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

FORM 10-K

(Mark One)

x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2020

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 Number: 001-38003

RAMACO RESOURCES, INC.
(Exact name of registrant as specified in its charter)

Delaware	38-4018838
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
250 West Main Street, Suite 1800 Lexington, Kentucky (Address of principal executive offices)	40507 (Zip Code)

(859) 244-7455
(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 on which registered
Common Stock, $0.01 par value	METC	NASDAQ Global Select Market

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 X

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 X

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 X No ☐

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

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	x	Smaller reporting company	x
		Emerging growth company	x

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. X

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. 7262(b)) by the registered public accounting firm that prepared or issued is audit report. ☐

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

As of June 30, 2020, the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of common stock held by non-affiliates of the registrant was $21.5 million.

As of February 15, 2021, the registrant had 42,637,302 shares of common stock outstanding.

Documents Incorporated by Reference:

Certain information required to be furnished pursuant to Part III of this Form 10-K is set forth in, and is hereby incorporated by reference herein from, the definitive proxy statement for our 2021 Annual General Meeting of Stockholders, to be filed by Ramaco Resources with the Securities and Exchange Commission pursuant to Regulation 14A within 120 days after December 31, 2020 (the "2021 Proxy Statement").

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

The information in this report includes "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements, other than statements of historical fact included in this report, regarding our strategy, future operations, financial position, estimated revenue and losses, projected costs, prospects, plans and objectives of management are forward-looking statements. When used in this annual report, the words "could," "believe," "anticipate," "intend," "estimate," "expect," "project" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain such identifying words. These forward-looking statements are based on management's current expectations and assumptions about future events and are based on currently available information as to the outcome and timing of future events. When considering forward-looking statements, you should keep in mind the risk factors and other cautionary statements described under the heading "Risk Factors" included in this report.

Forward-looking statements may include statements about:

- risks related to the impact of the COVID-19 global pandemic, such as the scope and duration of the outbreak, the health and safety of our employees, government actions and restrictive measures implemented in response, delays and cancellations of customer sales, supply chain disruptions and other impacts to the business, or our ability to execute our business continuity plans;
- anticipated production levels, costs, sales volumes and revenue;
- timing and ability to complete major capital projects;
- economic conditions in the metallurgical coal and steel industries generally, including any near-term or long-term downturn in these industries as a result of the COVID-19 pandemic and related actions;
- expected costs to develop planned and future mining operations, including the costs to construct necessary processing and transport facilities;
- estimated quantities or quality of our metallurgical coal reserves;
- our ability to obtain additional financing on favorable terms, if required, to complete the acquisition of additional metallurgical coal reserves as currently contemplated or to fund the operations and growth of our business;
- maintenance, operating or other expenses or changes in the timing thereof;
- financial condition and liquidity of our customers;
- competition in coal markets;
- the price of metallurgical coal and/or thermal coal;
- compliance with stringent domestic and foreign laws and regulations, including environmental, climate change and health and safety regulations, and permitting requirements, as well as changes in the regulatory environment, including as a result of the change in the presidential administration and composition of the U.S. Congress, the adoption of new or revised laws, regulations and permitting requirements;
- potential legal proceedings and regulatory inquiries against us;
- the impact of weather and natural disasters on demand, production and transportation;
- purchases by major customers and our ability to renew sales contracts;
- credit and performance risks associated with customers, suppliers, contract miners, co-shippers and trading, banks and other financial counterparties;
- geologic, equipment, permitting, site access and operational risks and new technologies related to mining;
- transportation availability, performance and costs;
- availability, timing of delivery and costs of key supplies, capital equipment or commodities such as diesel fuel, steel, explosives and tires;
- timely review and approval of permits, permit renewals, extensions and amendments by regulatory authorities;
- our ability to comply with certain debt covenants;
- our expectations relating to dividend payments and our ability to make such payments; and
- other risks identified in this Annual Report that are not historical.

We caution you that these forward-looking statements are subject to a number of risks, uncertainties and assumptions, which are difficult to predict and many of which are beyond our control, incident to the development, production, gathering and sale of coal. Moreover, we operate in a very competitive and rapidly changing environment and new risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. Although we believe that our plans, intentions and expectations reflected in or suggested by the forward-looking statements we make in this Annual Report are reasonable, we can give no assurance that these plans, intentions or expectations will be achieved or occur, and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. Given these risks and uncertainties, investors should not place undue reliance on forward-looking statements as a prediction of actual results.

All forward-looking statements, expressed or implied, included in this report are expressly qualified in their entirety by this cautionary statement. This cautionary statement should also be considered in connection with any subsequent written or oral forward-looking statements that we or persons acting on our behalf may issue.

Except as otherwise required by applicable law, we disclaim any duty to update any forward-looking statements, all of which are expressly qualified by the statements in this section, to reflect events or circumstances after the date of this report.

PART I

Item 1. Business

Ramaco Resources, Inc. is a Delaware corporation formed in October 2016. Our common stock is listed on the NASDAQ Global Select Market under the symbol "METC". Our principal corporate offices are located in Lexington, Kentucky. As used herein, "Ramaco Resources," "we," "our," and similar terms include Ramaco Resources, Inc. and its subsidiaries, unless the context indicates otherwise.

General

We are an operator and developer of high-quality, low-cost metallurgical coal in southern West Virginia, southwestern Virginia, and southwestern Pennsylvania. We are a pure play metallurgical coal company with 262 million tons of high-quality metallurgical coal reserves. We believe our advantaged reserve geology provides us with higher productivities and industry leading lower cash costs. Our development portfolio primarily includes four properties: Elk Creek, Berwind, RAM Mine and Knox Creek.

We believe each of these properties possesses geologic and logistical advantages that make our coal among the lowest delivered-cost U.S. metallurgical coal to a majority of our domestic target customer base, North American blast furnace steel mills and coke plants, as well as international metallurgical coal consumers.

We operate three deep mines and a surface mine at our Elk Creek mining complex. Development of this complex commenced in 2016 and included construction of a preparation plant and rail load-out facilities. The Elk Creek property consists of approximately 20,166 acres of controlled mineral rights and contains 25 seams that we have targeted for production.

Development of our Berwind mining complex began in late 2017. In 2020, we suspended development at the Berwind mining complex due to lower pricing and demand largely caused by the novel coronavirus disease 2019 ("COVID-19") outbreak. This complex remains a key part of our anticipated future growth. We expect to achieve commercial production at the Berwind mining complex approximately six months after we resume the slope project as described under "Our Projects – Berwind" below. The Berwind property consists of approximately 31,200 acres of controlled mineral rights.

Our Knox Creek facility includes a preparation plant and 62,100 acres of controlled mineral rights that we expect to develop in the future. The Knox Creek preparation plant processes coal from our Berwind mine as well as coal we may purchase from third parties.

Our RAM Mine property is located in southwestern Pennsylvania, consists of approximately 1,570 acres of controlled mineral rights, and is scheduled for initial production after a mining permit is issued. We expect this permit to be issued in 2021.

As of December 31, 2020, our estimated aggregate annual production capacity is approximately 2.3 million clean tons of coal. We plan to complete development of our existing properties and increase production from our existing development portfolio to more than 4-4.5 million clean tons of metallurgical coal annually, subject to market conditions, permitting and additional capital deployment. We may also acquire additional reserves or infrastructure that contribute to our focus on advantaged geology and lower costs.

Metallurgical Coal Industry

Metallurgical coal is also known as "coking coal," and is a key component of the blast furnace steelmaking process. North American metallurgical mines are primarily located in the Appalachian area of the eastern United States, and supply all of the requirements of the steel industry. Imported metallurgical coal has historically been un-economic due to transportation costs. Supply in excess of what can be consumed in North America is exported to the seaborne market to buyers in Europe, South America, Africa, India and Asia.

Metallurgical coal is transported by truck, rail and barge to coke batteries. Metallurgical coal contracts in North America frequently are calendar year contracts where both prices and volumes are fixed in the third or fourth quarter for the following calendar year.

The United States is the second largest global supplier to the seaborne metallurgical coal market behind Australia. U.S. producers, with their variable production volumes, generally serve as a swing supplier to the international metallurgical coal market. U.S. metallurgical coal exports compete with Australian metallurgical coals that are generally produced at lower cost, but are geographically disadvantaged to supply Western Europe. Conversely, Australian production has a much shorter logistical route to East Asian customers. Any supply shortfall out of Australia, or increase in global demand beyond Australia's capacity, has historically been serviced by U.S. coal producers.

Export metallurgical coal pricing is determined utilizing a series of indices from a number of independent sources and is adjusted for coal quality. Contracted volumes have terms that vary in duration from spot to one year, rarely exceeding one year. In some cases, indices are used at the point that the coal changes hands. In other cases, an average over time may be utilized. When the term "benchmark" is still utilized, it too is determined based on index values, typically for the preceding three months.

Metallurgical coals are generally classified as high, medium or low volatile. Volatiles are products, other than water, that are released as gas or vapor when coal is converted to coke. Carbon is what remains when the volatiles are released.

Our Strategy

Our business strategy is to increase stockholder value through sustained earnings growth and cash flow generation by:

Developing and Operating Our Metallurgical Coal Properties. We have a 262 million ton reserve base of high-quality metallurgical coal with attractive quality characteristics across high-volatility and low-volatility segments. This geologically advantaged reserve base allows for flexible capital spending in challenging market conditions.

We plan to complete development of our existing properties and increase production from our existing development portfolio to more than 4-4.5 million clean tons of metallurgical coal, subject to market conditions,

permitting and additional capital deployment. We may also acquire additional reserves or infrastructure that contribute to our focus on advantaged geology and lower costs.

Being a Low-Cost U.S. Producer of Metallurgical Coal. Our reserve base presents advantaged geologic characteristics such as relatively thick coal seams at the deep mines, a low effective mining ratio at the surface mines, and desirable metallurgical coal quality. These characteristics contribute to a production profile that has a cash cost of production that is significantly below most U.S. metallurgical coal producers.

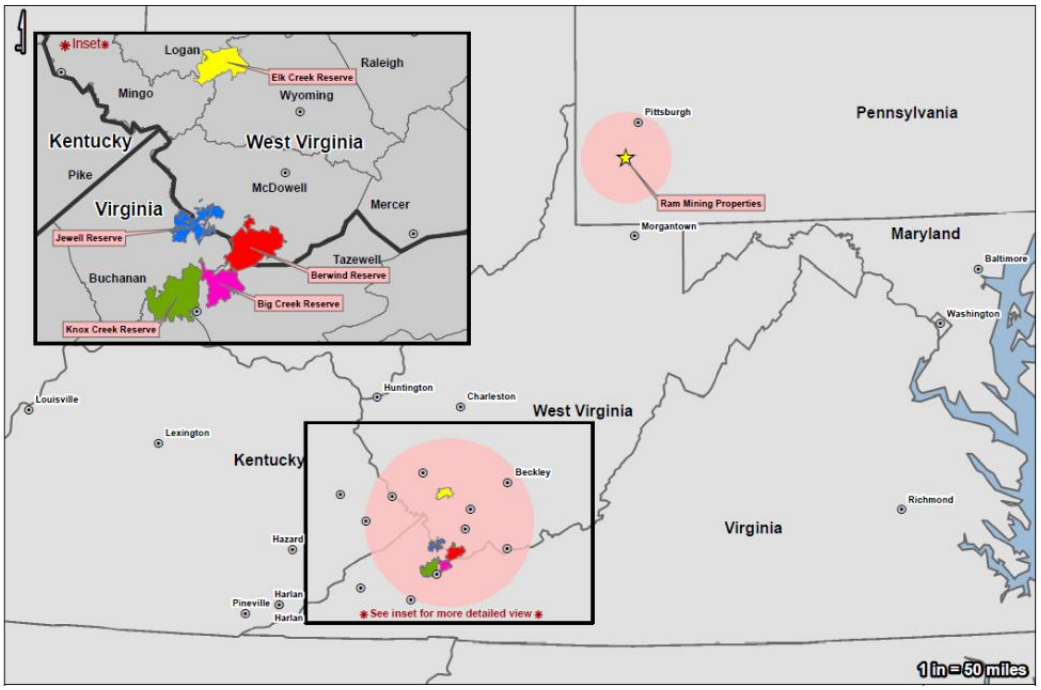
Maintaining a conservative capital structure and prudently managing the business for the long term. We are committed to maintaining a conservative capital structure with a reasonable amount of debt that will afford us the financial flexibility to execute our business strategies on an ongoing basis.

Enhancing Coal Purchase Opportunities. Depending on market conditions, we purchase coal from other independent producers. Purchased coal is complementary from a blending standpoint with our produced coals or it may also be sold as an independent product.

Demonstrating Excellence in Safety and Environmental Stewardship. We are committed to complying with both regulatory and our own high standards for environmental and employee health and safety requirements. We believe that business excellence is achieved through the pursuit of safer and more productive work practices.

Our Projects

Our properties are primarily located in southern West Virginia, southwestern Virginia, and southwestern Pennsylvania. The following map shows the location of our mining complexes and projects:



Elk Creek Mining Complex

Our Elk Creek mining complex in southern West Virginia began production in late December 2016. The Elk Creek property consists of approximately 20,166 acres of controlled mineral and contains 25 seams that we believe are economically mineable. Nearly all our seams contain high-quality, high volatile metallurgical coal accessible at or above drainage. Additionally, almost all of this coal is high-fluidity, which is an important factor for high volatile metallurgical coal.

We control the majority of the coal and related mining rights within the existing permitted areas and our current mine plans, as well as the surface for our surface facilities, through leases and subleases from Ramaco Coal, LLC, a related party, and McDonald Land Company. We estimate that the Elk Creek mining complex contains reserves capable of yielding approximately 113 million tons of clean saleable metallurgical coal.

We currently market most of the coal produced from the Elk Creek mining complex as a blended high volatile A/B product. When segregated, a portion of our coal can be sold as a high volatile A product for a premium. Our market for Elk Creek production is principally North American coke and steel producers. We also market our coal to European, South American, Asian and African customers, and occasionally to coal traders and brokers for use in filling orders for their blended products. Additionally, we seek to market a portion of our coal in the specialty coal markets that value low ash content.

We process our Elk Creek coal production through a 700 raw ton-per-hour preparation plant. The plant has a large-diameter (48") heavy-media cyclone, dual-stage spiral concentrators, froth flotation, horizontal vibratory and screen bowl centrifuges. Our rail load-out facilities at Elk Creek are capable of loading 4,000 tons per hour and a full 150-car unit train in under four hours. The load-out facility is served by the CSX railroad. We also have the ability to develop on controlled property a rail-loading facility on the Norfolk Southern railroad, which would facilitate dual rail service. We have not yet committed the capital for development of a Norfolk Southern rail facility.

The existing impoundment at Elk Creek has been converted principally into a combined refuse facility. The combined capacity is expected to provide approximately 20 years of disposal life for our operations. We completed construction of a full complement of plate presses during 2020 to allow for dewatering material currently being pumped to our impoundment. This equipment allows us to process all waste material for placement in the combined refuse facility.

On November 5, 2018, one of our three raw coal storage silos that fed our Elk Creek plant experienced a partial structural failure. A temporary conveying system completed in late-November 2018 restored approximately 80% of our plant capacity. We completed a permanent belt workaround and restored the preparation plant to its full processing capacity in mid-2019. Our insurance carrier, Federal Insurance Company, disputed our claim for coverage based on certain exclusions to the applicable policy and, therefore, on August 21, 2019 we filed suit against Federal Insurance Company and Chubb INA Holdings, Inc. in Logan County Circuit Court in West Virginia seeking a declaratory judgment that the partial silo collapse was an insurable event and to require coverage under our policy. Defendants removed the case to the United States District Court for the Southern District of West Virginia, and upon removal, we substituted ACE American Insurance Company as a defendant in place of Chubb INA Holdings, Inc. Currently, the case is scheduled for trial beginning June 29, 2021, in Charleston, West Virginia.

A large portion of our controlled reserves are permitted through existing, issued permits. We currently have three mining permits that have not been activated and we are actively pursuing multiple new permits.

On January 3, 2020, we entered into a mineral lease with the McDonald Land Company for coal reserves which, in many cases, are located immediately adjacent to our Elk Creek complex. This leased property became available after the former base lease with another party was terminated. The prior lessee, who controlled the property since 1978, did not produce commercial amounts of coal from the property during their possession of the lease. While it is unusual to have a metallurgical reserve in this part of Central Appalachia remain idle for such an extended period of time, the configuration and location of the tracts lend themselves to be mined and processed far more efficiently from our Elk Creek property. The McDonald reserves are expected to have the same geologic advantages and low costs that are being experienced in our Elk Creek mines. Our 2020 reserve study of the McDonald tracts showed over 21 million proven and probable reserves in approximately 20 different coal seams to our Elk Creek reserve base. We project to mine approximately 10 million tons of these reserves in our current 10 year mine plan.

Berwind Mining Complex

Our Berwind mining complex is located on the border of West Virginia and Virginia and is well-positioned to fill the anticipated market for low volatile coals. The Berwind property consists of approximately 31,200 acres of controlled mineral and contains a large area of Squire Jim seam coal deposits. The Squire Jim seam of coal is the lowest known coal seam on the geologic column in this region, and due to depth of cover has never been significantly explored. We have outcrop access to this seam at the top of an anticline. Should we choose to develop this seam in the future, we expect to experience above average seam height.

Development of our Berwind mining complex began in late 2017 in the thinner Pocahontas No. 3 seam with plans to slope up into the thicker Pocahontas No. 4 seam, subject to market conditions. In 2020, we suspended development at the Berwind mining complex due to lower pricing and demand largely caused by the economic effects of COVID-19. This complex remains a key part of our anticipated future growth. We expect to achieve commercial production at the Berwind mining complex approximately six months after we resume the slope project. We estimate that the mine life for the Berwind mining complex is more than 20 years.

In February 2021, the resumption of the slope development project at Berwind was approved by our Board of Directors in anticipation of better market conditions. We view Berwind as the second flagship complex for Ramaco. The slope project will allow us to transition our mining efforts at Berwind to the thicker Pocahontas No. 4 seam. We have already expended more than $50 million in growth capital during the past four years in development at the Berwind mining complex. We anticipate spending another $10-12 million in growth capital over the next 12 months with approximately one-third of that outlay occurring in early 2022. At full production at Berwind, we expect to produce approximately 750,000 tons per year of high quality low-volatile coal with total cash costs per ton in the low- to mid-$70's for company produced coal. We expect to have initial production by late 2021, and to ramp up to full production levels by the second quarter of 2022.

We are currently mining a small amount of coal from the Triad mine at Berwind. The mine is anticipated to produce less than 250,000 tons in 2021, and should function as a bridge until the main Berwind Pocahontas #4 reserve is fully activated.

We have the necessary permits for the Berwind mine for our current and budgeted operations. A permit for our Squire Jim seam room-and-pillar underground mine was issued during 2020. At this point, we do not anticipate activating this mining permit.

Knox Creek

The Knox Creek property consists of approximately 62,100 acres of controlled mineral, a 650 tons per hour preparation plant and coal-loading facility along with a refuse impoundment. Rail service is provided by Norfolk Southern.

The Tiller Mine slope face-up and shafts were idled before our acquisition of the property. We have spent limited amounts of capital to review the feasibility of a high volatile A metallurgical deep mine in the Jawbone seam of coal. This seam is located slightly above the Tiller Seam and would be accessed via a short slope. Jawbone coal could flow through the same portal and slope as the idle Tiller mine.

From time to time, we process coal purchased from other independent producers at the Knox Creek preparation plant and load-out facilities. We also process and load coal trucked from our Berwind mine at this facility.

In the fourth quarter of 2019, we acquired multiple permits from various affiliates of Omega Highwall Mining, LLC. Consideration for the transaction included assumption of approximately $0.6 million of ARO liability, curing minor lease defaults, and paying advance royalties under two assumed lease instruments. The total out-of-pocket consideration was less than $0.1 million, most of which is recoupable against future royalty payments. These permits are in close proximity to our Knox Creek preparation plant and loadout infrastructure, and provide immediate access to two separate mining areas in Southwestern Virginia. One is a deep mine permit in the Jawbone Seam, which contains approximately 2.65 million tons of geologically advantaged metallurgical coal. The second is a metallurgical surface mine in the Tiller and Red Ash seams that is spade ready for production. It contains approximately 800,000 tons of coal that can be mined via the surface and highwall mining methods. The surface mining is expected to have very low mining ratios. The combination of close proximity to Knox Creek and advantaged geology make these two mines likely to become active in the next few years. The fully permitted surface mine is one of the areas, subject to market conditions, that could positively impact near-term production and profitability. It is possible that the surface mine will be operated utilizing third party contractors we would manage.

In February 2021, a new mine development project known as the Big Creek mine and located near our Knox Creek preparation plant was approved by our Board of Directors. We anticipate to begin production at the Big Creek mine within approximately four to six months of breaking ground. We have obtained all required permits to begin development of the Big Creek mine. We anticipate full production of around 150,000-200,000 tons a year of primarily high quality, mid-volatile coal by the fourth quarter of 2021, with cash costs per ton in the upper $50's for company produced coal. We expect growth capital spending in the development of the Big Creek mine to be roughly $5-7 million over the next two quarters. We expect this mine to be able to produce at these levels for more than three years.

RAM Mine

Our RAM Mine property is located in southwestern Pennsylvania, consists of approximately 1,570 acres of controlled mineral and is scheduled for initial production after a mining permit is issued. Production of high volatile coal from the Pittsburgh seam is planned from a single continuous-miner room-and-pillar underground operation. The Pittsburgh seam, in close proximity to Pittsburgh area coke plants, has historically been a key feedstock for these coke plants. Operation of our RAM Mine coal reserve may require access to a newly constructed preparation plant and loading facility, third party processing, or direct shipment of raw coal product. Upon commencement of mining, we anticipate that the mine will produce at an annualized rate of between 300 and 500 thousand tons with an estimated 10-year mining life.

We expect that coal from the RAM Mine coal reserve will be transported to our customers by highway trucks, rail cars or by barge on river systems. In addition to close proximity to river barge facilities, our RAM Mine operations are also near Norfolk Southern rail access.

The RAM Mine coal reserve is not yet permitted, although we have applied for a permit and it is in the final phase of the permit application process. We expect this permit to be issued in 2021.

Customers and Contracts

Coal prices differ substantially by region and are impacted by many factors including the overall economy, demand for steel, demand for electricity, location, market, quality and type of coal, mine operation costs and the cost of customer alternatives. The major factors influencing our business are the global economy and demand for steel.

We market the bulk of our production to North American integrated steel mills and coke plants, in addition to international customers primarily in Europe, South America, Asia and Africa. Additionally, we market limited amounts of our production to various premium-priced specialty markets, such as foundry cokemakers, manufacturers of activated carbon products, and specialty metals producers.

We sold 1.75 million tons of coal during 2020. Of this, 71% was sold to North American markets and 29% was sold into export markets, excluding Canada. Principally, our export market sales were made to Europe. During 2020, sales to three customers accounted for approximately 70% of total revenue. The total balance due from these three customers at December 31, 2020 was approximately 46% of total accounts receivable. During 2019, sales to three customers accounted for approximately 53% of total revenue. The total balance due from these two customers at December 31, 2019 was approximately 58% of total accounts receivable. No other customer accounted for more than 10% of our revenue during this period. If a major customer decided to stop purchasing coal or significantly reduced its purchases from us, revenue could decline and our operating results and financial condition could be adversely affected.

Trade Names, Trademarks and Patents

We do not have any registered trademarks or trade names for our products, services or subsidiaries, and we do not believe that any trademark or trade name is material to our business. The names of the seams in which we have coal reserves, and attributes thereof, are widely recognized in the metallurgical coal market.

Competition

Our principal domestic competitors include Blackhawk Mining, LLC, Coronado Global Resources, Inc., Corsa Coal Corp, Arch Resources, Inc., Alpha Metallurgical Resources, Inc., Energy, Inc. and Warrior Met Coal, Inc. We also compete in international markets directly with domestic companies and with companies that produce coal from one or more foreign countries, such as Australia, Canada, Colombia and South Africa. Many of these coal producers are larger than we are and have greater financial resources and larger reserve bases than we do.

Suppliers

Supplies used in our business include petroleum-based fuels, explosives, tires, conveyance structure, ventilation supplies, lubricants and other raw materials as well as spare parts and other consumables used in the mining process. We use third-party suppliers for a significant portion of our equipment rebuilds and repairs, drilling services and construction. We believe adequate substitute suppliers and contractors are available and we are not dependent on any one supplier or contractor. We continually seek to develop relationships with suppliers and contractors that focus on reducing our costs while improving quality and service.

Environmental, Health and Safety and Other Regulatory Matters

Our operations are subject to federal, state, and local laws and regulations, such as those relating to matters such as permitting and licensing, employee health and safety, reclamation and restoration of mining properties, water discharges, air emissions, plant and wildlife protection, the storage, treatment and disposal of wastes, remediation of contaminants, surface subsidence from underground mining and the effects of mining on surface water and groundwater conditions.

Compliance with these laws and regulations may be costly and time-consuming and may delay commencement, continuation or expansion of exploration or production at our facilities. They may also depress demand for our products by imposing more stringent requirements and limits on our customers' operations. Moreover, these laws are constantly evolving and are becoming increasingly complex and stringent over time. These laws and regulations, particularly new legislative or administrative proposals, or judicial interpretations of existing laws and regulations related to the protection of the environment could result in substantially increased capital, operating and compliance costs.

Due in part to these extensive and comprehensive regulatory requirements and ever-changing interpretations of these requirements, violations of these laws can occur from time to time in our industry and also in our operations. Expenditures relating to environmental compliance are a major cost consideration for our operations and safety and compliance is a significant factor in mine design, both to meet regulatory requirements and to minimize long-term environmental liabilities.

The following is a summary of the various federal and state environmental and similar regulations that have a material impact on our business:

Surface Mining Control and Reclamation Act. The Surface Mining Control and Reclamation Act of 1977 ("SMCRA") establishes operational, reclamation and closure standards for our mining operations and requires that comprehensive environmental protection and reclamation standards be met during the course of and following completion of mining activities. SMCRA also stipulates compliance with many other major environmental statutes, including the CAA, the CWA, the ESA, RCRA and CERCLA. Permits for all mining operations must be obtained from the United States Office of Surface Mining Reclamation and Enforcement ("OSMRE") or, where state regulatory agencies have adopted federally approved state programs under SMCRA, the appropriate state regulatory authority. Our operations are located in states which have achieved primary jurisdiction for enforcement of SMCRA through approved state programs.

SMCRA imposes a complex set of requirements covering all facets of coal mining. SMCRA regulations govern, among other things, coal prospecting, mine plan development, topsoil or growth medium removal and replacement, disposal of excess spoil and coal refuse, protection of the hydrologic balance, and suitable post mining land uses.

From time to time, OSMRE will also update its mining regulations under SMCRA. For example, OSMRE has previously sought to impose stricter stream protection requirements by requiring more extension pre-mining and baseline data for coal mining operations. The rule was disapproved by Congress pursuant to the Congressional Review Act ("CRA"). However, whether Congress will enact future legislation to require a new Stream Protection Rule remains uncertain. The existing rules, or other new SMCRA regulations, could result in additional material costs, obligations and restrictions upon our operations.

Abandoned Mine Lands Fund. SMCRA also imposes a reclamation fee on all current mining operations, the proceeds of which are deposited in the Abandoned Mine Reclamation Fund ("AML Fund"), which is used to restore unreclaimed and abandoned mine lands mined before 1977. The current per ton fee is $0.28 per ton for surface-mined coal and $0.12 per ton for underground-mined coal. These fees are currently scheduled to be in effect until September 30, 2021. Estimates of our total reclamation and mine-closing liabilities are based upon permit requirements and our experience related to similar activities. If these accruals are insufficient or our liability in a particular year is greater than currently anticipated, our future operating results could be adversely affected.

Mining Permits and Approvals. Numerous governmental permits and approvals are required for mining operations. We are required to prepare and present to federal, state, and local authorities data detailing the effect or impact that any proposed exploration project for production of coal may have upon the environment, the public and our employees. The permitting rules, and the interpretations of these rules, are complex, change frequently, and may be subject to discretionary interpretations by regulators. The requirements imposed by these permits and associated regulations can be costly and time-consuming and may delay commencement or continuation of exploration, production or expansion at our operations. The governing laws, rules, and regulations authorize substantial fines and penalties, including revocation or suspension of mining permits under some circumstances. Monetary sanctions and, in certain circumstances, even criminal sanctions may be imposed for failure to comply with these laws.

Applications for permits and permit renewals at our mining operations are also subject to public comment and potential legal challenges from third parties seeking to prevent a permit from being issued, or to overturn the applicable agency's grant of the permit. Should our permitting efforts become subject to such challenges, the permits may not be issued in a timely fashion, may involve requirements which restrict our ability to conduct our mining operations or to do so profitably, or may not be issued at all. Any delays, denials, or revocation of these or other similar permits we need to operate could reduce our production and materially adversely impact our cash flow and results of our operations.

In order to obtain mining permits and approvals from state regulatory authorities, mine operators must also submit a reclamation plan for restoring the mined property to its prior condition, productive use or other permitted condition. The conditions of certain permits also require that we obtain surface owner consent if the surface estate has been split from the mineral estate. This requires us to negotiate with third parties for surface access that overlies coal we acquired or intend to acquire. These negotiations can be costly and time-consuming, lasting years in some instances, which can create additional delays in the permitting process. If we cannot successfully negotiate for land access, we could be denied a permit to mine coal we already own.

Finally, we typically submit necessary mining permit applications several months, or even years, before we anticipate mining a new area. However, we cannot control the pace at which the government issues permits needed for new or ongoing operations. For example, the process of obtaining CWA permits can be particularly time-consuming and subject to delays and denials. The EPA also has the authority to veto permits issued by the Corps under the CWA's Section 404 program that prohibits the discharge of dredged or fill material into regulated waters without a permit. Even after we obtain the permits that we need to operate, many of the permits must be periodically renewed, or may require modification. There is some risk that not all existing permits will be approved for renewal, or that existing permits will be approved for renewal only upon terms that restrict or limit our operations in ways that may be material.

Financial Assurance. Federal and state laws require a mine operator to secure the performance of its reclamation and lease obligations under SMCRA through the use of surety bonds or other approved forms of financial security for payment of certain long-term obligations, including mine closure or reclamation costs. The changes in the market for coal used to generate electricity in recent years have led to bankruptcies involving prominent coal producers. Several of these companies relied on self-bonding to guarantee their responsibilities under the SMCRA permits including for reclamation. In response to these bankruptcies, OSMRE issued a Policy Advisory in August 2016 to state agencies that was intended to discourage authorized states from approving self-bonding arrangements. Although the Policy Advisory was rescinded in October 2017, certain states, including Virginia, had previously announced that they would no longer accept self-bonding to secure reclamation obligations under the state mining laws. Additionally, in March 2018, the Government Accounting Office recommended that Congress consider amending SMCRA to eliminate the availability of self-bonding to guarantee responsibilities under SMCRA permits. Individually and collectively, these and future revised various financial assurance requirements may increase the amount of financial assurance needed and

limit the types of acceptable instruments, straining the capacity of the surety markets to meet demand. This may delay the timing for and increase the costs of obtaining the required financial assurance.

We use surety bonds, trusts and letters of credit to provide financial assurance for certain transactions and business activities. Federal and state laws require us to obtain surety bonds to secure payment of certain long-term obligations including mine closure or reclamation costs and other miscellaneous obligations. The bonds are renewable on a yearly basis. Surety bond rates have increased in recent years and the market terms of such bonds have generally become less favorable. Sureties typically require coal producers to post collateral, often having a value equal to 40% or more of the face amount of the bond. As a result, we may be required to provide collateral, letters of credit or other assurances of payment in order to obtain the necessary types and amounts of financial assurance. Under our surety bonding program, we are not currently required to post any letters of credit or other collateral to secure the surety bonds; obtaining letters of credit in lieu of surety bonds could result in a significant cost increase. Moreover, the need to obtain letters of credit may also reduce amounts that we can borrow under any senior secured credit facility for other purposes. If, in the future, we are unable to secure surety bonds for these obligations and are forced to secure letters of credit indefinitely or obtain some other form of financial assurance at too high of a cost, our profitability may be negatively affected.

We intend to maintain a credit profile that precludes the need to post collateral for our surety bonds. Nonetheless, our surety has the right to demand additional collateral at its discretion.

Some international customers require new suppliers to post performance guarantees during the initial stages of qualifying to become a long-term supplier. To date we have not had to provide a performance guarantee, but it is possible that such a guarantee could be required in the future.

Mine Safety and Health. The Mine Act and the MINER Act, and regulations issued under these federal statutes, impose stringent health and safety standards on mining operations. The regulations that have been adopted under the Mine Act and the MINER Act are comprehensive and affect numerous aspects of mining operations, including training of mine personnel, mining procedures, roof control, ventilation, blasting, use and maintenance of mining equipment, dust and noise control, communications, emergency response procedures, and other matters. MSHA regularly inspects mines to ensure compliance with regulations promulgated under the Mine Act and MINER Act.

Pennsylvania, West Virginia, and Virginia all have similar programs for mine safety and health regulation and enforcement. The various requirements mandated by federal and state statutes, rules, and regulations place restrictions on our methods of operation and result in fees and civil penalties for violations of such requirements or criminal liability for the knowing violation of such standards, significantly impacting operating costs and productivity.

The regulations enacted under the Mine Act and MINER Act as well as under similar state acts are routinely expanded or made more stringent, raising compliance costs and increasing potential liability. For example, MSHA published a request for information in August 2019 related to its consideration of a lower exposure limit for silica in respirable dust. Our compliance with current or future mine health and safety regulations could increase our mining costs. At this time, it is not possible to predict the full effect that new or proposed statutes, regulations and policies will have on our operating costs, but any expansion of existing regulations, or making such regulations more stringent may have a negative impact on the profitability of our operations. If we were to be found in violation of mine safety and health regulations, we could face penalties or restrictions that may materially and adversely impact our operations, financial results and liquidity.

In addition, government inspectors have the authority to issue orders to shut down our operations based on safety considerations under certain circumstances, such as imminent dangers, accidents, failures to abate violations, and unwarrantable failures to comply with mandatory safety standards. If an incident were to occur at one of our operations, it could be shut down for an extended period of time, and our reputation with prospective customers could be materially damaged. Moreover, if one of our operations is issued a notice of pattern of violations, then MSHA can issue an order withdrawing the miners from the area affected by any enforcement action during each subsequent significant and substantial ("S&S") citation until the S&S citation or order is abated.

Workers' Compensation and Black Lung. We are insured for workers' compensation benefits for work related injuries that occur within our United States operations. We retain first-dollar coverage for all of our subsidiaries and are insured for the statutory limits. Workers' compensation liabilities, including those related to claims incurred but not reported, are recorded principally using annual valuations based on discounted future expected payments using historical data of the operating subsidiary or combined insurance industry data when historical data is limited. State workers' compensation acts typically provide for an exception to an employer's immunity from civil lawsuits for workplace injuries in the case of intentional torts. However, West Virginia's workers' compensation act provides a much broader exception to workers' compensation immunity. The exception allows an injured employee to recover against his or her employer where he or she can show damages caused by an unsafe working condition of which the employer was aware that was a violation of a statute, regulation, rule or consensus industry standard. These types of lawsuits are not uncommon and could have a significant impact on our operating costs.

In addition, we obtained from a third-party insurer a workers' compensation insurance policy, which includes coverage for medical and disability benefits for black lung disease under the Federal Coal Mine Health and Safety Act of 1969 and the Mine Act, as amended. Under the Black Lung Benefits Revenue Act of 1977 and the Black Lung Benefits Reform Act of 1977, as amended in 1981, each coal mine operator must pay federal black lung benefits to claimants who are current and former employees and also make payments to a trust fund for the payment of benefits and medical expenses to claimants who last worked in the coal industry prior to January 1, 1970.

The Patient Protection and Affordable Care Act of 2010 includes significant changes to the federal black lung program including an automatic survivor benefit paid upon the death of a miner with an awarded black lung claim and the establishment of 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 could have a material impact on our costs expended in association with the federal black lung program. In addition to possibly incurring liability under federal statutes, we may also be liable under state laws for black lung claims.

Clean Air Act. The CAA and comparable state laws that regulate air emissions affect coal mining operations both directly and indirectly. Direct impacts on coal mining and processing operations include CAA permitting requirements and emission control requirements relating to air pollutants, including particulate matter such as fugitive dust. The CAA indirectly affects coal mining operations by extensively regulating the emissions of particulate matter, sulfur dioxide, nitrogen oxides, mercury and other compounds emitted by coal-fired power plants. In addition to the greenhouse gas ("GHG") issues discussed below, the air emissions programs that may materially and adversely affect our operations, financial results, liquidity, and demand for our coal, directly or indirectly, include, but are not limited to, the following:

- *Cross-State Air Pollution Rule.* In June 2011, the EPA finalized the Cross-State Air Pollution Rule ("CSAPR"), a cap-and-trade program that requires 28 states in the Midwest and eastern seaboard of the U.S. to reduce power plant emissions that cross state lines and contribute to ozone and/or fine particle pollution in other states. In May 2017, EPA further limited summertime (May-September) nitrogen oxide emissions from power plants in 22 states in the eastern United States in the CSAPR Update Rule. For states to meet these requirements, a number of coal-fired electric generating units will likely need to be retired, rather than retrofitted with the necessary emission control technologies, reducing demand for thermal coal. Moreover, in September 2019, the United States Court of Appeals for the District of Columbia Circuit ("D.C. Circuit") remanded the CSAPR Update Rule to EPA on the grounds that it failed to timely require upwind states to control or eliminate their contribution to ozone and/or fine particulate matter in downwind states, as required under the federal Clean Air Act. In October 2020, EPA proposed a Revised CSAPR Update Rule in response to the D.C. Circuit's ruling. The proposed rule addresses 21 states' outstanding interstate pollution transport obligations and would require additional emissions reductions of nitrogen oxides from power plants in 12 states. Imposition of stricter deadlines for controlling downwind contribution could accelerate unit retirements or the need to implement emission control strategies. Any reduction in the amount of coal consumed by electric power generators as a result of these limitations could decrease demand for thermal coal. However, the practical impact of CSAPR may be limited because utilities in the U.S. have continued to take steps to comply with CAIR, which requires similar power plant

emissions reductions, and because utilities are preparing to comply with the Mercury and Air Toxics Standards ("MATS") regulations, which require overlapping power plant emissions reductions.

- *Acid Rain*. Title IV of the CAA requires reductions of sulfur dioxide emissions by electric utilities and applies to all coal-fired power plants generating greater than 25 Megawatts of power. Affected power plants have sought to reduce sulfur dioxide emissions by switching to lower sulfur fuels, installing pollution control devices, reducing electricity generating levels or purchasing or trading sulfur dioxide emission allowances. These reductions could impact our customers in the electric generation industry. These requirements are not supplanted by CSAPR.

- *NAAQS for Criterion Pollutants.* The CAA requires the EPA to set standards, referred to as NAAQS, for six common air pollutants: carbon monoxide, nitrogen dioxide, lead, ozone, particulate matter and sulfur dioxide. Areas that are not in compliance (referred to as "non-attainment areas") with these standards must take steps to reduce emissions levels. The EPA has adopted NAAQS for nitrogen oxide, sulfur dioxide, particulate matter and ozone. The CAA further requires EPA to periodically review and revise the NAAQS, resulting in the adoption of increasingly more stringent standards over time. States with areas non-attainment areas must adopt a state implementation plan ("SIP") that demonstrates compliance with the existing or new air quality standards. These plans could require significant additional emissions control expenditures at coal-fired power plants. The final rules and new standards may also impose additional emissions control requirements on our customers in the electric generation, steelmaking, and coke industries. Because coal mining operations emit particulate matter and sulfur dioxide, our mining operations could be affected when the new standards are implemented by the states.

- *Mercury and Hazardous Air Pollutants*. The EPA has established emission standards for mercury and other metal, fine particulates, and acid gases from coal- and oil-fired power plants through the Mercury and Air Toxics Standards ("MATS") rule. In May 2020, the EPA published a final rule reversing its prior determination that it is appropriate and necessary to regulate these pollutants. However, this rule will not alter or eliminate the emissions standards established by the MATS rule. Like CSAPR, MATS and other similar future regulations could accelerate the retirement of a significant number of coal-fired power plants. Such retirements would likely adversely impact our business.

Global Climate Change. Climate change continues to attract considerable public and scientific attention. There is widespread concern about the contributions of human activity to such changes, especially through the emission of GHGs. There are three primary sources of GHGs associated with the coal industry. First, the end use of our coal by our customers in electricity generation, coke plants, and steelmaking is a source of GHGs. Second, combustion of fuel by equipment used in coal production and to transport our coal to our customers is a source of GHGs. Third, coal mining itself can release methane, which is considered to be a more potent GHG than CO_2, directly into the atmosphere. These emissions from coal consumption, transportation and production are subject to pending and proposed regulation as part of initiatives to address global climate change.

As a result, numerous proposals have been made and are likely to continue to be made at the international, national, regional and state levels of government to monitor and limit emissions of GHGs. Collectively, these initiatives could result in higher electric costs to our customers or lower the demand for coal used in electric generation, which could in turn adversely impact our business.

At present, we are principally focused on metallurgical coal production, which is not used in connection with the production of power generation. However, we may seek to sell greater amounts of our coal into the power-generation market in the future. The market for our coal may be adversely impacted if comprehensive legislation or regulations focusing on GHG emission reductions are adopted, or if our customers are unable to obtain financing for their operations.

At the international level, President Obama announced in November 2014 that the United States would seek to cut net GHG emissions 26-28 percent below 2005 levels by 2025 in return for China's commitment to seek to peak emissions around 2030, with concurrent increases in renewable energy. In April 2016, the United States further agreed to

voluntarily limit or reduce future emissions as part of the Paris Agreement reached at the United Nations Conference on Climate Change. In November 2019, the United States submitted formal notification to the United Nations that it intended to withdraw from the agreement and withdrew from the agreement in November 2020. However, on January 20, 2021, President Biden signed an "Acceptance on Behalf of the United States of America" that will allow the United States to rejoin the Paris Agreement. The newly signed acceptance, deposited with the United Nations on January 20, 2021, reverses the prior withdrawal. The United States will officially rejoin the Paris Agreement on February 19, 2021. In addition, shortly after taking office in January 2021, President Biden issued a series of executive orders designed to address climate change. Reentry into the Paris Agreement and President Biden's executive orders may result in the development of additional regulations or changes to existing regulations.

At the federal level, although no comprehensive climate change legislation has been implemented to date, such legislation has periodically been introduced in the U.S. Congress and may be proposed or adopted in the future. The likelihood of such legislation has increased due to the change in the administration. Furthermore, the EPA has determined that emissions of GHGs present an endangerment to public health and the environment, because emissions of GHGs are, according to the EPA, contributing to the warming of the earth's atmosphere and other climatic changes. Based on these findings, the EPA has begun adopting and implementing regulations to restrict emissions of GHGs under existing provisions of the CAA. For example, in August 2015, EPA finalized the CPP to cut carbon emissions from existing power plants. The CPP creates individualized emission guidelines for states to follow, and requires each state to develop an implementation plan to meet the individual state's specific targets for reducing GHG emissions. In July 2019, the EPA adopted a rule that replaced the CPP with a new rule titled the Affordable Clean Energy ("ACE") Rule. Although the ACE rule moves away from the individualized emission guidelines of the CPP, it still requires states to set appropriate GHG emission standards for power plants within their jurisdiction based upon the application of "candidate" heat rate improvement measures. The implementation of the ACE rule is currently being challenged in the D.C. Circuit. These and future GHG emission standards may encourage a shift away from coal-fired power generation, adversely impacting the market for our product.

At the state level, several states, including Pennsylvania and Virginia, have already adopted measures requiring GHG emissions to be reduced within state boundaries, including cap-and-trade programs and the imposition of renewable energy portfolio standards. Various states and regions have also adopted GHG initiatives and certain governmental bodies, have imposed, or are considering the imposition of, fees or taxes based on the emission of GHGs by certain facilities. A number of states have also enacted legislative mandates requiring electricity suppliers to use renewable energy sources to generate a certain percentage of power.

The uncertainty over the outcome of litigation challenging the ACE rule and the extent of future regulation of GHG emissions may inhibit utilities from investing in the building of new coal-fired plants to replace older plants or investing in the upgrading of existing coal-fired plants. Any reduction in the amount of coal consumed by electric power generators as a result of actual or potential regulation of GHG emissions could decrease demand for thermal coal, thereby reducing our revenue and adversely affecting our business and results of operations. We or prospective customers may also have to invest in CO2 capture and storage technologies in order to burn coal and comply with future GHG emission standards.

Finally, there have been attempts to encourage the reduction of coalbed methane emissions because methane has a greater GHG effect than CO2 and can give rise to safety concerns. For example, EPA has established the Coalbed Methane Outreach Program ("CMOP") in an effort to mitigate methane emissions from underground coal mines through voluntary initiatives and outreach. If new laws or regulations were introduced to reduce coalbed methane emissions, those rules could adversely affect our costs of operations by requiring installation of air pollution controls, higher taxes, or costs incurred to purchase credits that permit us to continue operations.

