.5 OPINION OF QUALIFIED PERSON

It is the QP's opinion that the risk of material impacts on the Resource estimate is low. The mining operations, processing facility, and site infrastructure are in place. Mining practices and costs are well established. The operation has a good track record of HSE compliance. The Energy Information Administration (EIA) predicts that global energy produced by coal will increase through 2050.

Please refer to Item 1A of the ARLP 10-K regarding the significant risks involved in investment in Alliance's operations including TRM, and the coal industry in general. It is the QP's opinion that the following technical and economic factors have the most potential to influence the economic extraction of the resource:

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a set of grids, generated using an inverse distance algorithm with a weighting factor of three. In addition to the thickness and quality data, plant recovery is modeled. Quality data and recovery rates are determined through a set of tests generating washability curves. The current operation washes the run-of-mine coal at a specific gravity of approximately 1.5-1.65. The qualities and plant yield are based on this specific gravity.

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Please refer to Item 1A of the ARLP 10-K regarding the significant risks involved in investment in Alliance's operations including TRM, and the coal industry in general. It is the QP's opinion that the following technical and economic factors have the most potential to influence the economic extraction of the resource:

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- / Skilled labor – This site is located near a populated area, which has a history of coal mining.
- / Environmental Matters
 - » Greenhouse gas emission Federal or State regulations/legislation
 - » Regulatory changes related to the Waters of the US
 - » Air quality standards
- / Regional supply and demand – Although the US electric utility market has moved to natural gas and renewable forms of energy to provide a higher percentage of electricity production, it is the QP's opinion, coal will continue to serve as a baseload fuel source in the US and other global energy markets.

The potential for changes in the circumstances relating to these factors influencing the prospect of economic extraction exists and could materially adversely impact economic extraction of the resource.

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12.0 MINERAL RESERVES ESTIMATES

12.1 DEFINITIONS

A mineral reserve is an estimate of tonnage and grade or quality of indicated and measured mineral resources that, in the opinion of the qualified person, can be the basis of an economically viable project. More specifically, it is the economically mineable part of a measured or indicated mineral resource, which includes diluting materials and allowances for losses that may occur when the material is mined or extracted. *Probable mineral reserves* comprise the economically mineable part of an indicated and, in some cases, a measured mineral resource. *Proven mineral reserves* represent the economically mineable part of a measured mineral resource and can only result from conversion of a measured mineral resource.

12.2 KEY ASSUMPTIONS, PARAMETERS AND METHODS

12.2.1 RESERVE CLASSIFICATION CRITERIA

The Pittsburgh No. 8 seam has historically been successfully mined at this location and throughout the Appalachian coal basin. Several other mines in the region are currently operating in this seam. Resources are identified as described in Section 11 of this report based on geologic conditions, mineability, and marketability of the coal seam. The two critical factors in converting indicated and measured mineral resources into the mineral reserves are inclusion in an economically feasible mine plan and government approval through the various environmental and operational permits.

Table 17-1 presents the various state and federal environmental permits currently held by the operation. These include the surface mining permit (required for surface operations), air quality permits, and water discharge permits. Approval has already been granted for the required surface disturbance, construction and operation of the preparation facilities, coal refuse disposal, and coal transport. It is noted that not all the anticipated underground mining areas are currently covered under the SMRCA mining permit. Shadow areas (underground only areas) are extended using permit revisions. This is a common practice for underground operations in Appalachia.

12.2.2 CUT-OFF GRADE

The coal bed consistently exhibits qualities that make the product marketable. No reduction is made to the resources or reserves due to quality.

12.2.3 MARKET PRICE

The EIA reported the average weekly coal commodity spot price for Northern Appalachia coal (the EIA price) on January 6, 2023, to be \$115.00/ton (13,000 BTU, <3.0 lbs. SO₂ basis). The reference price used in the economic analysis is \$71.62/ton, which is based on the QP's review of historical pricing and proprietary third-party coal price forecasts. The revenue projection in the economic analysis is based on this estimate of coal price and is assumed to be real 2022 US dollars.

12.3 MINERAL RESERVES

12.3.1 ESTIMATE OF MINERAL RESERVES

The current operation uses the longwall and room and pillar mining methods. A 70% mining recovery is used for the combined methods. The mining recovery is applied to the in-place coal.

All coal reserve tonnages are reported as clean controlled coal. Carlson's Surface Mine Module is used to estimate in-place tonnages, qualities, density, and seam recovery within a set of polygons. These polygons are the result of the intersection of polygons outlining property boundaries, adverse mining conditions, mining method, mine plan boundaries, and resource classification boundaries. The Carlson results are exported to a database, which then applies the appropriate percent ownership, mine recovery, and seam recovery. The basic calculation is:

$$\text{Tons} = \text{Area} * \text{Thickness} * \text{Density} * \text{Mine Recovery} * \text{Seam Recovery} * \text{Percent Ownership}$$

Table 12-1. Summary of Coal Reserves as of December 31, 2022

Reserve Category / Seam	Controlled Recoverable (1,000 tons)	Sulfur (%)	Ash (%)	BTU
Pittsburgh No. 8 Seam				
Proven	61,732	3.11	7.97	13,724
Probable	58,254	3.46	8.28	13,659
Total Reserves	119,986	3.28	8.12	13,692

Values in Table 12-1 are based on a washed, dry basis.

12.4 OPINION OF QUALIFIED PERSON

It is the QP's opinion that the risk of material impacts on the reserve estimate is low. The mining operations, processing facility, and site infrastructure are in place. Mining practices are well established. The operation has a good track record of HSE compliance. The Energy Information Administration (EIA) predicts that global energy produced by coal will increase through 2050.

Please refer to Item 1A of the ARLP 10-K regarding the significant risks involved in investment in Alliance's operations including TRM, and the coal industry in general. It is the QP's opinion that the following technical and economic factors have the most potential to influence the economic extraction of the reserve:

- / Extension of permitted area – Not all the Reserves are currently permitted. Underground operations in West Virginia and Pennsylvania have traditionally been able to extend the permitted shadow areas as needed. No change is anticipated in the issuance of these permit modifications in a timely fashion to facilitate future mining. It is expected that the shadow area of the permit will be expanded as needed.
- / Subsidence – Tunnel Ridge must obtain subsidence rights or mitigation from surface owners in advance of longwall mining.

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- / Skilled labor – This site is located near a populated area, which has a history of coal mining. Although there is competition from other underground operators for skilled labor, TRM has been successful in attracting and retaining skilled staff and has programs for training less experienced miners. Should TRM not be able to maintain as skilled a labor pool as anticipated, productivity could be impacted. However, economic evaluation indicates TRM remains economic with modest downturns in productivity.
- / Environmental Matters
 - » Greenhouse gas emission Federal or State regulations/legislation may impact the domestic electric utility market, which is a major customer for TRM coal. While many proposed changes have been suggested, the horizon for these changes severely impacting the market is anticipated to be beyond the current planning horizon supporting the reserve estimate.
 - » Regulatory changes related to the Waters of the US (WOTUS). The interpretation of the regulation and enforcement of the Clean Water Act with respect to the jurisdictional waters of the US has been modified multiple times through regulatory actions and court decisions. It is likely that further reinterpretation will occur. This could affect future modifications such as new or expanded stockpile areas, transportation areas, and refuse disposal areas. The coal industry has become experienced in adapting to these regulatory changes.
 - » Miscellaneous regulatory changes. The coal industry has been subjected to many changes in regulation and enforcement in the recent past. In addition to new regulations related to greenhouse gas emissions and WOTUS, it is expected that further change will occur.
- / Regional supply and demand – Although the US electric utility market has moved to natural gas and renewable forms of energy to provide a higher percentage of electricity production, it is the QP's opinion, coal will continue to serve as a baseload fuel source in the US and other global energy markets.