Clean Water Act. The CWA and corresponding state laws and regulations affect coal mining operations by restricting the discharge of pollutants, including dredged or fill materials, into waters of the United States. Likewise, permits are required under the CWA to construct impoundments, fills or other structure in areas that are designated as waters of the United States. The CWA provisions and associated state and federal regulations are complex and subject to amendments, legal challenges and changes in implementation. For example, prior to placing fill material in waters of the United States, such as with the construction of a valley fill, coal mining companies are required to obtain a permit from

the Corps under Section 404 of the CWA. The permit can be either a Nationwide Permit ("NWP"), normally NWP 21, 49 or 50 for coal mining activities, or a more complicated individual permit. NWPs are designed to allow for an expedited permitting process, while individual permits involve a longer and more detailed review process. The EPA has the authority to veto permits issued by the Corps under the CWA's Section 404 program that prohibits the discharge of dredged or fill material into regulated waters without a permit. Recent court decisions, regulatory actions and proposed legislation have created uncertainty over CWA jurisdiction and permitting requirements.

Prior to discharging any pollutants into waters of the United States, coal mining companies must obtain a National Pollutant Discharge Elimination System ("NPDES") permit from the appropriate state or federal permitting authority. NPDES permits include effluent limitations for discharged pollutants and other terms and conditions, including required monitoring of discharges. Failure to comply with the CWA or NPDES permits can lead to the imposition of significant penalties, litigation, compliance costs and delays in coal production. Changes and proposed changes in state and federally recommended water quality standards may result in the issuance or modification of permits with new or more stringent effluent limits or terms and conditions.

For instance, waters that states have designated as impaired (i.e., as not meeting present water quality standards) are subject to Total Maximum Daily Load ("TMDL") regulations, which may lead to the adoption of more stringent discharge standards for our coal mines and could require more costly treatment. Likewise, the water quality of certain receiving streams requires an anti-degradation review before approving any discharge permits. TMDL regulations and anti-degradation policies may increase the cost, time and difficulty associated with obtaining and complying with NPDES permits.

In addition, in certain circumstances private citizens may challenge alleged violations of NPDES permit limits in court. Recently, certain citizen groups have filed lawsuits alleging ongoing discharges of pollutants, including selenium and conductance, from valley fills located at certain mining sites in some of the regions where we operate. In West Virginia, several of these cases have been successful for the challengers. While it is difficult to predict the outcome of any potential or future suits, such litigation could result in increased compliance costs following the completion of mining at our operations.

Finally, in June 2015, the EPA and the Corps published a new definition of "waters of the United States" ("WOTUS") that would have expanded areas requiring NPDES or Corps Section 404 permits. In October 2019, EPA and the Army Corps of Engineers issued a final rule that repealed the 2015 WOTUS definition and reinstated the agencies' narrower pre-2015 scope of federal CWA jurisdiction. In April 2020, EPA and the Army Corps of Engineers issued the final Navigable Waters Protection Rule amending the definition of "water of the United States" and replacing EPA's October 2019 final rule. Judicial challenges to EPA's October 2019 and April 2020 final rules are currently before multiple federal district courts. If the October 2019 final rules are vacated and the expanded scope of jurisdiction in the 2015 rule is ultimately implemented, the CWA permits we need may not be issued, may not be issued in a timely fashion, or may be issued with new requirements which restrict our ability to conduct mining operations or to do so profitably.

Resource Conservation and Recovery Act. RCRA and corresponding state laws establish standards for the management of solid and hazardous wastes generated at our various facilities. Besides affecting current waste disposal practices, RCRA also addresses the environmental effects of certain past hazardous waste treatment, storage and disposal practices. In addition, RCRA requires certain of our facilities to evaluate and respond to any past release, or threatened release, of a hazardous substance that may pose a risk to human health or the environment.

RCRA may affect coal mining operations by establishing requirements for the proper management, handling, transportation and disposal of solid and hazardous wastes. For example, EPA regulates coal ash as a solid waste under Subtitle D of RCRA through its coal combustion residuals ("CCR") rule. This rule establishes limits for the location of new sites and requires closure of sites that fail to meet prescribed engineering standards, regular inspections of impoundments, and immediate remediation and closure of unlined ponds that are polluting ground water. As initially promulgated, the rule exempted closed coal ash impoundments located at inactive facilities and allowed for the continued operation of unlined or clay-lined ponds that were not polluting groundwater. However, in August 2020, EPA finalized amendments to its CCR rule that would require closure to be initiated at all unlined and clay-lined surface

impoundments by April 11, 2021. Additionally, in December 2016, Congress passed the Water Infrastructure Improvements for the Nation Act, which provides for the establishment of state and EPA permit programs for the control of coal combustion residuals and authorizes states to incorporate EPA's final rule for coal combustion residuals or develop other criteria that are at least as protective as the final rule. These requirements, as well as any future changes in the management of coal combustion residuals, could increase our customers' operating costs and potentially reduce their ability or need to purchase coal. In addition, contamination caused by the past disposal of coal combustion residuals, including coal ash, could lead to material liability for our customers under RCRA or other federal or state laws and potentially further reduce the demand for coal.

Currently, certain coal mine wastes, such as earth and rock covering a mineral deposit (commonly referred to as overburden) and coal cleaning wastes, are exempted from hazardous waste management under RCRA. Any change or reclassification of this exemption could significantly increase our coal mining costs.

Comprehensive Environmental Response, Compensation and Liability Act. CERCLA and similar state laws affect coal mining operations by, among other things, imposing cleanup requirements for threatened or actual releases of hazardous substances into the environment. Under CERCLA and similar state laws, joint and several liability may be imposed on hazardous substance generators, site owners, transporters, lessees and others regardless of fault or the legality of the original disposal activity. Although the EPA excludes most wastes generated by coal mining and processing operations from the primary hazardous waste laws, such wastes can, in certain circumstances, constitute hazardous substances for the purposes of CERCLA. In addition, the disposal, release or spilling of some products used by coal companies in operations, such as chemicals, could trigger the liability provisions of CERCLA or similar state laws. Thus, we may be subject to liability under CERCLA and similar state laws for coal mines that we currently own, lease or operate or that we or our predecessors have previously owned, leased or operated, and sites to which we or our predecessors sent hazardous substances. These liabilities could be significant and materially and adversely impact our financial results and liquidity.

Endangered Species and Bald and Golden Eagle Protection Acts. The ESA and similar state legislation protect species designated as threatened, endangered or other special status. The U.S. Fish and Wildlife Service (the "USFWS") works closely with the OSMRE and state regulatory agencies to ensure that species subject to the ESA are protected from mining-related impacts. Several species indigenous to the areas in which we operate area protected under the ESA. Other species in the vicinity of our operations may have their listing status reviewed in the future and could also become protected under the ESA. In addition, the USFWS has identified bald eagle habitat in some of the counties where we operate. The Bald and Golden Eagle Protection Act prohibits taking certain actions that would harm bald or golden eagles without obtaining a permit from the USFWS. Compliance with the requirements of the ESA and the Bald and Golden Eagle Protection Act could have the effect of prohibiting or delaying us from obtaining mining permits. These requirements may also include restrictions on timber harvesting, road building and other mining or agricultural activities in areas containing the affected species or their habitats.

Use of Explosives. Our surface mining operations are subject to numerous regulations relating to blasting activities. Due to these regulations, we will incur costs to design and implement blast schedules and to conduct pre-blast surveys and blast monitoring. In addition, the storage of explosives is subject to various regulatory requirements. For example, the Department of Homeland Security requires facilities in possession of chemicals of interest (including ammonium nitrate at certain threshold levels) to complete a screening review. Our mines are low risk, Tier 4 facilities which are not subject to additional security plans. The adoption of future, more stringent standards related to the use of explosives could materially adversely impact our cost or ability to conduct our mining operations.

National Environmental Policy Act. NEPA requires federal agencies, including the Department of Interior, to evaluate major agency actions that have the potential to significantly impact the environment, such as issuing a permit or other approval. In the course of such evaluations, an agency will typically prepare an environmental assessment to determine the potential direct, indirect and cumulative impacts of a proposed project. Where the activities in question have significant impacts to the environment, the agency must prepare an environmental impact statement. Compliance with NEPA can be time-consuming and may result in the imposition of mitigation measures that could affect the amount of coal that we are able to produce from mines on federal lands, and may require public comment. Furthermore, whether agencies have complied with NEPA is subject to protest, appeal or litigation, which can delay or halt projects. The

NEPA review process, including potential disputes regarding the level of evaluation required for climate change impacts, may extend the time and/or increase the costs and difficulty of obtaining necessary governmental approvals, and may lead to litigation regarding the adequacy of the NEPA analysis, which could delay or potentially preclude the issuance of approvals or grant of leases.

In the past, the Council on Environmental Quality ("CEQ") has issued guidance encouraging agencies to provide more detailed discussion of the direct, indirect, and cumulative impacts of a proposed action's reasonably foreseeable GHG emissions and effects. Although this guidance has since been withdrawn, the adoption of a similar guidance in the future could create additional delays and costs in the NEPA review process or in our operations, or even an inability to obtain necessary federal approvals for our operations due to the increased risk of legal challenges from environmental groups seeking additional analysis of climate impacts.

Other Environmental Laws. We are required to comply with numerous other federal, state, and local environmental laws and regulations in addition to those previously discussed. These additional laws include but are not limited to the Safe Drinking Water Act, the Toxic Substances Control Act, and the Emergency Planning and Community Right-to-Know Act. Each of these laws can impact permitting or planned operations and can result in additional costs or operational delays.

Seasonality

Our primary business is not materially impacted by seasonal fluctuations. Demand for metallurgical coal is generally more heavily influenced by other factors such as the general economy, interest rates and commodity prices.

Human Capital Resources

We believe our employees are a competitive advantage. We seek to foster a culture that supports diversity and inclusion, and strive to provide a safe, healthy and rewarding work environment with opportunities for growth. We had 349 employees as of December 31, 2020, including our named executive officers. None of our employees are covered by collective bargaining agreements, and we have not experienced any strikes or work stoppages related to labor relation issues. We believe we have good relations with our employees. Our human capital resources objectives include, as applicable, identifying, recruiting, training, retaining, incentivizing and integrating our existing and additional employees. We also depend on experienced contractors and third-party consultants to conduct some of our day-to-day activities. We plan to continue to use the services of many of these contractors and consultants.

Safety Philosophy. We have a comprehensive health and safety program based on the core belief that all accidents and occupational illnesses are preventable. We believe that:

- Business excellence is achieved through the pursuit of safer and more productive work practices.
- Any task that cannot be performed safely should not be performed.
- Working safely is a requirement of our employees.
- Controlling the work environment is important, but human behavior within the work environment is paramount.
- Safety starts with individual decision-making—all employees must assume a share of responsibility for acts within their control that pose a risk of injury to themselves or fellow workers.
- All levels of the organization must be proactive in implementing safety processes that promote a safe and healthy work environment.
- Consequently, we are committed to providing a safe work environment; providing our employees with proper training and equipment; and implementing safety and health rules, policies and programs that foster safety excellence.

Our safety program includes a focus on the following:

- *Hiring the Right Workers*. Our hiring program includes significant pre-employment screening and reference checks.
- *Safety Incentives*. We have a compensation system that encourages and rewards excellent safety performance.
- *Communication*. We conduct regular safety meetings with the frequent involvement of senior management to reinforce the "tone at the top."
- *Drug and Alcohol Testing*. We require pre-employment drug screening as well as regular random drug testing that exceeds regulatory requirements.
- *Continuous Improvement Programs*. We track key safety performance metrics, including accident rates, violation types and frequencies. We have specific targets in these areas and we measure performance against these targets. Specific action plans are implemented for targeted improvement in areas where performance falls below our expectations.
- *Training*. Our training program includes comprehensive new employee orientation and training, annual refresher training and task training components. These training modules are designed to reinforce our high safety expectations. Work rules and procedures are a key element of this training.
- *Accident Investigation*. We have a structured accident investigation procedure that identifies root causes of accidents as well as actions necessary to prevent reoccurrence. We focus on near misses and close calls as a means of attempting to prevent more serious accidents from occurring.
- *Safety Audits*. We conduct periodic safety audits that include work place examinations, including observation of workers at work, as well as safety program reviews. Both internal and external resources are utilized to conduct these audits.
- *Employee Performance Improvement*. A key element of our safety program is the recognition that safe work practices are a requirement of employment. We identify employee performance which is below expectations and develop specific action plans for improvement.
- *Employee Involvement*. The key to excellent safety is employee involvement and engagement. We foster direct employee involvement in a number of ways including audit participation, accident investigations, as training resources and through solicitation of ideas in small group meetings and through anonymous workplace observation suggestion boxes.
- *Positive Reinforcement*. Establishing safety as a core belief is paramount to our safety performance. As a result, we look for opportunities to celebrate accomplishments and to build pride in our operational safety and performance.

Jumpstart Our Business Startups Act ("JOBS Act")

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act (the "JOBS Act"). For as long as we are an emerging growth company, unlike public companies that are not emerging growth companies under the JOBS Act, we will not be required to:

- provide an auditor's attestation report on management's assessment of the effectiveness of our system of internal control over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act of 2002;
- comply with any new requirements adopted by the Public Company Accounting Oversight Board (the "PCAOB") requiring mandatory audit firm rotation or a supplement to the auditor's report in which the auditor would be required to provide additional information about the audit and the financial statements of the issuer;
- provide certain disclosure regarding executive compensation required of larger public companies or hold stockholder advisory votes on the executive compensation required by the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"); or
- obtain stockholder approval of any golden parachute payments not previously approved.

We will cease to be an emerging growth company upon the earliest of:

- the last day of the fiscal year in which we have $1.07 billion or more in annual revenues;
- the date on which we become a "large accelerated filer" (the fiscal year-end on which the total market value of our common equity securities held by non-affiliates is $700 million or more as of our most recently completed second fiscal quarter);
- the date on which we issue more than $1.0 billion of non-convertible debt over a three-year period; or
- the last day of the fiscal year following the fifth anniversary of our initial public offering, which will be December 31, 2022.

Available Information

Our investor relations website is ir.ramacoresources.com and we encourage investors to use it as a way of easily finding information about us. We promptly make available on this website, free of charge, the reports that we file or furnish with the Securities and Exchange Commission ("SEC"), corporate governance information (including our Code of Conduct and Ethics) and press releases. Our filings with the SEC are also available to the public from commercial document retrieval services and at the SEC's website at http://www.sec.gov.

Item 1A. Risk Factors

Our business involves certain risks and uncertainties. The following is a description of significant risks that might cause our future financial condition or results of operations to differ materially from those expected. In addition to the risks and uncertainties described below, we may face other risks and uncertainties, some of which may be unknown to us and some of which we may deem immaterial. If one or more of these risks or uncertainties occur, our business, financial condition or results of operations may be materially and adversely affected. A summary of our risk factors is as follows:

Risks Related to Our Business

- The impact of the spread of COVID-19 and the measures taken to mitigate it are adversely affecting our business, operations and financial condition.
- Our properties have not yet been fully developed into producing coal mines and, if we experience any development delays or cost increases or are unable to complete the construction of our facilities, our business, financial condition and results of operations could be adversely affected.
- We have customer concentration, so the loss of, or significant reduction in, purchases by our largest coal customers could adversely affect our business, financial condition, results of operations and cash flows.
- Our customer base is highly dependent on the steel industry.
- Deterioration in the global economic conditions, a worldwide financial downturn or negative credit market conditions could have a material adverse effect on our business, financial condition, results of operations, cash flows and ability to pay dividends.
- We have incurred debt under the Paycheck Protection Program in response to the COVID-19 pandemic. The federal government or private plaintiffs may challenge our determination that we meet the requirements for loans under the Paycheck Protection Program.
- We do not enter into long-term sales contracts for our coal and as a result we are exposed to fluctuations in market pricing.
- We face uncertainties in estimating our economically recoverable coal reserves, and inaccuracies in our estimates could result in lower than expected revenues, higher than expected costs and decreased profitability.
- A substantial or extended decline in the prices we receive for our coal could adversely affect our business, results of operations, financial condition, cash flows and ability to pay dividends to our stockholders.

- Increased competition or a loss of our competitive position could adversely affect sales of, or prices for, our coal, which could impair our profitability.
- The availability and reliability of transportation facilities and fluctuations in transportation costs could affect the demand for our coal or impair our ability to supply coal to prospective customers.
- Any significant downtime of our major pieces of mining equipment, including any preparation plants, could impair our ability to supply coal to prospective customers and materially and adversely affect our results of operations.
- Our ability to collect payments from customers could be impaired if their creditworthiness declines or if they fail to honor their contracts with us.
- If we are unable to obtain needed capital or financing on satisfactory terms, we may have to curtail our operations and delay our construction and growth plans, which may materially adversely affect our business, financial condition, results of operations, cash flows and ability to pay dividends to our stockholders.
- Our operations could be adversely affected if we are unable to obtain required financial assurance, or if the costs of financial assurance increase materially.
- Defects in title or loss of any leasehold interests in our properties could limit our ability to conduct mining operations on these properties or result in significant unanticipated costs.
- Substantially all of our mining properties are leased from our affiliates and conflicts of interest may arise in the future as a result.
- We may face restricted access to international markets in the future.

Risks Related to Environmental, Health, Safety and Other Regulations

- The incoming U.S. administration and Congress could enact legislative and regulatory measures that could adversely affect our mining operations or cost structure or our customers' ability to use coal, which could have a material adverse effect on our financial condition and results of operations.
- Current and future government laws, regulations and other legal requirements relating to protection of the environment and natural resources may increase our costs of doing business and may restrict our coal operations.
- Our operations may impact the environment or cause exposure to hazardous substances, and our properties may have environmental contamination, which could expose us to significant costs and liabilities.
- We must obtain, maintain, and renew governmental permits and approvals for mining operations, which can be a costly and time-consuming process and result in restrictions on our operations.
- We and our significant stockholders are subject to the Applicant Violator System.
- Our mines are subject to stringent federal and state safety regulations that increase our cost of doing business at active operations and may place restrictions on our methods of operation. In addition, government inspectors in certain circumstances may have the ability to order our operations to be shut down based on safety considerations.
- We have reclamation, mine closing, and related environmental obligations under the Surface Mining Control and Reclamation Act. If the assumptions underlying our accruals are inaccurate, we could be required to expend greater amounts than anticipated.

Risks Related to Our Company

- Our ability to pay dividends may be limited by the amount of cash we generate from operations following the payment of fees and expenses, by restrictions in any future debt instruments and by additional factors unrelated to our profitability.
- Our significant stockholders have the ability to direct the voting of a majority of the voting power of our common stock, and their interests may conflict with those of our other stockholders.

- Your percentage of ownership in us may be diluted in the future.
- Certain of our directors have significant duties with, and spend significant time serving, entities that may compete with us in seeking acquisitions and business opportunities and, accordingly, may have conflicts of interest in allocating time or pursuing business opportunities.
- Our significant stockholders and their affiliates are not limited in their ability to compete with us, and the corporate opportunity provisions in our amended and restated certificate of incorporation (our "Charter") could enable our significant stockholders to benefit from corporate opportunities that might otherwise be available to us.

Risks Related to Our Business

The impact of the spread of COVID-19 and the measures taken to mitigate it are adversely affecting our business, operations and financial condition.

The global spread of COVID-19 has created significant volatility, uncertainty, and economic disruption during 2020. In response to the COVID-19 pandemic, governments worldwide placed significant restrictions on both domestic and international travel and took action to restrict the movement of people and suspend some business operations. Lockdowns, travel restrictions and restrictions on public gatherings, coupled with the spread and impact of the COVID-19 pandemic, resulted in a significant worldwide economic slowdown. In certain cases, states that had begun taking steps to reopen their economies experienced a subsequent surge in cases of COVID-19, causing these states to cease such reopening measures in some cases and reinstitute restrictions in others. Rates of COVID-19 contractions have worsened in the United States during the winter months, and will likely cause federal, state and local governments to impose more severe restrictions on business and social activities. In the event governments impose such restrictions, the recovery of the economy may be further curtailed.

These social and governmental responses have caused a significant slowdown in the global economy and financial markets, and the current and anticipated economic impact of these actions has caused declines in many commodity prices, including a decline in metallurgical coal prices, and significant decline in the demand for steel. The extent of the impact of the COVID-19 pandemic on our business and financial results will continue to depend on numerous evolving factors that we are not able to accurately predict, including the duration and scope of the pandemic, global economic conditions during and after the pandemic, governmental actions that have been taken, or may be taken in the future, in response to the pandemic, the development and availability of treatments and vaccines and extent to which these treatments and vaccines may remain effective as potential new strains of the coronavirus emerge, and changes in consumer behavior in response to the pandemic, some of which may be more than just temporary.

Like other coal companies, our business has been adversely affected by the COVID-19 pandemic and measures being taken to mitigate its impact. The pandemic has resulted in widespread adverse impacts on our employees, customers, suppliers and other parties with whom we have business relations. Our actions have included:

- an operational furlough of approximately 182 employees at the Elk Creek mining complex in West Virginia for most of the month of April 2020;
- a one week operational furlough of approximately 157 employees at the Elk Creek mining complex in July 2020;
- the partial closure of our Berwind low volatile development mine complex affecting approximately 44 employees effective in July 2020; and
- a reduction or deferral of non-essential capital expenditures to adapt to the current market conditions.

Two customers declared a material adverse change or force majeure under their contracts with us and reduced or delayed their planned volumes of purchases of metallurgical coal from us for 2020 because of COVID-19. These delays or curtailments affected approximately 10% or 200,000 tons of our total contracted sales volumes for 2020 all of which was placed into the lower priced spot market.

These actions by customers may result in some disputes and could strain our relations with customers and others. If and to the extent these actions result in material modifications or cancellations of the underlying contracts, or

non-renewal of contracts, our business, financial condition, cash flows and results of operations could be materially adversely affected.

As the COVID-19 pandemic and government responses are rapidly evolving, the extent of the impact on domestic coal companies remains unknown. There is considerable uncertainty regarding the extent and duration of governmental and other measures implemented to try to slow the spread of the virus, such as large-scale travel bans and restrictions, border closures, quarantines, stay-at-home orders and business and government shutdowns. Restrictions of this nature have caused, and likely will continue to cause, us, our suppliers and other business counterparties to experience operational delays and delays in the delivery of materials and supplies that are sourced from around the globe, and have caused, and likely will continue to cause, milestones or deadlines relating to various projects to be missed. We have also modified certain business and workforce practices (including those related to employee travel, employee work locations, and cancellation of physical participation in meetings, events and conferences) to conform to government restrictions and best practices encouraged by governmental and regulatory authorities. However, the quarantine of personnel or the inability to access our facilities could adversely affect our operations.

We cannot predict the full impact that COVID-19 will have on our business, cash flows, liquidity, financial condition and results of operations at this time, due to numerous uncertainties. The ultimate impacts will depend on future developments, including, among others, the consequences of governmental and other measures designed to slow the spread of the virus, the development of effective treatments, the duration of the outbreak, actions taken by governmental authorities, customers, suppliers and other third parties, workforce availability, and the timing and extent to which normal economic and operating conditions resume.

Our properties have not yet been fully developed into producing coal mines and, if we experience any development delays or cost increases or are unable to complete the construction of our facilities, our business, financial condition and results of operations could be adversely affected.

We have not completed development plans for all of our coal properties, and do not expect to have full annual production from all of our properties until market conditions permit us to resume and complete these development plans. We expect to incur significant capital expenditures until we have completed the development of our properties. In addition, the development of our properties involves numerous regulatory, environmental, political and legal uncertainties that are beyond our control and that may cause delays in, or increase the costs associated with, their completion. Accordingly, we may not be able to complete the development of the properties on schedule, at the budgeted cost or at all, and any delays beyond the expected development periods or increased costs above those expected to be incurred could have a material adverse effect on our business, financial condition, results of operations, cash flows and ability to pay dividends to our stockholders.

If we are unable to complete or are substantially delayed in completing the development of any of our properties, our business, financial condition, results of operations cash flows and ability to pay dividends to our stockholders could be adversely affected.

We have customer concentration, so the loss of, or significant reduction in, purchases by our largest coal customers could adversely affect our business, financial condition, results of operations and cash flows.

We are exposed to risks associated with an increasingly concentrated customer base both domestically and globally. We derive a significant portion of our revenues from three customers, which accounted for approximately 33%, 24% and 13% of our total revenue, respectively, aggregating approximately 70% of our total revenue for the 12 months ended December 31, 2020. The balance due from these customers at December 31, 2020 was approximately 46% of total accounts receivable.

In 2020, two of these customers declared force majeure with respect to or curtailed their contractual obligations to purchase metallurgical coal from us due to the economic impacts of COVID-19. These reductions and delays lowered our total contracted sales volumes for 2020 by approximately 10% or almost 200,000 tons. Based on the current economic environment, it is possible that a portion of our contractual commitments for 2021 could be similarly delayed or curtailed, and we are not currently able to anticipate the impact such curtailments or delays could have on our business, financial condition, results of operations or cash flows.

There are inherent risks whenever a significant percentage of total revenues are concentrated with a limited number of customers. Revenues from our largest customers may fluctuate from time to time based on numerous factors, including market conditions, which may be outside of our control. If any of our largest customers experience declining revenues due to market, economic or competitive conditions, we could be pressured to reduce the prices that we charge for our coal, which could have an adverse effect on our margins, profitability, cash flows and financial position. If any customers were to significantly reduce their purchases of coal from us, including by failing to buy and pay for coal they committed to purchase in sales contracts, our business, financial condition, results of operations, cash flows and ability to pay dividends to our stockholders could be adversely affected.

Our customer base is highly dependent on the steel industry.

Substantially all of the metallurgical coal that we produce is sold to steel producers. Therefore, demand for our metallurgical coal is highly correlated to the steel industry. The steel industry's demand for metallurgical coal is affected by a number of factors including the cyclical nature of that industry's business, technological developments in the steel-making process and the availability of substitutes for steel such as aluminum, composites and plastics. A significant reduction in the demand for steel products would reduce the demand for metallurgical coal, which would have a material adverse effect on our business, financial condition, cash flows and results of operations. Similarly, if less expensive ingredients could be used in substitution for metallurgical coal in the integrated steel mill process, the demand for metallurgical coal would materially decrease, which would also materially adversely affect demand for our metallurgical coal. Metallurgical coal markets weakened significantly beginning in 2019 as certain China ports placed restrictions on imported coal and weakened further in 2020 due to the economic impacts of the COVID-19 pandemic. Between these import restrictions and the economic impacts of the pandemic, concerns about the stability of the global economy and the ongoing trade dispute between China and the U.S., metallurgical coal prices dropped meaningfully in 2019 and 2020. Our export customers, excluding Canada, include foreign steel producers who may be affected by the tariffs to the extent their production is imported into the U.S. Retaliatory threats by foreign nations to these tariffs may limit international trade and adversely impact global economic conditions.

Deterioration in the global economic conditions in any of the industries in which prospective customers operate, a worldwide financial downturn or negative credit market conditions could have a material adverse effect on our business, financial condition, results of operations, cash flows and ability to pay dividends to our stockholders.

Economic conditions in the industries in which most of our prospective customers operate, such as steelmaking and electric power generation, substantially deteriorated in recent years and reduced the demand for coal. A deterioration of economic conditions in our prospective customers' industries could cause a decline in demand for and production of metallurgical coal. Renewed or continued weakness in the economic conditions of any of the industries served by prospective customers could have a material adverse effect on our business, financial condition, results of operations, cash flows and ability to pay dividends to our stockholders.

We have incurred debt under the Paycheck Protection Program in response to the COVID-19 pandemic. The federal government or private plaintiffs may challenge our determination that we meet the requirements for loans under the Paycheck Protection Program.

On April 20, 2020, we received loan proceeds in the amount of approximately $8.4 million under the Paycheck Protection Program ("PPP") from KeyBank, as lender. In order to obtain the loan, we made a certification to the SBA that the then-current economic uncertainty, including uncertainty in the capital markets, made the loan request necessary to support the ongoing operations of the Company. On April 23, 2020, the SBA issued additional guidance on eligibility for the PPP (the "FAQs"), expressing its view that a public company with substantial market value and access to capital markets will not likely be able to make the required certification in good faith. The SBA noted that such a company should be prepared to demonstrate to the SBA the basis for such company's certification. Further, on April 28, 2020, Treasury Secretary Mnuchin advised that all companies that have been extended PPP loans in excess of $2 million will be audited. We believe, in light of the FAQs, that we have met the required good faith certification requirements and continue to meet the eligibility requirements for a PPP loan, and we have applied for forgiveness of our PPP loan. However, the federal government or a private plaintiff may disagree and assert otherwise. Any such contest with the federal government or third party action as a result of the PPP loan may require us to incur significant legal, accounting

and related fees. In addition, if it was ultimately determined that the certifications we made in connection with the PPP loan were not in good faith, it may result in civil and criminal penalties, which could have a material adverse effect on our liquidity and financial condition.

The SBA continues to develop and issue new and updated guidance regarding the PPP loans application process, including guidance regarding required borrower certifications and requirements for forgiveness of loans made under the program. We continue to track the guidance as it is released and assess and re-assess various aspects of its application as necessary based on the guidance. While we believe we have used loan proceeds for qualifying expenses, given the evolving nature of the guidance, it is possible that future changes in the rules and regulations regarding PPP loans, or the SBA's interpretation thereof, could affect whether the PPP loan is ultimately forgiven. Our application for forgiveness was approved by KeyBank and is currently being reviewed by the SBA, but there is no assurance that the SBA will approve the application for forgiveness.

We do not enter into long-term sales contracts for our coal and as a result we are exposed to fluctuations in market pricing.

Sales commitments in the metallurgical coal market are typically not long-term in nature and are generally no longer than one year in duration. Most metallurgical coal transactions in the U.S. are done on a calendar year basis, where both prices and volumes are fixed in the third and fourth quarter for the following calendar year. Globally the market is evolving to shorter term pricing. Some annual contracts have shifted to quarterly contracts and most volumes are being sold on an indexed basis, where prices are determined by averaging the leading spot indexes reported in the market and adjusting for quality. As a result, we are subject to fluctuations in market pricing. We are not protected from oversupply or market conditions where we cannot sell our coal at economic prices. Metallurgical coal has been an extremely volatile commodity over the past ten years and prices are likely to be volatile in the future. There can be no assurances we will be able to mitigate such conditions as they arise. Any sustained failure to be able to market our coal during such periods would have a material adverse effect on our business, financial condition, results of operations, cash flows and ability to pay dividends to our stockholders.

The failure to access coal preparation facilities may have a material adverse effect on our ability to produce coal for our prospective customers and to meet quality specifications.

The costs of establishing the infrastructure necessary to enable us to continue to ramp up our mining operations will be significant. We have constructed preparation and loading facilities at our Elk Creek mining complex. Our Berwind mine will remain under development until we reach our targeted coal reserves in the Pocahontas No. 4 seam. That coal is currently, and is planned to continue to be, washed at our active Knox Creek plant. At our RAM Mine, we may require access to either newly constructed preparation and loading facilities or arrangements with third parties to process and load our coal. Alternatively, we might mine the coal in a manner that allows us to ship the coal direct without washing. We will analyze whether to expend capital to construct preparation facilities or enter into third-party processing arrangements. Our failure to provide the necessary preparation, processing and loading facilities for our projects would have a material adverse effect on our operations.

The risks associated with the construction and operation of mines, processing plants and related infrastructure include:

- the potential lack of availability or cost of skilled and unskilled labor, equipment and principal supplies needed for construction of facilities;
- the need to obtain necessary environmental and other governmental approvals and permits and the timing of the receipt of those approvals and permits;
- industrial accidents;
- geologic mine failures, surface facility construction failures or mining, coal processing or transport equipment failures;
- structural failure of an impoundment or refuse area;
- natural phenomena such as inclement weather conditions, floods, droughts, rock slides and seismic activity;
- unusual or unexpected geological and coal quality conditions;

- potential opposition from non-governmental organizations, environmental groups or other activists, which may delay or prevent development activities; and
- restrictions or regulations imposed by governmental or regulatory authorities.

The costs, timing and complexities of developing our projects may be greater than anticipated. Cost estimates may increase significantly as more detailed engineering work is completed on a project. It is common in mining operations to experience unexpected costs, problems and delays during construction, development and mine start-up.

Product alternatives may reduce demand for our products.

Substantially all of our coal production is comprised of metallurgical coal, which commands a significant price premium over the majority of other forms of coal because of its use in blast furnaces for steel production. Metallurgical coal has specific physical and chemical properties, which are necessary for efficient blast furnace operation. Steel producers are continually investigating alternative steel production technologies with a view to reducing production costs. The steel industry has increased utilization of electric arc furnaces or pulverized coal injection processes, which reduce or eliminate the use of furnace coke, an intermediate product produced from metallurgical coal and, in turn, generally decreases the demand for metallurgical coal. Many alternative technologies are designed to use lower quality coals or other sources of carbon instead of higher cost high-quality metallurgical coal. While conventional blast furnace technology has been the most economic large-scale steel production technology for a number of years, and emergent technologies typically take many years to commercialize, there can be no assurance that over the longer term competitive technologies not reliant on metallurgical coal would not emerge, which could reduce the demand and price premiums for metallurgical coal.

Moreover, we may produce and market other coal products, such as thermal coal, which are also subject to alternative competition. Alternative technologies are continually being investigated and developed in order to reduce production costs or minimize environmental or social impact. If competitive technologies emerge that use other materials in place of our products, demand and price for our products might fall.

We face uncertainties in estimating our economically recoverable coal reserves, and inaccuracies in our estimates could result in lower than expected revenues, higher than expected costs and decreased profitability.

Coal is economically recoverable when the price at which coal can be sold exceeds the costs and expenses of mining and selling the coal. Any forecasts of our future performance are based on, among other things, estimates of our recoverable coal reserves. We base our reserve information on geologic data, coal ownership information and current and proposed mine plans. There are numerous uncertainties inherent in estimating quantities and qualities of coal and costs to mine recoverable reserves, including many factors beyond our control. As a result, estimates of economically recoverable coal reserves are by their nature uncertain. Some of the factors and assumptions that can impact economically recoverable coal reserve estimates include:

- geologic and mining conditions;
- historical production from the area compared with production from other producing areas;
- the assumed effects of environmental and other regulations and taxes by governmental agencies;
- our ability to obtain, maintain and renew all required permits;
- future improvements in mining technology;
- assumptions related to future prices; and
- future operating costs, including the cost of materials, and capital expenditures.

Each of the factors that impacts reserve estimation may vary considerably from the assumptions used in estimating the reserves. For these reasons, estimates of coal reserves may vary substantially. Actual production, revenues and expenditures with respect to our future coal reserves may vary from estimates, and these variances may be material. As a result, our estimates may not accurately reflect our actual future coal reserves.

Our inability to acquire additional coal reserves that are economically recoverable may have a material adverse effect on our future profitability.

Our profitability depends substantially on our ability to mine, in a cost-effective manner, coal reserves that possess the quality characteristics that prospective customers desire. Because our reserves will decline as we mine our coal, our future profitability depends upon our ability to acquire additional coal reserves that are economically recoverable to replace the reserves we will produce. If we fail to acquire or develop sufficient additional reserves over the long term to replace the reserves depleted by our production, our existing reserves could eventually be exhausted.

Our multiple coal quality levels and the need to send test shipments to prospective customers may negatively impact our ability to further develop our customer base.

Customers typically request test shipments of coal in advance of entering into coal sales agreements which requires that we provide coal quality to meet customer specifications. If we experience delays in the delivery of test shipments, it could negatively impact our ability to develop our customer base.

We are dependent on contractors for the successful completion of the development of our properties.

We regularly use contractors in the development of our mines and intend to use contractors if and when we construct facilities at the RAM Mine. Timely and cost-effective completion of the development of our properties, including necessary facilities and infrastructure, in compliance with agreed specifications is central to our business strategy and is highly dependent on the performance of our contractors under the agreements with them.

Although some agreements may provide for liquidated damages, if the contractor fails to perform in the manner required with respect to certain of its obligations, the events that trigger a requirement to pay liquidated damages may delay or impair the operation of our properties, and any liquidated damages that we receive may not be sufficient to cover the damages that we suffer as a result of any such delay or impairment. Further, we may have disagreements with our contractors about different elements of the construction process, which could lead to the assertion of rights and remedies under their contracts and increase the costs associated with development of the properties or result in a contractor's unwillingness to perform further work. If any contractor is unable or unwilling to perform according to the negotiated terms and timetable of its respective agreement for any reason or terminates its agreement, we would be required to engage a substitute contractor. This would likely result in significant project delays and increased costs, which could have a material adverse effect on our business, financial condition, results of operations, cash flows and ability to pay dividends to our stockholders.

Prices for coal are volatile and can fluctuate widely based upon a number of factors beyond our control, including oversupply relative to the demand available for our coal and weather. A substantial or extended decline in the prices we receive for our coal could adversely affect our business, results of operations, financial condition, cash flows and ability to pay dividends to our stockholders.

Our financial results are significantly affected by the prices we receive for our coal and depend, in part, on the margins that we earn on sales of our coal. Our margins will reflect the price we receive for our coal over our cost of producing and transporting our coal. Prices and quantities under U.S. domestic metallurgical coal sales contracts are generally based on expectations of the next year's coal prices at the time the contract is entered into, renewed, extended or re-opened. Pricing in the global seaborne market is moving towards shorter term pricing models, typically using indexes. The expectation of future prices for coal depends upon many factors beyond our control, including the following:

- the market price for coal;
- overall domestic and global economic conditions, including the supply of and demand for domestic and foreign coal, coke and steel;
- the consumption pattern of industrial consumers, electricity generators and residential users;
- weather conditions in our markets that affect the demand for thermal coal or that affect the ability to produce metallurgical coal;

- competition from other coal suppliers;
- technological advances affecting energy consumption;
- the costs, availability and capacity of transportation infrastructure;
- the impact of domestic and foreign governmental laws and regulations, including environmental and climate change regulations and regulations affecting the coal mining industry, and delays in the receipt of, failure to receive, failure to maintain or revocation of necessary governmental permits; and
- increased utilization by the steel industry of electric arc furnaces or pulverized coal injection processes, which reduce or eliminate the use of furnace coke, an intermediate product produced from metallurgical coal, and generally decrease the demand for metallurgical coal.

Metallurgical coal has been an extremely volatile commodity over the past 10 years. There are no assurances that supplies will remain low, that demand will not decrease or that overcapacity may resume, which could cause declines in the prices of and demand for coal, which could have a material adverse effect on our business, financial condition, results of operations, cash flows.

Increased competition or a loss of our competitive position could adversely affect sales of, or prices for, our coal, which could impair our profitability. In addition, foreign currency fluctuations could adversely affect the competitiveness of our coal abroad.

We compete with other producers primarily on the basis of coal quality, delivered costs to the customer and reliability of supply. We compete primarily with U.S. coal producers and with some Canadian coal producers for sales of metallurgical coal to domestic steel producers and, to a lesser extent, thermal coal to electric power generators. We also compete with both domestic and foreign coal producers for sales of metallurgical coal in international markets. Certain of these coal producers may have greater financial resources and larger reserve bases than we do. We sell coal to the seaborne metallurgical coal market, which is significantly affected by international demand and competition.

We cannot assure you that competition from other producers will not adversely affect us in the future. The coal industry has experienced significant consolidation in recent years, including consolidation among some of our major competitors. We cannot assure you that the result of current or further consolidation in the coal industry, or the reorganization through bankruptcy of competitors with large legacy liabilities, will not adversely affect us. A number of our competitors have idled production over the last several years in light of lower metallurgical coal prices. A stabilization or increase in coal prices could encourage existing producers to expand capacity or could encourage new producers to enter the market.

In addition, we face competition from foreign producers that sell their coal in the export market. Potential changes to international trade agreements, trade concessions, foreign currency fluctuations or other political and economic arrangements may benefit coal producers operating in countries other than the United States. Additionally, North American steel producers face competition from foreign steel producers, which could adversely impact the financial condition and business of our prospective customers. We cannot assure you that we will be able to compete on the basis of price or other factors with companies that in the future may benefit from favorable foreign trade policies or other arrangements. Coal is sold internationally in U.S. dollars and, as a result, general economic conditions in foreign markets and changes in foreign currency exchange rates may provide our foreign competitors with a competitive advantage. If our competitors' currencies decline against the U.S. dollar or against our prospective foreign customers' local currencies, those competitors may be able to offer lower prices for coal to prospective customers. Furthermore, if the currencies of our prospective overseas customers were to significantly decline in value in comparison to the U.S. dollar, those prospective customers 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, which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our business involves many hazards and operating risks, some of which may not be fully covered by insurance. The occurrence of a significant accident or other event that is not fully insured could adversely affect our business, results of operations, financial condition and cash flows, and ability to pay dividends to our stockholders.

Our mining operations, including our preparation and transportation infrastructure, are subject to many hazards and operating risks. Underground mining and related processing activities present inherent risks of injury to persons and damage to property and equipment. Our mines are subject to a number of operating risks that could disrupt operations, decrease production and increase the cost of mining for varying lengths of time, thereby adversely affecting our operating results. In addition, if coal production declines, we may not be able to produce sufficient amounts of coal to deliver under future sales contracts. Our inability to satisfy contractual obligations could result in prospective customers initiating claims against us. The operating risks that may have a significant impact on our future coal operations include:

- variations in thickness of seams of coal;
- adverse geologic conditions, including amounts of rock and other natural materials intruding into the coal seam, that could affect the stability of the roof and the side walls of the mine;
- environmental hazards;
- mining and processing equipment failures, structural failures and unexpected maintenance problems;
- fires or explosions, including as a result of methane, coal, coal dust or other explosive materials, or other accidents;
- inclement or hazardous weather conditions and natural disasters or other force majeure events;
- seismic activities, ground failures, rock bursts or structural cave-ins or slides;
- delays in moving our mining equipment;
- railroad delays or derailments;
- security breaches or terroristic acts; and
- other hazards or occurrences that could also result in personal injury and loss of life, pollution and suspension of operations.

Any of these risks could adversely affect our ability to conduct operations or result in substantial loss to us as a result of claims for:

- personal injury or loss of life;
- damage to and destruction of property, natural resources and equipment, including our coal properties and our coal production or transportation facilities;
- pollution, contamination and other environmental damage to our properties or the properties of others;
- potential legal liability and monetary losses;
- regulatory investigations, actions and penalties;
- suspension of our operations; and
- repair and remediation costs.

Although we maintain insurance for a number of risks and hazards, we may not be insured or fully insured, and we may not be able to recover under our insurance policies, against the losses or liabilities that could arise from a significant accident in our future coal operations. We may elect not to obtain insurance for any or all of these risks if we believe that the cost of available insurance is excessive relative to the risks presented. In addition, pollution, contamination and environmental risks generally are not fully insurable. Moreover, a significant mine accident or regulatory infraction could potentially cause a mine shutdown. The occurrence of an event that is not fully covered by insurance could have a material adverse effect on our business, financial condition, results of operations, cash flows and ability to pay dividends to our stockholders.

In addition, if any of the foregoing changes, conditions or events occurs and is not determined to be a force majeure event, any resulting failure on our part to deliver coal to the purchaser under contract could result in economic penalties, suspension or cancellation of shipments or ultimately termination of the agreement, any of which could have a material adverse effect on our business, financial condition, results of operations, cash flows and ability to pay dividends to our stockholders.

Our operations are exclusively located in a single geographic region, making us vulnerable to risks associated with operating in a single geographic area.

Currently, all of our operations are conducted in a single geographic region in the eastern United States in the states of Pennsylvania, Virginia and West Virginia. The geographic concentration of our operations may disproportionately expose us to disruptions in our operations if the region experiences severe weather, transportation capacity constraints, constraints on the availability of required equipment, facilities, personnel or services, significant governmental regulation or natural disasters. If any of these factors were to impact the region in which we operate more than other coal producing regions, our business, financial condition, results of operations and cash flows will be adversely affected relative to other mining companies that have a more geographically diversified asset portfolio.

In addition, scientists have warned that increasing concentrations of GHGs in the Earth's atmosphere may produce climate changes that have significant physical effects, such as increased frequency and severity of storms, droughts and floods and other climatic events. If these warnings are correct, and if any such effects were to occur in areas where we or our customers operate, they could have an adverse effect on our business, financial condition and cash flows.

The availability and reliability of transportation facilities and fluctuations in transportation costs could affect the demand for our coal or impair our ability to supply coal to prospective customers.

Transportation logistics play an important role in allowing us to supply coal to prospective customers. Any significant delays, interruptions or other limitations on the ability to transport our coal could negatively affect our operations. Delays and interruptions of rail services because of accidents, failure to complete construction of rail infrastructure, infrastructure damage, lack of rail or port capacity, weather-related problems, governmental regulation, terrorism, strikes, lock-outs, third-party actions or other events could impair our ability to supply coal to customers and adversely affect our profitability. In addition, transportation costs represent a significant portion of the delivered cost of coal and, as a result, the cost of delivery is a critical factor in a customer's purchasing decision. Increases in transportation costs, including increases resulting from emission control requirements and fluctuations in the price of locomotive diesel fuel and demurrage, could make our coal less competitive, which could have a material adverse effect on our business, financial condition, results of operations, cash flows and ability to pay dividends to our stockholders.

Any significant downtime of our major pieces of mining equipment, including any preparation plants, could impair our ability to supply coal to prospective customers and materially and adversely affect our results of operations.

We depend on several major pieces of mining equipment to produce and transport our coal, including, but not limited to, underground continuous mining units and coal conveying systems, surface mining equipment such as highwall miners, front-end loaders and coal overburden haul trucks, preparation plants and related facilities, conveyors and transloading facilities. If any of these pieces of equipment or facilities suffered major damage or were destroyed by fire, abnormal wear, flooding, incorrect operation or otherwise, we may be unable to replace or repair them in a timely manner or at a reasonable cost, which would impact our ability to produce and transport coal and materially and adversely affect our business, results of operations, financial condition and cash flows. Moreover, the Mine Safety and Health Administration ("MSHA") and other regulatory agencies sometimes make changes with regards to requirements for pieces of equipment. Such changes could cause delays if manufacturers and suppliers are unable to make the required changes in compliance with mandated deadlines.

If either our preparation plants, or train loadout facilities, or those of a third party processing or loading our coal, suffer extended downtime, including from major damage, or is destroyed, our ability to process and deliver coal to prospective customers would be materially impacted, which would materially adversely affect our business, results of operations, financial condition, cash flows and ability to pay dividends to our stockholders. For example, in late 2018, we experienced a partial structural failure at one of the raw coal storage silos that feeds our Elk Creek plant in West Virginia, which idled our Elk Creek preparation plant for approximately one month.

If customers do not enter into, extend or honor contracts with us, our profitability could be adversely affected.

Coal mined from our operations is subject to testing by prospective customers for its ability to meet various specifications and to work satisfactorily in their ovens and other facilities prior to entering into contracts for purchase (which are typically short-term orders having terms of one year or less). If we are unable to successfully test our coals or enter into new contracts for the sale of our coal, our ability to achieve profitability would be materially adversely affected. Once we enter into contracts, if a substantial portion of our sales contracts are modified or terminated and we are unable to replace the contracts (or if new contracts are priced at lower levels), our results of operations would be adversely affected, perhaps materially. In addition, if customers refuse to accept shipments of our coal for which they have a contractual obligation, our revenues could be substantially affected and we may have to reduce production at our mines until the customer's contractual obligations are honored. This, in turn, could have a material adverse effect on the payments we receive which could affect our business, financial condition, cash flows and ability to pay dividends to our stockholders.

Certain provisions in typical long-term sales contracts provide limited protection during adverse economic conditions, which may eventually result in economic penalties to us or permit the customer to terminate the contract. Furthermore, our ability to collect payments from prospective customers could be impaired if their creditworthiness declines or if they fail to honor their contracts with us.

We do not expect to enter into significant long-term sales contracts, but if we do, price adjustment, "price reopener" and other similar provisions typical in long-term sales contracts may reduce protection from short-term coal price volatility traditionally provided by such contracts. Price reopener provisions may be included in our future sales contracts. These price reopener provisions may automatically set a new price based on prevailing market price or, in some instances, require the parties to agree on a new price, sometimes within a specified range of prices. Any adjustment or renegotiations leading to a significantly lower contract price could adversely affect our profitability. Some annual metallurgical coal contracts have shifted to quarterly contracts and many include prices determined by averaging the leading spot indexes reported in the market, exposing us further to risks related to pricing volatility.

Our ability to receive payment for coal sold and delivered depends on the continued solvency and creditworthiness of prospective customers. The number of domestic steel producers is small, and they compete globally for steel production. If their business or creditworthiness suffers, we may bear an increased risk with respect to payment default. Competition with other coal suppliers could force us to extend credit to customers and on terms that could increase the risk we bear with respect to payment default. We could also enter into agreements to supply coal to energy trading and brokering customers under which a customer sells coal to end-users. If the creditworthiness of any prospective energy trading and brokering customer declines, we may not be able to collect payment for all coal sold and delivered to or on behalf of this customer.

In addition, if customers refuse to accept shipments of our coal that they have a contractual obligation to purchase, our revenues will decrease and we may have to reduce production at our mines until prospective customers' contractual obligations are honored. Our inability to collect payment from counterparties to our sales contracts may materially adversely affect our business, financial condition, results of operations, cash flows and ability to pay dividends to our stockholders.

Decreases in demand for electricity and changes in coal consumption patterns of U.S. electric power generators could adversely affect our business.

While demand for metallurgical coal is not closely linked to domestic demand for electricity, we anticipate that the incidental production of thermal coal may generate up to 5% of our tons sold annually. Any changes in coal consumption by electric power generators in the United States would likely impact our business over the long term.

The low price of natural gas in recent years has resulted, in many instances, in domestic electric generators increasing natural gas consumption while decreasing coal consumption. Federal and state mandates for increased use of electricity derived from renewable energy sources, such as the Clean Power Plan ("CPP"), also affect demand for our thermal coal. A decrease in coal consumption by the electric power generation industry could adversely affect the price

of coal, which could have a material adverse effect on its business, financial condition, results of operations, cash flows and ability to pay dividends to our stockholders.

Changes in the coal industry that affect our prospective customers, such as those caused by decreased electricity demand and increased competition, could also adversely affect our business. Indirect competition from natural gas fired plants that are relatively less expensive to construct and less difficult to permit has the most potential to displace a significant amount of coal fired electric power generation in the near term, particularly older, less efficient coal fired powered generators. In addition, uncertainty caused by federal and state regulations could cause thermal coal customers to be uncertain of their coal requirements in future years, which could adversely affect our ability to sell coal to such prospective customers under multi-year sales contracts. This could have a material adverse effect on our business, financial condition, cash flows.

We may be unsuccessful in integrating the operations of any future acquisitions, including acquisitions involving new lines of business, with our existing operations, and in realizing all or any part of the anticipated benefits of any such acquisitions.

From time to time, we may evaluate and acquire assets and businesses that we believe complement our existing assets and business, such as the mineral lease with the McDonald Land Company for coal reserves adjacent to our Elk Creek mine complex near Logan, West Virginia. The assets and businesses we acquire may be dissimilar from our initial lines of business. Acquisitions may require substantial capital or the incurrence of substantial indebtedness. Our capitalization and results of operations may change significantly as a result of future acquisitions. We may also add new lines of business to our existing operations.

Further, unexpected costs and challenges may arise whenever businesses with different operations or management are combined, and we may experience unanticipated delays in realizing the benefits of an acquisition. Entry into certain lines of business may subject us to new laws and regulations with which we are not familiar and may lead to increased litigation and regulatory risk. Also, following an acquisition, we may discover previously unknown liabilities associated with the acquired business or assets for which we have no recourse under applicable indemnification provisions. If an acquired business or new line of business generates insufficient revenue or if we are unable to efficiently manage our expanded operations, our results of operations may be materially adversely affected.

To maintain and grow our business, we will be required to make substantial capital expenditures. If we are unable to obtain needed capital or financing on satisfactory terms, we may have to curtail our operations and delay our construction and growth plans, which may materially adversely affect our business, results of operations, financial condition and cash flows, and ability to pay dividends to our stockholders.

In order to maintain and grow our business, we will need to make substantial capital expenditures associated with our mines and the construction of coal preparation facilities which have not yet been constructed. Constructing, maintaining, repairing and expanding mines and infrastructure, including coal preparation and loading facilities, is capital intensive. Specifically, the exploration, permitting and development of coal reserves, and the maintenance of machinery, equipment and facilities, and compliance with applicable laws and regulations require substantial capital expenditures. While we funded a significant amount of the capital expenditures needed to build out our mining and preparation infrastructure at our Elk Creek property with cash on hand, we must continue to invest capital to maintain or to increase our production and to develop any future acquired properties. Decisions to increase our production levels could also affect our capital needs. We cannot assure you that we will be able to maintain our production levels or generate sufficient cash flow, or that we will have access to sufficient financing to continue our production, exploration, permitting and development activities, and we may be required to defer all or a portion of our capital expenditures.

If we do not make sufficient or effective capital expenditures, we will be unable to develop and grow our business. To fund our projected capital expenditures, we will be required to use cash from our operations, incur debt or issue additional common stock or other equity securities. Using cash from our operations will reduce cash available for maintaining or increasing our operating activities and paying dividends to our stockholders. Our ability to obtain bank financing or our ability to access the capital markets for future equity or debt offerings may be limited by our financial

condition at the time of any such financing or offering and the covenants in our future debt agreements, as well as by general economic conditions, contingencies and uncertainties that are beyond our control.

In addition, incurring debt may significantly increase our interest expense and financial leverage, and issuing additional equity securities may result in significant stockholder dilution.

We may not be able to obtain equipment, parts and supplies in a timely manner, in sufficient quantities or at reasonable costs to support our coal mining and transportation operations.

Coal mining consumes large quantities of commodities including steel, copper, rubber products and liquid fuels and requires the use of capital equipment. Some commodities, such as steel, are needed to comply with roof control plans required by regulation. The prices we pay for commodities and capital equipment are strongly impacted by the global market. A rapid or significant increase in the costs of commodities or capital equipment we use in our operations could impact our mining operations costs because we may have a limited ability to negotiate lower prices and, in some cases, may not have a ready substitute.

We use equipment in our coal mining and transportation operations such as continuous mining units, conveyors, shuttle cars, rail cars, locomotives, and roof bolters. We procure this equipment from a concentrated group of suppliers, and obtaining this equipment often involves long lead times. Occasionally, demand for such equipment by mining companies can be high and some types of equipment may be in short supply. Delays in receiving or shortages of this equipment, as well as the raw materials used in the manufacturing of supplies and mining equipment, which, in some cases, do not have ready substitutes, or the cancellation of any future supply contracts under which we obtain equipment and other consumables, could limit our ability to obtain these supplies or equipment. In addition, if any of our suppliers experiences an adverse event, or decides to no longer do business with us, we may be unable to obtain sufficient equipment and raw materials in a timely manner or at a reasonable price to allow us to meet our production goals and our revenues may be adversely impacted. We use considerable quantities of steel in the mining process. If the price of steel or other materials increases substantially or if the value of the U.S. dollar declines relative to foreign currencies with respect to certain imported supplies or other products, our operating expenses could increase. Any of the foregoing events could materially and adversely impact our business, financial condition, results of operations, cash flows and ability to pay dividends to our stockholders.

We are a holding company and we depend on the ability of our subsidiaries to distribute funds to us in order to satisfy our financial obligations and to make dividend payments.

We are a holding company and our subsidiaries conduct all of our operations and own all of our operating assets. We have no significant assets other than the equity interests in our subsidiaries. As a result, our ability to pay our obligations and to make dividend payments, should we choose to do so in the future, depends entirely on our subsidiaries and their ability to distribute funds to us. The ability of a subsidiary to make these distributions could be affected by a claim or other action by a third-party, including a creditor, or by the law of their respective jurisdictions of formation which regulates the payment of dividends. If we are unable to obtain funds from our subsidiaries, we may not be able to declare or pay dividends.

Our operations could be adversely affected if we are unable to obtain required financial assurance, or if the costs of financial assurance increase materially.

Federal and state laws require financial assurance to secure our permit obligations including to reclaim lands used for mining, to pay federal and state workers' compensation and black lung benefits, and to satisfy other miscellaneous obligations. The changes in the market for coal used to generate electricity in recent years have led to bankruptcies involving prominent coal producers. Several of these companies relied on self-bonding to guarantee their responsibilities under the SMCRA permits including for reclamation. In response to these bankruptcies, the OSMRE issued a Policy Advisory in August 2016 to state agencies that was intended to discourage authorized states from approving self-bonding arrangements. Although the Policy Advisory was rescinded in October 2017, certain states, including Virginia, had previously announced that it would no longer accept self-bonding to secure reclamation obligations under the state mining laws. Individually and collectively, these and future revised financial assurance

requirements may lead to increased demand for other forms of financial assurance, which may strain capacity for those instruments and increase our costs of obtaining and maintaining the amounts of financial assurance needed for our operations, which may delay the timing for and increase the costs of obtaining this financial assurance.

We use surety bonds, trusts and letters of credit to provide financial assurance for certain transactions and business activities. If, in the future, we are unable to secure surety bonds for these obligations and are forced to secure letters of credit indefinitely or obtain some other form of financial assurance at too high of a cost, we may not be able to obtain permits and production on our properties could be adversely affected. This could have a material adverse effect on our business, financial condition, cash flows and ability to pay dividends to our stockholders.

Our mines are located in areas containing oil and natural gas operations, which may require us to coordinate our operations with those of oil and natural gas drillers.

Our coal reserves are in areas containing developed or undeveloped oil and natural gas deposits and reservoirs, including the Marcellus Shale in Pennsylvania, and our Virginia reserves are currently the subject of substantial oil and natural gas exploration and production activities, including by horizontal drilling. If we have received a permit for our mining activities, then, while we will have to coordinate our mining with such oil and natural gas drillers, our mining activities are expected to have priority over any oil and natural gas drillers with respect to the land covered by our permit. For reserves outside of our permits, we expect to engage in discussions with drilling companies on potential areas on which they can drill that may have a minimal effect on our mine plan. Depending on priority of interests, our operations may have to avoid existing oil and gas wells or expend sums to plug oil and gas wells.

If a well is in the path of our mining for coal on land that has not yet been permitted for our mining activities, we may not be able to mine through the well unless we purchase it. The cost of purchasing a producing horizontal or vertical well could be substantial. Horizontal wells with multiple laterals extending from the well pad may access larger oil and natural gas reserves than a vertical well, which would typically result in a higher cost to acquire. The cost associated with purchasing oil and natural gas wells that are in the path of our coal mining activities may make mining through those wells uneconomical, thereby effectively causing a loss of significant portions of our coal reserves, which could materially and adversely affect our business, financial condition, results of operations, cash flows and ability to pay dividends to our stockholders.

Defects in title or loss of any leasehold interests in our properties could limit our ability to conduct mining operations on these properties or result in significant unanticipated costs.

We conduct a significant part of our mining operations on properties that we lease. A title defect or the loss of any lease upon expiration of its term, upon a default or otherwise, could adversely affect our ability to mine the associated reserves and/or process the coal we mine. Title to most of our owned or leased properties and mineral rights is not usually verified until we make a commitment to develop a property, which may not occur until after we have obtained necessary permits and completed exploration of the property. In some cases, we rely on title information or representations and warranties provided by our lessors or grantors. Our right to mine some of our reserves may be adversely affected if defects in title or boundaries exist or if a lease expires. Any challenge to our title or leasehold interests could delay the exploration and development of the property and could ultimately result in the loss of some or all of our interest in the property and, accordingly, require us to reduce our estimated coal reserves. Mining operations from time to time may rely on an expired lease that we are unable to renew. If we were to be in default with respect to leases for properties on which we have mining operations, we may have to close down or significantly alter the sequence of such mining operations, which may adversely affect our future coal production and future revenues. If we mine on property that we do not own or lease, we could incur liability for such mining.

In any such case, the investigation and resolution of title issues would divert management's time from our business and our results of operations could be adversely affected. Additionally, if we lose any leasehold interests relating to any preparation plants, we may need to find an alternative location to process our coal and load it for delivery to customers, which could result in significant unanticipated costs.

In order to obtain leases or mining contracts to conduct our mining operations on property where these defects exist, we may in the future have to incur unanticipated costs. In addition, we may not be able to successfully negotiate new leases or mining contracts for properties containing additional reserves or maintain our leasehold interests in properties where we have not commenced mining operations during the term of the lease. Some leases have minimum production requirements. Failure to meet those requirements could result in losses of prepaid royalties and, in some rare cases, could result in a loss of the lease itself.

Substantially all of our mining properties are leased from our affiliates and conflicts of interest may arise in the future as a result.

Most of our properties, except those controlled by us at or near Knox Creek and a couple of leases at Elk Creek, including our mineral lease with the McDonald Land Company, are leased or subleased to our subsidiaries from entities controlled by Ramaco Coal, LLC, which shares some common ownership with us. Additionally, RAMACO Central Appalachia, LLC and RAMACO Resources, LLC entered into mutual cooperation agreements concerning the Elk Creek property and Berwind coal reserve, requiring each party to notify the other in the event that such party acquires an interest in real property adjacent to or contiguous with the Elk Creek property or Berwind coal reserve, respectively. RAMACO Northern Appalachia, LLC and RAM Mining, LLC entered into a mutual cooperation agreement concerning the RAM Mine property, requiring each party to notify the other in the event that such party acquires an interest in real property in Pennsylvania that contains coal or mining rights. Given the common ownership between Ramaco Coal, LLC and us and the complex contractual obligations under these arrangements, conflicts could arise (including between us and Ramaco Coal, LLC and our Chairman and Chief Executive Officer who is also an owner of Ramaco Coal, LLC). While we have an audit committee and formal related party transaction policy, a conflict may arise which could adversely affect the interests of our stockholders, including, without limitation, conflicts involving compliance with payment and performance obligations under existing leases, and negotiation of the terms of and performance under additional leases we may enter into with Ramaco Coal, LLC or its subsidiaries or affiliates in the future. For example, if a title defect were identified with respect to a property under lease or sublease from our affiliates, we may need to seek return of royalty payments or set off other payments due to such entities. Such a conflict could distract our management and could result in disputes with our affiliates.

While none of our employees who conduct mining operations are currently members of unions, our business could be adversely affected by union activities.

We are not subject to any collective bargaining or union agreement with respect to properties we currently control. However, it is possible that future employees, or those of our contract miners, who conduct mining operations may join or seek recognition to form a labor union or may be required to become labor agreement signatories. If some or all of the employees who conduct mining operations were to become unionized, it could adversely affect productivity, increase labor costs and increase the risk of work stoppages at our mines. If a work stoppage were to occur, it could interfere with operations and have a material adverse effect on our business, financial condition, results of operations, cash flows and our ability to pay dividends to our stockholders.

A shortage of skilled labor in the mining industry could pose a risk to achieving improved labor productivity, which could adversely affect our profitability.

Efficient coal mining using modern techniques and equipment requires skilled laborers, preferably with at least a year of experience and proficiency in multiple mining tasks. In the event there is a shortage of experienced labor, it could have an adverse impact on our labor productivity and our ability to expand production in the event there is an increase in the demand for our coal.

We may face restricted access to international markets in the future.

Access to international markets may be subject to ongoing interruptions and trade barriers due to policies and tariffs of individual countries, and the actions of certain interest groups to restrict the import or export of certain commodities. There can be no assurance that our access to these markets will not be restricted in the future. An inability for U.S. metallurgical coal suppliers to access international markets would likely result in an oversupply of metallurgical

coal in the domestic market, resulting in a decrease in prices, which could have a material adverse effect on our business, financial condition, cash flows and ability to pay dividends to our stockholders.

Risks Related to Environmental, Health, Safety and Other Regulations

The incoming U.S. administration and Congress could enact legislative and regulatory measures that could adversely affect our mining operations or cost structure or our customers' ability to use coal, which could have a material adverse effect on our financial condition and results of operations.

The President's proposed climate plan includes rejoining the Paris climate agreement, as well as a target of achieving carbon-free electricity generation in the United States by 2035 and net zero greenhouse gas emissions economy-wide by 2050. The plan calls for establishment of technology-neutral Energy Efficiency and Clean Electricity Standards, accompanied by clean energy tax credits and other incentives for utilities and grid operators to generate electricity with renewable energy. Depending upon what legislative and regulatory proposals in pursuit of these targets come into effect, there could be increased pressure on U.S. utilities and power generators to reduce greenhouse gas emissions, accelerating the decline in demand for coal in the United States. In addition, the Biden administration has indicated that it will unwind a number of regulatory rollbacks enacted or proposed by the Trump administration, including, among others, the Affordable Clean Energy Rule, the Navigable Waters Protection Rule, the proposed rule for the disposal of coal combustion residuals, and the National Environmental Policy Act overhaul, or otherwise impose and enforce more stringent permitting or other requirements, including those relating to reclamation, water quality, water availability and other environmental matters. New, more stringent legislation or regulations related to the protection of the environment, health and safety or the reduction of greenhouse gas emissions, as well as changes in the interpretation and enforcement of such laws and regulations, may require us or our customers to change operations significantly or incur increased costs, which may adversely affect our mining operations, cost structure or our customers' ability to use coal. Such changes could have a material adverse effect on our financial condition and results of operations.

Laws and regulations restricting greenhouse gas emissions as well as uncertainty concerning such regulations could adversely impact the market for coal, increase our operating costs, and reduce the value of our coal assets.

Climate change continues to attract considerable public and scientific attention. There is widespread concern about the contributions of human activity to such changes, especially through the emission of GHGs. There are three primary sources of GHGs associated with the coal industry. First, the end use of our coal by our customers in electricity generation, coke plants, and steelmaking is a source of GHGs. Second, combustion of fuel by equipment used in coal production and to transport our coal to our customers is a source of GHGs. Third, coal mining itself can release methane, which is considered to be a more potent GHG than CO2, directly into the atmosphere. These emissions from coal consumption, transportation and production are subject to pending and proposed regulation as part of initiatives to address global climate change.

As a result, numerous proposals have been made and are likely to continue to be made at the international, national, regional and state levels of government to monitor and limit emissions of GHGs. Collectively, these initiatives could result in higher electric costs to our customers or lower the demand for coal used in electric generation, which could in turn adversely impact our business. They could also result in direct regulation of the GHGs produced by our operations. See "Business—Environmental and Other Regulatory Matters—Global Climate Change."

At present, we are principally focused on metallurgical coal production, which is not used in connection with the production of power generation. However, we may seek to sell greater amounts of our coal into the power-generation market in the future. The market for our coal may be adversely impacted if comprehensive legislation or regulations focusing on GHG emission reductions are adopted, or if our customers are unable to obtain financing for their operations. The uncertainty over the outcome of litigation challenging the CPP or its replacement, and the extent of future regulation of GHG emissions may inhibit utilities from investing in the building of new coal-fired plants to replace older plants or investing in the upgrading of existing coal-fired plants. Any reduction in the amount of coal consumed by electric power generators as a result of actual or potential regulation of GHG emissions could decrease demand for our coal, thereby reducing our revenues and materially and adversely affecting our business and results of

operations. We or prospective customers may also have to invest in CO2 capture and storage technologies in order to burn coal and comply with future GHG emission standards.

Current and future government laws, regulations and other legal requirements relating to protection of the environment and natural resources may increase our costs of doing business and may restrict our coal operations.

We and our potential customers are subject to stringent and complex laws, regulations and other legal requirements enacted by federal, state and local authorities relating to protection of the environment and natural resources. These include those legal requirements that govern discharges or emissions of materials into the environment, the management and disposal of substances and wastes, including hazardous wastes, the cleanup of contaminated sites, threatened and endangered plant and wildlife protection, reclamation and restoration of mining properties after mining is completed, mitigation and restoration of streams or other waters, the protection of drinking water, assessment of the environmental impacts of mining, monitoring and reporting requirements, the installation of various safety equipment in our mines, remediation of impacts of surface subsidence from underground mining, and work practices related to employee health and safety. See "Business—Environmental and Other Regulatory Matters." Examples include laws and regulations relating to:

- employee health and safety;
- emissions to air and discharges to water;
- plant and wildlife protection, including endangered species protections;
- the reclamation and restoration of properties after mining or other activity has been completed;
- limitations on land use;
- mine permitting and licensing requirements;
- the storage, treatment and disposal of wastes;
- air quality standards;
- water pollution;
- protection of human health, plant-life and wildlife, including endangered and threatened species;
- protection of wetlands;
- the discharge of materials into the environment;
- remediation of contaminated soil, surface and groundwater; and
- the effects of operations on surface water and groundwater quality and availability.

Complying with these environmental and employee health and safety requirements, including the terms of our permits, has had, and will continue to have, a significant effect on our costs of operations. In addition, there is the possibility that we could incur substantial costs as a result of violations of environmental laws, judicial interpretations of or rulings on environmental laws or permits, or in connection with the investigation and remediation of environmental contamination. For example, the EPA and several of the states where we operate have, or intend to, propose revised recommended criteria for discharges of selenium regulated under the CWA, which may be more stringent than current criteria. Any additional laws, regulations and other legal requirements enacted or adopted by federal, state and local authorities, or new interpretations of existing legal requirements by regulatory bodies relating to the protection of the environment, including those related to discharges of selenium, could further affect our costs or limit our operations. See "Business—Environmental and Other Regulatory Matters."

Our operations may impact the environment or cause exposure to hazardous substances, and our properties may have environmental contamination, which could expose us to significant costs and liabilities.

Our operations currently use hazardous materials and generate limited quantities of hazardous wastes from time to time. Drainage flowing from or caused by mining activities can be acidic with elevated levels of dissolved metals, a condition referred to as "acid mine drainage," or may include other pollutants requiring treatment. We could become subject to claims for toxic torts, natural resource damages and other damages as well as for the investigation and clean-up of soil, surface water, groundwater, and other media. Such claims may arise, for example, out of conditions at sites that we currently own or operate, as well as at sites that we previously owned or operated, or may acquire. Our liability

for such claims may be joint and several, so that we may be held responsible for more than our share of the contamination or other damages, or for the entire share.

We maintain coal refuse areas and slurry impoundments as necessary. Such areas and impoundments are subject to extensive regulation. Structural failure of a slurry impoundment or coal refuse area could result in extensive damage to the environment and natural resources, such as bodies of water that the coal slurry reaches, as well as liability for related personal injuries and property damages, and injuries to wildlife. If an impoundment were to fail, we could be subject to claims for the resulting environmental contamination and associated liability, as well as for fines and penalties. Our coal refuse areas and slurry impoundments are designed, constructed, and inspected by our company and by regulatory authorities according to stringent environmental and safety standards.

We must obtain, maintain, and renew governmental permits and approvals for mining operations, which can be a costly and time-consuming process and result in restrictions on our operations.

Numerous governmental permits and approvals are required for mining operations. Our operations are principally regulated under permits issued pursuant to SMCRA and the federal CWA. State and federal regulatory authorities exercise considerable discretion in the timing and scope of permit issuance. Requirements imposed by these authorities may be costly and time consuming and may result in delays in the commencement or continuation of exploration or production operations. In addition, we may be required to prepare and present to permitting or other regulatory authorities data pertaining to the effect or impact that proposed exploration for or production of coal might have on the environment.

Our coal production is dependent upon our ability to obtain various federal and state permits and approvals to mine our coal reserves. The permitting rules, and the interpretations of these rules, are complex, change frequently, and are often subject to discretionary interpretations by regulators, all of which may make compliance more difficult or impractical, and which may possibly preclude the continuance of ongoing mine development or operations or the development of future mining operations. The pace with which the government issues permits needed for new operations and for ongoing operations to continue mining, particularly CWA permits, can be time-consuming and subject to delays and denials. These delays or denials of environmental permits needed for mining could reduce our production and materially adversely impact our cash flow and results of operations.

Prior to discharging any pollutants to waters of the United States, coal mining companies must obtain a National Pollutant Discharge Elimination System ("NPDES") permit from the appropriate state or federal permitting authority. NPDES permits include effluent limitations for discharged pollutants and other terms and conditions, including required monitoring of discharges. Changes and proposed changes in state and federally recommended water quality standards may result in the issuance or modification of permits with new or more stringent effluent limits or terms and conditions. See "Business—Environmental and Other Regulatory Matters—Clean Water Act."

Further, the public has certain statutory rights to comment on and submit objections to requested permits and environmental impact statements prepared in connection with applicable regulatory processes, and otherwise engage in the permitting process, including bringing citizens' claims to challenge the issuance or renewal of permits, the validity of environmental impact statements or performance of mining activities. As a result of challenges like these, the permits we need may not be issued or renewed in a timely fashion or issued or renewed at all, or permits issued or renewed may not be maintained, may be challenged or may be conditioned in a manner that may restrict our ability to efficiently and economically conduct our mining activities, any of which would materially reduce our production, cash flow, and profitability.

Permitting rules may also require, under certain circumstances, that we obtain surface owner consent if the surface estate has been severed from the mineral estate. This could require us to negotiate with third parties for surface access that overlies coal we acquired or intend to acquire. These negotiations can be costly and time-consuming, lasting years in some instances, which can create additional delays in the permitting process. If we cannot successfully negotiate for land access, we could be denied a permit to mine coal we already own.

We and our significant stockholders are subject to the Applicant Violator System.

Under SMCRA and its state law counterparts, all coal mining applications must include mandatory "ownership and control" information, which generally includes listing the names of our officers and directors, and our principal stockholders owning 10 percent or more of our voting shares, among others. Ownership and control reporting requirements are designed to allow regulatory review of any entities or persons deemed to have ownership or control of a coal mine, and bars the granting of a coal mining permit to any such entity or person (including any "owner and controller") who has had a mining permit revoked or suspended, or a bond or similar security forfeited within the five-year period preceding a permit application or application for a permit revision. Regulatory agencies also block the issuance of permits to an applicant who, or whose owner and controller, has permit violations outstanding that have not been timely abated.

A federal database, known as the Applicant Violator System, is maintained for this purpose. Certain relationships are presumed to constitute ownership or control, including the following: being an officer or director of an entity; being the operator of the coal mining operation; having the ability to commit the financial or real property assets or working resources of the permittee or operator; based on the instruments of ownership or the voting securities of a corporate entity, owning of record 10% or more of the mining operator, among others. This presumption, in most cases, can be rebutted where the person or entity can demonstrate that it in fact does not or did not have authority directly or indirectly to determine the manner in which the relevant coal mining operation is conducted. An ownership and control notice must be filed by us each time an entity obtains a 10% or greater interest in us. If we have unabated violations of SMCRA or its state law counterparts, have a coal mining permit suspended or revoked, or forfeit a reclamation bond, we and our "owners and controllers," as discussed above, may be prohibited from obtaining new coal mining permits, or amendments to existing permits, until such violations of law are corrected. This is known as being "permit-blocked." Additionally, Yorktown and Mr. Atkins are each currently deemed an "owner or controller" of a number of other mining companies; as such, we could be permit-blocked based upon the violations of or permit-blocked status of an "owner or controller" of us. This could adversely affect production from our properties.

We may be subject to additional limitations on our ability to conduct mining operations due to federal jurisdiction.

We may conduct some underground mining activities on properties that are within the designated boundary of federally protected lands or national forests where the above-mentioned restrictions within the meaning of SMCRA could apply. Federal court decisions could pose a potential restriction on underground mining within 100 feet of a public road as well as other restrictions. If these SMCRA restrictions ultimately apply to underground mining, considerable uncertainty would exist about the nature and extent of this restriction. While it could remain possible to obtain permits for underground mining operations in these areas even where this 100-foot restriction was applied, the time and expense of that permitting process would be likely to increase significantly, and the restrictions placed on the mining of those properties could adversely affect our costs.

Our customers are subject to extensive existing and future government laws, regulations and other legal requirements relating to protection of the environment, which could negatively impact our business and the market for our products.

Coal contains impurities, including sulfur, mercury, chlorine and other elements or compounds, many of which are released into the air when coal is burned. Complying with regulations to address these emissions can be costly for our customers. For example, in order to meet the CAA limits for sulfur dioxide emissions from electric power plants, coal users must install costly pollution control devices, use sulfur dioxide emission allowances (some of which they may purchase), or switch to other fuels. More costly and stringent environmental regulations could adversely impact the operations of our customers, which could in turn adversely impact our business. A number of coal-fired power plants, particularly smaller and older plants, already have retired or announced that they will retire rather than retrofit to meet the obligations of these rules.

In addition, considerable uncertainty is associated with new air emissions initiatives that may require significant emissions control expenditures for many coal-fired power plants. As a result, some of our prospective customers may switch to other fuels that generate fewer of these emissions or may install more effective pollution control equipment

that reduces the need for low-sulfur coal. Any further switching of fuel sources away from coal, closure of existing coal-fired power plants, or reduced construction of new coal-fired power plants could have a material adverse effect on demand for, and prices received for, our coal. In addition, our coke plant and steelmaking customers may face increased operational costs as a result of higher electric costs. See "Business—Environmental and Other Regulatory Matters."

Apart from actual and potential regulation of air emissions and solid wastes from coal-fired plants, state and federal mandates for increased use of electricity from renewable energy sources could have an impact on the market for our coal. Several states, including Pennsylvania and Virginia, have enacted legislative mandates requiring electricity suppliers to use renewable energy sources to generate a certain percentage of power. Possible advances in technologies and incentives, such as tax credits, to enhance the economics of renewable energy sources could make these sources more competitive with coal. Any reductions in the amount of coal consumed by electric power generators as a result of current or new standards for the emission of impurities, or current or new incentives to switch to renewable fuels or renewable energy sources, such as the ACE rule and various state programs, could reduce the demand for our coal, thereby reducing our revenues and adversely affecting our business, cash flows, results of operations and our ability to pay dividends to our stockholders.

Environmental activism and initiatives aimed at limiting climate change and a reduction of air pollutants could interfere with our business activities, operations and ability to access capital sources.

Participants in the coal mining industry are frequently targeted by environmental activist groups that openly attempt to disrupt the industry. For example, Greenpeace International filed a letter with the SEC alleging that one coal mining company's filings relating to a proposed public offering of securities may contain incomplete and misleading disclosures regarding the risks of investing in the coal market. On another occasion, the Sierra Club sent a letter to the SEC stating that it believed a coal mining company may be giving potential investors false impressions regarding risks to its business. Other groups have objected to our RAM No. 1 mine permit application in Pennsylvania. It is possible that we could continue to be the target of similar actions in the future, including when we attempt to grow our business through acquisitions or commence new mining operations. If that were to happen, our ability to operate our business or raise capital could be materially and adversely impacted.

In addition, there have also been efforts in recent years to influence the investment community, including investment advisors, sovereign wealth funds, public pension funds, universities and other groups, promoting the divestment of fossil fuel equities and also pressuring lenders to limit funding to companies engaged in the extraction of fossil fuel reserves. In California, for example, legislation was signed into law to require the state's pension funds to divest investments in companies that generate 50% or more of their revenue from coal mining by July 2017.

Several large investment banks also announced that they had adopted climate change guidelines for lenders. The guidelines require the evaluation of carbon risks in the financing of electric power generation plants, which may make it more difficult for utilities to obtain financing for coal-fired plants. In addition, there have also been efforts in recent years affecting the investment community, including investment advisers, sovereign wealth funds, public pension funds, universities and other groups, promoting the divestment of fossil fuel equities, encouraging the consideration of environmental, social and governance ("ESG") practices of companies in a manner that negatively affects coal companies, and also pressuring lenders to limit funding to companies engaged in the extraction of fossil fuel reserves. The impact of such efforts may adversely affect the demand for and price of securities issued by us, and impact our access to the capital and financial markets. These efforts, as well as concerted conservation and efficiency efforts could cause coal prices and sales of our coal to materially decline and could cause our costs to increase.

Other activist campaigns have urged companies to cease financing coal-driven businesses. A number of investors and asset managers have enacted such policies as a result. For example, in January 2020, an asset manager with over $7 trillion in assets announced that it will begin exiting investments that present high sustainability-related risks, such as thermal coal producers. The impact of such efforts may adversely affect the demand for and price of securities issued by us and impact our access to the capital and financial markets. In addition, several well-funded non-governmental organizations have explicitly undertaken campaigns to minimize or eliminate mining and the use of coal as a source of electricity generation. The net effect of these developments is to make it more costly and difficult to maintain our business and to continue to depress the market for coal.

Our mines are subject to stringent federal and state safety regulations that increase our cost of doing business at active operations and may place restrictions on our methods of operation. In addition, government inspectors in certain circumstances may have the ability to order our operations to be shut down based on safety considerations.

The Federal Mine Safety and Health Act of 1977 (the "Mine Act") and Mine Improvement and New Emergency Response Act (the "MINER Act"), and regulations issued under these federal statutes, impose stringent health and safety standards on mining operations. The regulations that have been adopted under the Mine Act and the MINER Act are comprehensive and affect numerous aspects of mining operations, including training of mine personnel, mining procedures, roof control, ventilation, blasting, use and maintenance of mining equipment, dust and noise control, communications, emergency response procedures, and other matters. MSHA regularly inspects mines to ensure compliance with regulations promulgated under the Mine Act and MINER Act. In addition, Pennsylvania, West Virginia, and Virginia all have similar programs for mine safety and health regulation and enforcement.

The various requirements mandated by federal and state statutes, rules, and regulations may place restrictions on our methods of operation and potentially result in fees and civil penalties for violations of such requirements or criminal liability for the knowing violation of such standards, significantly impacting operating costs and productivity. In addition, government inspectors have the authority to issue orders to shut down our operations based on safety considerations under certain circumstances, such as imminent dangers, accidents, failures to abate violations, and unwarrantable failures to comply with mandatory safety standards. See "Business—Environmental and Other Regulatory Matters—Mine Safety and Health."

The regulations enacted under the Mine Act and MINER Act as well as under similar state acts are routinely expanded, raising compliance costs and increasing potential liability. These existing and other future mine safety rules could potentially result in or require significant expenditures, as well as additional safety training and planning, enhanced safety equipment, more frequent mine inspections, stricter enforcement practices and enhanced reporting requirements. At this time, it is not possible to predict the full effect that new or proposed statutes, regulations and policies will have on our operating costs, but any expansion of existing regulations, or making such regulations more stringent may have a negative impact on the profitability of our operations. If we were to be found in violation of mine safety and health regulations, we could face penalties or restrictions that may materially and adversely impact our operations, financial results and liquidity.

We must also compensate employees for work-related injuries. State workers' compensation acts typically provide for an exception to an employer's immunity from civil lawsuits for workplace injuries in the case of intentional torts. In such situations, an injured worker would be able to bring suit against his or her employer for damages in excess of workers' compensation benefits. In addition, West Virginia's workers' compensation act provides a much broader exception to workers' compensation immunity, allowing an injured employee to recover against his or her employer if he or she can show damages caused by an unsafe working condition of which the employer was aware and that was a violation of a statute, regulation, rule or consensus industry standard. These types of lawsuits are not uncommon and could have a significant effect on our operating costs.

We have obtained from a third-party insurer a workers' compensation insurance policy, which includes coverage for medical and disability benefits for black lung disease under the Federal Coal Mine Health and Safety Act of 1969 and the Mine Act, as amended. We perform periodic evaluations of our black lung liability, using assumptions regarding rates of successful claims, discount factors, benefit increases and mortality rates, among others. Of note, the Patient Protection and Affordable Care Act of 2010 significantly amended the black lung provisions of the Mine Act by reenacting two provisions, which had been eliminated in 1981. Under the amendments, a miner with at least fifteen years of underground coal mine employment (or surface mine employment with similar dust exposure) who can prove that he suffers from a totally disabling respiratory condition is entitled to a rebuttable presumption that his disability is caused by black lung. The other amendment provides that the surviving spouse of a miner who was collecting federal black lung benefits at the time of his death is entitled to a continuation of those benefits. These changes could have a material impact on our costs expended in association with the federal black lung program.

We have reclamation, mine closing, and related environmental obligations under the Surface Mining Control and Reclamation Act. If the assumptions underlying our accruals are inaccurate, we could be required to expend greater amounts than anticipated.

SMCRA establishes operational, reclamation and closure standards for our mining operations. SMCRA requires that comprehensive environmental protection and reclamation standards be met during the course of and following completion of mining activities. Permits for all mining operations must be obtained from the OSMRE or, where state regulatory agencies have adopted federally approved state programs under SMCRA, the appropriate state regulatory authority. Our operations are located in states which have achieved primary jurisdiction for enforcement of SMCRA through approved state programs. See "Business—Environmental and Other Regulatory Matters."

In December 2016, OSMRE published the final version of the Stream Protection Rule. The rule became effective in January 2017 but was subsequently "disapproved" pursuant to the CRA. The rule would have impacted both surface and underground mining operations by imposing stricter guidelines on conducting coal mining operations within buffer zones and increasing testing and monitoring requirements related to the quality or quantity of surface water and groundwater or the biological condition of streams. The Stream Protection Rule would also have required the collection of increased premining data about the site of the proposed mining operation and adjacent areas to establish a baseline for evaluation of the impacts of mining and the effectiveness of reclamation associated with returning streams to premining conditions.

In addition, SMCRA imposes a reclamation fee on all current mining operations, the proceeds of which are deposited in the AML Fund, which is used to restore unreclaimed and abandoned mine lands mined before 1977. The current per ton fee is $0.28 per ton for surface mined coal and $0.12 per ton for underground mined coal. These fees are currently scheduled to be in effect until September 30, 2021.

We accrue for the costs of current mine disturbance and of final mine closure, including the cost of treating mine water discharge where necessary. The amounts recorded are dependent upon a number of variables, including the estimated future closure costs, estimated proven reserves, assumptions involving profit margins, inflation rates, and the assumed credit-adjusted risk-free interest rates. If these accruals are insufficient or our liability in a particular year is greater than currently anticipated, our future operating results could be adversely affected. We are also required to post bonds for the cost of a coal mine as a condition of our mining activities.

Risks Related to Our Company

Our ability to pay dividends may be limited by the amount of cash we generate from operations following the payment of fees and expenses, by restrictions in any future debt instruments and by additional factors unrelated to our profitability.

We may pay special and regular quarterly dividends in the future. The declaration and payment of dividends, if any, is subject to the discretion of our board of directors and the requirements of applicable law. The timing and amount of any dividends declared will depend on, among other things: (a) our earnings, earnings outlook, financial condition, cash flow, cash requirements and outlook on current and future market conditions, (b) our liquidity, including our ability to obtain debt and equity financing on acceptable terms, (c) restrictive covenants in any future debt instruments and (d) provisions of applicable law governing the payment of dividends.

The metallurgical coal industry is highly volatile, and we cannot predict with certainty the amount of cash, if any, that will be available for distribution as dividends in any period. Also, there may be a high degree of variability from period to period in the amount of cash, if any, that is available for the payment of dividends. The amount of cash we generate from operations and the actual amount of cash we will have available for dividends will vary based upon, among other things:

- risks related to the impact of the COVID-19 global pandemic, such as the scope and duration of the outbreak, the health and safety of our employees, government actions and restrictive measures

implemented in response, delays and cancellations of customer sales, supply chain disruptions and other impacts to the business, or our ability to execute our business continuity plans;
- the development of our properties into producing coal mines;
- the ability to begin generating significant revenues and operating cash flows;
- the market price for coal;
- overall domestic and global economic conditions, including the supply of and demand for domestic and foreign coal, coke and steel;
- unexpected operational events or geological conditions;
- cost overruns;
- our ability to enter into agreements governing the sale of coal, which are generally short-term in nature and subject to fluctuations in market pricing;
- the level of our operating costs;
- prevailing global and regional economic and political conditions;
- changes in interest rates;
- the impact of domestic and foreign governmental laws and regulations, including environmental and climate change regulations and regulations affecting the coal mining industry;
- delays in the receipt of, failure to receive, failure to maintain or revocation of necessary governmental permits;
- modification or revocation of our dividend policy by our board of directors; and
- the amount of any cash reserves established by our board of directors.

The amount of cash we generate from our operations may differ materially from our net income or loss for the period, which will be affected by non-cash items. We may incur other expenses or liabilities that could reduce or eliminate the cash available for distribution as dividends.

In addition, any future financing agreements may prohibit the payment of dividends if an event of default has occurred and is continuing or would occur as a result of the payment of such dividends.

In addition, Section 170 of the Delaware General Corporation Law ("DGCL") allows our board of directors to declare and pay dividends on the shares of our common stock either (i) out of our surplus, as defined in and computed in accordance with the DGCL or (ii) in case there shall be no such surplus, out of our net profits for the fiscal year in which the dividend is declared and/or the preceding fiscal year. We may not have sufficient surplus or net profits in the future to pay dividends, and our subsidiaries may not have sufficient funds, surplus or net profits to make distributions to us. As a result of these and the other factors mentioned above, we can give no assurance that dividends will be paid in the future.

For as long as we are an emerging growth company, we will not be required to comply with certain reporting requirements that apply to other public companies, including those relating to auditing standards and disclosure about our executive compensation.

The JOBS Act contains provisions that, among other things, relax certain reporting requirements for "emerging growth companies," including certain requirements relating to auditing standards and compensation disclosure. We are classified as an emerging growth company. For as long as we are an emerging growth company, which may be as late as our annual report for the fiscal year ending December 31, 2022, unlike other public companies, we will not be required to, among other things, (1) provide an auditor's attestation report on management's assessment of the effectiveness of our system of internal control over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act of 2002, (2) comply with any new requirements adopted by the PCAOB requiring mandatory audit firm rotation or a supplement to the auditor's report in which the auditor would be required to provide additional information about the audit and the financial statements of the issuer, (3) comply with any new audit rules adopted by the PCAOB after April 5, 2012 unless the SEC determines otherwise or (4) provide certain disclosure regarding executive compensation required of larger public companies.

Our significant stockholders have the ability to direct the voting of a majority of the voting power of our common stock, and their interests may conflict with those of our other stockholders.

Our significant stockholders, Yorktown and ECP, collectively own approximately 62% of our common stock, and management and our directors own approximately 15%. As a result, our significant stockholders are able to control matters requiring stockholder approval, including the election of directors, changes to our organizational documents and significant corporate transactions. This concentration of ownership makes it unlikely that any other holder or group of holders of our common stock will be able to affect the way we are managed or the direction of our business. The interests of our significant stockholders with respect to matters potentially or actually involving or affecting us, such as future acquisitions, financings and other corporate opportunities and attempts to acquire us, may conflict with the interests of our other stockholders. Given this concentrated ownership, our significant stockholders would have to approve any potential acquisition of us. In addition, certain of our directors are currently employees of our significant stockholders. These directors' duties as employees of our significant stockholders may conflict with their duties as our directors, and the resolution of these conflicts may not always be in our or your best interest.

Furthermore, we entered into a stockholders' agreement with the significant stockholders in connection with our initial public offering. Among other things, the stockholders' agreement provides certain funds affiliated with and/or managed by Yorktown and ECP with the right to designate a certain number of nominees to our board of directors until the later of (i) the time at which such stockholder no longer has the right to designate an individual for nomination to the board of directors under the stockholders' agreement, and (ii) the time at which the significant stockholders cease to hold in aggregate at least 50% of the outstanding shares of our common stock.

The existence of a significant stockholder and the stockholders' agreement may have the effect of deterring hostile takeovers, delaying or preventing changes in control or changes in management or limiting the ability of our other stockholders to approve transactions that they may deem to be in our best interests. Our significant stockholders' concentration of stock ownership may also adversely affect the trading price of our common stock to the extent investors perceive a disadvantage in owning stock of a company with significant stockholders.

Your percentage of ownership in us may be diluted in the future.