The potential for changes in the circumstances relating to these factors influencing the prospect of economic extraction exists and could materially adversely impact economic extraction of the reserve.

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13.0 MINING METHODS

13.1 GEOTECHNICAL & HYDROLOGICAL MODELS

Geotechnical models of the TRM mineral reserves have been assembled utilizing Carlson computer software. Geologic information from drillholes, underground channel samples, and past reserve studies is entered into the database and used to build stratigraphic grid models. Attributes including coal thickness, depth, recovery percentage, and quality are some of the features utilized to accurately model the TRM reserve.

Data collection to support the models is performed as needed to ensure proper characterization of the mining area. Core drilling is performed to provide geotechnical information for permitting and mine design. Underground channel sampling is performed concurrently with mining. Laboratory analysis of corehole and channel samples are performed periodically and used to update the geotechnical models. Commonly analyzed quality parameters include moisture, ash, sulfur, and BTU.

Water inflow into the mine is managed when encountered.

13.2 PRODUCTION RATES & EXPECTED MINE LIFE

The TRM extracts coal from the Pittsburgh No. 8 seam utilizing longwall and room and pillar methods of underground mining. Room and pillar methods are used for development of mainline areas as well as longwall panel gate entries and bleeders. Longwall mining is performed in areas where 100% extraction is possible utilizing a single longwall face that is typically 1,200 feet in width and up to 20,000 feet in length. Infrastructure within the mine includes conveyors, ventilation, power, freshwater capacity, one longwall face, and up to four development units. The number of development units varies based on the rate of longwall retreat.

Planned production varies according to contracted sales volume and expectations of market conditions. Figure 13.1 provides historic raw tons mined before processing, preparation plant recovery, and clean recoverable tons. The forecasted raw tons before processing, preparation plant recovery, and clean recoverable tons contained in the economic analysis are shown in Figure 13.2.

30



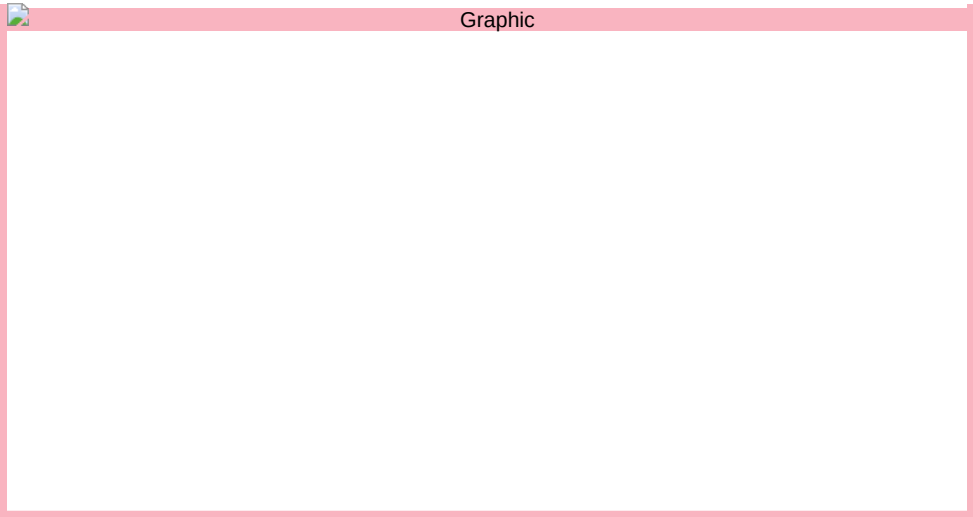


Figure 13 1. Historic Production Recovery

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Figure 13-1. Life of Reserve Tons Historic Production Recovery

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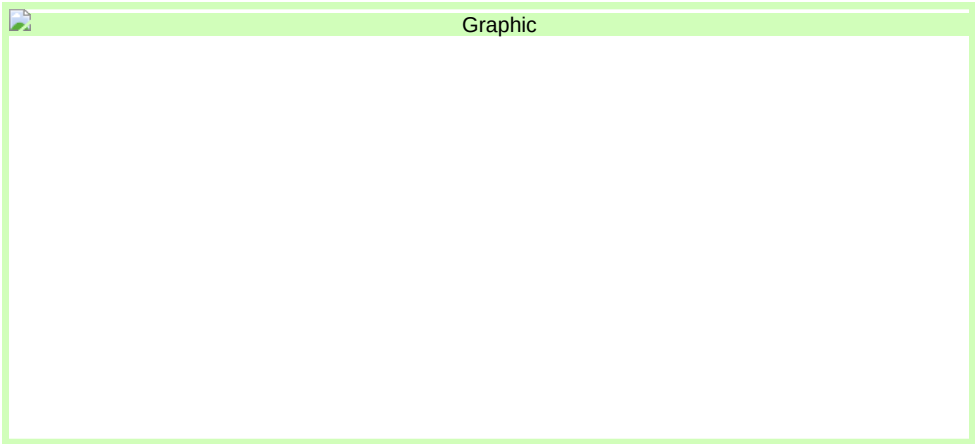


Figure 13-2. Life of Reserve Tons

33



There are approximately 120 million clean tons remaining in the TRM reserve to be mined within controlled properties. The current life of reserve plan anticipates exhausting the reserve in 2038. The lifespan of the mine is dependent on

many factors and may vary materially from current projections. Please refer to Item 1A of the ARLP 10-K regarding the significant risks involved in investment in Alliance’s operations including TRM, and the coal industry in general.

13.3 UNDERGROUND DEVELOPMENT

The TRM currently operates within the specifications of the approved permits and certifications required by all local, state (WV and PA), and federal regulatory agencies. Some of these permits and certifications are as follows:

- / Local: county road agreements, regulated drainage ditch permits
- / State: WVDEP and PADEP underground permits, WVDEP and PADEP surface permits, NPDES wastewater treatment permits, DAQ air permit and air permit
- / Federal: US NRC nuclear material license

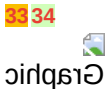
In addition to the above-mentioned permits, all applicable mining regulations found in Part 30 of the Code of Federal Regulations (CFR) must be followed. The Mine Safety and Health Administration (MSHA) is the federal regulatory agency that oversees compliance to the CFR. Further, plans uniquely specific to the TRM are required to be submitted, reviewed, and approved by MSHA prior to mining. Some of the approved MSHA required mine plans include:

- / Roof Control Plan
- / Ventilation Plan
- / Emergency Response Plan
- / Mine Emergency Evacuation and Fire Fighting Program Instruction Plan
- / Gas Well Mine Through/Around Plan

13.4 MINING EQUIPMENT FLEET, MACHINERY & PERSONNEL

Underground equipment utilized by at the TRM includes, but is not limited to:

- / Longwall Shearer
- / Longwall AFC
- / Stage Loader
- / Continuous Miner
- / Coal Loader
- / Shuttle car
- / Roof Bolter
- / Battery and Diesel Scoop
- / Fork Trucks



- / Fork Trucks
- / Personnel Carrier (mantrip)
- / Feeder Breaker
- / Belt Conveyor
- / Transformer/Substation
- / Refuge Alternative Chamber
- / Rock Dusters
- / Miscellaneous Dewatering Pumps

Surface equipment required at the TRM includes, but is not limited to:

- / Dozers (various sizes)
- / Miscellaneous preparation plant equipment
- / End loader
- / Man and material hoisting equipment
- / Ventilation fan
- / Substation
- / Mobile crane
- / Belt conveyor
- / Excavators
- / Roller Compactors
- / Articulated Trucks

Equipment that is utilized by TRM is representative of other Pittsburgh No. 8 seam operators. Personnel required to operate and maintain the TRM are generally obtained through the hiring of both skilled and unskilled workers from the immediate area. Salaried positions at the TRM are made up of production managers, business managers, engineers, information technology, preparation plant operators, maintenance foreman, purchasing agents, and safety specialists. Hourly positions include equipment operators on the surface and underground, general laborers, dust sampling technical, mechanics, examiners, warehouse clerks, etc. Total headcount numbers can vary depending on the market and demand for coal. Typical headcount ranges from 430 to 470 workers, depending on the number of development units operating.

13.5 MINE MAP

Please see Appendix A for a plan view of the mine map.

14.0 PROCESSING AND RECOVERY METHODS

14.1 PLANT PROCESS

The TRM utilizes a heavy media, float/sink style preparation plant to separate marketable coal from refuse. The plant has a design feed capacity of 1,800 tons per hour (TPH). The plant is divided into two independent 900 TPH circuits that can individually be idled to allow repairs to be made on one circuit while the other remains in operation. Once in the plant, the ROM material passes over vibratory screens to be separated by size. Approximately 80% of the ROM material reports to the heavy media circuit as coarse material. Through the introduction of magnetite, a ferromagnetic naturally occurring mineral, the gravity of the flotation solution within the heavy media circuit is manipulated to precisely control the float/sink point. The ROM material is introduced to the heavy media vessel where coal is floated in the solution and heavier rock material conveyed out for disposal. The clean coal, or product, produced by the heavy media vessel is rinsed, dried, and collected by the clean coal conveyor to be shipped. The rock, or coarse refuse, produced is also rinsed and sent to the refuse disposal area.

The 20% of material that makes up the fine circuit within the plant is also separated by gravity, but in a different manner. The fine ROM material reports to a series of classifying cyclones, spirals, and column flotation to separate the coal from the fine refuse. Clean coal produced by the spirals and column flotation is passed through screen bowl driers to remove excess moisture prior to being collected on the clean coal conveyor. Fine refuse from the same process is pumped to a static thickener. Once the fine refuse material has had sufficient time to settle to the bottom of the thickener, it is pumped away to be disposed of within the refuse impoundment.

14.2 ENERGY, WATER, PROCESS MATERIALS & PERSONNEL

American Electric Power, (AEP) provides most of the electrical power required to operate the TRM. The power required for underground mining operations is delivered by a 138kV transmission line with a 15-20-25MVA substation on site. Electrical power from this substation then branches out to other facilities owned and operated by the TRM. Preparation plant power is delivered by 69kV transmission line to a dual 10MVA substation located near the preparation plant facility. TRM maintains a separate 34.5kV transmission line to its Winters Return Fan site and Schoolhouse Portal site. Additionally, power is delivered and supplied by West Penn Power (WPP) to two bleeder shaft sites by a 12,470V power line.

Process water for underground mining, and the preparation plant is supplied by water pumped from the Ohio River. Potable water used in the bath houses and offices is supplied by various municipal water districts.

The preparation plant uses readily available reagents and supplies. These are competitively sourced from multiple vendors and are generally delivered to the mine by truck.

The preparation plant operates on a flexible work schedule responding to mine production and market demands. A typical shift crew includes one salaried and six hourly personnel with up to four crews to operate at full capacity.

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15.0 INFRASTRUCTURE

The TRM is located at 184 Schoolhouse Lane, Valley Grove, WV. Wheeling, WV (40°04'02" N, -80°43'16" W) is located approximately 12 miles to the west via US-40W. West Alexander, PA (40°06'17" N, -80°30'28" W) is located 4 miles to the east via US-40E / National Rd. Supplies are trucked to the mine from regional vendors. All necessary utilities are in place and working. Electricity is supplied by AEP to the mine by the 69kV and 138kV transmission lines. Water required for underground and coal processing operations and other non-potable needs is pumped from the Ohio River. Potable water needed for office and bathhouse facilities is supplied by various municipal districts.

Coal is transported by barge. The TRM barge loading facility is located at Ohio River mile marker 82 (40°10'30" N, -80°41'04" W). The TRM barge loading facility has an annual capacity of 9 million tons. The TRM has a clean coal ground storage capacity of 300,000 tons and clean coal silo capacity of 28,000 tons.

Two fine refuse impoundments are located on the mine's property. At the final stage, the embankment style impoundments will cover approximately 416 acres. The impoundment embankments are constructed of coarse refuse, creating storage space for fine refuse within the impoundment.

Figure 15-1 shows the layout for TRM surface facilities.

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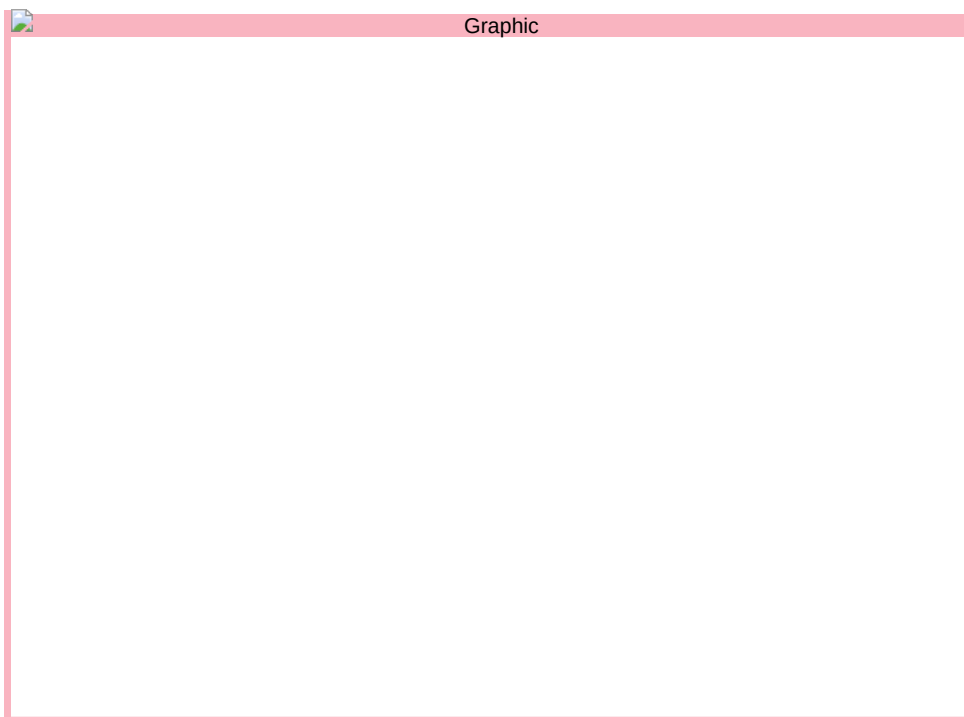


Figure 15-1. Infrastructure Layout

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Figure 15-1. Infrastructure Layout

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16.0 MARKET STUDIES

16.1 MARKETS

The TRM produces a medium/high sulfur coal that is sold to the domestic and international thermal coal markets. Production from the TRM is shipped by barge directly to customers or to various transloading facilities, including a third-party facility on the Wheeling and Lake Erie Railway providing connections to the CSX Transportation, Inc. (CSX) and Norfolk Southern Railway Company (NS) railroads.