Your percentage of ownership in us may be diluted because of equity issuances for acquisitions, capital market transactions or otherwise, including, without limitation, equity awards that we may be granting to our directors, officers and employees. Such issuances may have a dilutive effect on our earnings per share, which could adversely affect the market price of our common stock.

It is anticipated that the compensation committee of the board of directors of the Company will grant additional equity awards to Company employees and directors, from time to time, under the Company's compensation and employee benefit plans. These additional awards will have a dilutive effect on the Company's earnings per share, which could adversely affect the market price of the Company's common stock.

In addition, our Charter authorizes us to issue, without the approval of our stockholders, one or more classes or series of preferred stock having such designation, powers, preferences and relative, participating, optional and other special rights, including preferences over our common stock with respect to dividends and distributions, as our board of directors generally may determine. The terms of one or more classes or series of preferred stock could dilute the voting power or reduce the value of our common stock. For example, we could grant the holders of preferred stock the right to elect some number of our directors in all events or on the happening of specified events or to veto specified transactions. Similarly, the repurchase or redemption rights or liquidation preferences we could assign to holders of preferred stock could affect the residual value of our common stock.

Certain of our directors have significant duties with, and spend significant time serving, entities that may compete with us in seeking acquisitions and business opportunities and, accordingly, may have conflicts of interest in allocating time or pursuing business opportunities.

Certain of our directors, who are responsible for managing the direction of our operations and acquisition activities, hold positions of responsibility with other entities (including Yorktown- and ECP-affiliated entities) that are in the business of identifying and acquiring coal reserves. The existing positions held by these directors may give rise to fiduciary or other duties that are in conflict with the duties they owe to us. These directors may become aware of business opportunities that may be appropriate for presentation to us as well as to the other entities with which they are or may become affiliated. Due to these existing and potential future affiliations, they may present potential business opportunities to other entities prior to presenting them to us, which could cause additional conflicts of interest. They may also decide that certain opportunities are more appropriate for other entities with which they are affiliated, and as a result, they may elect not to present those opportunities to us. These conflicts may not be resolved in our favor.

Further, in addition to his role as our Chairman, Director and Chief Executive Officer, Mr. Atkins serves as Chairman and Chief Executive Officer of Ramaco Coal, LLC and as a director of one of its subsidiaries. Given certain common ownership between Ramaco Coal, LLC and us and the complex contractual obligations under the agreements we have entered into with Ramaco Coal, LLC and its subsidiaries, conflicts could arise between us and Ramaco Coal, LLC and Yorktown, ECP and Mr. Atkins. In addition, a conflict may arise which could adversely affect the interests of our stockholders, including, without limitation, conflicts involving compliance with payment and performance obligations under existing leases, and negotiation of the terms of and performance under additional leases we may enter into with Ramaco Coal, LLC or its subsidiaries or affiliates in the future. For additional discussion of our management's business affiliations and the potential conflicts of interest of which our stockholders should be aware, see "Certain Relationships and Related Persons Transactions."

Our significant stockholders and their affiliates are not limited in their ability to compete with us, and the corporate opportunity provisions in our Charter could enable our significant stockholders to benefit from corporate opportunities that might otherwise be available to us.

Our governing documents provide that our significant stockholders (including portfolio investments of our significant stockholders) are not restricted from owning assets or engaging in businesses that compete directly or indirectly with us. In particular, subject to the limitations of applicable law, our Charter, among other things:

- permits our significant stockholders and any of our officers or directors who are also employees, officers or directors of the significant stockholders to conduct business that competes with us and to make investments in any kind of property in which we may make investments; and
- provides that if our significant stockholders and any of our officers or directors who are also employees, officers or directors of the significant stockholders becomes aware of a potential business opportunity, transaction or other matter, they will have no duty to offer that opportunity to us.

Our significant stockholders, or any of our officers or directors who are also employees, officers or directors of the significant stockholders, may become aware, from time to time, of certain business opportunities (such as acquisition opportunities) and may direct such opportunities to other businesses in which they have invested, in which case we may not become aware of or otherwise have the ability to pursue such opportunity. Further, such businesses may choose to compete with us for these opportunities, possibly causing these opportunities to not be available to us or causing them to be more expensive for us to pursue. In addition, our significant stockholders, or any of our officers or directors who are also employees, officers or directors of the significant stockholders, may dispose of coal properties or other assets in the future, without any obligation to offer us the opportunity to purchase any of those assets. As a result, our renunciation of our interest and expectancy in any business opportunity that may be from time to time presented to our significant stockholders, or any of our officers or directors who are also employees, officers or directors of the significant stockholders, could adversely impact our business or prospects if attractive business opportunities are procured by such parties for their own benefit rather than for ours.

Each of our significant stockholders has resources greater than we do, which may make it more difficult for us to compete with our significant stockholders with respect to commercial activities as well as for potential acquisitions. We cannot assure you that any conflicts that may arise between us and our minority stockholders, on the one hand, and our significant stockholders, on the other hand, will be resolved in our favor. As a result, competition from our significant stockholders could adversely impact our results of operations.

Our Charter and Bylaws, as well as Delaware law, contain provisions that could discourage acquisition bids or merger proposals, which may adversely affect the market price of our common stock.

Our Charter authorizes our board of directors to issue preferred stock without stockholder approval. If our board of directors elects to issue preferred stock, it could be more difficult for a third-party to acquire us. In addition, some provisions of our Charter and Bylaws could make it more difficult for a third-party to acquire control of us, even if the change of control would be beneficial to our stockholders, including:

- limitations on the removal of directors;
- limitations on the ability of our stockholders to call special meetings;
- establishing advance notice provisions for stockholder proposals and nominations for elections to the board of directors to be acted upon at meetings of stockholders;
- providing that the board of directors is expressly authorized to adopt, or to alter or repeal our bylaws; and
- establishing advance notice and certain information requirements for nominations for election to our board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings.

Our Charter designates the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, employees or agents.

Our Charter provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will, to the fullest extent permitted by applicable law, be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, employees or agents to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law (the "DGCL"), our Charter or our bylaws, or (iv) any action asserting a claim against us that is governed by the internal affairs doctrine, in each such case subject to such Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein. This exclusive forum provision does not apply to a cause of action brought under federal or state securities laws. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of, and consented to, the provisions of our Charter described in the preceding sentence. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, employees or agents, which may discourage such lawsuits against us and such persons. Alternatively, if a court were to find these provisions of our Charter inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business, financial condition or results of operations.

General Risk Factors

Future changes in tax legislation could have an adverse impact on our cash tax liabilities, results of operations or financial condition.

Tax legislation in 2017 reduced the U.S. corporate income tax rate from 35% to 21% and included certain other changes that resulted in a significant reduction of our income tax liability. Congress could, in the future, revise or repeal those changes or enact other tax law changes, such as the elimination of tax preferences currently available with respect to coal exploration and development and the percentage depletion allowance. For example, President Biden has proposed increasing the U.S. corporate income tax rate to 28%. Such changes are potentially more likely under the new Democratic party-controlled Congress. We are unable to predict whether any such changes will ultimately be enacted, but any such changes could have a material impact on our cash tax liabilities, results of operations or financial condition.

Changes in the method of determining the London Interbank Offered Rate, or the replacement of the London Interbank Offered Rate with an alternative reference rate, may adversely affect interest expense related to outstanding debt.

Amounts drawn under our current debt agreements may bear interest at rates based on the London Interbank Offered Rate ("LIBOR"). On July 27, 2017, the United Kingdom's Financial Conduct Authority, which regulates LIBOR, announced that it intends to phase out LIBOR by the end of 2021. On November 30, 2020, ICE Benchmark Administration ("IBA"), the administrator of LIBOR, with the support of the United States Federal Reserve and the United Kingdom's Financial Conduct Authority, announced plans to consult on ceasing publication of USD LIBOR on December 31, 2021 for only the one week and two month USD LIBOR tenors, and on June 30, 2023 for all other USD Libor tenors. While this announcement extends the transition period to June 2023, the United States Federal Reserve concurrently issued a statement advising banks to stop new USD LIBOR issuances by the end of 2021. In light of these recent announcements, the future of LIBOR at this time is uncertain and any changes in the methods by which LIBOR is determined or regulatory activity related to LIBOR's phaseout could cause LIBOR to perform differently than in the past or cease to exist. Uncertainty as to the nature of such potential phase-out and alternative reference rates or disruption in the financial market could adversely affect our financial condition, results of operations and cash flows.

If we fail to maintain an effective system of internal controls, we may not be able to accurately report our financial results or prevent fraud. As a result, current and potential stockholders could lose confidence in our financial reporting, which would harm our business and the trading price of our common stock.

Effective internal controls are necessary for us to provide reliable financial reports, prevent fraud and operate successfully as a public company. If we cannot provide reliable financial reports or prevent fraud, our reputation and operating results would be harmed. We cannot be certain that our efforts to maintain our internal controls will be successful or that we will be able to comply with our obligations under Section 404 of the Sarbanes Oxley Act of 2002. Any failure to maintain effective internal controls, or difficulties encountered in implementing or improving our internal controls, could harm our operating results or cause us to fail to meet our reporting obligations. Ineffective internal controls could also cause investors to lose confidence in our reported financial information, which would likely have a negative effect on the trading price of our common stock.

Debt we incur in the future may limit our flexibility to obtain financing and to pursue other business opportunities.

Our future level of debt could have important consequences to us, including the following:

- our ability to obtain additional financing, if necessary, for working capital, capital expenditures or other purposes may be impaired, or such financing may not be available on favorable terms;
- our funds available for operations and future business opportunities will be reduced by that portion of our cash flow required to make interest payments on our debt;
- our ability to pay dividends if an event of default occurs and is continuing or would occur as a result of paying such dividend;
- we may be more vulnerable to competitive pressures or a downturn in our business or the economy generally; and
- our flexibility in responding to changing business and economic conditions may be limited.

Our ability to service our debt will depend upon, among other things, our future financial and operating performance, which will be affected by prevailing economic conditions and financial, business, regulatory and other factors, some of which are beyond our control. If our operating results are not sufficient to service any future indebtedness, we will be forced to take actions such as reducing or delaying our business activities, investments or capital expenditures, selling assets or issuing equity. We may not be able to affect any of these actions on satisfactory terms or at all.

The requirements of being a public company, including compliance with the reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the requirements of the Sarbanes-Oxley Act, may strain our resources, increase our costs and consume management attention, and we may be unable to comply with these requirements in a timely or cost-effective manner.

As a public company, we need to comply with new laws, regulations and requirements, certain corporate governance provisions of the Sarbanes-Oxley Act of 2002, related regulations of the SEC and the requirements of the NASDAQ, with which we were not required to comply as a private company. Complying with these statutes, regulations and requirements occupies a significant amount of time for our board of directors and management and significantly increases our costs and expenses. We need to:

- institute a more comprehensive compliance function;
- comply with rules promulgated by the NASDAQ;
- continue to prepare and distribute periodic public reports in compliance with our obligations under the federal securities laws;
- establish new internal policies, such as those relating to insider trading; and
- involve and retain to a greater degree outside counsel and accountants in the above activities.

Furthermore, while we generally must comply with Section 404 of the Sarbanes-Oxley Act of 2002, we are not required to have our independent registered public accounting firm attest to the effectiveness of our internal controls until our first annual report subsequent to our ceasing to be an "emerging growth company" within the meaning of Section 2(a)(19) of the Securities Act. Accordingly, we may not be required to have our independent registered public accounting firm attest to the effectiveness of our internal controls until as late as our annual report for the fiscal year ending December 31, 2022. Once it is required to do so, our independent registered public accounting firm may issue a report that is adverse in the event it is not satisfied with the level at which our controls are documented, designed, operated or reviewed. Compliance with these requirements may strain our resources, increase our costs and distract management, and we may be unable to comply with these requirements in a timely or cost-effective manner.

In addition, being a public company subject to these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified individuals to serve on our board of directors or as executive officers.

Our ability to operate effectively could be impaired if we fail to attract and retain key personnel.

The loss of our senior executives could have a material adverse effect on our business. There may be a limited number of persons with the requisite experience and skills to serve in our senior management positions. We may not be able to locate or employ qualified executives on acceptable terms. In addition, as our business develops and expands, we believe that our future success will depend greatly on our continued ability to attract and retain highly skilled personnel with coal industry experience. We may not be able to continue to employ key personnel or attract and retain qualified personnel in the future. Our failure to retain or attract key personnel could have a material adverse effect on our ability to effectively operate our business.

We could fail to retain customers or gain new ones.

The failure to obtain additional customers or the loss of all or a portion of the revenues attributable to any customer as a result of competition, creditworthiness, inability to negotiate extensions or replacement of contracts or otherwise, could have a material adverse effect on our business, financial condition, results of operations, cash flows and ability to pay dividends to our stockholders.

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, estimate quantities of coal reserves, as well as other activities related to our businesses. Strategic targets, such as energy-related assets, may 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, including systems that collect, organize, store or use personal data, or cloud-based applications 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, challenges in maintaining our books and records, environmental damage, communication interruptions, other operational disruptions and third-party liability. Due to the nature of cyber-attacks, breaches to our or our service or equipment providers' systems could go unnoticed for a prolonged period of time. 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, reputation, financial condition, results of operations and cash flows. Further, as cyber incidents continue to evolve, we may 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.

Failure to adequately protect critical data and technology systems and the impact of data privacy regulation could materially affect us.

Information technology solution failures, network disruptions and breaches of data security could disrupt our operations by causing delays or canceling or impeding processing of transactions and reporting financial results, resulting in the unintentional disclosure of employee, royalty owner, or other third party or our confidential information, or damage to our reputation. There can be no assurance that a system failure or data security breach will not have a material adverse effect on our operations, financial condition, results of operations or cash flows. In addition, new laws and regulations governing data privacy and the unauthorized disclosure of confidential information pose increasingly complex compliance challenges and potentially elevate costs, and any failure to comply with these laws and regulations (or contractual provisions requiring similar compliance) could result in significant penalties and legal liability, require us to change our business practices, increase the costs and complexity of compliance, and adversely affect our business. As noted above, we are also subject to the possibility of cyber incidents or attacks, which themselves may result in a violation of these laws or may result in significant expense.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our Properties

At December 31, 2020, we owned or controlled, primarily through long-term leases, approximately 113,466 acres of coal minerals in Virginia and West Virginia and 1,570 acres of coal minerals in Pennsylvania. Our preparation plants and loadout facilities are located on properties owned by us or held under leases which expire at varying dates over the next 30 years. Most of the leases contain options to renew.

Our executive headquarters occupies leased office space in Lexington, Kentucky and we lease office space in Charleston, West Virginia as an operations center. See Item 1. "Business—Our Projects" for specific information about our mining operations.

Our Coal Reserves

Reserves are defined by the SEC Industry Guide 7 as that part of a mineral deposit which could be economically and legally extracted or produced at the time of the reserve determination. Reserves are further classified as proven or probable according to the degree of certainty of existence. In determining whether our reserves meet this standard, we take into account, among other things, our potential ability to obtain a mining permit, the possible necessity of revising a mining plan, changes in estimated future costs, changes in future cash flows caused by changes in costs required to be incurred to meet regulatory requirements and obtaining or renewing mining permits, variations in quantity and quality of coal, and varying levels of demand and their effects on selling prices. Further, the economic recoverability of our reserves is based on market conditions including contracted pricing, market pricing and overall demand for our coal. Thus, the actual value at which we no longer consider our reserves to be economically recoverable varies depending on the length of time in which the specific market conditions are expected to last. We consider our reserves to be economically recoverable at a price in excess of our cash costs to mine the coal and fund our ongoing replacement capital. The reserves in this annual report are classified by reliability or accuracy in decreasing order of geological assurance as Proven (Measured) and Probable (Indicated). The terms and criteria utilized to estimate reserves for this study are based on United States Geological Survey Circular 891 and in general accordance with SEC Industry Guide 7, and are summarized as follows:

- Proven (Measured) Reserves: Reserves for which (a) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes; and grade and/or quality are computed from the results of detailed sampling and (b) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well-established.
- Probable (Indicated) Reserves: Reserves for which quantity and grade and/or quality are computed from information similar to that used for proven (measured) reserves, but the sites for inspection, sampling, and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for proven (measured) reserves, is high enough to assume continuity between points of observation.

Our coal reserve estimates at December 31, 2020 were prepared by our engineers and geologists. Our coal reserve estimates are based on data obtained from our drilling activities and other available geologic data. Acquisitions or sales of coal properties will change these estimates. Changes in mining methods or the utilization of new technologies may increase or decrease the recovery basis for a coal seam. Periodically, we retain outside experts to independently verify our coal reserve estimates. The most recent studies of our coal reserves at Elk Creek, Knox Creek, Berwind and RAM Mine were prepared by an independent engineering firm, Weir International, Inc. ("Weir"). In periods between third party updates, we update reserves utilizing our internal staff of engineers and geologists based upon production data. We intend to continue to periodically retain outside experts to assist management with the verification of our estimates of our coal reserves going forward.

In our most recent reserve study, Weir began preparing our reserve reporting for compliance with SEC Regulation S-K 1300 requirements, which is required for the first reporting period after December 31, 2021, by completing a historical project review and validating our complete drill hole database. Weir validated that property control is accurately reflected in reserve modeling, verifying the latest property boundaries, including control by each individual seam. Weir also examined reserve boundaries to ensure agreement with mining parameters, such as minimum thickness, minimum yield and minimum inter-burden between seams. Resource classification is determined based on the expectation of our meeting these mining parameters. Weir also conducted mining integrity checks to ensure each area reserve area is minable. For example, a slope calculation was conducted in areas planned to be contour mined. If these areas were too steep, the reserves would be reclassified as unminable and unreportable.

Our reserves available to us by lease or right to lease from Ramaco Coal, LLC are summarized by project in the table below. All reserves listed for our Elk Creek mining complex, Berwind, Knox Creek and RAM Mine properties are controlled by Ramaco Coal, LLC. We lease and sublease approximately 262 million tons of those reserves at our Elk

Creek, Berwind, Knox Creek and RAM Mine properties. In addition, we have the right to lease approximately 63 million additional tons of reserves controlled by Ramaco Coal, LLC, pursuant to mutual cooperation agreements.

	Location	Mining Method	Reserves (in millions) (1) Proven	Probable	Total	Status of Operation	Projected Mine Life (years)	Typical Met Coal Quality (2)	Planned Transportation
Elk Creek	Logan, Wyoming and Mingo Counties, WV	Underground, Highwall, Surface	68	45	113	Producing	20+	High Volatile A, A/B, B	CSX RR, Norfolk Southern RR, Truck
Berwind	McDowell County, WV, Buchanan and Tazewell Counties, VA	Underground	30	20	50	Producing	20+	Low Volatile	Truck, Norfolk Southern RR
RAM Mine	Washington County, PA	Underground	2	3	5	2022	10	High Volatile C	Norfolk Southern RR, Truck, Barge
Knox Creek	Buchanan, Tazewell and Russell Counties, VA	Highwall, Underground	81	13	94	Producing	20+ (3)	High Volatile A	Truck, Norfolk Southern RR
Total			181	81	262				

(1) Reserves, presented as clean recoverable tons, are based upon 50% underground mining recovery, theoretical preparation plant yield at appropriate specific gravities and 95% preparation plant efficiency. Assessments of economic mineability were determined using metallurgical coal sales prices based on the three-year historical benchmark price for high volatile A/B coking of approximately $112 per short ton for coal produced at Elk Creek, RAM and Knox Creek and the three-year average low volatile coking coal historical benchmark price of approximately $116 per short ton for coal produced at Berwind.

(2) Volatiles refers to the volatile matter contained in the coal. Classification of coal as low, mid or high volatile refers to the specific volatile content within the coal, with coals of 17% to 22% volatiles being classified as low volatile, 23% to 31% as mid volatile and 32% or greater as high volatile. The amount of volatile matter in coal impacts coke yield—the amount of coke and coke by-products produced per ton of coal charged. Low volatile coal contains more carbon, but too much carbon can result in coke oven damage. Too much volatile matter results in less carbon and reduces the volume of coke produced. Therefore, coke producers use blends of high volatile and low volatile coals for coke production. Totals may not sum due to rounding.

(3) The potential Jawbone underground mine would have a 10-15 year life.

These reserve estimates were assessed based on benchmark coal sales pricing at the time of reserve reporting for each property. Utilizing the three-year average high volatile A/B coking coal historical benchmark price of approximately $112 per short ton for coal produced at Elk Creek, RAM and Knox Creek, our mineral reserves at each such mines are economic. Utilizing a three-year average low volatile coking coal historical benchmark price of approximately $114 per short ton, our mineral reserves at our Berwind mine are projected to be economic when we reach our targeted coal reserve in the Pocahontas No.4 Seam, which we plan to achieve once market conditions permit us to resume and complete our Berwind mine development plans.

Year-end reserve estimates are and will continue to be reviewed by our senior management, and revisions are communicated to our board of directors. Inaccuracies in our estimates of our coal reserves could result in decreased profitability from lower than expected revenue or higher than expected costs. Actual production recovered from identified reserve areas and properties, and revenue and expenditures associated with our mining operations, may vary materially from estimates.

Item 3. Legal Proceedings

Due to the nature of our business, we may become, from time to time, involved in routine litigation or subject to disputes or claims related to our business activities. In the opinion of our management, there are no pending litigation, disputes or claims against us which, if decided adversely, will have a material adverse effect on our financial condition,

cash flows or results of operations. For a description of our legal proceedings, see "Commitments and Contingencies," Note 10 to the Notes to Consolidated Financial Statements.

Item 4. Mine Safety Disclosures

The 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 is included in Exhibit 95.1 to this annual report.

PART II

Item 5. Market for Registrant's Common Equity and Related Shareholder Matters

Our common stock is listed on the NASDAQ Global Select Market under the symbol "METC."

Holders. As of the close of business on February 15, 2021, there were forty-four holders of record of our common stock. Because many of our common shares are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of stockholders represented by these holders of record.

Dividends. We have never declared or paid cash dividends on our common stock. See Item 7 of Part II, "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources."

Item 6. Selected Financial Data

On February 8, 2017, in connection with the closing of our initial public offering, we completed a corporate reorganization pursuant to which all the interests in Ramaco Development, LLC ("Ramaco Development"), our accounting predecessor, were exchanged for newly issued shares of common stock of Ramaco Resources and as a result, Ramaco Development became a wholly-owned subsidiary of Ramaco Resources. As such, the financial information presented below for the periods through February 8, 2017 pertains to the historical financial statements and results of operations of Ramaco Development.

The selected historical consolidated financial data for the remaining periods were derived from our audited historical consolidated financial statements. Historical results are not necessarily indicative of future results. Please read the following table in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of

Operations," the historical consolidated financial statements of our predecessor and accompanying notes included elsewhere in this annual report.

	Years Ended December 31,				
(In thousands)	**2020**	**2019**	**2018**	**2017**	**2016**
Income Statement data:					
Revenue	$ 168,915	$ 230,213	$ 227,574	$ 61,036	$ 5,216
Cost and expenses					
Cost of sales (exclusive of items shown separately below)	145,503	162,470	176,555	60,521	4,397
Other operating costs and expenses	—	—	—	258	416
Asset retirement obligation accretion	570	511	494	405	229
Depreciation and amortization	20,912	19,521	12,423	3,154	252
Selling, general and administrative	21,023	18,179	14,006	12,591	7,452
Total cost and expenses	188,008	200,681	203,478	76,929	12,746
Operating income (loss)	(19,093)	29,532	24,096	(15,893)	(7,530)
Other income	11,926	1,758	2,518	204	—
Interest expense, net	(1,224)	(1,193)	(1,427)	272	15
Income (loss) before tax	$ (8,391)	$ 30,097	$ 25,187	$ (15,417)	$ (7,515)
Income tax expense (benefit)	(3,484)	5,163	113	—	—
Net income (loss)	$ (4,907)	$ 24,934	$ 25,074	$ (15,417)	$ (7,515)
Basic earnings (loss) per share	$ (0.12)	$ 0.61	$ 0.63	(0.41)	
Diluted earnings (loss) per share	$ (0.12)	$ 0.61	$ 0.62	(0.41)	
Cash Flow Data:					
Cash flows from operating activities	$ 13,312	$ 42,382	$ 36,183	$ (8,469)	$ (3,861)
Cash flows from investing activities	(24,753)	(45,722)	(42,937)	(19,802)	(77,463)
Cash flows from financing activities	11,286	2,825	7,916	29,292	85,527
Net change in cash and cash equivalents	$ (155)	$ (515)	$ 1,162	$ 1,021	$ 4,203
Operating Data:					
Tons sold:					
Company produced	1,723	1,872	1,721	372	-
Purchased	26	78	427	236	15
Total tons sold	1,749	1,950	2,148	608	15
Tons produced	1,695	1,855	1,750	548	-
	December 31,				
	2020	**2019**	**2018**	**2017**	**2016**
Balance Sheet Data:					
Cash and cash equivalents	$ 5,300	$ 5,532	$ 6,951	$ 5,934	$ 5,197
Property, plant and equipment – net	180,455	178,202	149,205	115,451	46,434
Total Assets	228,623	226,813	188,244	148,098	119,209
Current maturities of long-term debt	4,872	3,333	5,000	—	—
Long-term debt, less current portion	12,578	9,614	4,474	—	10,629
Other long-term obligations	17,837	20,705	12,816	12,276	9,435
Total stockholders' equity	169,095	170,083	141,109	113,397	83,788

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion is intended to assist you in understanding our results of operations and our present financial condition and contains forward-looking statements that reflect our future plans, estimates, beliefs and expected performance. The forward-looking statements are dependent upon events, risks and uncertainties that may be outside our control. We caution you that our actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to such differences are discussed elsewhere in this Annual Report, particularly in the "Cautionary Note Regarding Forward-Looking Statements" and "Risk Factors," all of which are difficult to predict. In light of these risks, uncertainties and assumptions, the forward-looking events discussed may not occur. We do not undertake any obligation to publicly update any forward-looking statements except as otherwise required by applicable law.

Overview

Our primary source of revenue is the sale of metallurgical coal. We have a 262 million ton reserve base of high-quality metallurgical coal and a development portfolio including four primary properties. Our plan is to continue development of our existing properties and grow production to 4-4.5 million clean tons of metallurgical coal, subject to market conditions, permitting and additional capital deployment. We may make acquisitions of reserves or infrastructure that continue our focus on advantaged geology and lower costs.

During 2020, we sold 1.75 million tons of coal. Of this, 71% was sold in North American markets and 29% was sold in export markets, excluding Canada, principally to Europe, South America, Asia and Africa. We also purchase coal from third parties for sale for our own account; although, these volumes decreased in 2019 and 2020. Sales of higher margin Company produced coal made up 99% of total sales in 2020 as compared with 96% in 2019.

The overall outlook of the metallurgical coal business is dependent on a variety of factors such as pricing, regulatory uncertainties and global economic conditions. Coal consumption and production in the U.S. is driven by several market dynamics and trends including the U.S. and global economies, the U.S. dollar's strength relative to other currencies and accelerating production cuts.

Metallurgical coal markets weakened significantly during 2020 due to the on-going severe global economic slowdown stemming from COVID-19 outbreak. The global spread of COVID-19 has created significant market volatility and economic uncertainty and disruption since early-2020. In response to the pandemic, governments worldwide have placed significant restrictions on both domestic and international travel and have taken action to restrict the movement of people and suspend some business operations, ranging from targeted restrictions to full national lockdowns. These lockdowns, restrictions on public gatherings and stay-at-home measures, coupled with the spread and impact of the COVID-19 pandemic, have resulted in a significant worldwide economic slowdown. In certain cases, states that had begun taking steps to reopen their economies experienced a subsequent surge in cases of COVID-19, causing these states to cease such reopening measures in some cases and reinstitute restrictions in others. The COVID-19 pandemic may significantly worsen in the United States during the upcoming months, which may cause federal, state and local governments to reconsider imposing more severe restrictions on business and social activities. In the event governments impose such restrictions, the re-opening of the economy may be further delayed.

The Company has been adversely affected by the deterioration and increased uncertainty in the macroeconomic environment as a result of the impact of COVID-19. In 2020, two customers notified us that their contractual obligations to purchase metallurgical coal from us would be delayed or curtailed because of COVID-19. These delays or curtailments reduced our total contracted sales volumes for 2020 by approximately 10% or almost 200,000 tons.

We took certain actions to limit our production and reduce capital expenditures in response to the COVID-19 pandemic and reduced global demand for metallurgical coal. These included:

- an operational furlough of approximately 182 employees at the Elk Creek mining complex in West Virginia for most of the month of April 2020;

- a one-week operational furlough of approximately 157 employees at the Elk Creek mining complex in July 2020;
- the partial closure of our Berwind low volatile development mine complex affecting approximately 44 employees effective in July 2020; and
- a reduction or deferral of non-essential capital expenditures, including cessation of the slope project at the Berwind mining complex to adapt to the current market conditions.

To date we have not had significant issues with any of our critical suppliers, but we continue to communicate with them and closely monitor their developments to ensure we have access to the goods and services required to maintain our operations.

We continue to actively monitor the situation and may take further actions altering our business operations if we determine they are in the best interests of our employees, customers, suppliers, and stakeholders, or as required by federal, state, or local authorities. Additional measures we may take could include extensions of operational furloughs, temporary salary reductions for certain executives, staffing reductions and idling or realignment of additional mines as conditions dictate. It is not clear what potential effects any such alterations or modifications may have on our business. The impact on our results in future periods could be much more significant and cannot currently be quantified.

The annual contracting season with North American steel producers generally occurs in late-summer through the fall. As of December 31, 2020, we had entered into forward sales contracts with certain North American customers for 2021 on a fixed price basis for 1.3 million tons of metallurgical coal at an average realizable price of $84/ton FOB mine. This level of pricing in 2021 is lower than we realized in 2020 and is due to a combination of factors, including the impact of COVID-19 discussed above, lower year-over-year steel prices, changes in types of coal qualities purchased by customers in 2021 and general economic concerns in the United States. We anticipate placing a greater percentage of our overall sales in the spot markets in 2021.

In 2020, our capital expenditures totaled approximately $24.8 million, down from $45.7 million in 2019. We continued to invest in infrastructure and mine equipment at our Elk Creek mining complex, primarily related to increasing our long-term refuse disposal. In 2020, we suspended development at the Berwind mining complex due to lower pricing and demand largely caused by the COVID-19 pandemic. This complex remains a key part of our anticipated future growth.

On November 5, 2018, one of our three raw coal storage silos that fed our Elk Creek plant experienced a partial structural failure. A temporary conveying system completed in late-November 2018 restored approximately 80% of our plant capacity. We completed a permanent belt workaround and restored the preparation plant to its full processing capacity in mid-2019. Our insurance carrier disputed our claim for coverage based on certain exclusions to the applicable policy and therefore on August 21, 2019, we filed suit seeking a declaratory judgment that the partial silo collapse was an insurable event and to require coverage under our policy. Please see "Commitments and Contingencies," Note 10 to the Notes to Consolidated Financial Statements for further discussion of this matter.

Results of Operations

(In thousands)	Years ended December 31, 2020	2019	2018
Consolidated statement of operations data			
Revenue	$ 168,915	$ 230,213	$ 227,574
Costs and expenses			
Cost of sales (exclusive of items shown separately below)	145,503	162,470	176,555
Asset retirement obligation accretion	570	511	494
Depreciation and amortization	20,912	19,521	12,423
Selling, general and administrative	21,023	18,179	14,006
Total costs and expenses	188,008	200,681	203,478
Operating income (loss)	(19,093)	29,532	24,096
Other income	11,926	1,758	2,518
Interest expense, net	(1,224)	(1,193)	(1,427)
Income (loss) before tax	(8,391)	30,097	25,187
Income tax expense (benefit)	(3,484)	5,163	113
Net income (loss)	$ (4,907)	$ 24,934	$ 25,074
Adjusted EBITDA	$ 18,455	$ 55,382	$ 42,169

Adjusted EBITDA was $18.5 million in 2020, which was 67% below that for 2019. We sold 1.75 million tons of Company produced tons at realized pricing of $85/ton in 2020. In 2019, we sold 1.9 million tons of Company produced tons at realized pricing of $109/ton. The decrease in EBITDA is principally due to lower pricing and volumes sold in 2020.

Year Ended December 31, 2020 compared to Year Ended December 31, 2019

Revenue. Our revenue includes sales to customers of Company produced coal and coal purchased from third parties. We include amounts billed by us for transportation to our customers within revenue and transportation costs incurred within cost of sales.

For the year ended December 31, 2020, we had revenue of $168.9 million from the sale of 1.75 million tons of coal including 0.03 million tons of purchased coal. During 2019, we sold 1.95 million tons of coal including 0.08 million tons of purchased coal for total revenue of $230.2 million.

Coal sales information is summarized as follows:

(In thousands)	Years ended December 31, 2020	2019	Increase
Company Produced			
Coal sales revenue	$ 166,488	$ 219,911	$ (53,423)
Tons sold	1,723	1,872	(149)
Purchased from Third Parties			
Coal sales revenue	$ 2,427	$ 10,302	$ (7,875)
Tons sold	26	78	(52)

Metallurgical coal pricing and demand weakened significantly in mid- to late-2019 coinciding with the time that annual contracts for 2020 shipments of North American metallurgical coal were being entered. Because of this, we contracted for fewer tons to domestic markets under annual contracts in 2020 as compared with 2019. Modestly higher volumes were planned for sale in the spot market during 2020 as compared with 2019. The aforementioned weakness in spot market demand and pricing, principally attributable to the COVID-19 pandemic, limited our overall sales results in 2020.

Cost of sales. Our cost of sales totaled $145.5 million for 2020 as compared to $162.5 million for 2019. The total cash cost per ton sold (FOB mine) during 2020 was approximately $72 for Company produced coal as compared with $73 for 2019. The cost of sales for coal we purchased from third parties declined to $1.6 million in 2020 from $8.9 million in 2019.

Asset retirement obligation accretion. Our asset retirement obligation ("ARO") accretion was $0.6 million for 2020 as compared to $0.5 million for 2019.

Depreciation and amortization. Depreciation of our plant and equipment totaled $17.1 million for the year ended December 31, 2020 as compared with $14.2 million for the previous year. Higher depreciation expense for 2020 was principally due to the increase in employment of additional mining equipment. Amortization of capitalized development costs totaled $3.8 million in 2020 as compared with $5.3 million for the previous year. The decrease in amortization of development costs in 2020 was driven by lower coal production from our properties and the full amortization of certain preparation plant assets in 2019.

Selling, general and administrative expenses. Selling, general and administrative expenses were $21.0 million for the year ended December 31, 2020 as compared with $18.2 million for 2019. This increase reflects the growth of our organization including higher fees for professional services.

Other income. Other income was $11.9 million for 2020 and $1.8 million in 2019. We recognized $8.4 million of other income during 2020 for the anticipated full forgiveness of the $8.4 million loan (the "PPP Loan") we received pursuant to the Paycheck Protection Program based on our usage of loan proceeds for eligible payroll expenses, lease, interest and utility payments. Other income also includes third-party royalty income and rail rebates received, each of which increased modestly in 2020.

Interest expense, net. Interest expense, net was approximately $1.2 million in 2020, which was approximately equal that of the prior year.

Income tax expense. We recognized an income tax benefit of $3.5 million in 2020 as compared with income tax expense of $5.2 million in 2019. The income tax benefit for 2020 includes $1.8 million of benefit associated with the recognition of other income for the anticipated PPP Loan forgiveness. In December 2020, the President signed new legislation making the PPP Loan forgiveness income tax free. Excluding this impact, our effective tax rate was 20.4% for 2020, compared to 17.2% for 2019. The primary difference from the statutory rate of 21% is related to permanent differences for state income taxes, non-deductible expenses and the difference in depletion expense between U.S. GAAP and federal income tax purposes.

Year Ended December 31, 2019 compared to Year Ended December 31, 2018

Please see Part I, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our 2019 Annual Report on Form 10-K for a discussion of the results of operation for the year ended December 31, 2019 as compared to the year ended December 31, 2018.

Non-GAAP Financial Measures

Adjusted EBITDA. Adjusted EBITDA is used as a supplemental non-GAAP financial measure by management and external users of our financial statements, such as industry analysts, investors, lenders and rating agencies. We believe Adjusted EBITDA is useful because it allows us to more effectively evaluate our operating performance.

We define Adjusted EBITDA as net income plus net interest expense, stock-based compensation, depreciation and amortization expenses and any transaction related costs. A reconciliation of net income to Adjusted EBITDA is included below. Adjusted EBITDA is not intended to serve as an alternative to U.S. GAAP measures of performance and may not be comparable to similarly-titled measures presented by other companies.

	Years ended December 31,		
(In thousands)	**2020**	**2019**	**2018**
Reconciliation of Net Income (Loss) to Adjusted EBITDA			
Net income (loss)	$ (4,907)	$ 24,934	$ 25,074
Depreciation and amortization	20,912	19,521	12,423
Interest expense, net	1,224	1,193	1,427
Income taxes	(3,484)	5,163	113
EBITDA	13,745	50,811	39,037
Stock-based compensation	4,140	4,060	2,638
Accretion of asset retirement obligation	570	511	494
Adjusted EBITDA	$ 18,455	$ 55,382	$ 42,169

Non-GAAP revenue per ton. Non-GAAP revenue per ton (FOB mine) is calculated as coal sales revenue less transportation costs, divided by tons sold. We believe revenue per ton (FOB mine) provides useful information to investors as it enables investors to compare revenue per ton we generate against similar measures made by other publicly-traded coal companies and more effectively monitor changes in coal prices from period to period excluding the impact of transportation costs which are beyond our control. The adjustments made to arrive at these measures are significant in understanding and assessing our financial condition. Revenue per ton sold (FOB mine) is not a measure of financial performance in accordance with U.S. GAAP and therefore should not be considered as an alternative to revenue under U.S. GAAP.

	Year ended December 31, 2020			Year ended December 31, 2019		
(In thousands, except per ton amounts)	Company Produced	Purchased Coal	Total	Company Produced	Purchased Coal	Total
Revenue	$ 166,488	$ 2,427	$ 168,915	$ 219,911	$ 10,302	$ 230,213
Less: Adjustments to reconcile to Non-GAAP revenue (FOB mine)						
Transportation costs	(20,000)	(811)	(20,811)	(16,253)	(424)	(16,677)
Non-GAAP revenue (FOB mine)	$ 146,488	$ 1,616	$ 148,104	$ 203,658	$ 9,878	$ 213,536
Tons sold	1,723	26	1,749	1,872	78	1,950
Revenue per ton sold (FOB mine)	$ 85	$ 62	$ 85	$ 109	$ 127	$ 110

Non-GAAP cash cost per ton sold. Non-GAAP cash cost per ton sold is calculated as cash cost of sales less transportation costs, divided by tons sold. We believe cash cost per ton sold provides useful information to investors as it enables investors to compare our cash cost per ton against similar measures made by other publicly-traded coal companies and more effectively monitor changes in coal cost from period to period excluding the impact of transportation costs which are beyond our control. The adjustments made to arrive at these measures are significant in understanding and assessing our financial condition. Cash cost per ton sold is not a measure of financial performance in accordance with U.S. GAAP and therefore should not be considered as an alternative to cost of sales under U.S. GAAP.

	Year ended December 31, 2020			Year ended December 31, 2019		
(In thousands, except per ton amounts)	Company Produced	Purchased Coal	Total	Company Produced	Purchased Coal	Total
Cost of sales	$ 143,064	$ 2,439	$ 145,503	$ 153,172	$ 9,298	$ 162,470
Less: Adjustments to reconcile to Non-GAAP cash cost of sales						
Transportation costs	(19,684)	(823)	(20,507)	(16,185)	(425)	(16,610)
Non-GAAP cash cost of sales	$ 123,380	$ 1,616	$ 124,996	$ 136,987	$ 8,873	$ 145,860
Tons sold	1,723	26	1,749	1,872	78	1,950
Cash cost per ton sold	$ 72	$ 62	$ 71	$ 73	$ 114	$ 75

2021 Sales Commitments

As of December 31, 2020, we had entered into forward sales contracts with North American customers for 2021 on a fixed price basis for 1.3 million tons at an average realizable price of $84/ton FOB mine. These volumes were all metallurgical quality coal.

Liquidity and Capital Resources

Our primary source of cash is proceeds from the sale of our coal production to customers. Our primary uses of cash include the cash costs of coal production, capital expenditures, royalty payments and other operating expenditures.

Cash flow information is as follows:

(In thousands)	Years Ended December 31, 2020	2019	2018
Consolidated statement of cash flow data:			
Cash flows from operating activities	$ 13,312	$ 42,382	$ 36,183
Cash flows from investing activities	(24,753)	(45,722)	(42,937)
Cash flows from financing activities	11,286	2,825	7,916
Net change in cash and cash equivalents and restricted cash	$ (155)	$ (515)	$ 1,162

Cash flows from operating activities during 2020 decreased from the comparable period of the prior year primarily resulting from lower cash earnings and reduced amounts required for working capital (receivables, inventories and accounts payable).

Net cash used in investing activities, all of which was used for capital expenditures, was $24.8 million for the year ended December 31, 2020 as compared with $45.7 million for 2019.

Cash flows from financing activities were $11.3 million for 2020, which was primarily due to net borrowings during the period and proceeds from the PPP Loan. Cash flows from financing activities were $2.8 million for 2019, which was due to net proceeds from short term borrowings.

Restricted cash balances at December 31, 2020 and 2019 were $1.4 million and $1.3 million, respectively, consisted of funds held in escrow for potential future workers' compensation claims and were classified in other current assets in the consolidated balance sheets.

Indebtedness

Revolving Credit Facility and Term Loan—On November 2, 2018, we entered into a Credit and Security Agreement (as amended, the "Revolving Credit Facility") with KeyBank National Association ("KeyBank"). The Revolving Credit Facility was amended on February 20, 2020, and consists of a $10.0 million term loan (the "Term Loan") and up to $30.0 million revolving line of credit, including $3.0 million letter of credit availability. All personal property assets, including, but not limited to accounts receivable, coal inventory and certain mining equipment are pledged to secure the Revolving Credit Facility.

The Revolving Credit Facility has a maturity date of December 31, 2023 and bears interest based on LIBOR + 2.0% or Base Rate + 1.5%. Base Rate is the highest of (i) KeyBank's prime rate, (ii) Federal Funds Effective Rate + 0.5%, or (iii) LIBOR + 2.0%. Advances under the Revolving Credit Facility are made initially as base rate loans, but may be converted to LIBOR rate loans at certain times at our discretion. As of December 31, 2020, $7.0 million was outstanding on the Revolving Credit Facility and we had remaining availability of $16.7 million.

The Term Loan is secured under a Master Security Agreement with a pledge of certain underground and surface mining equipment, bears interest at LIBOR + 5.15% and is required to be repaid in monthly installments of $278 thousand including accrued interest. The outstanding principal balance of the Term Loan was $6.7 million at December 31, 2020.

The Revolving Credit Facility contains usual and customary covenants including limitations on liens, additional indebtedness, investments, restricted payments, asset sales, mergers, affiliate transactions and other customary limitations, as well as financial covenants. As of December 31, 2020, we were in compliance with all debt covenants.

Equipment Financing Loan—On April 16, 2020, we entered into an equipment loan with Key Equipment Finance, a division of KeyBank, as lender, in the principal amount of approximately $4.7 million for the financing of existing underground and surface equipment. The equipment loan bears interest at 7.45% per annum and is payable in 36 monthly installments of $147 thousand. There is a 3% premium for prepayment of the note within the first 12 months.

This premium declines by 1% during each successive 12-month period. The outstanding principal balance of the Equipment Financing Loan was $3.8 million at December 31, 2020.

SBA Paycheck Protection Program Loan— On April 20, 2020, we received proceeds from a PPP Loan in the amount of approximately $8.4 million from KeyBank, as lender, pursuant to the PPP of the CARES Act. The purpose of the PPP is to encourage the continued employment of workers. Based upon receipt of this funding, we elected to recall our furloughed workers at our Elk Creek complex. We used all proceeds from the PPP Loan to retain employees, maintain payroll and make lease, interest and utility payments.

The PPP Loan matures on April 16, 2022 and bears interest at a rate of 1% per annum. Pursuant to the subsequently enacted *Paycheck Protection Flexibility Act of 2020*, we are permitted to defer required monthly payments of principal and interest until such time as an approval or denial of forgiveness is received from the SBA.

The PPP Loan is evidenced by a promissory note dated April 16, 2020, which contains customary events of default relating to, among other things, payment defaults and breaches of representations and warranties. The PPP Loan may be prepaid by the Company at any time prior to maturity with no prepayment penalties.

All or a portion of the PPP Loan and accrued interest thereon may be forgiven by the SBA upon documentation of expenditures in accordance with the SBA requirements and proper application by the Company. Under the CARES Act and *Paycheck Protection Flexibility Act of 2020*, loan forgiveness is available for the sum of documented payroll costs, covered rent payments, covered mortgage interest and covered utilities during either the eight week period or 24-week period beginning on the date of loan funding. For purposes of the PPP Loan, payroll costs exclude cash compensation of an individual employee in excess of $100 thousand, prorated annually. Not more than 40% of the forgiven amount may be for non-payroll costs. Forgiveness could be reduced if full-time headcount declines, or if salaries and wages for employees with salaries of $100 thousand or less annually are reduced by more than 25%.

Our application for forgiveness was approved by KeyBank and is currently being reviewed by the SBA. We anticipate that the full amount of the PPP Loan principal, together with accrued interest thereon, will be forgiven. Accordingly, we recognized $8.4 million as other income in the consolidated statement of operations for 2020.

Refer to Notes 6 and 7 to the Consolidated Financial Statements included in Item 8 of Part I in this Annual Report on Form 10-K for additional information on indebtedness.