The TRM participates in the Northern Appalachian coal market, selling coal to a diverse customer base of various domestic utilities, industrial facilities, and US East Coast and Gulf Coast exporters. While coal demand in the US is expected to decline over the coming years, the Eastern US thermal coal demand in 2021 was over 190 million tons.

With its low-cost position, exceptional coal quality and core domestic customer base, it is the QP's opinion that the TRM should continue to have adequate market opportunities for its product.

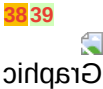
Table 16-1. Economic Analysis Coal Price

			Combined Historical and Forecasted Pricing						Combined Historical and Forecasted Pricing			
Operation	Operation	5-Year Average 2018-2022	Minimum	Maximum	Economic Analysis Coal Price ²	Reserve Tons	Operation	5-Year Average 2018-2022	Minimum	Maximum	Economic Analysis Coal Price ²	Reserve Tons
TRM	Tons Sold ³	7,392	---	---	---	119,986	Tons Sold ³	7,392	---	---	---	119,986
	Price per ton ²	---	\$50.19	td24.69	\$71.624	---	Price per ton ²	---	\$50.19	td24.69	\$71.624	---

1. Combined published EIA historical pricing and proprietary third-party pricing forecast for 13,000 BTU, 3.0 lbs. SO2 adjusted for heat content in real 2022 dollars on an annualized basis.
2. Price per ton is real 2022 dollars for the life of reserve economic analysis.
3. Tons reported in thousands.
4. The economic analysis coal price is based on the QP's QP's review of historical pricing as reported by EIA and proprietary third-party coal price forecasts provided by Alliance.

The demand for the TRM coal is closely linked to the demand for electricity, and any changes in coal consumption by United States or international electric power generators would likely impact the TRM demand. The domestic electric utility industry accounts for approximately 91% of domestic coal consumption. The amount of coal consumed by the domestic electric utility industry is affected primarily by the overall demand for electricity, environmental and other governmental regulations, and the price and availability of competing fuels for power plants such as nuclear, natural gas, and fuel oil as well as alternative sources of energy.

Future environmental regulation of GHG emissions could also accelerate the use by utilities of fuels other than coal. In addition, federal and state mandates for increased use of electricity derived from renewable energy sources could affect demand for coal. Such mandates, combined with other incentives to use renewable energy sources such as tax credits, could make alternative fuel sources more competitive with coal. A decrease in coal consumption by the domestic electric utility industry could adversely affect the price of coal.



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17.0 ENVIRONMENTAL

17.1 ENVIRONMENTAL STUDIES

No standalone environmental studies have been conducted for the properties. As part of the state and federal permitting process, various environmental assessments have been conducted. As disturbances are proposed for the operation, all relevant local, state, and federal agencies are contacted to review the proposed project. Each agency reviews the project for impacts to lands, water, and ecology.

17.2 WASTE DISPOSAL & WATER MANAGEMENT

The processing of the run-of-mine coal at TRM generates fine and coarse refuse waste streams. The fine and coarse refuse are disposed of in the two onsite refuse impoundments. The coarse refuse is used to construct the impoundments' embankments and the fine refuse is pumped to the pool areas created by the embankments. Additional permitting will be required to expand the refuse impoundments. The expansion areas will be constructed on controlled land adjacent to the existing refuse impoundments. In conjunction with the expansion area, the refuse impoundments may be increased by employing upstream construction methods.

All runoff from the site is managed by sediment control structures including diversions, sumps, and sediment basins. Prior to discharge from the permitted areas, water must meet compliance standards as defined in the NPDES permits. Water samples at discharge locations are collected in accordance with the approved permit and analyzed by an independent laboratory.

17.3 PERMITTING REQUIREMENTS

The TRM is located on the border of West Virginia and Pennsylvania and operates in each state. The regulatory requirements for each state must be met pertaining to mining operations and facilities located in each respective state.

In West Virginia, WVDEP, DMR is responsible for review and issuance of all permits relative to coal mining and reclamation activities, and financial assurance of comprehensive environmental protection performance standards related to surface and underground coal mining operations.

In Pennsylvania, PADEP is the regulatory authority over mining activities. PADEP, DMO is responsible for review and issuance of all permits relative to coal mining and reclamation activities, and financial assurance of comprehensive environmental protection performance standards related to surface and underground coal mining operations.

In addition to the state mining and reclamation laws, operators must comply with various other federal laws relevant to mining. The federal laws include:

- / Clean Air Act
- / Clean Water Act

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- / Surface Mining Control and Reclamation Act
- / Federal Coal Mine Safety and Health Act
- / Endangered Species Act
- / Fish and Wildlife Coordination Act
- / National Historic Preservation Act
- / Archaeological and Historic Preservation Act

In conjunction with the WVDEP coal mining permit, the Clean Air Act and Clean Water Act laws and regulations are administered by the WVDEP. The WVDEP, Division of Air Quality (DAQ) is responsible for permit issuance and compliance monitoring for all activities which have the potential to impact air quality. The WVDEP, Division of Water and Waste Management is responsible for permit issuance and compliance monitoring for all activities which have potential to impact water quality.

In conjunction with the PADEP coal mining permit, the Clean Air Act and Clean Water Act laws and regulations are administered by the PADEP. The PADEP, Bureau of Air Quality (BAQ) is responsible for permit issuance and compliance monitoring for all activities which have the potential to impact air quality. The PADEP, Bureau of Clean Water is responsible for permit issuance and compliance monitoring for all activities which have potential to impact water quality.

All applicable permits for underground mining, coal preparation and related facilities, and other incidental activities have been obtained and remain in good standing. A listing of all current state mining permits is provided in Table 17-1. Mining permits generally require that the permittee post a performance bond in an amount established by the agency to provide assurance that any disturbance or liability created by the mining operations is properly restored to an approved post-mining land use and that all regulations and requirements of the permit are satisfied before the bond is returned to the permittee.

Table 17-1. Current State Permits

Regulatory Permit Permitted			Permitted				
Agency	No.	Area (Acres)	Regulatory Agency	Permit No.	Permitted Area (Acres)	Permitted Underground Area (Acres)	Bond
			WVDEP	0-2000-00	204.1	11,000.10	YES
			WVDEP	0-1000-01	04.01	---	YES
			WVDEP	0-2010-00	334.33	---	YES
			WVDEP	0-0101-00	04.24	---	YES
			PADEP	00001001	104.00	0,002.10	YES
			WVDEP	NFDES: WV10002000	---	---	---
			WVDEP	NFDES: WV10000004	---	---	---
			WVDEP	AIR: WV021000	---	---	---
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17.4 PLANS, NEGOTIATIONS OR AGREEMENTS

New permits and certain permit amendments/revisions require public notification. The public is made of the application is retained at the county's public library or online through the State's public access t the public to submit comments to the regulatory authority.

In certain instances, additional opportunities are provided to the public for comment. These instances operations within 300 feet of a public building, school, church, or community building. In those insta own or provide oversight for a particular facility.

17.5 MINE CLOSURE

A detailed plan for reclamation activities upon completion of mining required at the properties has be publicly available heavy construction databases. Reclamation costs at the end of the year 2022 totale

17.6 LOCAL PROCUREMENT & HIRING

There are no commitments for local procurement or hiring. However, efforts are made to source supp

17.7 OPINION OF THE QUALIFIED PERSON ON DATA AI

The approved permits and certifications are adequate for continued operation of the facility. Waste facilities in order to provide life of reserve storage. Water control structures are in place and functio adequate to estimate mine closure and reclamation costs at the property.

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18.0 CAPITAL AND OPERATING COS'

RESPEC reviewed capital and operating costs required for the coal mining operations at the TRM. Hi an operating coal mine; therefore, the capital and operating cost estimates were prepared with cor RESPEC considers these cost estimates to be reasonable. All costs in this section are expressed in i

18.1 CAPITAL COSTS

Capital costs were estimated with the costs classified as routine operating necessity (sustaining discussed in Item 12.3, the reserve for TRM is 120.0M tons. The current production schedule estimat tons are provided in Figure 18-1.



Grap

Figure 18 1. Capital Cost Estimate

18.2 OPERATING COSTS

Operating cost inputs for the life of reserve economic analysis such as labor, benefits, consumable based on recent operating data. A summary of the estimated operating costs, including depreciation i

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18.0 CAPITAL AND OPERATING COS

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mining operations at the TRM. Historic capital and operating expenditures were supplied to RESPE estimates were prepared with consideration of recent operating performance. The cost estimates are in this section are expressed in real US dollars.

18.1 CAPITAL COSTS

Capital costs were estimated with the costs classified as routine operating necessity (sus expansion. As discussed in Item 12.3, the reserve for TRM is 120.0M tons. The current produc capital costs for the reserve tons are provided in Figure 18 2 18-1.

18.2. OPERATING COSTS

Operating Costs Estimates cost inputs for the life of reserve economic analysis such as labr administrative expenses were based on recent operating data. A summary of the estimated c life of the reserve are provided in Figure18-2.

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Life of Reserve Estimate 2023-2038 (US\$ 000's)									
Category	2023	2024	2025	2026	2027	2028	2029	2030	2031
Routine Operating Necessity	68,530	58,316	47,102	59,368	63,061	35,233	30,574	48,350	27,8
Major Infrastructure Investment	13,160	23,584	4,095	-	-	-	-	-	6,8

Figure 19-1 provides an annual cash flow of the life of reserve economic

Life of Reserve Estimate 2023-2038 (US\$								
Category	2023	2024	2025	2026	2027	2028	2029	2030
Cash Operating Costs	269,767	249,796	230,058	222,789	225,065	222,673	222,328	234,364
Royalties	16,110	15,994	26,027	30,584	34,156	34,406	36,087	36,842
Depreciation	59,383	66,955	63,445	62,972	66,813	65,001	64,314	47,100
Mining and Processing Costs	345,260	332,746	319,529	316,345	326,033	322,079	322,729	318,306

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ANALYSIS

RESPEC completed an economic analysis based on the cash flow developed from the product revenue estimate used for the life of reserve economic evaluation was \$71.62.

19.1 KEY PARAMETERS AND ASSUMPTIONS

The economic analysis has been based on production, revenue, capital, and operating costs by a partnership for tax purposes and not taxed as a corporation.

Table 19-1 provides an annual cash flow of the life of reserve economic analysis for TRM.

Figure 19 1. Pre-Tax Cash Flow Summary

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The economic viability of the operation is reliable based on various factors. This is an on-going operation with no major up front capital expenditures, there is no calculation of NPV, internal rate of return, etc.

We have tested the economic viability of the life of reserve economic analysis by conducting independent sensitivity analysis, the revenue was reduced by 15% and the operating and capital costs were increased by 15%. The results show that the project remains economically viable in both scenarios. The summary of the sensitivity analysis is shown in Table 19.1.

Table 19-1. Sensitivity Analysis 19.1. C

Life of Reserve Estimate 2023-2038 (US\$ 000's)			
Category	Annual Minimum	Annual Maximum	Annual Average
Revenue Reduced15% - Cash Flow	72,452	206,894	149,987
Operating & Capital Costs increased 20% - Cash Flow	78,731	237,341	169,793

Life of Reserve Estimate 2023-2038 (US\$ 000's)								
Category	2023	2024	2025	2026	2027	2028	2029	2030
Revenues	526,590	504,742	510,342	534,656	559,031	540,816	555,276	566,994
Cash Operating Costs	(269,767)	(249,796)	(230,058)	(222,789)	(225,065)	(222,673)	(222,328)	(234,364)
Royalties	(16,110)	(15,994)	(26,027)	(30,584)	(34,156)	(34,406)	(36,087)	(36,842)
Capital Expenditures	(81,690)	(81,901)	(51,197)	(59,368)	(63,061)	(35,233)	(30,574)	(48,350)
Working Capital Changes	(9,994)	(1,528)	(3,176)	(1,910)	(2,451)	(2,180)	(3,787)	(1,699)
Cash Flow	149,029	155,523	199,885	220,005	234,298	246,324	262,500	245,738

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20.0 ADJACENT PROPERTIES19.2 ECONOMIC VIABILITY

The initial corridor economic viability of the operation is reliable based on various factors. The economic costs. The economic analysis utilized the same parameters and assumptions u and costs. Since this is an on-going operation with no major up front capital expenditures, the

We have tested the economic viability of the life of reserve economic analysis by conducting independent sensitivity analysis, the revenue was reduced by 15% and the operating and ca 15,000 feet between the underground mine works remain economically viable in both scenario Mine to the north. From examining old works, these mines were successful room and pillar Bailey and Enlow Fork mines currently operate eastward. sensitivity analysis is shown in Table

Table 19-2. Sensit

Life of Reserve Estimate 2023-2038 (US\$ 000		
Category	Annual Minimum	Annual

Revenue Reduced15% - Cash Flow	72,452	206
Operating & Capital Costs increased 20% - Cash Flow	78,731	237

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21.0 OTHER RELEVANT DATA AND PROPERTIES

All data relevantThe initial corridor to access the TRM reserves was driven east 15,000 feet studies south and estimates of mineral resourcesWindsor's Beech Bottom Mine to the north included in the sections of this TRS. No additional information or explanation is necessary| successful longwall operation. The Bailey and not misleading. Enlow Fork mines currently ope

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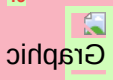
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21.0 OTHER RELEVANT DATA AND IN

All data relevant to the supporting studies and estimates of mineral resources and reserves h necessary to make this TRS understandable and not misleading.