Liquidity

As of December 31, 2020, our available liquidity was $22.0 million, comprised of cash and availability under our Revolving Credit Facility. We expect to fund our capital and liquidity requirements with cash on hand, borrowings discussed above and projected cash flow from operations. Factors that could adversely impact our future liquidity and ability to carry out our capital expenditure program include the following:

- Timely delivery of our product by rail and other transportation carriers;
- Timely payment of accounts receivable by our customers;
- Cost overruns in our purchases of equipment needed to complete our mine development plans;
- Delays in completion of development of our various mines which would reduce the coal we would have available to sell and our cash flow from operations; and
- Adverse changes in the metallurgical coal markets that would reduce the expected cash flow from operations.

Capital Requirements

Our primary use of cash includes capital expenditures for mine development and for ongoing operating expenses. During 2020 we spent $24.8 million primarily for the purchase of mining equipment, infrastructure and development of mines at our Elk Creek and Berwind mining complexes. We anticipate capital expenditures of approximately $15 million in 2021, with the potential to increase this amount depending on market conditions.

As of the date of this Annual Report on Form 10-K, management believes that current cash on hand, cash flow from operations and available liquidity under our Revolving Credit Facility will be sufficient to meet its capital expenditure and operating plans. We expect to fund any new reserve acquisitions from cash on hand, cash from operations and potential future issuances of debt or equity securities.

If future cash flows are insufficient to meet our liquidity needs or capital requirements, we may reduce our expected level of capital expenditures and/or fund a portion of our capital expenditures through the issuance of debt or equity securities, the entry into debt arrangements or from other sources, such as asset sales.

Contractual Obligations

The following table summarizes our contractual obligations as of December 31, 2020:

	Payments due by period				
(In thousands)	**Total**	**Less Than 1 year**	**1 – 3 years**	**3 – 5 years**	**More than 5 years**
Minimum royalty obligations	$ 40,516	$ 5,297	$ 11,429	$ 11,438	$ 12,352
Asset retirement obligations, discounted	15,150	692	2,605	443	11,410
Take or pay obligations	3,332	3,332	—	—	—
Total	$ 58,998	$ 9,321	$ 14,034	$ 11,881	$ 23,762

Off-Balance Sheet Arrangements

As of December 31, 2020, we had no off-balance sheet arrangements.

Critical Accounting Policies and Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the amounts of revenue and expenses reported for the period then ended.

Mine development costs. Mine development costs represent the costs incurred to prepare future mine sites and/or seams of coal for mining. These costs include costs of acquiring, permitting, planning, research, and developing access to identified mineral reserves and other preparations for commercial production as necessary to develop and permit the properties for mining activities. Mine development costs are capitalized and amortized on a units-of-production basis as mining of the associated mine's assigned reserves takes place. Operating expenditures, including certain professional fees and overhead costs, are not capitalized but are expensed as incurred.

Asset retirement obligations. We recognize as a liability an asset retirement obligation, or ARO, associated with the retirement of a tangible long-lived asset in the period in which it is incurred or becomes determinable, with an associated increase in the carrying amount of the related long-lived asset. The initially recognized asset retirement cost is amortized using the same method and useful life as the long-lived asset to which it relates. Accretion expense is recognized over time as the discounted liability is accreted to its expected settlement value.

Estimating the future ARO requires management to make estimates and judgments regarding timing and existence of a liability, as well as what constitutes adequate restoration. Inherent in the fair value calculation are numerous assumptions and judgments including the ultimate costs, inflation factors, credit adjusted discount rates, timing of settlement and changes in the legal, regulatory, environmental and political environments. To the extent future revisions to these assumptions impact the fair value of the existing ARO liability, a corresponding adjustment is made to the related asset.

Impairment of Long-lived Assets. We review our long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. These events and circumstances

include, but are not limited to, a current expectation that a long-lived asset will be disposed of significantly before the end of its previously estimated useful life, a significant adverse change in the extent or manner in which we use a long-lived asset or a change in its physical condition.

When such events or changes in circumstances occur, a recoverability test is performed comparing projected undiscounted cash flows from the use and eventual disposition of an asset or asset group to its carrying amount. If the projected undiscounted cash flows are less than the carrying amount, an impairment is recorded for the excess of the carrying amount over the estimated fair value.

We make various assumptions, including assumptions regarding future cash flows in our assessments of long-lived assets for impairment. The assumptions about future cash flows and growth rates are based on the current and long-term business plans related to the long-lived assets.

Stock-based compensation expense. Compensation cost for equity incentive awards is based on the fair value of the equity instrument generally on the date of grant and is recognized over the requisite service period.

The fair value of restricted stock awards is determined using the publicly-traded price of our common stock on the grant date. The fair value of option awards is calculated using the Black-Scholes option-pricing model. The Black-Scholes model requires us to make assumptions and judgments about the variables used in the calculation, including the expected term, expected volatility, risk-free interest rate, dividend rate and service period.

Income Taxes. We provide for deferred income taxes for temporary differences arising from differences between the financial statement and tax basis of assets and liabilities existing at each balance sheet date using enacted tax rates. We initially recognize the effects of a tax position when it is more than 50 percent likely, based on the technical merits that the position will be sustained upon examination. Our determination of whether or not a tax position has met the recognition threshold depends on the facts, circumstances, and information available at the reporting date.

A valuation allowance may be recorded to reflect the amount of future tax benefits that management believes are not likely to be realized. The assessment takes into account expectations of future taxable income or loss, available tax planning strategies and the reversal of temporary differences. The development of these expectations involves the use of estimates such as production levels, operating profitability, timing of development activities and the cost and timing of reclamation work. If actual outcomes differ from our expectations, we may record an additional valuation allowance through income tax expense in the period such determination is made.

Recent Accounting Pronouncements. See Item 8 of Part II, "Financial Statements and Supplementary Data—Note 2—Summary of Significant Accounting Policies—Recent Accounting Pronouncements."

Item 7A. Quantitative and Qualitative Disclosure About Market Risk

In addition to the risks inherent in operations, we are exposed to financial, market, political and economic risks. The following discussion provides additional detail regarding our exposure to the risks related to changes in commodity prices, interest rates and foreign exchange rates.

Commodity Price Risk. Our primary product is metallurgical coal, which is in itself a commodity. Our coal is sold under short-term fixed price contracts, term transactions utilizing index pricing or on a spot basis. As such, we are exposed to changes in the international price of metallurgical coal. We attempt to manage this risk by keeping tight control over our mining costs.

Interest Rate Risk. As we have limited debt, we are not overly exposed to interest rate risk. Should we incur additional debt in the future or increase our cash position, the general level of interest rates will begin to take on greater importance. At that time, we will manage our exposure through a variety of financial tools designed to minimize exposure to interest rate fluctuations.

Foreign Exchange Rate Risk. International sales of coal are typically denominated in U.S. dollars. As a result, we do not have direct exposure to currency valuation exchange rate fluctuations. However, because our coal is sold internationally, to the extent that the U.S. dollar strengthens against the foreign currency of a customer or potential customer, we may find our coal at a price disadvantage as compared with other non-U.S. suppliers. This could lead to our receiving lower prices or being unable to compete for that specific customer's business. Consequently, currency fluctuations could adversely affect the competitiveness of our coal in international markets.

Item 8. Financial Statements and Supplementary Data

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Ramaco Resources, Inc.
Lexington, Kentucky

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Ramaco Resources, Inc. (the Company) as of December 31, 2020 and 2019, and the related consolidated statements of operations, equity, and cash flows for each of the years in the three-year period ended December 31, 2020, and the related notes (collectively referred to as the financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2020, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. 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 Company 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. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

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.

/s/ Briggs & Veselka Co.

We have served as the Company's auditor since 2015.

Houston, Texas
February 18, 2021

Ramaco Resources, Inc.
Consolidated Balance Sheets

In thousands, except share and per-share amounts	December 31, 2020	December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 5,300	$ 5,532
Accounts receivable	20,299	19,256
Inventories	11,947	15,261
Prepaid expenses and other	4,953	4,274
Total current assets	42,499	44,323
Property, plant and equipment – net	180,455	178,202
Advanced coal royalties	4,784	3,271
Other	885	1,017
Total Assets	$ 228,623	$ 226,813
Liabilities and Stockholders' Equity		
Liabilities		
Current liabilities		
Accounts payable	$ 11,742	$ 10,663
Accrued expenses	11,591	11,740
Asset retirement obligations	46	19
Current portion of long-term debt	4,872	3,333
Other current liabilities	862	656
Total current liabilities	29,113	26,411
Asset retirement obligations	15,110	14,586
Long-term debt, net	12,578	9,614
Deferred tax	1,762	5,265
Other long-term liabilities	965	854
Total liabilities	59,528	56,730
Commitments and contingencies	—	—
Stockholders' Equity		
Preferred stock, $0.01 par value, 50,000,000 shares authorized, none issued and outstanding	—	—
Common stock, $0.01 par value, 260,000,000 shares authorized, 42,706,908 and 40,950,175 shares issued and outstanding, respectively	427	410
Additional paid-in capital	158,859	154,957
Retained earnings	9,809	14,716
Total stockholders' equity	169,095	170,083
Total Liabilities and Stockholders' Equity	$ 228,623	$ 226,813

The accompanying notes are an integral part of these consolidated financial statements.

Ramaco Resources, Inc.
Consolidated Statements of Operations

In thousands, except per-share amounts	Years ended December 31, 2020	2019	2018
Revenue	$ 168,915	$ 230,213	$ 227,574
Costs and expenses			
Cost of sales (exclusive of items shown separately below)	145,503	162,470	176,555
Asset retirement obligation accretion	570	511	494
Depreciation and amortization	20,912	19,521	12,423
Selling, general and administrative	21,023	18,179	14,006
Total costs and expenses	188,008	200,681	203,478
Operating income (loss)	(19,093)	29,532	24,096
Other income	11,926	1,758	2,518
Interest expense, net	(1,224)	(1,193)	(1,427)
Income (loss) before tax	(8,391)	30,097	25,187
Income tax expense (benefit)	(3,484)	5,163	113
Net income (loss)	$ (4,907)	$ 24,934	$ 25,074
Earnings (loss) per common share			
Basic	$ (0.12)	$ 0.61	$ 0.63
Diluted	$ (0.12)	$ 0.61	$ 0.62
Basic weighted average shares outstanding	42,460	40,838	40,039
Diluted weighted average shares outstanding	42,460	40,838	40,263

The accompanying notes are an integral part of these consolidated financial statements.

Ramaco Resources, Inc.
Consolidated Statements of Equity

In thousands	Common Stock	Additional Paid-in Capital	Retained Earnings (Deficit)	Total Stockholders' Equity
Balance at January 1, 2018	$ 396	$ 148,293	$ (35,292)	$ 113,397
Stock-based compensation	5	2,633	—	2,638
Net income	—	—	25,074	25,074
Balance at December 31, 2018	401	150,926	(10,218)	141,109
Restricted stock surrendered for withholding taxes payable	—	(20)	—	(20)
Stock-based compensation	9	4,051	—	4,060
Net income	—	—	24,934	24,934
Balance at December 31, 2019	410	154,957	14,716	170,083
Restricted stock surrendered for withholding taxes payable	(1)	(220)	—	(221)
Stock-based compensation	18	4,122	—	4,140
Net loss	—	—	(4,907)	(4,907)
Balance at December 31, 2020	$ 427	$ 158,859	$ 9,809	$ 169,095

The accompanying notes are an integral part of these consolidated financial statements.

Ramaco Resources, Inc.
Consolidated Statements of Cash Flows

In thousands	Years ended December 31, 2020	2019	2018
Cash flows from operating activities			
Net income (loss)	$ (4,907)	$ 24,934	$ 25,074
Adjustments to reconcile net income (loss) to net cash from operating activities:			
Accretion of asset retirement obligations	570	511	494
Depreciation and amortization	20,912	19,521	12,423
Amortization of debt issuance costs	58	58	569
Stock-based compensation	4,140	4,060	2,638
Other income - PPP Loan	(8,444)	—	—
Deferred income taxes	(3,503)	5,156	109
Changes in operating assets and liabilities:			
Accounts receivable	(1,043)	(8,527)	(3,563)
Prepaid expenses and other current assets	986	723	(629)
Inventories	3,314	(1,076)	(4,127)
Other assets and liabilities	(1,270)	689	(835)
Accounts payable	2,753	(7,313)	(1,521)
Accrued expenses	(254)	3,646	5,551
Net cash from operating activities	13,312	42,382	36,183
Cash flow from investing activities:			
Purchases of property, plant and equipment	(24,753)	(45,722)	(48,137)
Proceeds from maturities of investment securities	—	—	5,200
Net cash from investing activities	(24,753)	(45,722)	(42,937)
Cash flows from financing activities			
Proceeds from PPP Loan	8,444	—	—
Proceeds from borrowings	50,043	73,750	28,424
Proceeds from notes payable - related party	—	—	3,000
Payments of debt issuance cost	—	—	(569)
Repayment of borrowings	(45,598)	(70,335)	(18,950)
Repayment of notes payable - related party	—	—	(3,000)
Repayments of financed insurance payable	(1,382)	(570)	(989)
Restricted stock surrendered for withholding taxes payable	(221)	(20)	—
Net cash from financing activities	11,286	2,825	7,916
Net change in cash and cash equivalents and restricted cash	(155)	(515)	1,162
Cash and cash equivalents and restricted cash, beginning of period	6,865	7,380	6,218
Cash and cash equivalents and restricted cash, end of period	$ 6,710	$ 6,865	$ 7,380
Supplemental cash flow information:			
Cash paid for interest	$ 1,095	$ 999	$ 826
Cash paid for taxes	19	—	—
Non-cash investing and financing activities:			
Capital expenditures included in accounts payable and accrued expenses	1,228	2,902	1,319
Financed insurance	1,588	939	1,276
Additional asset retirement obligations incurred	86	516	—

The accompanying notes are an integral part of these consolidated financial statements.

Ramaco Resources, Inc.
Notes to Consolidated Financial Statements

NOTE 1—DESCRIPTION OF BUSINESS

Ramaco Resources, Inc. ("Ramaco") is a Delaware corporation formed in October 2016. Our principal corporate offices are located in Lexington, Kentucky. We are an operator and developer of high-quality, low-cost metallurgical coal in southern West Virginia, southwestern Virginia, and southwestern Pennsylvania.

As used herein, "the Company," "we," "us," "our," and similar terms include Ramaco Resources, Inc. and its subsidiaries, unless the context indicates otherwise.

Our development portfolio includes four primary properties: Elk Creek, Berwind, RAM Mine and Knox Creek. We believe each of these projects possesses geologic and logistical advantages that make our coal among the lowest delivered-cost U.S. metallurgical coal to a majority of our domestic target customer base, North American blast furnace steel mills and coke plants, as well as international metallurgical coal consumers.

We operate three deep mines and a surface mine at our Elk Creek mining complex. Development of this complex commenced in 2016 and included construction of a preparation plant and rail load-out facilities. Development of our Berwind mining complex began in late 2017. In 2020, we suspended development at the Berwind mining complex due to lower pricing and demand largely caused by the economic impacts of the COVID-19 pandemic. This complex remains a key part of our anticipated future growth. We expect to achieve commercial production at the Berwind mining complex approximately six months after we resume the slope project. The Knox Creek preparation plant processes coal from our Berwind mine as well as coal we may purchase from or toll wash for third parties. Our RAM Mine property is scheduled for initial production in 2022, subject to permitting and market conditions.

Impact of COVID-19 Pandemic on Our Business— The global spread of COVID-19 has created significant market volatility and economic uncertainty and disruption since early 2020. In response to the pandemic, governments worldwide have placed significant restrictions on both domestic and international travel and have taken action to restrict the movement of people and suspend some business operations, ranging from targeted restrictions to full national lockdowns. These lockdowns, restrictions on public gatherings and stay-at-home measures, coupled with the spread and impact of the COVID-19 pandemic, have resulted in a significant worldwide economic slowdown. In certain cases, states that had begun taking steps to reopen their economies experienced a subsequent surge in cases of COVID-19, causing these states to cease such reopening measures in some cases and reinstitute restrictions in others. The COVID-19 pandemic may significantly worsen in the United States during the upcoming months, which may cause federal, state and local governments to reconsider imposing more severe restrictions on business and social activities. In the event governments impose such restrictions, the re-opening of the economy may be further delayed.

The Company has been adversely affected by the deterioration and increased uncertainty in the macroeconomic environment as a result of the impact of COVID-19. In 2020, two customers notified us that their contractual obligations to purchase metallurgical coal from us would be delayed or curtailed because of COVID-19. These delays or curtailments reduced our total contracted sales volumes for 2020 by approximately 10% or almost 200,000 tons.

We took other actions to limit our production and reduce capital expenditures in response to the pandemic and reduced global demand for metallurgical coal. These included:

- an operational furlough of approximately 182 employees at the Elk Creek mining complex in West Virginia for most of the month of April 2020;
- a one-week operational furlough of approximately 157 employees at the Elk Creek mining complex in July 2020;
- the partial closure of our Berwind low volatile development mine complex affecting approximately 44 employees effective in July 2020; and
- a reduction or deferral of non-essential capital expenditures including cessation of the slope project at the Berwind mining complex to adapt to the current market conditions.

To date we have not had significant issues with any of our critical suppliers, but we continue to communicate with them and closely monitor their developments to ensure we have access to the goods and services required to maintain our operations.

We continue to actively monitor the situation and may take further actions altering our business operations if we determine they are in the best interests of our employees, customers, suppliers, and stakeholders, or as required by federal, state, or local authorities. Additional measures we may take could include extensions of operational furloughs, temporary salary reductions for certain executives, staffing reductions and idling or realignment of additional mines as conditions dictate. It is not clear what potential effects any such alterations or modifications may have on our business. The impact on our results in future periods could be much more significant and cannot currently be determined and quantified.

NOTE 2—SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Consolidation—The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") and U.S. Securities and Exchange Commission regulations. The financial statements are presented on a consolidated basis for all periods presented. All significant intercompany balances and transactions between consolidated entities have been eliminated in consolidation.

Use of estimates—The preparation of these financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect certain reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates. The most significant estimates are related to the quantity and value of coal inventories, stock-based compensation, asset retirement obligations, contingencies, evaluation of long-lived assets for impairment, and the quantities and values of coal reserves.

Revenue Recognition—Our primary source of revenue is from the sale of coal through contracts with steel producers usually having durations of less than one year. Revenue is recognized when performance obligations under the terms of a contract with our customers are satisfied. This occurs when control of the coal is transferred to our customers. For coal shipments to domestic customers via rail, control is generally transferred when the railcar is loaded. Control is transferred for export coal shipments to customers via ocean vessel when the vessel is loaded at the port.

Our coal sales generally include up to 90-day payment terms following the transfer of control of the goods to our customer. In the case of some of our foreign customers, our contracts also require that letters of credit are posted to secure payment of any outstanding receivable. We do not include extended payment terms in our contracts. Our contracts with customers typically provide for minimum specifications or qualities of the coal we deliver. Variances from these specifications or qualities are settled by means of price adjustments. Generally, these price adjustments are settled within 30 days of delivery and are insignificant.

Freight Revenue and Expense—Costs incurred to transport coal to the point of sale at the port facility are included in cost of sales and the gross amounts billed to customers to cover shipping to and handling of the coal at the port are included in revenue.

Cash and Cash Equivalents—We classify all highly-liquid instruments with an original maturity of three months or less as cash equivalents. Restricted cash balances at December 31, 2020 and 2019 were $1.4 million and $1.3 million, respectively, consisted of funds held in escrow for potential future workers' compensation claims and were classified in other current assets in the consolidated balance sheets.

Inventories— Coal is reported as inventory at the point in time it is extracted from the mine. Coal inventories are valued at the lower of average cost or net realizable value, with cost determined on a first-in, first-out inventory valuation method. Coal inventory costs include labor, supplies, equipment costs, freight, operating overhead, depreciation and amortization. Coal inventory quantities are adjusted periodically based on aerial surveys of coal

stockpiles. Supply inventories are valued at average cost and totaled $2.5 million at December 31, 2020 and $2.9 million at December 31, 2019.

Property, Plant and Equipment—Property, plant and equipment is recorded at cost. Expenditures which extend the useful lives of existing plant and equipment are capitalized. Planned major maintenance costs which do not extend the useful lives of existing plant and equipment are expensed as incurred. When properties are retired or otherwise disposed, the related cost and accumulated depreciation are removed from the respective accounts and any profit or loss on disposition is recognized in the consolidated statements of operations.

Coal exploration costs are expensed as incurred. Coal exploration costs include those incurred to ascertain existence, location, extent or quality of ore or minerals before beginning the development stage of the mine.

Capitalized mine development costs represent the costs incurred to prepare mine sites and/or seams of coal for future mining. These costs include costs of acquiring, permitting, planning, research, and developing access to identified mineral reserves and other preparations for commercial production as necessary to develop and permit the properties for mining activities. Operating expenditures including certain professional fees and overhead costs are not capitalized but are expensed as incurred.

The capitalized mine development costs are amortized on a units-of-production basis as mining of that mine's assigned reserves takes place. Depreciation of plant and equipment is calculated on the straight-line method over their estimated useful lives ranging from three to thirty years.

Advanced Coal Royalties—In most cases, we acquire the right to mine coal reserves under leases which call for the payment of royalties on coal as it is mined and sold. In many cases, these mineral leases require the payment of advance or minimum coal royalties to lessors that are recoupable against future production royalties. These advance payments are deferred and charged to operations as the coal reserves are mined.

Impairment of Long-lived Assets—We review and evaluate long-lived assets, including property, plant and equipment and mine development costs, for impairment when events or changes in circumstances indicate that the asset's carrying value may not be recoverable. Recoverability is measured by comparing the net book value to the fair value. When the net book value exceeds the fair value, an impairment loss is measured and recorded.

If it is determined that an undeveloped mineral interest cannot be economically converted to proven and probable reserves, or that the recoverability of capitalized mine development costs is uncertain, such capitalized costs are reduced to their net realizable value and an impairment loss is recorded to expense and future development costs are expensed as incurred.

Asset Retirement Obligations—Legal obligations associated with the retirement of long-lived assets are reflected at their estimated fair value, with a corresponding charge to development costs, at the time they are incurred. Our asset retirement obligations primarily consist of spending estimates related to reclaiming metallurgical coal land and support facilities in accordance with federal and state reclamation laws as defined by each mining permit. We estimate and record the fair value of a liability for an asset retirement obligation in the period in which it is incurred and a corresponding increase in the carrying amount of the related long-lived asset. The liability is accreted to its present value each period and the capitalized cost is amortized using the units-of-production method over estimated recoverable reserves upon commencement of mining.

Deferred Income—We account for the SBA Paycheck Protection Program Loan ("PPP Loan") as an in-substance government grant because we expect to meet the PPP Loan eligibility criteria and have concluded that the loan represents, in substance, a grant that is expected to be forgiven. Proceeds from the PPP Loan were initially recognized as a deferred income liability. Subsequently, we reduced this liability and recognized income on a systematic basis over the period in which the related costs for which the PPP Loan was intended were incurred. PPP Loan income is presented as other income within the consolidated statements of operations.

Self-Insurance—We are self-insured for certain losses relating to workers' compensation claims. We purchase insurance coverage to reduce our exposure to significant levels of these claims. Self-insured losses are accrued based upon estimates of the aggregate liability for uninsured claims incurred as of the balance sheet date using current and historical claims experience and certain actuarial assumptions. As of December 31, 2020, the estimated aggregate liability for uninsured claims totaled $1.7 million. Of this, $0.9 million was included in other long-term liabilities within the consolidated balance sheets. As of December 31, 2019, the estimated aggregate liability for uninsured claims totaled $1.0 million, including $0.7 million in other long-term liabilities. These estimates are subject to uncertainty due to a variety of factors, including extended lag times in the reporting and resolution of claims, and trends or changes in claim settlement patterns, insurance industry practices and legal interpretations. As a result, actual costs could differ significantly from the estimated amounts. Adjustments to estimated liabilities are recorded in the period in which the change in estimate occurs.

Leases—We determine if an arrangement is a lease at inception. Operating leases are included in other current assets, other current liabilities, and other long-term liabilities in our consolidated balance sheets. We do not have any finance leases.

Right of use ("ROU") assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As most of our leases do not provide an implicit rate, we generally use our incremental borrowing rate based on the estimated rate of interest for collateralized borrowing over a similar term of the lease payments at commencement date. The operating lease ROU asset also includes any lease payments made and excludes lease incentives. Our lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

Leases of mineral reserves are exempted under U.S. GAAP from recognition within the financial statements.

Fair Value Measurements— For assets and liabilities that are recognized or disclosed at fair value in the consolidated financial statements, fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. We use a three-level fair value hierarchy that categorizes assets and liabilities measured at fair value based on the observability of the inputs utilized in the valuation. These levels include: Level 1 - inputs are quoted prices in active markets for the identical assets or liabilities; Level 2 - inputs are other than quoted prices included in Level 1 that are directly or indirectly observable through market-corroborated inputs; and Level 3 - inputs are unobservable, or observable but cannot be market-corroborated, requiring us to make assumptions about pricing by market participants.

Income Taxes—Income taxes are accounted for using a balance sheet approach. We account for deferred income taxes by applying statutory tax rates in effect at the reporting date of the balance sheet to differences between the book and tax basis of assets and liabilities. A valuation allowance is established if it is more likely than not that the related tax benefits will not be realized. In determining the appropriate valuation allowance, we consider the projected realization of tax benefits based on expected levels of future taxable income, available tax planning strategies and reversals of existing taxable temporary differences.

Uncertain tax positions are recognized only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. We had no unrecognized tax positions at December 31, 2020 and 2019. We file income tax returns in the U.S. and in various state and local jurisdictions which may be routinely examined by tax authorities. The statute of limitations is currently open for all tax returns filed.

Segment Reporting—Our properties located in West Virginia, Virginia and Pennsylvania each consist of mineral reserves for production of metallurgical coal from both underground and surface mines. These operations are within the Appalachia basin. Geology, coal transportation routes to customers, regulatory environments and coal quality or type are characteristic to a basin. For financial reporting purposes, these operations represent a single segment because

each possesses similar production methods, distribution methods, and customer quality and consumption characteristics, resulting in similar long-term expected financial performance.

Stock-Based Compensation—We account for employee stock-based compensation using the fair value method. Compensation cost for equity incentive awards is based on the fair value of the equity instrument generally on the date of grant and is recognized over the requisite service period. Forfeitures are recognized as they occur.

The fair value of restricted stock awards is determined using the publicly-traded price of our common stock on the grant date. The fair value of option awards is calculated using the Black-Scholes option-pricing model. The Black-Scholes model requires us to make assumptions and judgments about the variables used in the calculation, including the expected term, expected volatility, risk-free interest rate, dividend rate and service period.

Concentrations—Our operations are all related to metallurgical coal within the mining industry. A reduction in metallurgical coal prices or other disturbances in the metallurgical coal markets could have an adverse effect on our operations. In 2020, 2019 and 2018, approximately 71%, 74% and 50%, respectively, of our revenue was derived from coal shipments to customers in North American markets.

Financial instruments that potentially subject us to a significant concentration of credit risk consist primarily of cash and cash equivalents, restricted cash and accounts receivable. We maintain deposits in federally insured financial institutions in excess of federally insured limits. We monitor the credit ratings and concentration of risk with these financial institutions on a continuing basis to safeguard cash deposits.

We have a limited number of customers. Contracts with these customers provide for billings principally upon shipment and compliance with payment terms is monitored on an ongoing basis. Outstanding receivables beyond payment terms are promptly investigated and discussed with the specific customer. We estimate an allowance for doubtful accounts based on an analysis of specific customers, taking into consideration the age of past due accounts and an assessment of the customer's ability to pay. An allowance for doubtful accounts was not necessary as of December 31, 2020 and 2019.

During 2020, sales to three customers accounted for approximately 70% of total revenue. The total balance due from these customers at December 31, 2020 was approximately 46% of total accounts receivable. During 2019, sales to three customers accounted for approximately 53% of total revenue. The total balance due from these customers at December 31, 2019 was approximately 58% of total accounts receivable. During 2018, sales to six customers accounted for approximately 71% of total revenue.

Reclassifications—Financial statements presented for prior periods include reclassifications that were made to conform to the current-year presentation.

Recent Accounting Pronouncements—In May 2014, the FASB issued Accounting Standards Update ("ASU") 2014-09, *Revenue from Contracts with Customers*. This standard supersedes nearly all existing revenue recognition guidance under U.S. GAAP. The core principle of ASU 2014-09 is to recognize revenue in a way that depicts the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled to in exchange for those goods or services. ASU 2014-09 defines a five-step process to achieve this core principle and, in doing so, it is possible that more judgment and estimates may be required within the revenue recognition process than is required under present U.S. GAAP. These may include identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price, and allocating the transaction price to each separate performance obligation. The new standard also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments. We adopted this new standard on January 1, 2018 using the modified retrospective method of adoption. The adoption of this standard did not have a material effect on our financial position, results of operations or cash flows, but resulted in increased disclosures related to revenue recognition policies and disaggregation of revenue.

In February 2016, the FASB issued ASU 2016-02, *Leases*, which aims to make leasing activities more transparent and comparable and requires substantially all leases be recognized by lessees on their balance sheet as a right-of-use asset and corresponding lease liability, including leases currently accounted for as operating leases. Leases of mineral reserves and related land leases are exempted from the standard. We adopted ASU 2016-02 on January 1, 2019. We elected the "package of practical expedients" within the standard which permits us not to reassess prior conclusions about lease identification, lease classification and initial direct costs. We made an accounting policy election to not separate lease and non-lease components for all leases. The adoption of this standard resulted in the recognition of right-of-use assets and lease liabilities of $0.3 million, which were not previously recorded on our consolidated balance sheet.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments—Credit Losses*, which replaces the existing incurred loss impairment model with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. We adopted this standard effective January 1, 2020. The adoption of this ASU did not have a material impact on our consolidated financial statements because we do not have a history of credit losses on our financial instruments and have no material expected losses.

In August 2018, the FASB issued ASU 2018-15, *Internal-Use Software*, which addresses the accounting for implementation costs associated with a hosted service. The standard provides that implementation costs be evaluated for capitalization using the same criteria as that used for internal-use software development costs, with amortization expense being recorded in the same income statement expense line as the hosted service costs and over the expected term of the hosting arrangement. We adopted this standard as of January 1, 2020 on a prospective basis. The adoption of this ASU did not have a material impact on our consolidated financial statements.

In December 2019, the FASB issued ASU 2019-12, *Income Taxes*, which enhances and simplifies various aspects of the income tax accounting guidance, including requirements such as tax basis step-up in goodwill obtained in a transaction that is not a business combination, ownership changes in investments, and interim-period accounting for enacted changes in tax law. The standard will be effective for us in the first quarter of 2021. We do not expect that the adoption of this ASU will have a significant impact on our consolidated financial statements.

In March 2020, the FASB issued ASU No. 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting*, which provides optional expedients and exceptions for applying generally accepted accounting principles to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. The amendments are effective for all entities beginning on March 12, 2020 through December 31, 2022. The Company may elect to apply the amendments prospectively through December 31, 2022. The Company has not adopted this ASU as of December 31, 2020. The Company is currently assessing the impact of adopting this standard on its financial statements and the timing of adoption.

NOTE 3—PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment consisted of the following:

	December 31,	
(In thousands)	**2020**	**2019**
Plant and equipment	$ 155,173	$ 142,773
Construction in process	7,245	11,986
Capitalized mine development costs	74,279	58,773
Less: accumulated depreciation and amortization	(56,242)	(35,330)
Total property, plant and equipment, net	$ 180,455	$ 178,202

Capitalized amounts related to coal reserves at properties where we are not currently engaged in mining operations totaled $15.4 million as of December 31, 2020 and $12.7 million as of December 31, 2019.

Depreciation and amortization included:

(In thousands)	Years ended December 31, 2020	2019	2018
Depreciation of plant and equipment	$ 17,094	$ 14,219	$ 9,751
Amortization of capitalized mine development costs	3,818	5,302	2,672
Total depreciation and amortization	$ 20,912	$ 19,521	$ 12,423

In the fourth quarter of 2019, we acquired multiple permits from various affiliates of Omega Highwall Mining, LLC. Consideration for the transaction included assumption of approximately $0.6 million of ARO liability, curing minor lease defaults, and paying advance royalties under two assumed lease instruments. The total out-of-pocket consideration was less than $0.1 million, most of which is recoupable against future royalty payments. These permits are in close proximity to our Knox Creek preparation plant and loadout infrastructure, and provide immediate access to two separate mining areas in Southwestern Virginia.

On January 3, 2020, we entered into a mineral lease with the McDonald Land Company for coal reserve tracts which, in many cases, are located immediately adjacent to our Elk Creek complex. This lease adds more than 21 million proven and probable reserves in approximately 20 different coal seams to our Elk Creek reserve base.

NOTE 4—FAIR VALUES OF FINANCIAL INSTRUMENTS

The carrying amounts and fair values of our financial assets and liabilities were as follows:

(In thousands)	December 31, 2020 Carrying Amount	December 31, 2020 Fair Value	December 31, 2019 Carrying Amount	December 31, 2019 Fair Value
Financial Assets:				
Cash and cash equivalents	$ 5,300	$ 5,300	$ 5,532	$ 5,532
Accounts receivable	20,299	20,299	19,256	19,256
Other current assets - restricted cash	1,410	1,410	1,333	1,333
Financial liabilities:				
Accounts payable	(11,742)	(11,742)	(10,663)	(10,663)
Debt	(17,450)	(17,450)	(12,947)	(12,947)
Other current liabilities - financed insurance payable	(862)	(862)	(656)	(656)

We use a market approach to determine the fair value of our fixed-rate debt using observable market data, which resulted in a Level 2 fair-value measurement.

Nonrecurring fair value measurements include asset retirement obligations, the estimated fair value of which is calculated as the present value of estimated cash flows related to its reclamation liabilities using Level 3 inputs. The significant inputs used to calculate such liabilities include estimates of costs to be incurred, our credit adjusted discount rate, inflation rates and estimated date of reclamation.

NOTE 5—ASSET RETIREMENT OBLIGATIONS

We estimate asset retirement obligations ("ARO") for final reclamation based upon detailed engineering calculations of the amount and timing of the future cash spending for a third-party to perform the required work.

Spending estimates were escalated for inflation at 2% per year and the estimated cash outflows were then discounted at 4% at December 31, 2020 and 2019. Amounts recorded related to asset retirement obligations were as follows:

	December 31,	
(In thousands)	2020	2019
Balance at beginning of year	$ 14,605	$ 12,778
Additional asset retirement obligations acquired/incurred	—	800
Expenditures made	(105)	—
Accretion expense	570	511
Revisions to estimates	86	516
Balance at end of year	$ 15,156	$ 14,605

NOTE 6—DEBT

Our outstanding debt consisted of the following:

	December 31,	
(In thousands)	2020	2019
Term loan	$ 6,672	$ 9,947
Revolving Credit Facility	7,000	3,000
Equipment Loan	3,778	—
Total debt	$ 17,450	$ 12,947
Current portion of long-term debt	4,872	3,333
Long-term debt, net	$ 12,578	$ 9,614

Revolving Credit Facility and Term Loan—On November 2, 2018, we entered into a Credit and Security Agreement (as amended, the "Revolving Credit Facility") with KeyBank National Association ("KeyBank"). The Revolving Credit Facility was amended on February 20, 2020 and consists of a $10.0 million term loan (the "Term Loan") and up to $30.0 million revolving line of credit, including $3.0 million letter of credit availability. All personal property assets, including, but not limited to accounts receivable, coal inventory and certain mining equipment are pledged to secure the Revolving Credit Facility.

The Revolving Credit Facility has a maturity date of December 31, 2023 and bears interest based on LIBOR + 2.0% or Base Rate + 1.5%. Base Rate is the highest of (i) KeyBank's prime rate, (ii) Federal Funds Effective Rate + 0.5%, or (iii) LIBOR + 2.0%. Advances under the Revolving Credit Facility are made initially as base rate loans, but may be converted to LIBOR rate loans at certain times at our discretion. As of December 31, 2020, we had remaining availability under the Revolving Credit Facility of $16.7 million.

The Term Loan is secured under a Master Security Agreement with a pledge of certain underground and surface mining equipment, bears interest at LIBOR + 5.15% and is required to be repaid in monthly installments of $278 thousand including accrued interest.

The Revolving Credit Facility contains usual and customary covenants including limitations on liens, additional indebtedness, investments, restricted payments, asset sales, mergers, affiliate transactions and other customary limitations, as well as financial covenants. As of December 31, 2020, we were in compliance with all debt covenants.

Equipment Financing Loan—On April 16, 2020, we entered into an equipment loan with Key Equipment Finance, a division of KeyBank, as lender, in the original principal amount of approximately $4.7 million for the financing of existing underground and surface equipment (the "Equipment Financing Loan"). The loan bears interest at 7.45% per annum and is payable in 36 monthly installments of $147 thousand. There is a 3% premium for prepayment of the loan within the first 12 months. This premium declines by 1% during each successive 12-month period.

Maturities of our long-term debt are as follows:

(In thousands) **Years ending December 31:**	
2021	$ 4,872
2022	11,991
2023	587
Total	$ 17,450

NOTE 7— SBA PAYCHECK PROTECTION PROGRAM LOAN

On April 20, 2020, we received proceeds from the PPP Loan in the amount of approximately $8.4 million from KeyBank, as lender, pursuant to the Paycheck Protection Program ("PPP") of the *Coronavirus Aid, Relief, and Economic Security Act* (the "CARES Act"). The purpose of the PPP is to encourage the continued employment of workers. Based upon receipt of this funding, we elected to recall our furloughed workers at our Elk Creek complex. We used all of the PPP Loan proceeds for eligible payroll expenses, lease, interest and utility payments.

The PPP Loan matures on April 16, 2022 and bears interest at a rate of 1% per annum. Pursuant to the subsequently enacted *Paycheck Protection Flexibility Act of 2020*, we are permitted to defer required monthly payments of principal and interest until such time as an approval or denial of forgiveness is received from the U.S. Small Business Administration ("SBA").

The PPP Loan is evidenced by a promissory note dated April 16, 2020, which contains customary events of default relating to, among other things, payment defaults and breaches of representations and warranties. The PPP Loan may be prepaid by the Company at any time prior to maturity with no prepayment penalties.

All or a portion of the PPP Loan and accrued interest thereon may be forgiven by the SBA upon documentation of expenditures in accordance with the SBA requirements and proper application by the Company. Under the CARES Act and *Paycheck Protection Flexibility Act of 2020*, loan forgiveness is available for the sum of documented payroll costs, covered rent payments, covered mortgage interest and covered utilities during either the eight-week period or 24-week period beginning on the date of loan funding. For purposes of the PPP Loan, payroll costs exclude cash compensation of an individual employee in excess of $100 thousand, prorated annually. Not more than 40% of the forgiven amount may be for non-payroll costs. Forgiveness could be reduced if full-time headcount declines, or if salaries and wages for employees with salaries of $100 thousand or less annually are reduced by more than 25%.

Our application for forgiveness was approved by KeyBank and is currently being reviewed by the SBA. We believe it is probable that the full amount of the PPP Loan principal, together with accrued interest thereon, will be forgiven. Accordingly, we recognized $8.4 million as other income in the consolidated statement of operations for 2020.

NOTE 8—LEASES

Operating Leases—We lease facilities under various noncancelable operating lease agreements. Our leases have remaining lease terms of less than two years. Operating lease expense for facilities totaled $0.2 million, $0.2 million and $0.1 million in 2020, 2019 and 2018, respectively.

At December 31, 2020 and 2019, operating lease ROU assets totaled $0.1 million and $0.2 million, respectively. Operating lease liabilities at December 31, 2020 totaled $0.1 million. Of this, $31 thousand is included in other long-term liabilities within the consolidated balance sheets. Operating lease liabilities at December 31, 2019 totaled $0.2 million. Of this, $0.1 million is included in other long-term liabilities within the consolidated balance sheets.

Maturities of operating lease liabilities are as follows:

(In thousands) **Years ending December 31:**	
2021	$ 98
2022	41
Total lease payments	139
Less imputed interest	(29)
Total	$ 110

As of December 31, 2020, the weighted average remaining lease term was 1.3 years and the weighted average discount rate used in computing the lease obligations was 8.5%.

Coal Leases and Associated Royalty Commitments—Leases of mineral reserves and related land leases are exempted under U.S. GAAP from recognition within the financial statements. We lease coal reserves under agreements that require royalties to be paid as the coal is mined and sold. Many of these agreements require minimum annual royalties to be paid regardless of the amount of coal mined and sold. Total royalty expense was $11.8 million, $15.6 million and $11.6 million for the years ended December 31, 2020, 2019 and 2018, respectively. These agreements generally have terms running through exhaustion of all the mineable and merchantable coal covered by the respective lease. Royalties or throughput payments are based on a percentage of the gross selling price received for the coal we mine. Payments of minimum coal royalties and throughput payments for leases with Ramaco Coal, LLC commenced in 2017 pursuant to the terms of the agreements.

Future minimum lease and royalty payments for each of the next five years and thereafter are as follows:

(In thousands) **Years ending December 31:**	
2021	$ 5,297
2022	5,709
2023	5,720
2024	5,719
2025	5,719
Thereafter	12,352
Total minimum payments	$ 40,516

NOTE 9—EQUITY

We are authorized to issue up to a total of 260,000,000 shares of common stock and 50,000,000 shares of preferred stock, each having a par value of $0.01 per share. Holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of stockholders and to receive ratably in proportion to the shares of common stock held by them any dividends declared from time to time by the board of directors. Our common stock has no preferences or rights of conversion, exchange, pre-exemption or other subscription rights.

Stock-Based Compensation—We have a stock-based compensation plan under which stock options, restricted stock, performance-based stock awards and other stock-based awards may be granted. At December 31, 2020, 3.2 million shares were available under the current plan for future awards.

Options for the purchase of a total of 937,424 shares of our common stock for $5.34 per share were granted to two executives on August 31, 2016. The options have a ten-year term from the grant date and are fully vested. The options remain outstanding and unexercised and were not in-the-money at December 31, 2020.

We grant restricted stock to certain senior executive employees and directors. The shares vest over one to three and a half years from the date of grant. During the vesting period, the participants have voting rights and may receive dividends, but the shares may not be sold, assigned, transferred, pledged or otherwise encumbered. Unvested shares are

forfeited upon termination of employment, unless an employee enters into another written arrangement. The fair value of the restricted shares on the date of the grant is amortized ratably over the service period. Compensation expense for restricted stock awards totaled $4.1 million in 2020, $4.1 million in 2019 and $2.6 million in 2018. As of December 31, 2020, there was $6.0 million of total unrecognized compensation cost related to unvested restricted stock to be recognized over a weighted average period of 1.9 years.

The following table summarizes restricted awards outstanding, as well as activity for the periods:

	Shares	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2018	966,134	$ 6.99
Granted	889,908	5.44
Vested	(211,964)	5.70
Forfeited	(15,837)	5.73
Outstanding at December 31, 2019	1,628,241	6.32
Granted	1,867,477	3.05
Vested	(640,920)	5.30
Forfeited	(9,273)	3.49
Outstanding at December 31, 2020	2,845,525	$ 4.28

The total fair value of awards vested was $1.5 million during 2020 and $0.8 million during 2019.

In December 2019, we entered into modification agreements with 14 executives and employees holding 1.4 million shares of unvested restricted stock whereby the vesting periods for these share grants was extended an additional six months. In exchange for the modification, we made an additional restricted stock grant to each of these executives and employees. In all, we granted 22,000 additional restricted shares in the modification. Incremental compensation costs associated with these modifications totaled $0.8 million and was recognized during 2020.

NOTE 10—COMMITMENTS AND CONTINGENCIES

Environmental Liabilities—Environmental liabilities are recognized when the expenditures are considered probable and can be reasonably estimated. Measurement of liabilities is based on currently enacted laws and regulations, existing technology and undiscounted site-specific costs. Generally, such recognition would coincide with a commitment to a formal plan of action. No amounts have been recognized for environmental liabilities.

Surety Bond—In accordance with state laws, we are required to post reclamation bonds to assure that reclamation work is completed. Reclamation bonds outstanding at December 31, 2020 totaled approximately $14.9 million. Additionally, we had $0.3 million of surety bonds that secured performance obligations.

Contingent Transportation Purchase Commitments—We secure the ability to transport coal through rail contracts and export terminals that are sometimes funded through take-or-pay arrangements. As of December 31, 2020, contingent liabilities under these take-or-pay arrangements expiring March 31, 2021 totaled $3.3 million. The level of these take or pay liabilities will be reduced at a per ton rate as such rail and export terminal services are utilized against the required minimum tonnage amounts over the contract term stipulated in such rail and export terminal contracts.

Litigation—From time to time, we are subject to various litigation and other claims in the normal course of business. No amounts have been accrued in the consolidated financial statements with respect to any matters.

On November 5, 2018, one of three raw coal storage silos that fed our Elk Creek plant experienced a partial structural failure. A temporary conveying system completed in late-November 2018 restored approximately 80% of the plant capacity. We completed a permanent belt workaround and restored the preparation plant to its full processing capacity in mid-2019. Our insurance carrier, Federal Insurance Company, disputed our claim for coverage based on certain exclusions to the applicable policy and therefore on August 21, 2019 we filed suit against Federal Insurance

Company and Chubb INA Holdings, Inc. in Logan County Circuit Court in West Virginia seeking a declaratory judgment that the partial silo collapse was an insurable event and to require coverage under our policy. Defendants removed the case to the United States District Court for the Southern District of West Virginia, and upon removal, we substituted ACE American Insurance Company as a defendant in place of Chubb INA Holdings, Inc. Currently, the case is scheduled for trial beginning June 29, 2021, in Charleston, West Virginia.