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22.0 INTERPRETATION AND CONCLUSIONS

22.1 INTERPRETATIONS AND CONCLUSIONS

The QP has reached a conclusion concerning the TRM operation based on data and analysis : economic benefits for Tunnel Ridge and the market needs of this product. TRM contains an es

22.2 RISKS AND UNCERTAINTIES

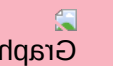
It is the QP's opinion the mine operating risks are low. This is an on-going operation that has used the same methodology the operation has used in the past. Given the reliability of past i reliable. Due to the operation's ability to obtain and retain permits, it is reasonably likely the market uncertainty associated with government regulations could result in earlier retireme pricing for the Tunnel Ridge product. Please refer to ARLP Item 1A for a complete listing of ris



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23.0 RECOMMENDATIONS

The recommendations for TRM are as follows:

- / Continue acquiring mining rights in the extended mine plan to support future production
- / Continued permitting efforts for the waste disposal facility and future mining.

/ Continue current exploration plan

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24.0 REFERENCES23.0 RECOMMENDATIONS

Blake, B.M., JR; Cross, A.T.; Eble, C.F.; Gillespie, W.H.; and Pfefferkorn, H.W. (2002). Selected
L.V. Hills, C.M. Henderson and E.W. Bamber eds., Carboniferous and Permian of the World; Ca
TRM are as follows:

https:

/www.wvgs.wvnet.edu/www/coal/coal_images/WVGES_CoalStratChartPennsylvanianBeds.pdf

Nalley S., LaRose, A. (2022). Annual Energy Outlook 2022 Press Release, U.S. Energy Informa

U.S. Energy Information Administration (EIA). (2022). Coal Markets. Accessed on January 6, 2

/ Continued permitting efforts for the waste disposal facility and future mining.

/ Continue current exploration plan

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25.0 REFERENCE ON INFORM REGISTRANT 24.0 REFERENCES

Table 25-1 summarizes Blake, B.M., JR; Cross, A.T.; Eble, C.F.; Gillespie, W.H.; and Pfefferkorn, I matters discussed in this report, as permitted under §229.1302(f) Carboniferous of the SEC S E.W. Bamber eds., Carboniferous and Permian of the World; Canadian Society of Petroleum G https://www.wvgs.wvnet.edu/www/coal/coal_images/WVGES_CoalStratChartPennsylvanianBe

Table 25-1. Summary of Nalley S., LaRose, A. (2022). Annual Energy Outlook 2022 Press Relea

Category	Report Item/ Portion	Disclose why th
Macroeconomic trends	Section Administration (EIA). Accessed on January 6, 2023. Retrieved from https://www.eia.gov/outlooks/aeo/19	N/A
Marketing information	Section16	The market trend The QP's experi are representativ States
Legal matters	Section17	The legal matter were provided by The QP's experie meets all statuto United States
Environmental matters	Section17	The environment The QP's exper information prov operation in the U
Local area commitments	Section17	N/A
Governmental factors	N/A	N/A

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25.0 RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

Table 25-1 summarizes the information provided by the registrant for matters discussed in this report,

Table 25-1. Summary of Informa

Category	Report Item/ Portion	Disclose why th
Macroeconomic trends	Section 19	N/A
Marketing information	Section 16	The market trend The QP's experi are representativ States
Legal matters	Section 17	The legal matter were provided by The QP's experie meets all statuto United States
Environmental matters	Section 17	The environment The QP's exper information prov operation in the l
Local area commitments	Section 17	N/A
Governmental factors	N/A	N/A

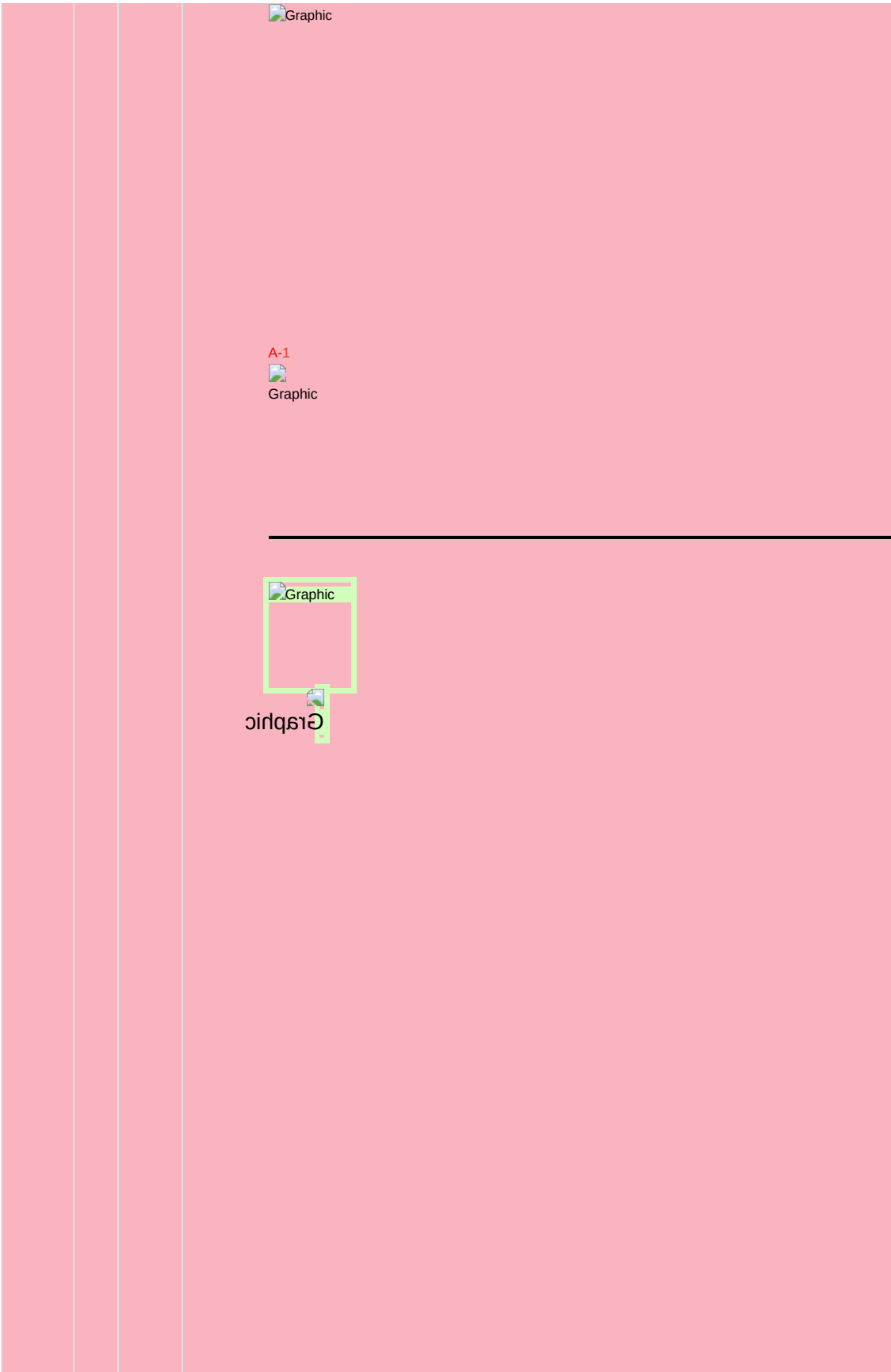
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APPENDIX A

MINE MAP



			Graphic
		A-2 Graphic	1. Recoupment. If Alliance Resource Partners, L.P. (the "Company") is required to be Impracticable, take reasonably prompt action to recoup all Recoverable Compensation of) any right of repayment, forfeiture or off-set against any Covered Person that may be a to or after adoption of this Policy). The Committee may, in its sole discretion and in the e:

additional action is appropriate to address the circumstances surrounding any recovery of other discipline as it deems appropriate.

2. Method of Recoupment. Subject to applicable law, the Committee may seek to repay such amount to the Company; (ii) offsetting a Covered Person's other compensation. The Committee, in its sole discretion, determines to be appropriate. To the extent that a Covered Person's compensation exceeds the amount payable to the Company as determined pursuant to this Policy, the Company shall take all actions reasonably necessary to recover such amount. The applicable Covered Person shall be required to reimburse the Company for a Covered Person's recovery of such amount.

3. Administration of Policy. The Committee shall have full authority to administer the provisions of this Policy, make such determinations and interpretations and take such actions as may be advisable. All determinations and interpretations made by the Committee shall be final, binding and conclusive. No amendment or termination of this Policy shall be effective if such amendment or termination (or any action taken contemporaneously with such amendment or termination) cause the Company to violate any applicable law, rule or regulation of the Securities and Exchange Commission (the "SEC") or the rules of any national securities exchange or national securities clearing agency. The Committee shall consult with the Company's audit committee, chief financial officer and legal counsel to properly administer and interpret any provision of this Policy.

4. No Indemnification. Notwithstanding the terms of any of the Company's agreements, the Company shall not indemnify any Covered Person against the loss of any Recoverable Compensation.

5. Disclosures and Record Keeping. The Company shall make all disclosures required by the applicable rules and forms of the SEC (including, without limitation, the "Exchange Act") and any applicable exchange listing standard.

6. Governing Law. The validity, construction, and effect of this Policy and any action taken hereunder shall be governed by the laws of the State of Delaware without regard to its conflicts of laws principles.

7. Successors. This Policy shall be binding and enforceable against all Covered Persons and their successors and other legal representatives.

8. Definitions. In addition to terms otherwise defined in this Policy, the following definitions shall apply:

"Applicable Period" means the three completed fiscal years preceding the earliest date on which the Company is authorized to take such action if Committee action is not required, concludes, or is required to prepare a Restatement; or (ii) the date a court, regulator, or other legally authorized body determines that the Company shall also include any transition period (that results from a change in the Company's fiscal year) that results in three completed fiscal years.

"Covered Person" means any person who receives Recoverable Compensation.

"Executive Officer" includes the Company's president, principal financial officer, principal accounting officer, controller, any vice-president of the Company in charge of a principal business unit, division or department, any officer who performs a policy-making function, or any other person (including any executive or employee) who performs policy-making functions for the Company, and such other employees who may from time to time be designated as Executive Officers by the Committee.

“Financial Reporting Measure” means a measure that is determined and presented in the Company’s financial statements (including “non-GAAP” financial measures, such as the Company’s unit price, total unitholder return and EBITDA are Financial Reporting Measures).

“Impracticable” means, after exercising a normal due process review of all the Company’s compensation arrangements, the Compensation Committee has determined that it is impracticable because: (i) it has determined that the direct expense that the Company would incur in complying with the requirements of the Compensation Committee would exceed the amount to be recovered; (ii) it has concluded that the Company’s compensation arrangements are not in the best interests of the Company or its unitholders under the country law adopted prior to November 28, 2022; or (iii) it has determined that the requirements of the Compensation Committee, under which benefits are broadly available to the Company’s employees, are not in the best interests of the Company or its unitholders under the requirements of the Compensation Committee and regulations thereunder.

“Incentive-Based Compensation” includes any compensation that is granted, awarded or paid to an Executive Officer based on the Company’s Financial Reporting Measure; however it does not include: (i) base salaries; (ii) discretionary bonuses; (iii) compensation based on subjective, strategic or operational standards; and (iv) equity awards that vest solely based on the Company’s Financial Reporting Measure.

“Received” – Incentive-Based Compensation is deemed “Received” in any Compensation Award if the amount of the award is paid to the Executive Officer or the Executive Officer has the right to receive the amount of the award.

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attained, even if the payment or grant of the Incentive-Based Compensation occurs after the date of the Restatement.

“Recoverable Compensation” means all Incentive-Based Compensation (calculated as the amount of the award) received by an Executive Officer: (i) after beginning service as an Executive Officer; (ii) who served as an Executive Officer during the Applicable Period, that exceeded the amount of Incentive-Based Compensation that the Executive Officer was entitled to receive based on the Financial Reporting Measures, as reflected in the Restatement. With respect to the amount of erroneously awarded compensation is not subtracted from the Restatement, the amount must be based on a reasonable estimate of the effect of the Restatement on the amount of Incentive-Based Compensation was received.

“Restatement” means an accounting restatement of any of the Company’s financial statements required under U.S. securities laws, including any required accounting restatement that is material to the previously issued financial statements (often referred to as a restatement if the error were corrected in the current period or left uncorrected in the current period) effective date of this Policy (but subject to changes that may occur in accounting principles, including situations in which financial statement changes did not result from material non-compliance with accounting principles to retrospective: (i) application of a change in accounting principles; (ii) revision to the Company’s internal organization; (iii) reclassification due to a discontinued operation or reorganization of entities under common control; (v) adjustment to provision amounts in the Company’s financial statements, unit dividends, reverse unit splits or other changes in capital structure.

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				Cawley, Gillespie & Associates Petroleum Consultants 306 West Seventh Street, Suite 400 Fort Worth, Texas 76102-4000 817-336-2461 www.cgaus.com December 7, 2023
			6500 River Place Blvd., Bldg 3 Suite 200 Austin, Texas 78730-1111 512-249-7000 Mr. Kirk D. Tholen Alliance Royalty, LLC 1717 South Boulder, Ste 400 Tulsa, OK 74119  Graphic	
				Re: Alliance Royalty, LLC Variable Interest Note Debt As to the
				EXECUTIVE SUMMARY CHIEF EXECUTIVE OFFICER
			ENGINEERING GEOLOGY GEOPHYSICS PETROPHYSICS	Securities and Exchange Commission Reporting Requirements Future Net
			Mr. Kirk D. Tholen Alliance Royalty, LLC	January 5, 2023

Category	Net Reserves			Future Net Revenue (M\$)	
	Oil (MBBL)	NGL (MBBL)	Gas (MMCF)	Total	Present Worth at 10%
Proved Developed Producing	5,185.2	3,456.2	30,774.3	714,180.1	341,685.1
Proved Developed Non-Producing	1,560.5	763.3	5,017.3	181,860.8	104,151.7
Proved Undeveloped	1,242.8	653.6	4,786.1	151,889.3	86,547.5
Total Proved	7,988.5	4,873.1	40,577.7	1,047,930.2	532,384.3

The oil volumes shown reserves include crude oil and condensate. Oil and natural gas liquids liquid (NGL) volumes are expressed in millions of barrels (MBBL); a barrel is equivalent to 42 United States gallons. Gas volumes are expressed in millions of standard cubic feet (MMCF). Gas (barrels of oil equivalent) is expressed as oil and NGL volumes in barrels plus gas volumes in Mcf divided by six (6) to

Hydrocarbon Pricing

When compared on an area-by-area basis, some The base SEC oil and gas prices calculated for December company must use a 12-month average price, calculated as the unweighted arithmetic average of each first-day-of-the-month oil/NGL price is based upon WTI-Cushing spot prices (London Stock Exchange Group) during 2023 and the base

Adjustments to prices were applied based upon calculations derived from regional averages or provided by A crude quality corrections. Gas price differentials include adjustments for basis differential and the BTU heating value less than processing losses, flaring and contract allocations.