NOTE 11—REVENUE

Our revenue is derived from contracts for the sale of coal which is recognized when the performance obligations under the contracts are satisfied, which is at the point in time control is transferred to our customer. Generally, domestic sales contracts have terms of about one year and the pricing is typically fixed. Export sales have spot or term contracts and pricing can either be by fixed-price or a price derived against index-based pricing mechanisms. Disaggregated information about our revenue is presented below:

	Years ended December 31,		
(In thousands)	**2020**	**2019**	**2018**
Coal Sales			
North American revenues	$ 119,981	$ 170,927	$ 114,508
Export revenues, excluding Canada	48,934	59,286	113,066
Total revenues	$ 168,915	$ 230,213	$ 227,574

As of December 31, 2020, outstanding performance obligations for 2021 totaled approximately 1.3 million tons for contracts having fixed pricing and 0.3 million tons for contracts with index-based pricing mechanisms.

NOTE 12—RELATED PARTY TRANSACTIONS

Mineral Lease and Surface Rights Agreements—Much of the coal reserves and surface rights that we control were acquired through a series of mineral leases and surface rights agreements with Ramaco Coal, LLC. Production royalty payables due to Ramaco Coal, LLC totaling $0.4 million and $0.5 million at December 31, 2020 and 2019, respectively, were included in accounts payable in the consolidated balance sheets. Royalties paid to Ramaco Coal, LLC in 2020, 2019 and 2018 totaled $4.5 million, $9.0 million and $1.9 million, respectively.

On-going Administrative Services—Under a Mutual Services Agreement dated December 22, 2017 but effective as of March 31, 2017, the Company and Ramaco Coal, LLC agreed to share the services of certain of each company's employees. Each party will pay the other a fee on a quarterly basis for such services calculated as the annual base salary of each employee providing services multiplied by the percentage of time each employee spent providing services for the other party. The services will be provided for 12-month terms, but may be terminated by either party at the end of any 12-month term by providing written notice at least 30 days prior to the end of the then-current term. Charges to Ramaco Coal, LLC were $0.2 million in both 2020 and 2019. In 2018, there were no charges to Ramaco Coal, LLC.

NOTE 13—INCOME TAXES

Income tax expense (benefit) consisted of the following:

(In thousands)	Years ended December 31, 2020	2019	2018
Current taxes:			
Federal	$ —	$ —	$ —
State	19	7	4
Current taxes	19	7	4
Deferred taxes:			
Federal	(3,164)	3,228	(111)
State	(339)	1,928	220
Deferred taxes	(3,503)	5,156	109
Provision for income taxes, net	$ (3,484)	$ 5,163	$ 113

The items accounting for differences between income taxes computed at the federal statutory rate and the provision recorded for income taxes were as follows:

(In thousands)	Years ended December 31, 2020	2019	2018
Income taxes computed at the federal statutory rate	$ (1,762)	$ 6,320	$ 5,289
Effect of:			
State taxes, net of federal benefits	(253)	945	970
Percentage depletion	(714)	(2,093)	(1,033)
PPP Loan forgiveness	(1,773)	—	—
Change in valuation allowance	—	—	(4,464)
Stock-based compensation	473	109	—
Other, net	545	(118)	(649)
Total	$ (3,484)	$ 5,163	$ 113

Deferred tax assets and liabilities were as follows:

(In thousands)	December 31, 2020	2019
Deferred tax assets:		
Loss carryforwards U.S. - Federal/States	$ 22,873	$ 19,512
Asset retirement obligations	3,972	3,523
Accrued expenses	856	725
Stock-based compensation	2,200	2,094
Other	—	—
Total deferred tax assets	29,901	25,854
Less valuation allowance	—	—
Deferred tax assets, net	29,901	25,854
Deferred tax liabilities:		
Depreciation & amortization	(31,663)	(31,119)
Net deferred tax liabilities	$ (1,762)	$ (5,265)

As of December 31, 2020, our federal net operating loss carryforwards for income tax purposes were approximately $94 million. Total state loss carryforwards were approximately $57 million. If not utilized, federal and state net operating loss carryforwards approximating $60 million and $36 million, respectively, will expire between 2035 and 2037. The remaining net operating loss carryforwards have no statutory expiration.

NOTE 14—EARNINGS (LOSS) PER SHARE

The following table is a calculation of the net earnings (loss) per basic and diluted share:

(In thousands, except per share amounts)	Years ended December 31, 2020	2019	2018
Numerator			
Net income (loss)	$ (4,907)	$ 24,934	$ 25,074
Denominator			
Weighted average shares used to compute basic EPS	42,460	40,838	40,039
Dilutive effect of stock-based awards	—	—	224
Weighted average shares used to compute diluted EPS	42,460	40,838	40,263
Earnings (loss) per share			
Basic	$ (0.12)	$ 0.61	$ 0.63
Diluted	$ (0.12)	$ 0.61	$ 0.62

Diluted EPS for 2020 and 2019 excludes 937,424 options to purchase our common stock because their effect would be anti-dilutive.

* * * * *

SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

The following table presents selected quarterly financial data derived from our unaudited interim financial statements. The following data is only a summary and should be read with our historical consolidated financial statements and related notes contained in this document.

(In thousands, except per share amounts)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2020				
Total revenues	$ 41,936	$ 36,374	$ 39,459	$ 51,146
Gross profit[a]	11,002	6,240	3,770	2,400
Operating income	1,142	(4,299)	(7,582)	(8,354)
Net income	1,963	2,652	(4,776)	(4,746)
Net earnings per share: [b]				
Basic	$ 0.05	$ 0.06	$ (0.11)	$ (0.11)
Diluted	$ 0.05	$ 0.06	$ (0.11)	$ (0.11)
2019				
Total revenues	$ 57,460	$ 65,761	$ 61,380	$ 45,612
Gross profit[a]	16,454	22,542	16,397	12,350
Operating income	8,250	12,889	6,452	1,941
Net income	6,883	10,613	5,550	1,888
Net earnings per share: [b]				
Basic	$ 0.17	$ 0.26	$ 0.14	$ 0.05
Diluted	$ 0.17	$ 0.26	$ 0.14	$ 0.05

(a) Represents total revenue less cost of sales.
(b) The sum of quarterly per share amounts may not equal amounts reported for the annual periods due to the effects of rounding.

* * * * *

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures. Under the supervision and with the participation of our management, including the Chief Executive Officer ("CEO"), the principal executive officer, and Chief Financial Officer ("CFO"), the principal financial officer, we conducted an evaluation of the effectiveness of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) and 15d - 15(e) promulgated under the Securities Exchange Act of 1934 (the "Exchange Act"), as amended. Based on this evaluation, the CEO and CFO concluded that our disclosure controls and procedures were effective as of December 31, 2020. There have been no significant changes in our internal controls or in other factors that could significantly affect the internal controls subsequent to the date we completed the evaluation.

Management's Report on Internal Control Over Financial Reporting. Management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) of the 1934 Act. Management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2020 based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. As a result of this assessment, management concluded that, as of December 31, 2020, our internal control over financial reporting was effective in providing reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Changes in Internal Control Over Financial Reporting. There were no changes in our internal control over financial reporting during the quarter ended December 31, 2020 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on Controls. Our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving their objectives as specified above. Management does not expect, however, that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all error and fraud. Any control system, no matter how well designed and operated, is based upon certain assumptions and can provide only reasonable, not absolute, assurance that its objectives will be met. Further, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within the Company have been detected.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this Item is incorporated herein by reference to our Proxy Statement for the 2021 Annual Meeting of Stockholders, which is expected to be filed with the SEC within 120 days after the close of our fiscal year.

Item 11. Executive Compensation

The information required by this Item is incorporated herein by reference to our Proxy Statement for the 2021 Annual Meeting of Stockholders, which is expected to be filed with the SEC within 120 days after the close of our fiscal year.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this Item is incorporated herein by reference to our Proxy Statement for the 2021 Annual Meeting of Stockholders, which is expected to be filed with the SEC within 120 days after the close of our fiscal year.

Item 13. Certain Relationships and Related Persons Transactions

The information required by this Item is incorporated herein by reference to our Proxy Statement for the 2021 Annual Meeting of Stockholders, which is expected to be filed with the SEC within 120 days after the close of our fiscal year.

Item 14. Principal Accountant Fees and Services

The information required by this Item is incorporated herein by reference to our Proxy Statement for the 2021 Annual Meeting of Stockholders, which is expected to be filed with the SEC within 120 days after the close of our fiscal year.

Item 15. Exhibits and Financial Statement Schedules

(a) *The following documents are filed as part of this Report*:

(1) Report of Independent Registered Public Accounting Firm

Consolidated Balance Sheets as of December 31, 2020 and 2019

Consolidated Statements of Operations for the Years Ended December 31, 2020, 2019 and 2018

Consolidated Statements of Equity for the Years Ended December 31, 2020, 2019 and 2018

Consolidated Statements of Cash Flows for the Years Ended December 31, 2020, 2019 and 2018

Notes to Consolidated Financial Statements

(2) Selected Quarterly Financial Data (Unaudited)

(b) Exhibits

Exhibit Number	Description
2.1	Master Reorganization Agreement, dated February 1, 2017, by and among Ramaco Resources, Inc., Ramaco Development, LLC, Ramaco Merger Sub, LLC and the other parties named therein (incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on February 7, 2017)
3.1	Amended and Restated Certificate of Incorporation of Ramaco Resources, Inc. (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on February 14, 2017)
3.2	Amended and Restated Bylaws of Ramaco Resources, Inc. (incorporated by reference to Exhibit 3.2 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on February 14, 2017)
3.3	Amendment No. 1 to the Amended and Restated Bylaws of Ramaco Resources, Inc. (incorporated by reference to Exhibit 3.2 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on December 15, 2020)
4.1	Form of Common Stock Certificate (incorporated by reference to Exhibit 4.1 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
4.2	Registration Rights Agreement, dated as of February 8, 2017, by and among Ramaco Resources, Inc. and the stockholders named therein (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on February 14, 2017)
4.3	Shareholders' Agreement, dated as of February 8, 2017, by and among Ramaco Resources, Inc., Yorktown Energy Partners IX, L.P., Yorktown Energy Partners X, L.P., Yorktown Energy Partners XI, L.P., Energy Capital Partners Mezzanine Opportunities Fund, LP, Energy Capital Partners Mezzanine Opportunities Fund A, LP, and ECP Mezzanine B (Ramaco IP), LP. (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on February 14, 2017)

*4.4	Description of Common Stock
†10.1	Ramaco Resources, Inc. Long-Term Incentive Plan (incorporated by reference to Exhibit 4.3 of the Company's Registration Statement on Form S-8 (File No. 333-215913) filed with the Commission on February 6, 2017)
10.2	Berwind Mutual Cooperation Agreement, dated August 20, 2015, by and between Ramaco Resources, LLC and Ramaco Central Appalachia, LLC (incorporated by reference to Exhibit 10.3 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.3	Elk Creek Mutual Cooperation Agreement, dated August 20, 2015, by and between Ramaco Resources, LLC and Ramaco Central Appalachia, LLC (incorporated by reference to Exhibit 10.4 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.4	Indemnification Agreement, dated August 20, 2015, by and between Ramaco Coal, LLC and Ramaco Development, LLC (incorporated by reference to Exhibit 10.5 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.5	RAM Mine Mutual Cooperation Agreement, dated August 20, 2015, by and between RAM Mining, LLC and Ramaco Northern Appalachia, LLC (incorporated by reference to Exhibit 10.6 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.6	Promissory Note, dated August 31, 2016, by and between Ramaco Development, LLC, as maker, and Ramaco Coal, LLC, as noteholder (incorporated by reference to Exhibit 10.7 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.7	Corporate Guaranty, dated August 20, 2015, by and between Ramaco Coal, LLC, as guarantor, and RAMACO Development, LLC as oblige (incorporated by reference to Exhibit 10.8 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.8	Corporate Guaranty, dated August 20, 2015, by and between RAMACO Development, LLC, as guarantor, and Ramaco Coal, LLC, as oblige (incorporated by reference to Exhibit 10.9 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.9	Berwind Sublease Agreement, dated August 20, 2015, by and between Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.10 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.10	First Amendment to Berwind Lease Agreement and Sublease, dated February 2016, by and among Berwind Land Company, Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.11 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.11	Second Amendment to Berwind Sublease, dated August 31, 2016, by and between Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.12 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.12	Third Amendment to Berwind Lease Agreement and Consent to Sublease, dated December 19, 2017, by and between Berwind Land Company and Ramaco Central Appalachia, LLC (incorporated by reference to

	Exhibit 10.12 of the Company's Annual Report on Form 10-K (File No. 333-215913) filed with the Commission on February 20, 2020)
10.13	Elk Creek Coal Lease Agreement, dated August 20, 2015, by and between Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.13 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.14	Amendment No. 1 to Elk Creek Coal Lease Agreement, dated December 31, 2015, by and between Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.14 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.15	Amendment No. 2 to Elk Creek Coal Lease Agreement, dated March 31, 2016, by and between Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.15 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.16	Amendment No. 3 to Elk Creek Coal Lease Agreement, dated August 31, 2016, by and between Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.16 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.17	Amendment No. 4 to Elk Creek Coal Lease Agreement, dated January 12, 2017, by and between Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.17 of the Company's Annual Report on Form 10-K (File No. 333-215913) filed with the Commission on February 20, 2020)
10.18	Amendment No. 5 to Elk Creek Coal Lease Agreement, dated September 28, 2018, by and between Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.18 of the Company's Annual Report on Form 10-K (File No. 333-215913) filed with the Commission on February 20, 2020)
10.19	Amendment No. 6 to Elk Creek Coal Lease Agreement, dated December 21, 2018, by and between Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.19 of the Company's Annual Report on Form 10-K (File No. 333-215913) filed with the Commission on February 20, 2020)
10.20	Amendment No. 7 to Elk Creek Coal Lease Agreement, dated February 1, 2019, by and between Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.20 of the Company's Annual Report on Form 10-K (File No. 333-215913) filed with the Commission on February 20, 2020)
10.21	Elk Creek Surface Rights Lease Agreement, dated August 20, 2015, by and between Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.17 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.22	Amendment No. 1 to Elk Creek Surface Rights Lease Agreement, dated December 31, 2015, by and between Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.18 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.23	Amendment No. 2 to Elk Creek Surface Rights Lease Agreement, dated March 31, 2016, by and between Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.19

	of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.24	Amendment No. 3 to Elk Creek Surface Rights Lease Agreement, dated August 31, 2016, by and between Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.20 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.25	Mutual Services Agreement, dated December 22, 2017, by and between Ramaco Development, LLC and Ramaco Coal, LLC (incorporated by reference to Exhibit 10.23 of the Company's Annual Report on Form 10-K (File No. 001-38003) filed with the Commission on March 21, 2018)
10.26	NRP Sublease Agreement, dated August 19, 2015, by and between Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.24 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.27	Amendment No. 1 to NRP Sublease Agreement, dated August 31, 2016, by and between Ramaco Central Appalachia, LLC and Ramaco Resources, LLC (incorporated by reference to Exhibit 10.25 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.28	Amended and Restated Lease Agreement, dated August 20, 2015, by and among Ramaco Northern Appalachia, LLC, RAM Farms, LLC, RAM Mining, LLC and RAMACO Mining, LLC (incorporated by reference to Exhibit 10.26 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.29	Amendment No. 1 to Amended and Restated Lease Agreement, dated December 31, 2015, by and among Ramaco Northern Appalachia, LLC, RAM Farms, LLC and RAM Mining, LLC (incorporated by reference to Exhibit 10.27 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.30	Amendment No. 2 to Amended and Restated Lease Agreement, dated March 31, 2016, by and among Ramaco Northern Appalachia, LLC, RAM Farms, LLC and RAM Mining, LLC (incorporated by reference to Exhibit 10.28 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
10.31	Amendment No. 3 to Amended and Restated Lease Agreement, dated August 31, 2016, by and among Ramaco Northern Appalachia, LLC, RAM Farms, LLC and RAM Mining, LLC (incorporated by reference to Exhibit 10.29 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
†10.32	Ramaco Development, LLC 2016 Membership Unit Option Plan (incorporated by reference to Exhibit 10.30 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
†10.33	Form of Ramaco Resources, Inc. Stock Option Notice and Agreement (incorporated by reference to Exhibit 10.31 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)
†10.34	Form of Amendment to Option Agreement (incorporated by reference to Exhibit 10.32 of the Company's Registration Statement on Form S-1 (File No. 333-215363) filed with the Commission on December 29, 2016)

†10.35	Indemnification Agreement (Randall Atkins) (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on February 14, 2017)
†10.36	Indemnification Agreement (Michael Bauersachs) (incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on February 14, 2017)
†10.37	Indemnification Agreement (Mark Clemens) (incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on February 14, 2017)
†10.38	Indemnification Agreement (Patrick C. Graney) (incorporated by reference to Exhibit 10.4 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on February 14, 2017)
†10.39	Indemnification Agreement (W. Howard Keenan, Jr.) (incorporated by reference to Exhibit 10.5 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on February 14, 2017)
†10.40	Indemnification Agreement (Trent Kososki) (incorporated by reference to Exhibit 10.6 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on February 14, 2017)
†10.41	Indemnification Agreement (Bryan H. Lawrence) (incorporated by reference to Exhibit 10.7 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on February 14, 2017)
†10.42	Indemnification Agreement (Tyler Reeder) (incorporated by reference to Exhibit 10.8 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on February 14, 2017)
†10.43	Indemnification Agreement (Marc Solochek) (incorporated by reference to Exhibit 10.9 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on February 14, 2017)
†10.44	Indemnification Agreement (Richard M. Whiting) (incorporated by reference to Exhibit 10.10 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on February 14, 2017)
†10.45	Indemnification Agreement (Michael Windisch) (incorporated by reference to Exhibit 10.11 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on February 14, 2017)
†10.46	Indemnification Agreement (Bruce E. Cryder) (incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on July 5, 2017)
†10.47	Indemnification Agreement (Christopher L. Blanchard) (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on December 29, 2017)
†10.48	Indemnification Agreement (Peter Leidel) (incorporated by reference to Exhibit 10.48 of the Company's Annual Report on Form 10-K (File No. 001 38003) filed with the Commission on February 20, 2020)
†10.49	Indemnification Agreement (Trent Kososki) (incorporated by reference to Exhibit 10.49 of the Company's Annual Report on Form 10-K (File No. 001 38003) filed with the Commission on February 20, 2020)
†10.50	Indemnification Agreement (C. Lynch Christian, III) (incorporated by reference to Exhibit 10.50 of the Company's Annual Report on Form 10-K (File No. 001 38003) filed with the Commission on February 20, 2020)

*†10.51	Indemnification Agreement (Mahmud Riffat)
*†10.52	Indemnification Agreement (David E. K. Frischkorn, Jr.)
*†10.53	Indemnification Agreement (E. Forrest Jones, Jr.)
†10.54	Form of Restricted Stock Agreement (incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on April 21, 2020)
†10.55	Amendment to Restricted Stock Award Agreements, dated December 10, 2019, between the Company and Randall W. Atkins (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on December 13, 2019)
†10.56	Amendment to Restricted Stock Award Agreements, dated December 10, 2019, between the Company and Michael D. Bauersachs (incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on December 13, 2019)
†10.57	Amendment to Restricted Stock Award Agreements, dated December 10, 2019, between the Company and Christopher L. Blanchard (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K/A (File No. 001-38003) filed with the Commission on December 16, 2019)
†10.58	Amendment to Restricted Stock Award Agreements, dated December 10, 2019, between the Company and Jeremy R. Sussman (incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K/A (File No. 001-38003) filed with the Commission on December 16, 2019)
10.59	Credit and Security Agreement, dated November 2, 2018, by and among: (i) Keybank National Association, as administrative agent, collateral agent, lender and issuer; (ii) such other lenders that are now or hereafter become a party thereto; and (iii) the Company, Ramaco Development, LLC, RAM Mining, LLC, Ramaco Coal Sales, LLC, Ramaco Resources, LLC and Ramaco Resources Land Holdings, LLC, as borrower (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on November 2, 2018)
10.60	First Amendment to Credit and Security Agreement, dated as of February 20, 2020, by and among Ramaco Resources, Inc., Ramaco Development, LLC, RAM Mining, LLC, Ramaco Coal Sales, LLC, Ramaco Resources, LLC and Ramaco Resources Land Holdings, LLC, as borrowers, the lenders party thereto and KeyBank National Association as administrative agent, collateral agent, a lender and issuing bank (incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on April 21, 2020)
10.61	Credit and Security Agreement, dated November 22, 2019, by and among: (i) Key Equipment Finance, a division of Keybank National Association, as administrative agent, collateral agent, lender and issuer; (ii) such other lenders that are now or hereafter become a party thereto; and (iii) the Company, Ramaco Development, LLC, RAM Mining, LLC, Ramaco Coal Sales, LLC, Ramaco Resources, LLC and Ramaco Resources Land Holdings, LLC, as borrower (incorporated by reference to Exhibit 10.57 of the Company's Annual Report on Form 10-K (File No. 001-38003) filed with the Commission on February 20, 2020)

10.62	Promissory Note dated April 20, 2020 by Ramaco Resources, Inc., Ramaco Development, LLC, RAM Mining, LLC, Ramaco Coal Sales, LLC, Ramaco Resources, LLC and Ramaco Resources Land Holdings, LLC, as borrowers, and Key Equipment Finance, a Division of KeyBank National Association, as lender (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on April 21, 2020)
10.63	Promissory Note dated April 16, 2020 by Ramaco Resources, Inc. in favor of KeyBank National Association (incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on April 21, 2020)
10.64	Ramaco Resources, Inc. Change in Control and Severance Plan, effective as of April 27, 2020 (incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K (File No. 001-38003) filed with the Commission on April 28, 2020)
*10.65	Separation and Consulting Agreement, dated December 31, 2020, by and between Ramaco Resources, Inc. and Michael D. Bauersachs
*21.1	Subsidiaries of Ramaco Resources, Inc.
*23.1	Consent of Briggs & Veselka Co.
*23.2	Consent of Weir International, Inc.
*23.3	Consent of True Line, Inc.
*31.1	Certification of Chief Executive Officer pursuant to Section 302 of Sarbanes-Oxley Act of 2002
*31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
*32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
*32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
*95.1	Mine Safety Disclosure
*101	Interactive Data File (Form 10-K for the year ended December 31, 2020 filed in XBRL). The financial information contained in the XBRL-related documents is "unaudited" and "unreviewed."

* Exhibit filed herewith.
† Management contract or compensatory plan or agreement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

February 18, 2021

By: /s/ Randall W. Atkins
Randall W. Atkins
Chairman, Chief Executive Officer and Director
(Principal Executive Officer)

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.

February 18, 2021

By: /s/ Randall W. Atkins
Randall W. Atkins
Chairman, Chief Executive Officer and Director
(Principal Executive Officer)

February 18, 2021

By: /s/ Jeremy R. Sussman
Jeremy R. Sussman
Chief Financial Officer
(Principal Financial Officer)

February 18, 2021

By: /s/ John C. Marcum
John C. Marcum
Chief Accounting Officer
(Principal Accounting Officer)

February 18, 2021

By: /s/ Bryan H. Lawrence
Bryan H. Lawrence
Director

February 18, 2021

By: /s/ Richard M. Whiting
Richard M. Whiting
Director

February 18, 2021

By: /s/ Patrick C. Graney, III
Patrick C. Graney, III
Director

February 18, 2021

By: /s/ Jennifer Gray
Jennifer Gray
Director

February 18, 2021

By: /s/ Bruce E. Cryder
Bruce E. Cryder
Director

February 18, 2021	By: /s/ C. Lynch Christian III C. Lynch Christian III Director
February 18, 2021	By: /s/ Peter Leidel Peter Leidel Director
February 18, 2021	By: /s/ Mahmud Riffat Mahmud Riffat Director
February 18, 2021	By: /s/ David E. K. Frischkorn, Jr. David E. K. Frischkorn, Jr. Director
February 18, 2021	By: /s/ E. Forrest Jones, Jr. E. Forrest Jones, Jr. Director

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

Ramaco Resources, Inc. (the "Company" or "Ramaco") has one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended: common stock, par value $0.01 per share (the "common stock"). The following contains a description of our Common Stock, as well as certain related additional information. This description is a summary only and does not purport to be complete and is subject to and qualified by reference to the provisions of applicable law, the Company's Amended and Restated Certificate of Incorporation, as amended (the "Certificate"), and the Company's Amended and Restated Bylaws (the "Bylaws," and together with the Certificate, the "Charter Documents"), each of which is incorporated by reference as an exhibit to the Company's Annual Report on Form 10-K. For additional information, please read the Company's Charter Documents and the applicable provisions of the Delaware General Corporation Law (the "DGCL"). References to "we," "our" and "us" refer to the Company, unless the context otherwise requires. References to "stockholders" refer to holders of our common stock, unless the context otherwise requires.

General

Pursuant to the Certificate, we are authorized to issue 310,000,000 shares of capital stock, consisting of 260,000,000 shares of common stock and 50,000,000 shares of preferred stock, par value $0.01 per share (the "preferred stock"). There are no issued and outstanding shares of preferred stock.

Common Stock

Voting Rights

Holders of shares of common stock are entitled to one vote per share held of record on all matters to be voted upon by the stockholders. The holders of common stock do not have cumulative voting rights in the election of directors.

Dividend Rights

Holders of shares of our common stock are entitled to ratably receive dividends when and if declared by our board of directors out of funds legally available for that purpose, subject to any statutory or contractual restrictions on the payment of dividends and to any prior rights and preferences that may be applicable to any outstanding preferred stock. Any determination to declare a regular or special dividend, as well as the amount of any dividend that may be declared, will be based on the board of director's consideration of our financial position, earnings, earnings outlook, capital spending plans, outlook on current and future market conditions, alternative stockholder return methods such as share repurchases, and other factors that the board of directors considers relevant at that time.

Liquidation Rights

Upon our liquidation, dissolution, distribution of assets or other winding up, the holders of common stock are entitled to receive ratably the assets available for distribution to the stockholders after payment of liabilities and the liquidation preference of any of our outstanding shares of preferred stock.

Other Matters

The shares of common stock have no preemptive or conversion rights and are not subject to further calls or assessment by us. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of our common stock are fully paid and non-assessable.

Listing

Our common stock is traded on the NASDAQ Global Select Market under the symbol "METC."

Anti-Takeover Effects of Provisions of Our Certificate, Bylaws and Delaware Law

Some provisions of Delaware law, and our Charter Documents described below, contain provisions that could make the following transactions more difficult: acquisitions of us by means of a tender offer, a proxy contest or otherwise; or removal of our incumbent officers and directors. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions that might result in a premium over the market price for our shares.

These provisions, summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with us. We believe that the benefits of increased protection and our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because, among other things, negotiation of these proposals could result in an improvement of their terms.

Delaware Law

We will not be subject to the provisions of Section 203 of the DGCL, regulating corporate takeovers for so long as Yorktown Energy Partners IX, L.P., Yorktown Energy Partners X, L.P and Yorktown Energy Partners XI, L.P. (collectively, "Yorktown") and Energy Capital Partners Mezzanine Opportunities Fund, L.P., Energy Capital Partners Mezzanine Opportunities Fund A, LP and ECP Mezzanine B (Ramaco IP), LP (collectively, "ECP") and their respective affiliates own in the aggregate more than 15% of our outstanding common stock. In general, those provisions prohibit a Delaware corporation, including those whose securities are listed for trading on the NASDAQ, from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder, unless:

- the transaction is approved by the board of directors before the date the interested stockholder attained that status;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced; or
- on or after such time the business combination is approved by the board of directors and authorized at a meeting of stockholders by at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

Amended and Restated Certificate of Incorporation and Bylaws

Provisions of our Charter Documents may delay or discourage transactions involving an actual or potential change in control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our common stock.

Among other things, the Charter Documents:

- establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the annual meeting for the preceding year.

The Bylaws specify the requirements as to form and content of all stockholders' notices. These requirements may preclude stockholders from bringing matters before the stockholders at an annual or special meeting;

- provide that all vacancies, including newly created directorships, may, except as otherwise required by law or, if applicable, the rights of holders of a series of preferred stock, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;

- provide our board of directors the ability to authorize undesignated preferred stock. This ability makes it possible for our board of directors to issue, without stockholder approval, preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of the Company;

- as long as Yorktown and ECP and their respective affiliates own or control the voting of more than 50% of the outstanding shares of our common stock:

    - provide that Yorktown and ECP, collectively, may designate up to seven directors depending on their percent ownership of our common stock;

    - provide that the authorized number of directors may be changed only by the affirmative vote of holders of not less than 50% in voting power of the then-outstanding shares of stock entitled to vote thereon;

    - provide that any action required or permitted to be taken at any annual meeting or special meeting of the stockholders of the Company may be taken by written consent;

    - provide that our Charter Documents may be amended by the affirmative vote of the holders of at least 50% of our then outstanding common stock;

    - provide that special meetings of our stockholders may be called by the board of directors or our secretary at the request of the holders of a majority of our common stock; and

    - provide that we renounce any interest in existing and future investments in other entities by, or the business opportunities of, Yorktown or ECP or any of their officers, directors, agents, stockholders, members, partners, affiliates and subsidiaries (other than our directors that are presented business opportunities in their capacity as our directors) and that they have no obligation to offer us those investments or opportunities; and

    - provide that the Bylaws can be amended only with the approval of a majority of the board of directors and the affirmative vote of holders of not less than 50% in voting power of the then-outstanding shares of stock entitled to vote thereon.

- at any time after Yorktown and ECP and their respective affiliates no longer own or control the voting of more than 50% of the outstanding shares of our common stock:

    - provide that the authorized number of directors may be changed only by resolution of the board of directors;

    - provide that any action required or permitted to be taken by the stockholders must be effected at a duly called annual or special meeting of stockholders and may not be effected by any consent in writing in lieu of a meeting of such stockholders, subject to the rights of the holders of any series of preferred stock with respect to such series;

- provide that our Charter Documents may be amended by the affirmative vote of the holders of at least two-thirds of our then outstanding common stock;

- provide that special meetings of our stockholders may only be called by the board of directors;

- provide, after Yorktown no longer beneficially owns or controls a majority of our outstanding voting interests, for our board of directors to be divided into three classes of directors, with each class as nearly equal in number as possible, serving staggered three-year terms, other than directors which may be elected by holders of preferred stock, if any. This system of electing and removing directors may tend to discourage a third party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors;

- provide that we renounce any interest in existing and future investments in other entities by, or the business opportunities of, Yorktown or ECP or any of their officers, directors, agents, stockholders, members, partners, affiliates and subsidiaries (other than our directors that are presented business opportunities in their capacity as our directors) and that they have no obligation to offer us those investments or opportunities; and

- provide that the Bylaws can be amended by the board of directors.

Forum Selection

Our Certificate provides that unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will, to the fullest extent permitted by applicable law, be the sole and exclusive forum for:

- any derivative action or proceeding brought on our behalf;

- any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, employees or agents to us or our stockholders;

- any action asserting a claim against us or any director or officer or other employee of ours arising pursuant to any provision of the DGCL, our Certificate or our Bylaws; or

- any action asserting a claim against us or any director or officer or other employee of ours that is governed by the internal affairs doctrine, in each such case subject to such Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein.

Our Certificate also provides that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of, and to have consented to, this forum selection provision. Although we believe these provisions will benefit us by providing increased consistency in the application of Delaware law for the specified types of actions and proceedings, the provisions may have the effect of discouraging lawsuits against our directors, officers, employees and agents. The enforceability of similar exclusive forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that, in connection with one or more actions or proceedings described above, a court could rule that this provision in our Certificate is inapplicable or unenforceable. This exclusive forum provision does not apply to a cause of action brought under federal or state securities laws.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC.

INDEMNIFICATION AGREEMENT

This Indemnification Agreement ("Agreement") is made effective as of December 10, 2020, by and between Ramaco Resources, Inc., a Delaware corporation (the "Corporation"), and Mahmud Riffat ("Indemnitee").

RECITALS:

WHEREAS, directors, officers and other persons in service to corporations or business enterprises are subjected to expensive and time-consuming litigation relating to, among other things, matters that traditionally would have been brought only against the Corporation or business enterprise itself;

WHEREAS, highly competent persons have become more reluctant to serve as directors, officers or in other capacities unless they are provided with adequate protection through insurance and adequate indemnification against inordinate risks of claims and actions against them arising out of their service to and activities on behalf of the corporation;

WHEREAS, the Board of Directors of the Corporation (the "Board") has determined that the increased difficulty in attracting and retaining such persons is detrimental to the best interests of the Corporation and its stockholders and that the Corporation should act to assure such persons that there will be increased certainty of such protection in the future;

WHEREAS, (i) the Amended and Restated Bylaws of the Corporation (as may be amended, the "Bylaws") require indemnification of the officers and directors of the Corporation, (ii) Indemnitee may also be entitled to indemnification pursuant to the General Corporation Law of the State of Delaware ("DGCL") and (iii) the Bylaws and the DGCL expressly provide that the indemnification provisions set forth therein are not exclusive and thereby contemplate that contracts may be entered into between the Corporation and members of the Board, officers and other persons with respect to indemnification;

WHEREAS, this Agreement is a supplement to and in furtherance of the Bylaws and the Amended and Restated Certificate of Incorporation of the Corporation (as may be amended, the "Certificate of Incorporation") and any resolutions adopted pursuant thereto, and shall not be deemed a substitute therefore, nor to diminish or abrogate any rights of Indemnitee thereunder; and

WHEREAS, (i) Indemnitee does not regard the protection available under the Bylaws and insurance as adequate in the present circumstances, (ii) Indemnitee may not be willing to serve or continue to serve as a director or officer of the Corporation without adequate protection, (iii) the Corporation desires Indemnitee to serve in such capacity, and (iv) Indemnitee is willing to serve, continue to serve and to take on additional service for or on behalf of the Corporation on the condition that he be so indemnified.

AGREEMENT:

NOW, THEREFORE, in consideration of the premises and the covenants contained herein, the Corporation and Indemnitee do hereby covenant and agree as follows:

Section 1 (a) As used in this Agreement:

"Affiliate" of any specified Person shall mean any other Person controlling, controlled by or under common control with such specified Person.

"Corporate Status" describes the status of a person who is or was a director, officer, employee or agent of (i) the Corporation or (ii) any other corporation, limited liability company, partnership or joint venture, trust, employee benefit plan or other enterprise which such person is or was serving at the request of the Corporation.

"Disinterested Director" shall mean a director of the Corporation who is not and was not a party to the Proceeding in respect of which indemnification is sought by Indemnitee.

"Enterprise" shall mean the Corporation and any other corporation, limited liability company, partnership, joint venture, trust, employee benefit plan or other enterprise of which Indemnitee is or was serving at the request of the Corporation as a director, officer, employee, agent or fiduciary.

"Exchange Act" shall mean the Securities Exchange Act of 1934, as amended.

"Expenses" shall mean all reasonable costs, expenses, fees and charges, including, without limitation, attorneys' fees, document and e-discovery costs, litigation expenses, retainers, court costs, transcript costs, fees of experts, witness fees, travel expenses, duplicating costs, printing and binding costs, telephone charges, postage, delivery service fees, and all other disbursements or expenses of the types customarily incurred in connection with prosecuting, defending, preparing to prosecute or defend, investigating, being or preparing to be a witness in, or otherwise participating in, a Proceeding. Expenses also shall include, without limitation, (i) expenses incurred in connection with any appeal resulting from, incurred by Indemnitee in connection with, arising out of, or in respect of or relating to, any Proceeding, including, without limitation, the premium, security for, and other costs relating to any cost bond, supersedes bond, or other appeal bond or its equivalent, (ii) for purposes of Section 12(d) hereof only, expenses incurred by Indemnitee in connection with the interpretation, enforcement or defense of Indemnitee's rights under this Agreement, by litigation or otherwise, (iii) any federal, state, local or foreign taxes imposed on Indemnitee as a result of the actual or deemed receipt of any payments under this Agreement, and (iv) any interest, assessments or other charges in respect of the foregoing. "Expenses" shall not include "Liabilities."

"Indemnity Obligations" shall mean all obligations of the Corporation to Indemnitee under this Agreement, including the Corporation's obligations to provide indemnification to Indemnitee and advance Expenses to Indemnitee under this Agreement.

"Independent Counsel" shall mean a law firm of fifty (50) or more attorneys, or a member of a law firm of fifty (50) or more attorneys, that is experienced in matters of corporation law and neither presently is, nor in the past five (5) years has been, retained to represent: (i) the Corporation or Indemnitee in any matter material to either such party (other than with respect to matters concerning Indemnitee under this Agreement, or of other indemnitees under similar indemnification agreements), or (ii) any other party to the Proceeding giving rise to a claim for indemnification hereunder; provided, however, that the term "Independent Counsel" shall not include any person who, under the applicable standards of professional conduct then prevailing, would have a conflict of interest in representing either the Corporation or Indemnitee in an action to determine Indemnitee's rights under this Agreement.

"Liabilities" shall mean all claims, liabilities, damages, losses, judgments, orders, fines, penalties and other amounts payable in connection with, arising out of, or in respect of or relating to any Proceeding, including, without limitation, amounts paid in settlement in any Proceeding and all costs and expenses in complying with any judgment, order or decree issued or entered in connection with any Proceeding or any settlement agreement, stipulation or consent decree entered into or issued in settlement of any Proceeding.

"Person" shall mean any individual, corporation, partnership, limited partnership, limited liability company, trust, governmental agency or body or any other legal entity.

"Proceeding" shall mean any threatened, pending or completed action, claim, suit, arbitration, alternate dispute resolution mechanism, formal or informal hearing, inquiry or investigation, litigation, inquiry, administrative hearing or any other actual, threatened or completed judicial, administrative or arbitration proceeding (including, without limitation, any such proceeding under the Securities Act of 1933, as amended, or the Exchange Act or any other federal law, state law, statute or regulation), whether brought in the right of the Corporation or otherwise, and whether of a civil, criminal, administrative or investigative nature, in each case, in which Indemnitee was, is or will be, or is threatened to be, involved as a party, witness or otherwise by reason of the fact that Indemnitee is or was a director or officer of the Corporation, by reason of any actual or alleged action taken by Indemnitee or of any action on Indemnitee's part while acting as director or officer of the Corporation, or by reason of the fact that he is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, limited liability company, partnership, joint venture, trust or other enterprise, in each case whether or not serving in such capacity at the time any liability or expense is incurred for which indemnification, reimbursement, or advancement can be provided under this Agreement

(b) For the purpose hereof, references to "fines" shall include any excise tax assessed with respect to any employee benefit plan; references to "serving at the request of the Corporation" shall include any service as a director, officer, employee or agent of the Corporation which imposes duties on, or involves services by, such director, officer, employee or agent with respect to an employee benefit plan, its participants or beneficiaries; and a Person who acted in good faith and in a manner he reasonably believed to be in the best interests of the participants and beneficiaries of

an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation" as referred to in this Agreement.

Section 2 Indemnity in Third-Party Proceedings. The Corporation shall indemnify and hold harmless Indemnitee, to the fullest extent permitted by applicable law, from and against all Liabilities and Expenses suffered or reasonably incurred (and, in the case of retainers, reasonably expected to be incurred) by Indemnitee or on Indemnitee's behalf in connection with any Proceeding (other than any Proceeding brought by or in the right of the Corporation to procure a judgment in its favor), or any claim, issue or matter therein.

Section 3 Indemnity in Proceedings by or in the Right of the Corporation. The Corporation shall indemnify and hold harmless Indemnitee, to the fullest extent permitted by applicable law, from and against all Liabilities and Expenses suffered or incurred by Indemnitee or on Indemnitee's behalf in connection with any Proceeding brought by or in the right of the Corporation to procure a judgment in its favor, or any claim, issue or matter therein. No indemnification for Liabilities and Expenses shall be made under this Section 3 in respect of any claim, issue or matter as to which Indemnitee shall have been finally adjudged by a court to be liable to the Corporation, unless and only to the extent that the Delaware Court of Chancery or any court in which the Proceeding was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, Indemnitee is fairly and reasonably entitled to such indemnification.

Section 4 Indemnification for Expenses of a Party Who is Wholly or Partly Successful. Notwithstanding any other provisions of this Agreement, and without limiting the rights of Indemnitee under any other provision hereof, including any rights to indemnification pursuant to Sections 2 or 3 hereof, to the fullest extent permitted by applicable law, to the extent that Indemnitee is successful, on the merits or otherwise, in any Proceeding or in defense of any claim, issue or matter therein, in whole or in part, the Corporation shall indemnify Indemnitee against all Expenses actually and reasonably incurred by Indemnitee or on Indemnitee's behalf in connection with each successfully resolved Proceeding, claim, issue or matter. For purposes of this Section 4 and without limitation, the termination of any Proceeding or claim, issue or matter in such a Proceeding by dismissal, with or without prejudice, shall be deemed to be a successful result as to such claim, issue or matter.

Section 5 Indemnification For Expenses of a Witness. Notwithstanding any other provision of this Agreement, to the fullest extent permitted by applicable law and to the extent that Indemnitee is, by reason of Indemnitee's Corporate Status, a witness, or is made (or asked) to respond to discovery requests or a subpoena or similar demand for documents or testimony, in any Proceeding to which Indemnitee is not a party, Indemnitee shall be indemnified against all Expenses suffered or incurred (or, in the case of retainers, reasonably expected to be incurred) by Indemnitee or on Indemnitee's behalf in connection therewith.

Section 6 Additional Indemnification. Notwithstanding any limitation in Sections 2, 3 or 4 hereof, the Corporation shall indemnify Indemnitee to the fullest extent permitted by applicable law if Indemnitee is a party to or threatened to be made a party to any Proceeding (including a Proceeding by or in the right of the Corporation to procure a judgment in its favor) against all Liabilities and Expenses suffered or reasonably incurred by Indemnitee in connection with such Proceeding, including but not limited to:

(a) the fullest extent permitted by the provision of the DGCL that authorizes or contemplates additional indemnification by agreement, or the corresponding provision of any amendment to or replacement of the DGCL; and

(b) the fullest extent authorized or permitted by any amendments to or replacements of the DGCL adopted after the date of this Agreement that increase the extent to which a corporation may indemnify its officers and directors.

Section 7 Exclusions. Notwithstanding any provision in this Agreement, the Corporation shall not be obligated under this Agreement to indemnify or hold harmless Indemnitee:

(a) for which payment has actually been made to or on behalf of Indemnitee under any insurance policy obtained by the Corporation except with respect to any excess beyond the amount paid under such insurance policy;

(b) for an accounting of profits made from the purchase and sale (or sale and purchase) by Indemnitee of securities of the Corporation within the meaning of Section 16(b) of the Exchange Act or similar provisions of state statutory law or common law;

(c) for any reimbursement of the Corporation by Indemnitee of any bonus or other incentive-based or equity-based compensation or of any profits realized by Indemnitee from the sale of securities of the Corporation, as required in each case under the Exchange Act (including any such reimbursements that arise from an accounting restatement of the Corporation pursuant to Section 304 of the Sarbanes-Oxley Act of 2002 (the "***Sarbanes-Oxley Act***"), or the payment to the Corporation of profits arising from the purchase and sale by Indemnitee of securities in violation of Section 306 of the Sarbanes-Oxley Act), if Indemnitee is held liable therefor (including pursuant to any settlement arrangements) or in respect of claw-back provisions promulgated under the rules and regulations of the Securities and Exchange Commission pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act; or

(d) except as provided in Section 12(d) of this Agreement, in connection with any Proceeding (or any part of any Proceeding) initiated by Indemnitee, including any Proceeding (or any part of any Proceeding) initiated by Indemnitee against the Corporation or its directors, officers, employees or other indemnitees, unless (i) the Board authorized the Proceeding (or any part of any Proceeding) prior to its initiation or (ii) the Corporation provides the indemnification, in its sole discretion, pursuant to the powers vested in the Corporation under applicable law; or

(e) if a final decision by a court having jurisdiction in the matter shall determine that such indemnification is not lawful.

Section 8 Advancement. In accordance with the pre-existing requirements of the Bylaws, and notwithstanding any provision of this Agreement to the contrary, the Corporation shall advance, to the extent not prohibited by applicable law, the Expenses reasonably incurred by Indemnitee in connection with any Proceeding, and such advancement shall be made within ten (10) days after the receipt by the Corporation of a statement or statements requesting such advances from time to time, whether prior to or after final disposition of any Proceeding. Advances shall be unsecured and interest free. Advances shall be made without regard to Indemnitee's ability to repay the Expenses and without regard to Indemnitee's ultimate entitlement to indemnification under the other provisions of this Agreement. Advances shall include any and all Expenses reasonably incurred pursuing an action to enforce this right of advancement, including Expenses incurred preparing and forwarding statements to the Corporation to support the advances claimed. Indemnitee shall qualify for advances upon the execution and delivery to the Corporation of this Agreement, which shall constitute an undertaking providing that Indemnitee undertakes to repay the amounts advanced to the extent that it is ultimately determined that Indemnitee is not entitled to be indemnified by the Corporation. This Section 8 shall not apply to any claim made by Indemnitee for which indemnity is excluded pursuant to Section 7 hereof.

Section 9 Procedure for Notification and Defense of Claim.

(a) Indemnitee shall promptly notify the Corporation in writing of any Proceeding with respect to which Indemnitee intends to seek indemnification or advancement hereunder following the receipt by Indemnitee of written notice thereof. The written notification to the Corporation shall include a description of the nature of the Proceeding and the facts underlying the Proceeding. To obtain indemnification under this Agreement, Indemnitee shall submit to the Corporation a written request, including therein or therewith such documentation and information as is reasonably available to Indemnitee and is reasonably necessary to determine whether and to what extent Indemnitee is entitled to indemnification following the final disposition of such Proceeding. Any delay or failure by Indemnitee to notify the Corporation hereunder will not relieve the Corporation from any liability which it may have to Indemnitee hereunder or otherwise than under this Agreement, and any delay or failure in so notifying the Corporation shall not constitute a waiver by Indemnitee of any rights under this Agreement. The Secretary of the Corporation shall, promptly upon receipt of such a request for indemnification, advise the Board in writing that Indemnitee has requested indemnification.

(b) In the event Indemnitee is entitled to indemnification and/or advancement with respect to any Proceeding, Indemnitee may, at Indemnitee's option, (i) retain counsel selected by Indemnitee and approved by the Corporation to defend Indemnitee in such Proceeding, at the sole expense of the Corporation (which approval shall not be unreasonably withheld, conditioned or delayed), or (ii) have the Corporation assume the defense of Indemnitee in such Proceeding, in which case the Corporation shall assume the defense of such Proceeding with counsel selected by the

Corporation and approved by Indemnitee (which approval shall not be unreasonably withheld, conditioned or delayed) within ten (10) days of the Corporation's receipt of written notice of Indemnitee's election to cause the Corporation to do so. If the Corporation is required to assume the defense of any such Proceeding, it shall engage legal counsel for such defense, and the Corporation shall be solely responsible for all fees and expenses of such legal counsel and otherwise of such defense. Such legal counsel may represent both Indemnitee and the Corporation (and any other party or parties entitled to be indemnified by the Corporation with respect to such matter) unless, in the reasonable opinion of legal counsel to Indemnitee, there is a conflict of interest between Indemnitee and the Corporation (or any other such party or parties) or there are legal defenses available to Indemnitee that are not available to the Corporation (or any such other party or parties). Notwithstanding either party's assumption of responsibility for defense of a Proceeding, each party shall have the right to engage separate counsel at its own expense. The party having responsibility for defense of a Proceeding shall provide the other party and its counsel with all copies of pleadings and material correspondence relating to the Proceeding. Indemnitee and the Corporation shall reasonably cooperate in the defense of any Proceeding with respect to which indemnification is sought hereunder, regardless of whether the Corporation or Indemnitee assumes the defense thereof. Indemnitee may not settle or compromise any Proceeding without the prior written consent of the Corporation, which consent shall not be unreasonably withheld, conditioned or delayed. The Corporation may not settle or compromise any Proceeding without the prior written consent of Indemnitee.

Section 10 Procedure Upon Application for Indemnification.

(a) Upon written request by Indemnitee for indemnification pursuant to Section 9(a) hereof, if any determination by the Corporation is required by applicable law with respect to Indemnitee's entitlement thereto, such determination shall be made (i) if Indemnitee shall request such determination be made by Independent Counsel, by Independent Counsel, and (ii) in all other circumstances, (A) by a majority vote of the Disinterested Directors, even though less than a quorum of the Board, (B) by a committee of Disinterested Directors designated by a majority vote of the Disinterested Directors, even though less than a quorum of the Board, (C) if there are no such Disinterested Directors or, if such Disinterested Directors so direct, by Independent Counsel in a written opinion to the Board, a copy of which shall be delivered to Indemnitee, or (D) if so directed by the Board, by the stockholders of the Corporation; and, if it is so determined that Indemnitee is entitled to indemnification, payment to Indemnitee shall be made within ten (10) days after such determination. Indemnitee shall cooperate with the person, persons or entity making such determination with respect to Indemnitee's entitlement to indemnification, including providing to such person, persons or entity upon reasonable advance request any documentation or information which is not privileged or otherwise protected from disclosure and which is reasonably available to Indemnitee and reasonably necessary to such determination. Any Expenses incurred by Indemnitee in so cooperating with the person, persons or entity making such determination shall be borne by the Corporation (irrespective of the determination as to Indemnitee's entitlement to indemnification) and the Corporation hereby indemnifies and agrees to hold Indemnitee harmless therefrom. The Corporation will not deny any written request for indemnification hereunder made in good faith by Indemnitee unless a determination as to Indemnitee's entitlement to such indemnification described in this Section 10(a) has been made. The Corporation agrees to pay the reasonable fees and expenses of the Independent Counsel referred to above and to fully indemnify such counsel against any and all Liabilities and Expenses arising out of or relating to this Agreement or its engagement pursuant hereto.

(b) In the event the determination of entitlement to indemnification is to be made by Independent Counsel pursuant to Section 10(a) hereof, (i) the Independent Counsel shall be selected by the Corporation within ten (10) days of the Submission Date (the cost of such Independent Counsel to be paid by the Corporation), (ii) the Corporation shall give written notice to Indemnitee advising it of the identity of the Independent Counsel so selected and (iii) Indemnitee may, within ten (10) days after such written notice of selection shall have been given, deliver to the Corporation Indemnitee's written objection to such selection. Such objection by Indemnitee may be asserted only on the ground that the Independent Counsel selected does not meet the requirements of "Independent Counsel" as defined in this Agreement. If such written objection is made and substantiated, the Independent Counsel selected shall not serve as Independent Counsel unless and until Indemnitee withdraws the objection or a court has determined that such objection is without merit. Absent a timely objection, the person so selected shall act as Independent Counsel. If no Independent Counsel shall have been selected and not objected to before the later of (i) thirty (30) days after the later of submission by Indemnitee of a written request for indemnification pursuant to Section 10(a) hereof (the "Submission Date") and (ii) ten (10) days after the final disposition of the Proceeding, each of the Corporation and Indemnitee shall select a law firm or member of a law firm meeting the qualifications to serve as Independent Counsel,

and such law firms or members of law firms shall select the Independent Counsel. Upon the due commencement of any judicial proceeding or arbitration pursuant to Section 12(a) of this Agreement, Independent Counsel shall be discharged and relieved of any further responsibility in such capacity (subject to the applicable standards of professional conduct then prevailing).

Section 11 Presumptions and Effect of Certain Proceedings.

(a) In making a determination with respect to entitlement to indemnification hereunder, the person, persons or entity making such determination shall, to the fullest extent not prohibited by applicable law, presume that Indemnitee is entitled to indemnification under this Agreement if Indemnitee has submitted a request for indemnification in accordance with Section 9(a) of this Agreement, and the Corporation shall, to the fullest extent not prohibited by applicable law, have the burden of proof to overcome that presumption in connection with the making by any person, persons or entity of any determination contrary to that presumption. Neither the failure of the Corporation (including by its directors or independent legal counsel) to have made a determination prior to the commencement of any action pursuant to this Agreement that indemnification is proper in the circumstances because Indemnitee has met the applicable standard of conduct, nor an actual determination by the Corporation (including by its directors or independent legal counsel) that Indemnitee has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that Indemnitee has not met the applicable standard of conduct.

(b) Subject to Section 12(e) hereof, if the person, persons or entity empowered or selected under Section 10 of this Agreement to determine whether Indemnitee is entitled to indemnification shall not have made a determination within sixty (60) days after receipt by the Corporation of the request therefore, the requisite determination of entitlement to indemnification shall, to the fullest extent not prohibited by applicable law, be deemed to have been made and Indemnitee shall be entitled to such indemnification, absent a prohibition of such indemnification under applicable law; provided, however, that such 60-day period may be extended for a reasonable time, not to exceed an additional thirty (30) days, if (i) the determination is to be made by Independent Counsel and Indemnitee objects to the Corporation's selection of Independent Counsel and (ii) the Independent Counsel ultimately selected requires such additional time for the obtaining or evaluating of documentation or information relating thereto; provided further, however, that such 60-day period may also be extended for a reasonable time, not to exceed an additional sixty (60) days, if the determination of entitlement to indemnification is to be made by the stockholders of the Corporation.

(c) The termination of any Proceeding or of any claim, issue or matter therein, by judgment, order, settlement or conviction, or upon a plea of nolo contendere or its equivalent, shall not (except as otherwise expressly provided in this Agreement) adversely affect the right of Indemnitee to indemnification or create a presumption that Indemnitee did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the Corporation or, with respect to any criminal Proceeding, that Indemnitee had reasonable cause to believe that Indemnitee's conduct was unlawful.

(d) Reliance as Safe Harbor. For purposes of any determination of good faith, Indemnitee shall be deemed to have acted in good faith if Indemnitee's action is based on the records or books of account of the Enterprise, including financial statements, or on information supplied to Indemnitee by the officers of the Enterprise in the course of their duties, or on the advice of legal counsel for the Enterprise or on information or records given or reports made to the Enterprise by an independent certified public accountant or by an appraiser or other expert selected with the reasonable care by the Enterprise. The provisions of this Section 11(d) shall not be deemed to be exclusive or to limit in any way the other circumstances in which Indemnitee may be deemed to have met the applicable standard of conduct set forth in this Agreement.

(e) Actions of Others. The knowledge or actions, or failure to act, of any director, officer, agent or employee of the Enterprise shall not be imputed to Indemnitee for purposes of determining the right to indemnification under this Agreement.

Section 12 Remedies of Indemnitee.

(a) Subject to Section 12(e) hereof, in the event that (i) a determination is made pursuant to Section 10 of this Agreement that Indemnitee is not entitled to indemnification under this Agreement, (ii) advancement is not timely made pursuant to Section 8 of this Agreement, (iii) no determination of entitlement to indemnification shall have been

made pursuant to Section 10(a) of this Agreement within ninety (90) days after receipt by the Corporation of the request for indemnification, (iv) payment of indemnification is not made pursuant to Sections 4 or 5 or the last sentence of Section 10(a) of this Agreement within ten (10) days after receipt by the Corporation of a written request therefor, (v) payment of indemnification pursuant to Sections 2, 3 or 6 of this Agreement is not made within ten (10) days after a determination has been made that Indemnitee is entitled to indemnification, or (vi) in the event that the Corporation or any other Person takes or threatens to take any action to declare this Agreement void or unenforceable, or institutes any litigation or other action or proceeding designed to deny, or to recover from, Indemnitee the benefits provided or intended to be provided to Indemnitee hereunder, Indemnitee shall be entitled to an adjudication by a court of Indemnitee's entitlement to such indemnification or advancement. Alternatively, Indemnitee, at Indemnitee's option, may seek an award in arbitration to be conducted by a single arbitrator pursuant to the Commercial Arbitration Rules of the American Arbitration Association. The Corporation shall not oppose Indemnitee's right to seek any such adjudication or award in arbitration.

(b) In the event that a determination shall have been made pursuant to Section 10(a) of this Agreement that Indemnitee is not entitled to indemnification, any judicial proceeding or arbitration commenced pursuant to this Section 12 shall be conducted in all respects as a de novo trial, or arbitration, on the merits and Indemnitee shall not be prejudiced by reason of that adverse determination. In any judicial proceeding or arbitration commenced pursuant to this Section 12 the Corporation shall have the burden of proving Indemnitee is not entitled to indemnification or advancement, as the case may be.

(c) If a determination shall have been made pursuant to Section 10(a) of this Agreement that Indemnitee is entitled to indemnification, the Corporation shall be bound by such determination in any judicial proceeding or arbitration commenced pursuant to this Section 12, absent a prohibition of such indemnification under applicable law.

(d) The Corporation shall, to the fullest extent not prohibited by applicable law, be precluded from asserting in any judicial proceeding or arbitration commenced pursuant to this Section 12 that the procedures and presumptions of this Agreement are not valid, binding and enforceable and shall stipulate in any such court or before any such arbitrator that the Corporation is bound by all the provisions of this Agreement. It is the intent of the Corporation that Indemnitee not be required to incur Expenses associated with the interpretation, enforcement or defense of Indemnitee's rights under this Agreement by litigation or otherwise because the cost and expense thereof would substantially detract from the benefits intended to be extended to Indemnitee hereunder. The Corporation shall indemnify Indemnitee against any and all such Expenses and, if requested by Indemnitee, shall (within ten (10) days after receipt by the Corporation of a written request therefore) advance, to the extent not prohibited by applicable law, such Expenses to Indemnitee, which are incurred by Indemnitee in connection with any action brought by Indemnitee for indemnification or advancement from the Corporation under this Agreement or under any directors' and officers' liability insurance policies maintained by the Corporation, regardless of whether Indemnitee ultimately is determined to be entitled to such indemnification, advancement or insurance recovery, as the case may be.

(e) Notwithstanding anything in this Agreement to the contrary, no determination as to entitlement to indemnification under this Agreement shall be required to be made prior to the final disposition of the Proceeding; provided that, in absence of any such determination with respect to such Proceeding, the Corporation shall advance Expenses with respect to such Proceeding.

Section 13 Non-Exclusivity; Survival of Rights; Insurance; Subrogation.

(a) The rights of indemnification and to receive advancement as provided by this Agreement shall not be deemed exclusive of any other rights to which Indemnitee may at any time be entitled under applicable law, the Certificate of Incorporation, the Bylaws, any agreement, a vote of stockholders or a resolution of directors, or otherwise. No amendment, alteration or repeal of this Agreement or of any provision hereof shall limit or restrict any right of Indemnitee under this Agreement in respect of any action taken or omitted by such Indemnitee in Indemnitee's Corporate Status prior to such amendment, alteration or repeal. To the extent that a change in Delaware law, whether by statute or judicial decision, permits greater indemnification or advancement than would be afforded currently under the Bylaws or this Agreement, it is the intent of the parties hereto that Indemnitee shall enjoy by this Agreement the greater benefits so afforded by such change. No right or remedy herein conferred is intended to be exclusive of any other right or remedy, and every other right and remedy shall be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment

of any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other right or remedy.

(b) The Corporation hereby acknowledges that Indemnitee may have certain rights to indemnification, advancement and insurance provided by one or more Persons with whom or which Indemnitee may be associated. The Corporation hereby acknowledges and agrees that (i) the Corporation shall be the indemnitor of first resort with respect to any Proceeding, Expense, Liability or matter that is the subject of the Indemnity Obligations, (ii) the Corporation shall be primarily liable for all Indemnity Obligations and any indemnification afforded to Indemnitee in respect of any Proceeding, Expense, Liability or matter that is the subject of Indemnity Obligations, whether created by applicable law, organizational or constituent documents, contract (including this Agreement) or otherwise, (iii) any obligation of any other Persons with whom or which Indemnitee may be associated to indemnify Indemnitee or advance Expenses or Liabilities to Indemnitee in respect of any Proceeding shall be secondary to the obligations of the Corporation hereunder, (iv) the Corporation shall be required to indemnify Indemnitee and advance Expenses or Liabilities to Indemnitee hereunder to the fullest extent provided herein without regard to any rights Indemnitee may have against any other Person with whom or which Indemnitee may be associated or insurer of any such Person and (v) the Corporation irrevocably waives, relinquishes and releases any other Person with whom or which Indemnitee may be associated from any claim of contribution, subrogation or any other recovery of any kind in respect of amounts paid by the Corporation hereunder. In the event any other Person with whom or which Indemnitee may be associated or their insurers advances or extinguishes any liability or loss which is the subject of any Indemnity Obligation owed by the Corporation or payable under any Corporation insurance policy, the payor shall have a right of subrogation against the Corporation or its insurer or insurers for all amounts so paid which would otherwise be payable by the Corporation or its insurer or insurers under this Agreement. In no event will payment of an Indemnity Obligation by any other Person with whom or which Indemnitee may be associated or their insurers affect the obligations of the Corporation hereunder or shift primary liability for any Indemnity Obligation to any other Person with whom or which Indemnitee may be associated. Any indemnification, insurance or advancement provided by any other Person with whom or which Indemnitee may be associated with respect to any Liability arising as a result of Indemnitee's Corporate Status or capacity as an officer or director of any Person is specifically in excess over any Indemnity Obligation of the Corporation or any collectible insurance (including but not limited to any malpractice insurance or professional errors and omissions insurance) provided by the Corporation under this Agreement.

(c) The Corporation shall maintain an insurance policy or policies providing liability insurance providing reasonable and customary coverage as compared with similarly situated companies (as determined by the Board in its reasonable discretion) for directors, officers, employees, or agents of the Corporation or of any other Enterprise, and Indemnitee shall be covered by such policy or policies in accordance with its or their terms to the maximum extent of the coverage available for any such director, officer, employee or agent under such policy or policies and such policies shall provide for and recognize that the insurance policies are primary to any rights to indemnification, advancement or insurance proceeds to which Indemnitee may be entitled from one or more Persons with whom or which Indemnitee may be associated to the same extent as the Corporation's indemnification and advancement obligations set forth in this Agreement. If, at the time of the receipt of a notice of a claim pursuant to the terms hereof, the Corporation has director and officer liability insurance in effect, the Corporation shall give prompt notice of the commencement of such Proceeding to the insurers in accordance with the procedures set forth in the respective policies. The Corporation shall thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of Indemnitee, all amounts payable as a result of such Proceeding in accordance with the terms of such policies.

(d) In the event of any payment under this Agreement, the Corporation shall not be subrogated to the rights of recovery of Indemnitee, including rights of indemnification provided to Indemnitee from any other person or entity with whom Indemnitee may be associated; provided, however, that the Corporation shall be subrogated to the extent of any such payment of all rights of recovery of Indemnitee under insurance policies of the Corporation or any of its subsidiaries.

(e) The indemnification and contribution provided for in this Agreement will remain in full force and effect regardless of any investigation made by or on behalf of Indemnitee.

Section 14 Duration of Agreement; Not Employment Contract. This Agreement shall continue until and terminate upon the latest of: (i) ten (10) years after the date that Indemnitee shall have ceased to serve as a director, officer, employee or agent of the Corporation or any other Enterprise, (ii) the date of final termination of any Proceeding then pending in respect of which Indemnitee is granted rights of indemnification or advancement hereunder and of any

proceeding commenced by Indemnitee pursuant to Section 12 of this Agreement relating thereto or (iii) the expiration of all statutes of limitation applicable to possible Proceedings to which Indemnitee may be subject arising out of the Indemnitee's Corporate Status. The indemnification provided under this Agreement shall continue as to the Indemnitee even though he or she may have ceased to be a director of the Corporation or of any the Corporation's direct or indirect subsidiaries or to have Corporate Status. This Agreement shall be binding upon the Corporation and its successors and assigns and shall inure to the benefit of Indemnitee and Indemnitee's heirs, executors and administrators. This Agreement shall not be deemed an employment contract between the Corporation (or any of its subsidiaries or any other Enterprise) and Indemnitee. Indemnitee specifically acknowledges that Indemnitee's employment with the Corporation (or any of its subsidiaries or any other Enterprise), if any, is at will, and Indemnitee may be discharged at any time for any reason, with or without cause, except as may be otherwise provided in any written employment contract between Indemnitee and the Corporation (or any of its subsidiaries or any other Enterprise), other applicable formal severance policies duly adopted by the Board, or, with respect to service as a director of the Corporation, by the Certificate of Incorporation, the Bylaws or the DGCL.

Section 15 Severability. If any provision or provisions of this Agreement shall be held to be invalid, illegal or unenforceable for any reason whatsoever: (a) the validity, legality and enforceability of the remaining provisions of this Agreement (including, without limitation, each portion of any Section of this Agreement containing any such provision held to be invalid, illegal or unenforceable that is not itself invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby and shall remain enforceable to the fullest extent permitted by applicable law; (b) such provision or provisions shall be deemed reformed to the extent necessary to conform to applicable law and to give the maximum effect to the intent of the parties hereto; and (c) to the fullest extent possible, the provisions of this Agreement (including, without limitation, each portion of any Section of this Agreement containing any such provision held to be invalid, illegal or unenforceable that is not itself invalid, illegal or unenforceable) shall be construed so as to give effect to the intent manifested thereby.

Section 16 Enforcement.

(a) The Corporation expressly confirms and agrees that it has entered into this Agreement and assumed the obligations imposed on it hereby in order to induce Indemnitee to serve as a director, officer, employee or agent of the Corporation, and the Corporation acknowledges that Indemnitee is relying upon this Agreement in serving as a director, officer, employee or agent of the Corporation.

(b) This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter hereof and supersedes all prior agreements and understandings, oral, written and implied, between the parties hereto with respect to the subject matter hereof; provided, however, that this Agreement is a supplement to and in furtherance of the Certificate of Incorporation, the Bylaws and applicable law, and shall not be deemed a substitute therefore, nor diminish or abrogate any rights of Indemnitee thereunder.

Section 17 Modification and Waiver. No supplement, modification or amendment of this Agreement shall be binding unless executed in writing by the parties thereto. No waiver of any of the provisions of this Agreement shall be deemed to be or shall constitute a waiver of any other provision of this Agreement nor shall any waiver constitute a continuing waiver.

Section 18 Notices. All notices, requests, demands and other communications under this Agreement shall be in writing and shall be deemed to have been duly given if (a) delivered by hand and receipted for by the party to whom said notice or other communication shall have been directed, (b) mailed by certified or registered mail with postage prepaid, on the third business day after the date on which it is so mailed, (c) mailed by reputable overnight courier and receipted for by the party to whom said notice or other communication shall have been directed or (d) sent by facsimile transmission, with receipt of oral confirmation that such transmission has been received:

(i) If to Indemnitee, at such address as Indemnitee shall provide to the Corporation.

(ii) If to the Corporation to:

Ramaco Resources, Inc.

250 West Main Street, Suite 1800

Lexington, Kentucky 40507

Attention: Board of Directors

or to any other address as may have been furnished to Indemnitee by the Corporation.

Section 19 Contribution. To the fullest extent permissible under applicable law, if the indemnification provided for in this Agreement is unavailable to Indemnitee for any reason whatsoever, the Corporation, in lieu of indemnifying Indemnitee, shall contribute to the amount incurred by Indemnitee, whether for Liabilities or for Expenses, in connection with any claim relating to an indemnifiable event under this Agreement, in such proportion as is deemed fair and reasonable in light of all of the circumstances of such Proceeding in order to reflect (a) the relative benefits received by the Corporation and Indemnitee as a result of the event(s) and transaction(s) giving cause to such Proceeding; and (b) the relative fault of the Corporation (and its directors, officers, employees and agents) and Indemnitee in connection with such event(s) and transaction(s).

Section 20 Applicable Law. This Agreement and the legal relations among the parties shall be governed by, and construed and enforced in accordance with, the laws of the State of Delaware, without regard to its conflict of laws rules.

Section 21 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall for all purposes be deemed to be an original but all of which together shall constitute one and the same Agreement. Only one such counterpart signed by the party against whom enforceability is sought needs to be produced to evidence the existence of this Agreement.

Section 22 Miscellaneous. Use of the masculine pronoun shall be deemed to include usage of the feminine pronoun where appropriate. The headings of the paragraphs of this Agreement are inserted for convenience only and shall not be deemed to constitute part of this Agreement or to affect the construction thereof.

IN WITNESS WHEREOF, the parties have caused this Agreement to be signed effective as of the day and year first above written.

RAMACO RESOURCES, INC.

By: /s/ Randall W. Atkins
Name: Randall W. Atkins
Title: Chairman and Chief Executive

INDEMNITEE

By: /s/ Mahmud Riffat
Name: Mahmud Riffat

[Signature Page to Indemnification Agreement]

INDEMNIFICATION AGREEMENT

This Indemnification Agreement ("Agreement") is made effective as of January 18, 2021, by and between Ramaco Resources, Inc., a Delaware corporation (the "Corporation"), and David E.K. Frischkorn, Jr. ("Indemnitee").

RECITALS:

WHEREAS, directors, officers and other persons in service to corporations or business enterprises are subjected to expensive and time-consuming litigation relating to, among other things, matters that traditionally would have been brought only against the Corporation or business enterprise itself;

WHEREAS, highly competent persons have become more reluctant to serve as directors, officers or in other capacities unless they are provided with adequate protection through insurance and adequate indemnification against inordinate risks of claims and actions against them arising out of their service to and activities on behalf of the corporation;

WHEREAS, the Board of Directors of the Corporation (the "Board") has determined that the increased difficulty in attracting and retaining such persons is detrimental to the best interests of the Corporation and its stockholders and that the Corporation should act to assure such persons that there will be increased certainty of such protection in the future;

WHEREAS, (i) the Amended and Restated Bylaws of the Corporation (as may be amended, the "Bylaws") require indemnification of the officers and directors of the Corporation, (ii) Indemnitee may also be entitled to indemnification pursuant to the General Corporation Law of the State of Delaware ("DGCL") and (iii) the Bylaws and the DGCL expressly provide that the indemnification provisions set forth therein are not exclusive and thereby contemplate that contracts may be entered into between the Corporation and members of the Board, officers and other persons with respect to indemnification;

WHEREAS, this Agreement is a supplement to and in furtherance of the Bylaws and the Amended and Restated Certificate of Incorporation of the Corporation (as may be amended, the "Certificate of Incorporation") and any resolutions adopted pursuant thereto, and shall not be deemed a substitute therefore, nor to diminish or abrogate any rights of Indemnitee thereunder; and

WHEREAS, (i) Indemnitee does not regard the protection available under the Bylaws and insurance as adequate in the present circumstances, (ii) Indemnitee may not be willing to serve or continue to serve as a director or officer of the Corporation without adequate protection, (iii) the Corporation desires Indemnitee to serve in such capacity, and (iv) Indemnitee is willing to serve, continue to serve and to take on additional service for or on behalf of the Corporation on the condition that he be so indemnified.

AGREEMENT:

NOW, THEREFORE, in consideration of the premises and the covenants contained herein, the Corporation and Indemnitee do hereby covenant and agree as follows:

Section 1 (a) As used in this Agreement:

"Affiliate" of any specified Person shall mean any other Person controlling, controlled by or under common control with such specified Person.

"Corporate Status" describes the status of a person who is or was a director, officer, employee or agent of (i) the Corporation or (ii) any other corporation, limited liability company, partnership or joint venture, trust, employee benefit plan or other enterprise which such person is or was serving at the request of the Corporation.

"Disinterested Director" shall mean a director of the Corporation who is not and was not a party to the Proceeding in respect of which indemnification is sought by Indemnitee.

"Enterprise" shall mean the Corporation and any other corporation, limited liability company, partnership, joint venture, trust, employee benefit plan or other enterprise of which Indemnitee is or was serving at the request of the Corporation as a director, officer, employee, agent or fiduciary.

"Exchange Act" shall mean the Securities Exchange Act of 1934, as amended.

"Expenses" shall mean all reasonable costs, expenses, fees and charges, including, without limitation, attorneys' fees, document and e-discovery costs, litigation expenses, retainers, court costs, transcript costs, fees of experts, witness fees, travel expenses, duplicating costs, printing and binding costs, telephone charges, postage, delivery service fees, and all other disbursements or expenses of the types customarily incurred in connection with prosecuting, defending, preparing to prosecute or defend, investigating, being or preparing to be a witness in, or otherwise participating in, a Proceeding. Expenses also shall include, without limitation, (i) expenses incurred in connection with any appeal resulting from, incurred by Indemnitee in connection with, arising out of, or in respect of or relating to, any Proceeding, including, without limitation, the premium, security for, and other costs relating to any cost bond, supersedes bond, or other appeal bond or its equivalent, (ii) for purposes of Section 12(d) hereof only, expenses incurred by Indemnitee in connection with the interpretation, enforcement or defense of Indemnitee's rights under this Agreement, by litigation or otherwise, (iii) any federal, state, local or foreign taxes imposed on Indemnitee as a result of the actual or deemed receipt of any payments under this Agreement, and (iv) any interest, assessments or other charges in respect of the foregoing. "Expenses" shall not include "Liabilities."

"Indemnity Obligations" shall mean all obligations of the Corporation to Indemnitee under this Agreement, including the Corporation's obligations to provide indemnification to Indemnitee and advance Expenses to Indemnitee under this Agreement.

"Independent Counsel" shall mean a law firm of fifty (50) or more attorneys, or a member of a law firm of fifty (50) or more attorneys, that is experienced in matters of corporation law and neither presently is, nor in the past five (5) years has been, retained to represent: (i) the Corporation or Indemnitee in any matter material to either such party (other than with respect to matters concerning Indemnitee under this Agreement, or of other indemnitees under similar indemnification agreements), or (ii) any other party to the Proceeding giving rise to a claim for indemnification hereunder; provided, however, that the term "Independent Counsel" shall not include any person who, under the applicable standards of professional conduct then prevailing, would have a conflict of interest in representing either the Corporation or Indemnitee in an action to determine Indemnitee's rights under this Agreement.

"Liabilities" shall mean all claims, liabilities, damages, losses, judgments, orders, fines, penalties and other amounts payable in connection with, arising out of, or in respect of or relating to any Proceeding, including, without limitation, amounts paid in settlement in any Proceeding and all costs and expenses in complying with any judgment, order or decree issued or entered in connection with any Proceeding or any settlement agreement, stipulation or consent decree entered into or issued in settlement of any Proceeding.

"Person" shall mean any individual, corporation, partnership, limited partnership, limited liability company, trust, governmental agency or body or any other legal entity.

"Proceeding" shall mean any threatened, pending or completed action, claim, suit, arbitration, alternate dispute resolution mechanism, formal or informal hearing, inquiry or investigation, litigation, inquiry, administrative hearing or any other actual, threatened or completed judicial, administrative or arbitration proceeding (including, without limitation, any such proceeding under the Securities Act of 1933, as amended, or the Exchange Act or any other federal law, state law, statute or regulation), whether brought in the right of the Corporation or otherwise, and whether of a civil, criminal, administrative or investigative nature, in each case, in which Indemnitee was, is or will be, or is threatened to be, involved as a party, witness or otherwise by reason of the fact that Indemnitee is or was a director or officer of the Corporation, by reason of any actual or alleged action taken by Indemnitee or of any action on Indemnitee's part while acting as director or officer of the Corporation, or by reason of the fact that he is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, limited liability company, partnership, joint venture, trust or other enterprise, in each case whether or not serving in such capacity at the time any liability or expense is incurred for which indemnification, reimbursement, or advancement can be provided under this Agreement

(b) For the purpose hereof, references to "fines" shall include any excise tax assessed with respect to any employee benefit plan; references to "serving at the request of the Corporation" shall include any service as a director, officer, employee or agent of the Corporation which imposes duties on, or involves services by, such director, officer, employee or agent with respect to an employee benefit plan, its participants or beneficiaries; and a Person who acted in good faith and in a manner he reasonably believed to be in the best interests of the participants and beneficiaries of

an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation" as referred to in this Agreement.

Section 2 Indemnity in Third-Party Proceedings. The Corporation shall indemnify and hold harmless Indemnitee, to the fullest extent permitted by applicable law, from and against all Liabilities and Expenses suffered or reasonably incurred (and, in the case of retainers, reasonably expected to be incurred) by Indemnitee or on Indemnitee's behalf in connection with any Proceeding (other than any Proceeding brought by or in the right of the Corporation to procure a judgment in its favor), or any claim, issue or matter therein.

Section 3 Indemnity in Proceedings by or in the Right of the Corporation. The Corporation shall indemnify and hold harmless Indemnitee, to the fullest extent permitted by applicable law, from and against all Liabilities and Expenses suffered or incurred by Indemnitee or on Indemnitee's behalf in connection with any Proceeding brought by or in the right of the Corporation to procure a judgment in its favor, or any claim, issue or matter therein. No indemnification for Liabilities and Expenses shall be made under this Section 3 in respect of any claim, issue or matter as to which Indemnitee shall have been finally adjudged by a court to be liable to the Corporation, unless and only to the extent that the Delaware Court of Chancery or any court in which the Proceeding was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, Indemnitee is fairly and reasonably entitled to such indemnification.

Section 4 Indemnification for Expenses of a Party Who is Wholly or Partly Successful. Notwithstanding any other provisions of this Agreement, and without limiting the rights of Indemnitee under any other provision hereof, including any rights to indemnification pursuant to Sections 2 or 3 hereof, to the fullest extent permitted by applicable law, to the extent that Indemnitee is successful, on the merits or otherwise, in any Proceeding or in defense of any claim, issue or matter therein, in whole or in part, the Corporation shall indemnify Indemnitee against all Expenses actually and reasonably incurred by Indemnitee or on Indemnitee's behalf in connection with each successfully resolved Proceeding, claim, issue or matter. For purposes of this Section 4 and without limitation, the termination of any Proceeding or claim, issue or matter in such a Proceeding by dismissal, with or without prejudice, shall be deemed to be a successful result as to such claim, issue or matter.

Section 5 Indemnification For Expenses of a Witness. Notwithstanding any other provision of this Agreement, to the fullest extent permitted by applicable law and to the extent that Indemnitee is, by reason of Indemnitee's Corporate Status, a witness, or is made (or asked) to respond to discovery requests or a subpoena or similar demand for documents or testimony, in any Proceeding to which Indemnitee is not a party, Indemnitee shall be indemnified against all Expenses suffered or incurred (or, in the case of retainers, reasonably expected to be incurred) by Indemnitee or on Indemnitee's behalf in connection therewith.

Section 6 Additional Indemnification. Notwithstanding any limitation in Sections 2, 3 or 4 hereof, the Corporation shall indemnify Indemnitee to the fullest extent permitted by applicable law if Indemnitee is a party to or threatened to be made a party to any Proceeding (including a Proceeding by or in the right of the Corporation to procure a judgment in its favor) against all Liabilities and Expenses suffered or reasonably incurred by Indemnitee in connection with such Proceeding, including but not limited to:

(a) the fullest extent permitted by the provision of the DGCL that authorizes or contemplates additional indemnification by agreement, or the corresponding provision of any amendment to or replacement of the DGCL; and

(b) the fullest extent authorized or permitted by any amendments to or replacements of the DGCL adopted after the date of this Agreement that increase the extent to which a corporation may indemnify its officers and directors.

Section 7 Exclusions. Notwithstanding any provision in this Agreement, the Corporation shall not be obligated under this Agreement to indemnify or hold harmless Indemnitee:

(a) for which payment has actually been made to or on behalf of Indemnitee under any insurance policy obtained by the Corporation except with respect to any excess beyond the amount paid under such insurance policy;

(b) for an accounting of profits made from the purchase and sale (or sale and purchase) by Indemnitee of securities of the Corporation within the meaning of Section 16(b) of the Exchange Act or similar provisions of state statutory law or common law;

(c) for any reimbursement of the Corporation by Indemnitee of any bonus or other incentive-based or equity-based compensation or of any profits realized by Indemnitee from the sale of securities of the Corporation, as required in each case under the Exchange Act (including any such reimbursements that arise from an accounting restatement of the Corporation pursuant to Section 304 of the Sarbanes-Oxley Act of 2002 (the "***Sarbanes-Oxley Act***"), or the payment to the Corporation of profits arising from the purchase and sale by Indemnitee of securities in violation of Section 306 of the Sarbanes-Oxley Act), if Indemnitee is held liable therefor (including pursuant to any settlement arrangements) or in respect of claw-back provisions promulgated under the rules and regulations of the Securities and Exchange Commission pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act; or

(d) except as provided in Section 12(d) of this Agreement, in connection with any Proceeding (or any part of any Proceeding) initiated by Indemnitee, including any Proceeding (or any part of any Proceeding) initiated by Indemnitee against the Corporation or its directors, officers, employees or other indemnitees, unless (i) the Board authorized the Proceeding (or any part of any Proceeding) prior to its initiation or (ii) the Corporation provides the indemnification, in its sole discretion, pursuant to the powers vested in the Corporation under applicable law; or

(e) if a final decision by a court having jurisdiction in the matter shall determine that such indemnification is not lawful.

Section 8 Advancement. In accordance with the pre-existing requirements of the Bylaws, and notwithstanding any provision of this Agreement to the contrary, the Corporation shall advance, to the extent not prohibited by applicable law, the Expenses reasonably incurred by Indemnitee in connection with any Proceeding, and such advancement shall be made within ten (10) days after the receipt by the Corporation of a statement or statements requesting such advances from time to time, whether prior to or after final disposition of any Proceeding. Advances shall be unsecured and interest free. Advances shall be made without regard to Indemnitee's ability to repay the Expenses and without regard to Indemnitee's ultimate entitlement to indemnification under the other provisions of this Agreement. Advances shall include any and all Expenses reasonably incurred pursuing an action to enforce this right of advancement, including Expenses incurred preparing and forwarding statements to the Corporation to support the advances claimed. Indemnitee shall qualify for advances upon the execution and delivery to the Corporation of this Agreement, which shall constitute an undertaking providing that Indemnitee undertakes to repay the amounts advanced to the extent that it is ultimately determined that Indemnitee is not entitled to be indemnified by the Corporation. This Section 8 shall not apply to any claim made by Indemnitee for which indemnity is excluded pursuant to Section 7 hereof.

Section 9 Procedure for Notification and Defense of Claim.

(a) Indemnitee shall promptly notify the Corporation in writing of any Proceeding with respect to which Indemnitee intends to seek indemnification or advancement hereunder following the receipt by Indemnitee of written notice thereof. The written notification to the Corporation shall include a description of the nature of the Proceeding and the facts underlying the Proceeding. To obtain indemnification under this Agreement, Indemnitee shall submit to the Corporation a written request, including therein or therewith such documentation and information as is reasonably available to Indemnitee and is reasonably necessary to determine whether and to what extent Indemnitee is entitled to indemnification following the final disposition of such Proceeding. Any delay or failure by Indemnitee to notify the Corporation hereunder will not relieve the Corporation from any liability which it may have to Indemnitee hereunder or otherwise than under this Agreement, and any delay or failure in so notifying the Corporation shall not constitute a waiver by Indemnitee of any rights under this Agreement. The Secretary of the Corporation shall, promptly upon receipt of such a request for indemnification, advise the Board in writing that Indemnitee has requested indemnification.

(b) In the event Indemnitee is entitled to indemnification and/or advancement with respect to any Proceeding, Indemnitee may, at Indemnitee's option, (i) retain counsel selected by Indemnitee and approved by the Corporation to defend Indemnitee in such Proceeding, at the sole expense of the Corporation (which approval shall not be unreasonably withheld, conditioned or delayed), or (ii) have the Corporation assume the defense of Indemnitee in such Proceeding, in which case the Corporation shall assume the defense of such Proceeding with counsel selected by the

Corporation and approved by Indemnitee (which approval shall not be unreasonably withheld, conditioned or delayed) within ten (10) days of the Corporation's receipt of written notice of Indemnitee's election to cause the Corporation to do so. If the Corporation is required to assume the defense of any such Proceeding, it shall engage legal counsel for such defense, and the Corporation shall be solely responsible for all fees and expenses of such legal counsel and otherwise of such defense. Such legal counsel may represent both Indemnitee and the Corporation (and any other party or parties entitled to be indemnified by the Corporation with respect to such matter) unless, in the reasonable opinion of legal counsel to Indemnitee, there is a conflict of interest between Indemnitee and the Corporation (or any other such party or parties) or there are legal defenses available to Indemnitee that are not available to the Corporation (or any such other party or parties). Notwithstanding either party's assumption of responsibility for defense of a Proceeding, each party shall have the right to engage separate counsel at its own expense. The party having responsibility for defense of a Proceeding shall provide the other party and its counsel with all copies of pleadings and material correspondence relating to the Proceeding. Indemnitee and the Corporation shall reasonably cooperate in the defense of any Proceeding with respect to which indemnification is sought hereunder, regardless of whether the Corporation or Indemnitee assumes the defense thereof. Indemnitee may not settle or compromise any Proceeding without the prior written consent of the Corporation, which consent shall not be unreasonably withheld, conditioned or delayed. The Corporation may not settle or compromise any Proceeding without the prior written consent of Indemnitee.

Section 10 Procedure Upon Application for Indemnification.

(a) Upon written request by Indemnitee for indemnification pursuant to Section 9(a) hereof, if any determination by the Corporation is required by applicable law with respect to Indemnitee's entitlement thereto, such determination shall be made (i) if Indemnitee shall request such determination be made by Independent Counsel, by Independent Counsel, and (ii) in all other circumstances, (A) by a majority vote of the Disinterested Directors, even though less than a quorum of the Board, (B) by a committee of Disinterested Directors designated by a majority vote of the Disinterested Directors, even though less than a quorum of the Board, (C) if there are no such Disinterested Directors or, if such Disinterested Directors so direct, by Independent Counsel in a written opinion to the Board, a copy of which shall be delivered to Indemnitee, or (D) if so directed by the Board, by the stockholders of the Corporation; and, if it is so determined that Indemnitee is entitled to indemnification, payment to Indemnitee shall be made within ten (10) days after such determination. Indemnitee shall cooperate with the person, persons or entity making such determination with respect to Indemnitee's entitlement to indemnification, including providing to such person, persons or entity upon reasonable advance request any documentation or information which is not privileged or otherwise protected from disclosure and which is reasonably available to Indemnitee and reasonably necessary to such determination. Any Expenses incurred by Indemnitee in so cooperating with the person, persons or entity making such determination shall be borne by the Corporation (irrespective of the determination as to Indemnitee's entitlement to indemnification) and the Corporation hereby indemnifies and agrees to hold Indemnitee harmless therefrom. The Corporation will not deny any written request for indemnification hereunder made in good faith by Indemnitee unless a determination as to Indemnitee's entitlement to such indemnification described in this Section 10(a) has been made. The Corporation agrees to pay the reasonable fees and expenses of the Independent Counsel referred to above and to fully indemnify such counsel against any and all Liabilities and Expenses arising out of or relating to this Agreement or its engagement pursuant hereto.

(b) In the event the determination of entitlement to indemnification is to be made by Independent Counsel pursuant to Section 10(a) hereof, (i) the Independent Counsel shall be selected by the Corporation within ten (10) days of the Submission Date (the cost of such Independent Counsel to be paid by the Corporation), (ii) the Corporation shall give written notice to Indemnitee advising it of the identity of the Independent Counsel so selected and (iii) Indemnitee may, within ten (10) days after such written notice of selection shall have been given, deliver to the Corporation Indemnitee's written objection to such selection. Such objection by Indemnitee may be asserted only on the ground that the Independent Counsel selected does not meet the requirements of "Independent Counsel" as defined in this Agreement. If such written objection is made and substantiated, the Independent Counsel selected shall not serve as Independent Counsel unless and until Indemnitee withdraws the objection or a court has determined that such objection is without merit. Absent a timely objection, the person so selected shall act as Independent Counsel. If no Independent Counsel shall have been selected and not objected to before the later of (i) thirty (30) days after the later of submission by Indemnitee of a written request for indemnification pursuant to Section 10(a) hereof (the "Submission Date") and (ii) ten (10) days after the final disposition of the Proceeding, each of the Corporation and Indemnitee shall select a law firm or member of a law firm meeting the qualifications to serve as Independent Counsel,

and such law firms or members of law firms shall select the Independent Counsel. Upon the due commencement of any judicial proceeding or arbitration pursuant to Section 12(a) of this Agreement, Independent Counsel shall be discharged and relieved of any further responsibility in such capacity (subject to the applicable standards of professional conduct then prevailing).

Section 11 Presumptions and Effect of Certain Proceedings.

(a) In making a determination with respect to entitlement to indemnification hereunder, the person, persons or entity making such determination shall, to the fullest extent not prohibited by applicable law, presume that Indemnitee is entitled to indemnification under this Agreement if Indemnitee has submitted a request for indemnification in accordance with Section 9(a) of this Agreement, and the Corporation shall, to the fullest extent not prohibited by applicable law, have the burden of proof to overcome that presumption in connection with the making by any person, persons or entity of any determination contrary to that presumption. Neither the failure of the Corporation (including by its directors or independent legal counsel) to have made a determination prior to the commencement of any action pursuant to this Agreement that indemnification is proper in the circumstances because Indemnitee has met the applicable standard of conduct, nor an actual determination by the Corporation (including by its directors or independent legal counsel) that Indemnitee has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that Indemnitee has not met the applicable standard of conduct.

(b) Subject to Section 12(e) hereof, if the person, persons or entity empowered or selected under Section 10 of this Agreement to determine whether Indemnitee is entitled to indemnification shall not have made a determination within sixty (60) days after receipt by the Corporation of the request therefore, the requisite determination of entitlement to indemnification shall, to the fullest extent not prohibited by applicable law, be deemed to have been made and Indemnitee shall be entitled to such indemnification, absent a prohibition of such indemnification under applicable law; provided, however, that such 60-day period may be extended for a reasonable time, not to exceed an additional thirty (30) days, if (i) the determination is to be made by Independent Counsel and Indemnitee objects to the Corporation's selection of Independent Counsel and (ii) the Independent Counsel ultimately selected requires such additional time for the obtaining or evaluating of documentation or information relating thereto; provided further, however, that such 60-day period may also be extended for a reasonable time, not to exceed an additional sixty (60) days, if the determination of entitlement to indemnification is to be made by the stockholders of the Corporation.

(c) The termination of any Proceeding or of any claim, issue or matter therein, by judgment, order, settlement or conviction, or upon a plea of nolo contendere or its equivalent, shall not (except as otherwise expressly provided in this Agreement) adversely affect the right of Indemnitee to indemnification or create a presumption that Indemnitee did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the Corporation or, with respect to any criminal Proceeding, that Indemnitee had reasonable cause to believe that Indemnitee's conduct was unlawful.

(d) Reliance as Safe Harbor. For purposes of any determination of good faith, Indemnitee shall be deemed to have acted in good faith if Indemnitee's action is based on the records or books of account of the Enterprise, including financial statements, or on information supplied to Indemnitee by the officers of the Enterprise in the course of their duties, or on the advice of legal counsel for the Enterprise or on information or records given or reports made to the Enterprise by an independent certified public accountant or by an appraiser or other expert selected with the reasonable care by the Enterprise. The provisions of this Section 11(d) shall not be deemed to be exclusive or to limit in any way the other circumstances in which Indemnitee may be deemed to have met the applicable standard of conduct set forth in this Agreement.