After these pricing adjustments, the estimates net realized prices over the life of Netherland, Sewell & Associates future revenue are reasonable when aggregated at the proved level properties was estimated to be \$77.61 per bbl of oil equivalent. All other factors were held constant in accordance with SEC guidelines.

Expenses, Taxes and Investments

Ownership was accepted as furnished and has not been independently confirmed. CG&A performed a detailed review of operating expenses and future development costs as calculated and prepared by Alliance, and confirmed all commercial operating expenses and future development costs are not paid by the Standards Pertaining mineral owner, they were applied in this evaluation. All operating expenses and future development costs, were held constant (not escalated) throughout the life of these properties.

Reserve Estimation Methods

The methods employed in estimating reserves are industry standards and appropriate for this analysis. For the vast majority of properties. Certain new producing properties with very little production history were forecasted using either methods for the vast majority of properties. Certain new producing properties with very little production history were forecasted using either methods for the vast majority of properties. Monthly production data from the various states are typically updated through October 2023.

Alliance Royalty, LLC Interests

December 7, 2023

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Non-producing reserve estimates, for both developed and undeveloped properties, were forecasted using either methods for the vast majority of properties. Certain new producing properties with very little production history were forecasted using either methods for the vast majority of properties. Auditing an abundance of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers (SPE) threshold set forth in the SPE Standards. We are satisfied with the subsurface control data. The assumptions, data, and methods for the vast majority of properties.

New drills on the Alliance acreage include planned (AFE'd) drills, wells currently drilling, and/or permitted wells based upon the proximity to production and geologic control. Reserves for each location were assigned based on reserves given to modern completions.

The drill schedules for each basin were determined based on spud and completion rates, well status, and well order based on state filings or publicly sourced completion data. The development schedule for these locations began to estimate the turn-in-line rate of these locations due to production data lag. Second, spud locations with unknown completion dates were scheduled in chronological order by filing date. Third, permitted locations, without development data, were scheduled in chronological order by filing date. The drill schedule is included in this report.

SEC Conformance and Regulations

The reserve classifications and the economic considerations used herein conform to the criteria of the SEC. The rules, policies, laws, taxes and royalties currently in effect except as noted herein. The possible effects of changes in economics have not been considered. However, we saw nothing to anticipate nor are we aware of an unusual situation with respect to reserves.

This audit includes 644 commercial proved undeveloped locations, targeting various productive reservoirs in part of Alliance's development plans conforms to the proved undeveloped standards as set forth by the SEC. In our opinion, this development plan within the next five (5) years. Furthermore, Alliance and the other operators have demonstrated development success to ensure this development plan will be fully executed.

General Discussion

The estimates and forecasts were based upon interpretations of data furnished by your office and available to supplement these data. The basic engineering and geological data were subject to third party reservations and qualifications. We believe that we are not justified in relying on such data. All estimates in the aggregate, as prepared by Alliance.

2100 ROSS AVENUE, SUITE 2200 DALLAS, TEXAS 75201 PH: 214-969-5401 FAX: 214-969-5411
1301 MCKINNEY STREET, SUITE 3200 HOUSTON, TEXAS 77010 PH: 713-654-4950 FAX: 713-654-4951

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Reserves categorization conveys the relative degree of certainty; reserves subcategorization is based on development status. Reserves have been adjusted for risk. Alliance's estimates do not include probable or possible reserves that may exist for these proved undeveloped reserves have been estimated.

Prices used by Alliance are based on our best judgment based on the 12-month unweighted arithmetic average of oil and gas prices in the period January through December 2022. For oil future production rates, commodity prices are adjusted by area for quality, transportation fees, and market differentials. For gas volumes, the average Henry Hub gas price is used. All prices are held constant throughout the lives of the properties. The average adjusted product price for oil, \$35.87 per barrel of NGL, and \$5.43 per MCF of gas.

Because Alliance owns no working interest in these properties, no operating costs or capital costs would be used to confirm economic producibility and determine economic limits for the properties. These cost estimates are based on current prices and are not escalated for inflation. Alliance would not incur any costs due to abandonment, nor would it realize any salvage value.

The reserves shown in this report are estimates only and should not be construed as exact quantities. Proved reserves are estimated with reasonable certainty to be economically producible; probable and possible reserves are those that are not estimated with reasonable certainty. Estimates of reserves may increase or decrease as a result of market conditions, future operations, changes in reserves, and other factors discussed herein, estimates of Alliance and NSAI are based on certain assumptions including, but not limited to, realization of reserves by Alliance, that the properties will be operated in a prudent manner, that no governmental regulations or controls will affect the reserves and that projections of future production will prove consistent with actual performance. If the reserves are more or less than the estimated amounts. Because

An on-site field inspection of governmental policies the properties has not been performed. The mechanical or nor have the wells been tested by Cawley, Gillespie & Associates, Inc. Possible environmental liability related to the pr

Alliance Royalty, LLC Interests

December 7, 2023

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considered. The cost of supply plugging and demand, the sales rates, prices received for the reserves, and t not been included in recovering such reserves may vary from assumptions made while preparing these estimates. thi

Conclusion

It should be understood that our audit does and the development of our reserves forecasts do not constitute primarily properties of substantive testing, wherein we conducted a detailed review of major properties making up 80 not independently verified the accuracy and completeness of information and data furnished by Alliance with respec development, product prices, or any agreements relating to current and future operations of the properties and sale came to our attention that which brought into question the validity or sufficiency of any of such information or data, we thereto or had independently verified such information or data. Our audit did not include a review

Please be advised that, based upon the foregoing, in our opinion the above-described estimates of Alliance's

We used standard discounted cash flows are, in the aggregate and independently, reasonable within (+/-) 10%.. engineering and geoscience methods, or a combination of methods, including performance analysis, volumetric conclusions set forth herein. As in all aspects of oil and gas evaluation there are uncertainties inherent in the interpre informed professional judgment.

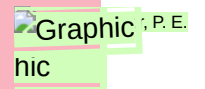
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Supporting data documenting this audit, along with data provided by Alliance, are on file in our office. The tech qualifications, independence, objectivity, and confidentiality principles as set forth in the SPE Standards. Michael F. Kr promulgated by the Society of Petroleum Engineers and as mandated by the SEC.

Cawley, Gillespie & Associates, Inc. is a Texas Registered Engineering Firm (F-693), made up of indepen services to the oil and gas industry for over 60 years. This evaluation was supervised by W. Todd Brooker, President a State of Texas, has been practicing consulting petroleum engineering at NSAI since 1998 and has over 15 years of pi Texas, has been practicing consulting petroleum geoscience at NSAI since 1991 and has over 10 years of prior geophysicists, and petrophysicists; we do not own an interest in these the properties nor or Alliance Royalty, LLC and ε

Sincerely, We have used all methods and procedures that we consider necessary under the circumstanc estimates are available

NETHERLAND, SEWE

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By: /s/ Michael F. Krehel, Jr.

Michael F. Krehel, Jr., F

Vice President

Date Signed: January 5, 2023

MFK:LMS

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