(e) Actions of Others. The knowledge or actions, or failure to act, of any director, officer, agent or employee of the Enterprise shall not be imputed to Indemnitee for purposes of determining the right to indemnification under this Agreement.

Section 12 Remedies of Indemnitee.

(a) Subject to Section 12(e) hereof, in the event that (i) a determination is made pursuant to Section 10 of this Agreement that Indemnitee is not entitled to indemnification under this Agreement, (ii) advancement is not timely made pursuant to Section 8 of this Agreement, (iii) no determination of entitlement to indemnification shall have been

made pursuant to Section 10(a) of this Agreement within ninety (90) days after receipt by the Corporation of the request for indemnification, (iv) payment of indemnification is not made pursuant to Sections 4 or 5 or the last sentence of Section 10(a) of this Agreement within ten (10) days after receipt by the Corporation of a written request therefor, (v) payment of indemnification pursuant to Sections 2, 3 or 6 of this Agreement is not made within ten (10) days after a determination has been made that Indemnitee is entitled to indemnification, or (vi) in the event that the Corporation or any other Person takes or threatens to take any action to declare this Agreement void or unenforceable, or institutes any litigation or other action or proceeding designed to deny, or to recover from, Indemnitee the benefits provided or intended to be provided to Indemnitee hereunder, Indemnitee shall be entitled to an adjudication by a court of Indemnitee's entitlement to such indemnification or advancement. Alternatively, Indemnitee, at Indemnitee's option, may seek an award in arbitration to be conducted by a single arbitrator pursuant to the Commercial Arbitration Rules of the American Arbitration Association. The Corporation shall not oppose Indemnitee's right to seek any such adjudication or award in arbitration.

(b) In the event that a determination shall have been made pursuant to Section 10(a) of this Agreement that Indemnitee is not entitled to indemnification, any judicial proceeding or arbitration commenced pursuant to this Section 12 shall be conducted in all respects as a de novo trial, or arbitration, on the merits and Indemnitee shall not be prejudiced by reason of that adverse determination. In any judicial proceeding or arbitration commenced pursuant to this Section 12 the Corporation shall have the burden of proving Indemnitee is not entitled to indemnification or advancement, as the case may be.

(c) If a determination shall have been made pursuant to Section 10(a) of this Agreement that Indemnitee is entitled to indemnification, the Corporation shall be bound by such determination in any judicial proceeding or arbitration commenced pursuant to this Section 12, absent a prohibition of such indemnification under applicable law.

(d) The Corporation shall, to the fullest extent not prohibited by applicable law, be precluded from asserting in any judicial proceeding or arbitration commenced pursuant to this Section 12 that the procedures and presumptions of this Agreement are not valid, binding and enforceable and shall stipulate in any such court or before any such arbitrator that the Corporation is bound by all the provisions of this Agreement. It is the intent of the Corporation that Indemnitee not be required to incur Expenses associated with the interpretation, enforcement or defense of Indemnitee's rights under this Agreement by litigation or otherwise because the cost and expense thereof would substantially detract from the benefits intended to be extended to Indemnitee hereunder. The Corporation shall indemnify Indemnitee against any and all such Expenses and, if requested by Indemnitee, shall (within ten (10) days after receipt by the Corporation of a written request therefore) advance, to the extent not prohibited by applicable law, such Expenses to Indemnitee, which are incurred by Indemnitee in connection with any action brought by Indemnitee for indemnification or advancement from the Corporation under this Agreement or under any directors' and officers' liability insurance policies maintained by the Corporation, regardless of whether Indemnitee ultimately is determined to be entitled to such indemnification, advancement or insurance recovery, as the case may be.

(e) Notwithstanding anything in this Agreement to the contrary, no determination as to entitlement to indemnification under this Agreement shall be required to be made prior to the final disposition of the Proceeding; provided that, in absence of any such determination with respect to such Proceeding, the Corporation shall advance Expenses with respect to such Proceeding.

Section 13 Non-Exclusivity; Survival of Rights; Insurance; Subrogation.

(a) The rights of indemnification and to receive advancement as provided by this Agreement shall not be deemed exclusive of any other rights to which Indemnitee may at any time be entitled under applicable law, the Certificate of Incorporation, the Bylaws, any agreement, a vote of stockholders or a resolution of directors, or otherwise. No amendment, alteration or repeal of this Agreement or of any provision hereof shall limit or restrict any right of Indemnitee under this Agreement in respect of any action taken or omitted by such Indemnitee in Indemnitee's Corporate Status prior to such amendment, alteration or repeal. To the extent that a change in Delaware law, whether by statute or judicial decision, permits greater indemnification or advancement than would be afforded currently under the Bylaws or this Agreement, it is the intent of the parties hereto that Indemnitee shall enjoy by this Agreement the greater benefits so afforded by such change. No right or remedy herein conferred is intended to be exclusive of any other right or remedy, and every other right and remedy shall be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment

of any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other right or remedy.

(b) The Corporation hereby acknowledges that Indemnitee may have certain rights to indemnification, advancement and insurance provided by one or more Persons with whom or which Indemnitee may be associated. The Corporation hereby acknowledges and agrees that (i) the Corporation shall be the indemnitor of first resort with respect to any Proceeding, Expense, Liability or matter that is the subject of the Indemnity Obligations, (ii) the Corporation shall be primarily liable for all Indemnity Obligations and any indemnification afforded to Indemnitee in respect of any Proceeding, Expense, Liability or matter that is the subject of Indemnity Obligations, whether created by applicable law, organizational or constituent documents, contract (including this Agreement) or otherwise, (iii) any obligation of any other Persons with whom or which Indemnitee may be associated to indemnify Indemnitee or advance Expenses or Liabilities to Indemnitee in respect of any Proceeding shall be secondary to the obligations of the Corporation hereunder, (iv) the Corporation shall be required to indemnify Indemnitee and advance Expenses or Liabilities to Indemnitee hereunder to the fullest extent provided herein without regard to any rights Indemnitee may have against any other Person with whom or which Indemnitee may be associated or insurer of any such Person and (v) the Corporation irrevocably waives, relinquishes and releases any other Person with whom or which Indemnitee may be associated from any claim of contribution, subrogation or any other recovery of any kind in respect of amounts paid by the Corporation hereunder. In the event any other Person with whom or which Indemnitee may be associated or their insurers advances or extinguishes any liability or loss which is the subject of any Indemnity Obligation owed by the Corporation or payable under any Corporation insurance policy, the payor shall have a right of subrogation against the Corporation or its insurer or insurers for all amounts so paid which would otherwise be payable by the Corporation or its insurer or insurers under this Agreement. In no event will payment of an Indemnity Obligation by any other Person with whom or which Indemnitee may be associated or their insurers affect the obligations of the Corporation hereunder or shift primary liability for any Indemnity Obligation to any other Person with whom or which Indemnitee may be associated. Any indemnification, insurance or advancement provided by any other Person with whom or which Indemnitee may be associated with respect to any Liability arising as a result of Indemnitee's Corporate Status or capacity as an officer or director of any Person is specifically in excess over any Indemnity Obligation of the Corporation or any collectible insurance (including but not limited to any malpractice insurance or professional errors and omissions insurance) provided by the Corporation under this Agreement.

(c) The Corporation shall maintain an insurance policy or policies providing liability insurance providing reasonable and customary coverage as compared with similarly situated companies (as determined by the Board in its reasonable discretion) for directors, officers, employees, or agents of the Corporation or of any other Enterprise, and Indemnitee shall be covered by such policy or policies in accordance with its or their terms to the maximum extent of the coverage available for any such director, officer, employee or agent under such policy or policies and such policies shall provide for and recognize that the insurance policies are primary to any rights to indemnification, advancement or insurance proceeds to which Indemnitee may be entitled from one or more Persons with whom or which Indemnitee may be associated to the same extent as the Corporation's indemnification and advancement obligations set forth in this Agreement. If, at the time of the receipt of a notice of a claim pursuant to the terms hereof, the Corporation has director and officer liability insurance in effect, the Corporation shall give prompt notice of the commencement of such Proceeding to the insurers in accordance with the procedures set forth in the respective policies. The Corporation shall thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of Indemnitee, all amounts payable as a result of such Proceeding in accordance with the terms of such policies.

(d) In the event of any payment under this Agreement, the Corporation shall not be subrogated to the rights of recovery of Indemnitee, including rights of indemnification provided to Indemnitee from any other person or entity with whom Indemnitee may be associated; provided, however, that the Corporation shall be subrogated to the extent of any such payment of all rights of recovery of Indemnitee under insurance policies of the Corporation or any of its subsidiaries.

(e) The indemnification and contribution provided for in this Agreement will remain in full force and effect regardless of any investigation made by or on behalf of Indemnitee.

Section 14 Duration of Agreement; Not Employment Contract. This Agreement shall continue until and terminate upon the latest of: (i) ten (10) years after the date that Indemnitee shall have ceased to serve as a director, officer, employee or agent of the Corporation or any other Enterprise, (ii) the date of final termination of any Proceeding then pending in respect of which Indemnitee is granted rights of indemnification or advancement hereunder and of any

proceeding commenced by Indemnitee pursuant to Section 12 of this Agreement relating thereto or (iii) the expiration of all statutes of limitation applicable to possible Proceedings to which Indemnitee may be subject arising out of the Indemnitee's Corporate Status. The indemnification provided under this Agreement shall continue as to the Indemnitee even though he or she may have ceased to be a director of the Corporation or of any the Corporation's direct or indirect subsidiaries or to have Corporate Status. This Agreement shall be binding upon the Corporation and its successors and assigns and shall inure to the benefit of Indemnitee and Indemnitee's heirs, executors and administrators. This Agreement shall not be deemed an employment contract between the Corporation (or any of its subsidiaries or any other Enterprise) and Indemnitee. Indemnitee specifically acknowledges that Indemnitee's employment with the Corporation (or any of its subsidiaries or any other Enterprise), if any, is at will, and Indemnitee may be discharged at any time for any reason, with or without cause, except as may be otherwise provided in any written employment contract between Indemnitee and the Corporation (or any of its subsidiaries or any other Enterprise), other applicable formal severance policies duly adopted by the Board, or, with respect to service as a director of the Corporation, by the Certificate of Incorporation, the Bylaws or the DGCL.

Section 15 Severability. If any provision or provisions of this Agreement shall be held to be invalid, illegal or unenforceable for any reason whatsoever: (a) the validity, legality and enforceability of the remaining provisions of this Agreement (including, without limitation, each portion of any Section of this Agreement containing any such provision held to be invalid, illegal or unenforceable that is not itself invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby and shall remain enforceable to the fullest extent permitted by applicable law; (b) such provision or provisions shall be deemed reformed to the extent necessary to conform to applicable law and to give the maximum effect to the intent of the parties hereto; and (c) to the fullest extent possible, the provisions of this Agreement (including, without limitation, each portion of any Section of this Agreement containing any such provision held to be invalid, illegal or unenforceable that is not itself invalid, illegal or unenforceable) shall be construed so as to give effect to the intent manifested thereby.

Section 16 Enforcement.

(a) The Corporation expressly confirms and agrees that it has entered into this Agreement and assumed the obligations imposed on it hereby in order to induce Indemnitee to serve as a director, officer, employee or agent of the Corporation, and the Corporation acknowledges that Indemnitee is relying upon this Agreement in serving as a director, officer, employee or agent of the Corporation.

(b) This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter hereof and supersedes all prior agreements and understandings, oral, written and implied, between the parties hereto with respect to the subject matter hereof; provided, however, that this Agreement is a supplement to and in furtherance of the Certificate of Incorporation, the Bylaws and applicable law, and shall not be deemed a substitute therefore, nor diminish or abrogate any rights of Indemnitee thereunder.

Section 17 Modification and Waiver. No supplement, modification or amendment of this Agreement shall be binding unless executed in writing by the parties thereto. No waiver of any of the provisions of this Agreement shall be deemed to be or shall constitute a waiver of any other provision of this Agreement nor shall any waiver constitute a continuing waiver.

Section 18 Notices. All notices, requests, demands and other communications under this Agreement shall be in writing and shall be deemed to have been duly given if (a) delivered by hand and receipted for by the party to whom said notice or other communication shall have been directed, (b) mailed by certified or registered mail with postage prepaid, on the third business day after the date on which it is so mailed, (c) mailed by reputable overnight courier and receipted for by the party to whom said notice or other communication shall have been directed or (d) sent by facsimile transmission, with receipt of oral confirmation that such transmission has been received:

(i) If to Indemnitee, at such address as Indemnitee shall provide to the Corporation.

(ii) If to the Corporation to:

Ramaco Resources, Inc.

250 West Main Street, Suite 1800

Lexington, Kentucky 40507

Attention: Board of Directors

or to any other address as may have been furnished to Indemnitee by the Corporation.

Section 19 Contribution. To the fullest extent permissible under applicable law, if the indemnification provided for in this Agreement is unavailable to Indemnitee for any reason whatsoever, the Corporation, in lieu of indemnifying Indemnitee, shall contribute to the amount incurred by Indemnitee, whether for Liabilities or for Expenses, in connection with any claim relating to an indemnifiable event under this Agreement, in such proportion as is deemed fair and reasonable in light of all of the circumstances of such Proceeding in order to reflect (a) the relative benefits received by the Corporation and Indemnitee as a result of the event(s) and transaction(s) giving cause to such Proceeding; and (b) the relative fault of the Corporation (and its directors, officers, employees and agents) and Indemnitee in connection with such event(s) and transaction(s).

Section 20 Applicable Law. This Agreement and the legal relations among the parties shall be governed by, and construed and enforced in accordance with, the laws of the State of Delaware, without regard to its conflict of laws rules.

Section 21 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall for all purposes be deemed to be an original but all of which together shall constitute one and the same Agreement. Only one such counterpart signed by the party against whom enforceability is sought needs to be produced to evidence the existence of this Agreement.

Section 22 Miscellaneous. Use of the masculine pronoun shall be deemed to include usage of the feminine pronoun where appropriate. The headings of the paragraphs of this Agreement are inserted for convenience only and shall not be deemed to constitute part of this Agreement or to affect the construction thereof.

IN WITNESS WHEREOF, the parties have caused this Agreement to be signed effective as of the day and year first above written.

RAMACO RESOURCES, INC.

By: /s/ Randall W. Atkins
Name: Randall W. Atkins
Title: Chairman and Chief Executive

INDEMNITEE

By: /s/ David E.K. Frischkorn, Jr.
Name: David E.K. Frischkorn, Jr.

[Signature Page to Indemnification Agreement]

INDEMNIFICATION AGREEMENT

This Indemnification Agreement ("Agreement") is made effective as of January 18, 2021, by and between Ramaco Resources, Inc., a Delaware corporation (the "Corporation"), and E. Forrest Jones, Jr. ("Indemnitee").

RECITALS:

WHEREAS, directors, officers and other persons in service to corporations or business enterprises are subjected to expensive and time-consuming litigation relating to, among other things, matters that traditionally would have been brought only against the Corporation or business enterprise itself;

WHEREAS, highly competent persons have become more reluctant to serve as directors, officers or in other capacities unless they are provided with adequate protection through insurance and adequate indemnification against inordinate risks of claims and actions against them arising out of their service to and activities on behalf of the corporation;

WHEREAS, the Board of Directors of the Corporation (the "Board") has determined that the increased difficulty in attracting and retaining such persons is detrimental to the best interests of the Corporation and its stockholders and that the Corporation should act to assure such persons that there will be increased certainty of such protection in the future;

WHEREAS, (i) the Amended and Restated Bylaws of the Corporation (as may be amended, the "Bylaws") require indemnification of the officers and directors of the Corporation, (ii) Indemnitee may also be entitled to indemnification pursuant to the General Corporation Law of the State of Delaware ("DGCL") and (iii) the Bylaws and the DGCL expressly provide that the indemnification provisions set forth therein are not exclusive and thereby contemplate that contracts may be entered into between the Corporation and members of the Board, officers and other persons with respect to indemnification;

WHEREAS, this Agreement is a supplement to and in furtherance of the Bylaws and the Amended and Restated Certificate of Incorporation of the Corporation (as may be amended, the "Certificate of Incorporation") and any resolutions adopted pursuant thereto, and shall not be deemed a substitute therefore, nor to diminish or abrogate any rights of Indemnitee thereunder; and

WHEREAS, (i) Indemnitee does not regard the protection available under the Bylaws and insurance as adequate in the present circumstances, (ii) Indemnitee may not be willing to serve or continue to serve as a director or officer of the Corporation without adequate protection, (iii) the Corporation desires Indemnitee to serve in such capacity, and (iv) Indemnitee is willing to serve, continue to serve and to take on additional service for or on behalf of the Corporation on the condition that he be so indemnified.

AGREEMENT:

NOW, THEREFORE, in consideration of the premises and the covenants contained herein, the Corporation and Indemnitee do hereby covenant and agree as follows:

Section 1 (a) As used in this Agreement:

"Affiliate" of any specified Person shall mean any other Person controlling, controlled by or under common control with such specified Person.

"Corporate Status" describes the status of a person who is or was a director, officer, employee or agent of (i) the Corporation or (ii) any other corporation, limited liability company, partnership or joint venture, trust, employee benefit plan or other enterprise which such person is or was serving at the request of the Corporation.

"Disinterested Director" shall mean a director of the Corporation who is not and was not a party to the Proceeding in respect of which indemnification is sought by Indemnitee.

"Enterprise" shall mean the Corporation and any other corporation, limited liability company, partnership, joint venture, trust, employee benefit plan or other enterprise of which Indemnitee is or was serving at the request of the Corporation as a director, officer, employee, agent or fiduciary.

"Exchange Act" shall mean the Securities Exchange Act of 1934, as amended.

"Expenses" shall mean all reasonable costs, expenses, fees and charges, including, without limitation, attorneys' fees, document and e-discovery costs, litigation expenses, retainers, court costs, transcript costs, fees of experts, witness fees, travel expenses, duplicating costs, printing and binding costs, telephone charges, postage, delivery service fees, and all other disbursements or expenses of the types customarily incurred in connection with prosecuting, defending, preparing to prosecute or defend, investigating, being or preparing to be a witness in, or otherwise participating in, a Proceeding. Expenses also shall include, without limitation, (i) expenses incurred in connection with any appeal resulting from, incurred by Indemnitee in connection with, arising out of, or in respect of or relating to, any Proceeding, including, without limitation, the premium, security for, and other costs relating to any cost bond, supersedes bond, or other appeal bond or its equivalent, (ii) for purposes of Section 12(d) hereof only, expenses incurred by Indemnitee in connection with the interpretation, enforcement or defense of Indemnitee's rights under this Agreement, by litigation or otherwise, (iii) any federal, state, local or foreign taxes imposed on Indemnitee as a result of the actual or deemed receipt of any payments under this Agreement, and (iv) any interest, assessments or other charges in respect of the foregoing. "Expenses" shall not include "Liabilities."

"Indemnity Obligations" shall mean all obligations of the Corporation to Indemnitee under this Agreement, including the Corporation's obligations to provide indemnification to Indemnitee and advance Expenses to Indemnitee under this Agreement.

"Independent Counsel" shall mean a law firm of fifty (50) or more attorneys, or a member of a law firm of fifty (50) or more attorneys, that is experienced in matters of corporation law and neither presently is, nor in the past five (5) years has been, retained to represent: (i) the Corporation or Indemnitee in any matter material to either such party (other than with respect to matters concerning Indemnitee under this Agreement, or of other indemnitees under similar indemnification agreements), or (ii) any other party to the Proceeding giving rise to a claim for indemnification hereunder; provided, however, that the term "Independent Counsel" shall not include any person who, under the applicable standards of professional conduct then prevailing, would have a conflict of interest in representing either the Corporation or Indemnitee in an action to determine Indemnitee's rights under this Agreement.

"Liabilities" shall mean all claims, liabilities, damages, losses, judgments, orders, fines, penalties and other amounts payable in connection with, arising out of, or in respect of or relating to any Proceeding, including, without limitation, amounts paid in settlement in any Proceeding and all costs and expenses in complying with any judgment, order or decree issued or entered in connection with any Proceeding or any settlement agreement, stipulation or consent decree entered into or issued in settlement of any Proceeding.

"Person" shall mean any individual, corporation, partnership, limited partnership, limited liability company, trust, governmental agency or body or any other legal entity.

"Proceeding" shall mean any threatened, pending or completed action, claim, suit, arbitration, alternate dispute resolution mechanism, formal or informal hearing, inquiry or investigation, litigation, inquiry, administrative hearing or any other actual, threatened or completed judicial, administrative or arbitration proceeding (including, without limitation, any such proceeding under the Securities Act of 1933, as amended, or the Exchange Act or any other federal law, state law, statute or regulation), whether brought in the right of the Corporation or otherwise, and whether of a civil, criminal, administrative or investigative nature, in each case, in which Indemnitee was, is or will be, or is threatened to be, involved as a party, witness or otherwise by reason of the fact that Indemnitee is or was a director or officer of the Corporation, by reason of any actual or alleged action taken by Indemnitee or of any action on Indemnitee's part while acting as director or officer of the Corporation, or by reason of the fact that he is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, limited liability company, partnership, joint venture, trust or other enterprise, in each case whether or not serving in such capacity at the time any liability or expense is incurred for which indemnification, reimbursement, or advancement can be provided under this Agreement

(b) For the purpose hereof, references to "fines" shall include any excise tax assessed with respect to any employee benefit plan; references to "serving at the request of the Corporation" shall include any service as a director, officer, employee or agent of the Corporation which imposes duties on, or involves services by, such director, officer, employee or agent with respect to an employee benefit plan, its participants or beneficiaries; and a Person who acted in good faith and in a manner he reasonably believed to be in the best interests of the participants and beneficiaries of

an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation" as referred to in this Agreement.

Section 2 Indemnity in Third-Party Proceedings. The Corporation shall indemnify and hold harmless Indemnitee, to the fullest extent permitted by applicable law, from and against all Liabilities and Expenses suffered or reasonably incurred (and, in the case of retainers, reasonably expected to be incurred) by Indemnitee or on Indemnitee's behalf in connection with any Proceeding (other than any Proceeding brought by or in the right of the Corporation to procure a judgment in its favor), or any claim, issue or matter therein.

Section 3 Indemnity in Proceedings by or in the Right of the Corporation. The Corporation shall indemnify and hold harmless Indemnitee, to the fullest extent permitted by applicable law, from and against all Liabilities and Expenses suffered or incurred by Indemnitee or on Indemnitee's behalf in connection with any Proceeding brought by or in the right of the Corporation to procure a judgment in its favor, or any claim, issue or matter therein. No indemnification for Liabilities and Expenses shall be made under this Section 3 in respect of any claim, issue or matter as to which Indemnitee shall have been finally adjudged by a court to be liable to the Corporation, unless and only to the extent that the Delaware Court of Chancery or any court in which the Proceeding was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, Indemnitee is fairly and reasonably entitled to such indemnification.

Section 4 Indemnification for Expenses of a Party Who is Wholly or Partly Successful. Notwithstanding any other provisions of this Agreement, and without limiting the rights of Indemnitee under any other provision hereof, including any rights to indemnification pursuant to Sections 2 or 3 hereof, to the fullest extent permitted by applicable law, to the extent that Indemnitee is successful, on the merits or otherwise, in any Proceeding or in defense of any claim, issue or matter therein, in whole or in part, the Corporation shall indemnify Indemnitee against all Expenses actually and reasonably incurred by Indemnitee or on Indemnitee's behalf in connection with each successfully resolved Proceeding, claim, issue or matter. For purposes of this Section 4 and without limitation, the termination of any Proceeding or claim, issue or matter in such a Proceeding by dismissal, with or without prejudice, shall be deemed to be a successful result as to such claim, issue or matter.

Section 5 Indemnification For Expenses of a Witness. Notwithstanding any other provision of this Agreement, to the fullest extent permitted by applicable law and to the extent that Indemnitee is, by reason of Indemnitee's Corporate Status, a witness, or is made (or asked) to respond to discovery requests or a subpoena or similar demand for documents or testimony, in any Proceeding to which Indemnitee is not a party, Indemnitee shall be indemnified against all Expenses suffered or incurred (or, in the case of retainers, reasonably expected to be incurred) by Indemnitee or on Indemnitee's behalf in connection therewith.

Section 6 Additional Indemnification. Notwithstanding any limitation in Sections 2, 3 or 4 hereof, the Corporation shall indemnify Indemnitee to the fullest extent permitted by applicable law if Indemnitee is a party to or threatened to be made a party to any Proceeding (including a Proceeding by or in the right of the Corporation to procure a judgment in its favor) against all Liabilities and Expenses suffered or reasonably incurred by Indemnitee in connection with such Proceeding, including but not limited to:

(a) the fullest extent permitted by the provision of the DGCL that authorizes or contemplates additional indemnification by agreement, or the corresponding provision of any amendment to or replacement of the DGCL; and

(b) the fullest extent authorized or permitted by any amendments to or replacements of the DGCL adopted after the date of this Agreement that increase the extent to which a corporation may indemnify its officers and directors.

Section 7 Exclusions. Notwithstanding any provision in this Agreement, the Corporation shall not be obligated under this Agreement to indemnify or hold harmless Indemnitee:

(a) for which payment has actually been made to or on behalf of Indemnitee under any insurance policy obtained by the Corporation except with respect to any excess beyond the amount paid under such insurance policy;

(b) for an accounting of profits made from the purchase and sale (or sale and purchase) by Indemnitee of securities of the Corporation within the meaning of Section 16(b) of the Exchange Act or similar provisions of state statutory law or common law;

(c) for any reimbursement of the Corporation by Indemnitee of any bonus or other incentive-based or equity-based compensation or of any profits realized by Indemnitee from the sale of securities of the Corporation, as required in each case under the Exchange Act (including any such reimbursements that arise from an accounting restatement of the Corporation pursuant to Section 304 of the Sarbanes-Oxley Act of 2002 (the "***Sarbanes-Oxley Act***"), or the payment to the Corporation of profits arising from the purchase and sale by Indemnitee of securities in violation of Section 306 of the Sarbanes-Oxley Act), if Indemnitee is held liable therefor (including pursuant to any settlement arrangements) or in respect of claw-back provisions promulgated under the rules and regulations of the Securities and Exchange Commission pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act; or

(d) except as provided in Section 12(d) of this Agreement, in connection with any Proceeding (or any part of any Proceeding) initiated by Indemnitee, including any Proceeding (or any part of any Proceeding) initiated by Indemnitee against the Corporation or its directors, officers, employees or other indemnitees, unless (i) the Board authorized the Proceeding (or any part of any Proceeding) prior to its initiation or (ii) the Corporation provides the indemnification, in its sole discretion, pursuant to the powers vested in the Corporation under applicable law; or

(e) if a final decision by a court having jurisdiction in the matter shall determine that such indemnification is not lawful.

Section 8 Advancement. In accordance with the pre-existing requirements of the Bylaws, and notwithstanding any provision of this Agreement to the contrary, the Corporation shall advance, to the extent not prohibited by applicable law, the Expenses reasonably incurred by Indemnitee in connection with any Proceeding, and such advancement shall be made within ten (10) days after the receipt by the Corporation of a statement or statements requesting such advances from time to time, whether prior to or after final disposition of any Proceeding. Advances shall be unsecured and interest free. Advances shall be made without regard to Indemnitee's ability to repay the Expenses and without regard to Indemnitee's ultimate entitlement to indemnification under the other provisions of this Agreement. Advances shall include any and all Expenses reasonably incurred pursuing an action to enforce this right of advancement, including Expenses incurred preparing and forwarding statements to the Corporation to support the advances claimed. Indemnitee shall qualify for advances upon the execution and delivery to the Corporation of this Agreement, which shall constitute an undertaking providing that Indemnitee undertakes to repay the amounts advanced to the extent that it is ultimately determined that Indemnitee is not entitled to be indemnified by the Corporation. This Section 8 shall not apply to any claim made by Indemnitee for which indemnity is excluded pursuant to Section 7 hereof.

Section 9 Procedure for Notification and Defense of Claim.

(a) Indemnitee shall promptly notify the Corporation in writing of any Proceeding with respect to which Indemnitee intends to seek indemnification or advancement hereunder following the receipt by Indemnitee of written notice thereof. The written notification to the Corporation shall include a description of the nature of the Proceeding and the facts underlying the Proceeding. To obtain indemnification under this Agreement, Indemnitee shall submit to the Corporation a written request, including therein or therewith such documentation and information as is reasonably available to Indemnitee and is reasonably necessary to determine whether and to what extent Indemnitee is entitled to indemnification following the final disposition of such Proceeding. Any delay or failure by Indemnitee to notify the Corporation hereunder will not relieve the Corporation from any liability which it may have to Indemnitee hereunder or otherwise than under this Agreement, and any delay or failure in so notifying the Corporation shall not constitute a waiver by Indemnitee of any rights under this Agreement. The Secretary of the Corporation shall, promptly upon receipt of such a request for indemnification, advise the Board in writing that Indemnitee has requested indemnification.

(b) In the event Indemnitee is entitled to indemnification and/or advancement with respect to any Proceeding, Indemnitee may, at Indemnitee's option, (i) retain counsel selected by Indemnitee and approved by the Corporation to defend Indemnitee in such Proceeding, at the sole expense of the Corporation (which approval shall not be unreasonably withheld, conditioned or delayed), or (ii) have the Corporation assume the defense of Indemnitee in such Proceeding, in which case the Corporation shall assume the defense of such Proceeding with counsel selected by the

Corporation and approved by Indemnitee (which approval shall not be unreasonably withheld, conditioned or delayed) within ten (10) days of the Corporation's receipt of written notice of Indemnitee's election to cause the Corporation to do so. If the Corporation is required to assume the defense of any such Proceeding, it shall engage legal counsel for such defense, and the Corporation shall be solely responsible for all fees and expenses of such legal counsel and otherwise of such defense. Such legal counsel may represent both Indemnitee and the Corporation (and any other party or parties entitled to be indemnified by the Corporation with respect to such matter) unless, in the reasonable opinion of legal counsel to Indemnitee, there is a conflict of interest between Indemnitee and the Corporation (or any other such party or parties) or there are legal defenses available to Indemnitee that are not available to the Corporation (or any such other party or parties). Notwithstanding either party's assumption of responsibility for defense of a Proceeding, each party shall have the right to engage separate counsel at its own expense. The party having responsibility for defense of a Proceeding shall provide the other party and its counsel with all copies of pleadings and material correspondence relating to the Proceeding. Indemnitee and the Corporation shall reasonably cooperate in the defense of any Proceeding with respect to which indemnification is sought hereunder, regardless of whether the Corporation or Indemnitee assumes the defense thereof. Indemnitee may not settle or compromise any Proceeding without the prior written consent of the Corporation, which consent shall not be unreasonably withheld, conditioned or delayed. The Corporation may not settle or compromise any Proceeding without the prior written consent of Indemnitee.

Section 10 Procedure Upon Application for Indemnification.

(a) Upon written request by Indemnitee for indemnification pursuant to Section 9(a) hereof, if any determination by the Corporation is required by applicable law with respect to Indemnitee's entitlement thereto, such determination shall be made (i) if Indemnitee shall request such determination be made by Independent Counsel, by Independent Counsel, and (ii) in all other circumstances, (A) by a majority vote of the Disinterested Directors, even though less than a quorum of the Board, (B) by a committee of Disinterested Directors designated by a majority vote of the Disinterested Directors, even though less than a quorum of the Board, (C) if there are no such Disinterested Directors or, if such Disinterested Directors so direct, by Independent Counsel in a written opinion to the Board, a copy of which shall be delivered to Indemnitee, or (D) if so directed by the Board, by the stockholders of the Corporation; and, if it is so determined that Indemnitee is entitled to indemnification, payment to Indemnitee shall be made within ten (10) days after such determination. Indemnitee shall cooperate with the person, persons or entity making such determination with respect to Indemnitee's entitlement to indemnification, including providing to such person, persons or entity upon reasonable advance request any documentation or information which is not privileged or otherwise protected from disclosure and which is reasonably available to Indemnitee and reasonably necessary to such determination. Any Expenses incurred by Indemnitee in so cooperating with the person, persons or entity making such determination shall be borne by the Corporation (irrespective of the determination as to Indemnitee's entitlement to indemnification) and the Corporation hereby indemnifies and agrees to hold Indemnitee harmless therefrom. The Corporation will not deny any written request for indemnification hereunder made in good faith by Indemnitee unless a determination as to Indemnitee's entitlement to such indemnification described in this Section 10(a) has been made. The Corporation agrees to pay the reasonable fees and expenses of the Independent Counsel referred to above and to fully indemnify such counsel against any and all Liabilities and Expenses arising out of or relating to this Agreement or its engagement pursuant hereto.

(b) In the event the determination of entitlement to indemnification is to be made by Independent Counsel pursuant to Section 10(a) hereof, (i) the Independent Counsel shall be selected by the Corporation within ten (10) days of the Submission Date (the cost of such Independent Counsel to be paid by the Corporation), (ii) the Corporation shall give written notice to Indemnitee advising it of the identity of the Independent Counsel so selected and (iii) Indemnitee may, within ten (10) days after such written notice of selection shall have been given, deliver to the Corporation Indemnitee's written objection to such selection. Such objection by Indemnitee may be asserted only on the ground that the Independent Counsel selected does not meet the requirements of "Independent Counsel" as defined in this Agreement. If such written objection is made and substantiated, the Independent Counsel selected shall not serve as Independent Counsel unless and until Indemnitee withdraws the objection or a court has determined that such objection is without merit. Absent a timely objection, the person so selected shall act as Independent Counsel. If no Independent Counsel shall have been selected and not objected to before the later of (i) thirty (30) days after the later of submission by Indemnitee of a written request for indemnification pursuant to Section 10(a) hereof (the "Submission Date") and (ii) ten (10) days after the final disposition of the Proceeding, each of the Corporation and Indemnitee shall select a law firm or member of a law firm meeting the qualifications to serve as Independent Counsel,

and such law firms or members of law firms shall select the Independent Counsel. Upon the due commencement of any judicial proceeding or arbitration pursuant to Section 12(a) of this Agreement, Independent Counsel shall be discharged and relieved of any further responsibility in such capacity (subject to the applicable standards of professional conduct then prevailing).

Section 11 Presumptions and Effect of Certain Proceedings.

(a) In making a determination with respect to entitlement to indemnification hereunder, the person, persons or entity making such determination shall, to the fullest extent not prohibited by applicable law, presume that Indemnitee is entitled to indemnification under this Agreement if Indemnitee has submitted a request for indemnification in accordance with Section 9(a) of this Agreement, and the Corporation shall, to the fullest extent not prohibited by applicable law, have the burden of proof to overcome that presumption in connection with the making by any person, persons or entity of any determination contrary to that presumption. Neither the failure of the Corporation (including by its directors or independent legal counsel) to have made a determination prior to the commencement of any action pursuant to this Agreement that indemnification is proper in the circumstances because Indemnitee has met the applicable standard of conduct, nor an actual determination by the Corporation (including by its directors or independent legal counsel) that Indemnitee has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that Indemnitee has not met the applicable standard of conduct.

(b) Subject to Section 12(e) hereof, if the person, persons or entity empowered or selected under Section 10 of this Agreement to determine whether Indemnitee is entitled to indemnification shall not have made a determination within sixty (60) days after receipt by the Corporation of the request therefore, the requisite determination of entitlement to indemnification shall, to the fullest extent not prohibited by applicable law, be deemed to have been made and Indemnitee shall be entitled to such indemnification, absent a prohibition of such indemnification under applicable law; provided, however, that such 60-day period may be extended for a reasonable time, not to exceed an additional thirty (30) days, if (i) the determination is to be made by Independent Counsel and Indemnitee objects to the Corporation's selection of Independent Counsel and (ii) the Independent Counsel ultimately selected requires such additional time for the obtaining or evaluating of documentation or information relating thereto; provided further, however, that such 60-day period may also be extended for a reasonable time, not to exceed an additional sixty (60) days, if the determination of entitlement to indemnification is to be made by the stockholders of the Corporation.

(c) The termination of any Proceeding or of any claim, issue or matter therein, by judgment, order, settlement or conviction, or upon a plea of nolo contendere or its equivalent, shall not (except as otherwise expressly provided in this Agreement) adversely affect the right of Indemnitee to indemnification or create a presumption that Indemnitee did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the Corporation or, with respect to any criminal Proceeding, that Indemnitee had reasonable cause to believe that Indemnitee's conduct was unlawful.

(d) Reliance as Safe Harbor. For purposes of any determination of good faith, Indemnitee shall be deemed to have acted in good faith if Indemnitee's action is based on the records or books of account of the Enterprise, including financial statements, or on information supplied to Indemnitee by the officers of the Enterprise in the course of their duties, or on the advice of legal counsel for the Enterprise or on information or records given or reports made to the Enterprise by an independent certified public accountant or by an appraiser or other expert selected with the reasonable care by the Enterprise. The provisions of this Section 11(d) shall not be deemed to be exclusive or to limit in any way the other circumstances in which Indemnitee may be deemed to have met the applicable standard of conduct set forth in this Agreement.

(e) Actions of Others. The knowledge or actions, or failure to act, of any director, officer, agent or employee of the Enterprise shall not be imputed to Indemnitee for purposes of determining the right to indemnification under this Agreement.

Section 12 Remedies of Indemnitee.

(a) Subject to Section 12(e) hereof, in the event that (i) a determination is made pursuant to Section 10 of this Agreement that Indemnitee is not entitled to indemnification under this Agreement, (ii) advancement is not timely made pursuant to Section 8 of this Agreement, (iii) no determination of entitlement to indemnification shall have been

made pursuant to Section 10(a) of this Agreement within ninety (90) days after receipt by the Corporation of the request for indemnification, (iv) payment of indemnification is not made pursuant to Sections 4 or 5 or the last sentence of Section 10(a) of this Agreement within ten (10) days after receipt by the Corporation of a written request therefor, (v) payment of indemnification pursuant to Sections 2, 3 or 6 of this Agreement is not made within ten (10) days after a determination has been made that Indemnitee is entitled to indemnification, or (vi) in the event that the Corporation or any other Person takes or threatens to take any action to declare this Agreement void or unenforceable, or institutes any litigation or other action or proceeding designed to deny, or to recover from, Indemnitee the benefits provided or intended to be provided to Indemnitee hereunder, Indemnitee shall be entitled to an adjudication by a court of Indemnitee's entitlement to such indemnification or advancement. Alternatively, Indemnitee, at Indemnitee's option, may seek an award in arbitration to be conducted by a single arbitrator pursuant to the Commercial Arbitration Rules of the American Arbitration Association. The Corporation shall not oppose Indemnitee's right to seek any such adjudication or award in arbitration.

(b) In the event that a determination shall have been made pursuant to Section 10(a) of this Agreement that Indemnitee is not entitled to indemnification, any judicial proceeding or arbitration commenced pursuant to this Section 12 shall be conducted in all respects as a de novo trial, or arbitration, on the merits and Indemnitee shall not be prejudiced by reason of that adverse determination. In any judicial proceeding or arbitration commenced pursuant to this Section 12 the Corporation shall have the burden of proving Indemnitee is not entitled to indemnification or advancement, as the case may be.

(c) If a determination shall have been made pursuant to Section 10(a) of this Agreement that Indemnitee is entitled to indemnification, the Corporation shall be bound by such determination in any judicial proceeding or arbitration commenced pursuant to this Section 12, absent a prohibition of such indemnification under applicable law.

(d) The Corporation shall, to the fullest extent not prohibited by applicable law, be precluded from asserting in any judicial proceeding or arbitration commenced pursuant to this Section 12 that the procedures and presumptions of this Agreement are not valid, binding and enforceable and shall stipulate in any such court or before any such arbitrator that the Corporation is bound by all the provisions of this Agreement. It is the intent of the Corporation that Indemnitee not be required to incur Expenses associated with the interpretation, enforcement or defense of Indemnitee's rights under this Agreement by litigation or otherwise because the cost and expense thereof would substantially detract from the benefits intended to be extended to Indemnitee hereunder. The Corporation shall indemnify Indemnitee against any and all such Expenses and, if requested by Indemnitee, shall (within ten (10) days after receipt by the Corporation of a written request therefore) advance, to the extent not prohibited by applicable law, such Expenses to Indemnitee, which are incurred by Indemnitee in connection with any action brought by Indemnitee for indemnification or advancement from the Corporation under this Agreement or under any directors' and officers' liability insurance policies maintained by the Corporation, regardless of whether Indemnitee ultimately is determined to be entitled to such indemnification, advancement or insurance recovery, as the case may be.

(e) Notwithstanding anything in this Agreement to the contrary, no determination as to entitlement to indemnification under this Agreement shall be required to be made prior to the final disposition of the Proceeding; provided that, in absence of any such determination with respect to such Proceeding, the Corporation shall advance Expenses with respect to such Proceeding.

Section 13 Non-Exclusivity; Survival of Rights; Insurance; Subrogation.

(a) The rights of indemnification and to receive advancement as provided by this Agreement shall not be deemed exclusive of any other rights to which Indemnitee may at any time be entitled under applicable law, the Certificate of Incorporation, the Bylaws, any agreement, a vote of stockholders or a resolution of directors, or otherwise. No amendment, alteration or repeal of this Agreement or of any provision hereof shall limit or restrict any right of Indemnitee under this Agreement in respect of any action taken or omitted by such Indemnitee in Indemnitee's Corporate Status prior to such amendment, alteration or repeal. To the extent that a change in Delaware law, whether by statute or judicial decision, permits greater indemnification or advancement than would be afforded currently under the Bylaws or this Agreement, it is the intent of the parties hereto that Indemnitee shall enjoy by this Agreement the greater benefits so afforded by such change. No right or remedy herein conferred is intended to be exclusive of any other right or remedy, and every other right and remedy shall be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment

of any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other right or remedy.

(b) The Corporation hereby acknowledges that Indemnitee may have certain rights to indemnification, advancement and insurance provided by one or more Persons with whom or which Indemnitee may be associated. The Corporation hereby acknowledges and agrees that (i) the Corporation shall be the indemnitor of first resort with respect to any Proceeding, Expense, Liability or matter that is the subject of the Indemnity Obligations, (ii) the Corporation shall be primarily liable for all Indemnity Obligations and any indemnification afforded to Indemnitee in respect of any Proceeding, Expense, Liability or matter that is the subject of Indemnity Obligations, whether created by applicable law, organizational or constituent documents, contract (including this Agreement) or otherwise, (iii) any obligation of any other Persons with whom or which Indemnitee may be associated to indemnify Indemnitee or advance Expenses or Liabilities to Indemnitee in respect of any Proceeding shall be secondary to the obligations of the Corporation hereunder, (iv) the Corporation shall be required to indemnify Indemnitee and advance Expenses or Liabilities to Indemnitee hereunder to the fullest extent provided herein without regard to any rights Indemnitee may have against any other Person with whom or which Indemnitee may be associated or insurer of any such Person and (v) the Corporation irrevocably waives, relinquishes and releases any other Person with whom or which Indemnitee may be associated from any claim of contribution, subrogation or any other recovery of any kind in respect of amounts paid by the Corporation hereunder. In the event any other Person with whom or which Indemnitee may be associated or their insurers advances or extinguishes any liability or loss which is the subject of any Indemnity Obligation owed by the Corporation or payable under any Corporation insurance policy, the payor shall have a right of subrogation against the Corporation or its insurer or insurers for all amounts so paid which would otherwise be payable by the Corporation or its insurer or insurers under this Agreement. In no event will payment of an Indemnity Obligation by any other Person with whom or which Indemnitee may be associated or their insurers affect the obligations of the Corporation hereunder or shift primary liability for any Indemnity Obligation to any other Person with whom or which Indemnitee may be associated. Any indemnification, insurance or advancement provided by any other Person with whom or which Indemnitee may be associated with respect to any Liability arising as a result of Indemnitee's Corporate Status or capacity as an officer or director of any Person is specifically in excess over any Indemnity Obligation of the Corporation or any collectible insurance (including but not limited to any malpractice insurance or professional errors and omissions insurance) provided by the Corporation under this Agreement.

(c) The Corporation shall maintain an insurance policy or policies providing liability insurance providing reasonable and customary coverage as compared with similarly situated companies (as determined by the Board in its reasonable discretion) for directors, officers, employees, or agents of the Corporation or of any other Enterprise, and Indemnitee shall be covered by such policy or policies in accordance with its or their terms to the maximum extent of the coverage available for any such director, officer, employee or agent under such policy or policies and such policies shall provide for and recognize that the insurance policies are primary to any rights to indemnification, advancement or insurance proceeds to which Indemnitee may be entitled from one or more Persons with whom or which Indemnitee may be associated to the same extent as the Corporation's indemnification and advancement obligations set forth in this Agreement. If, at the time of the receipt of a notice of a claim pursuant to the terms hereof, the Corporation has director and officer liability insurance in effect, the Corporation shall give prompt notice of the commencement of such Proceeding to the insurers in accordance with the procedures set forth in the respective policies. The Corporation shall thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of Indemnitee, all amounts payable as a result of such Proceeding in accordance with the terms of such policies.

(d) In the event of any payment under this Agreement, the Corporation shall not be subrogated to the rights of recovery of Indemnitee, including rights of indemnification provided to Indemnitee from any other person or entity with whom Indemnitee may be associated; provided, however, that the Corporation shall be subrogated to the extent of any such payment of all rights of recovery of Indemnitee under insurance policies of the Corporation or any of its subsidiaries.

(e) The indemnification and contribution provided for in this Agreement will remain in full force and effect regardless of any investigation made by or on behalf of Indemnitee.

Section 14 Duration of Agreement; Not Employment Contract. This Agreement shall continue until and terminate upon the latest of: (i) ten (10) years after the date that Indemnitee shall have ceased to serve as a director, officer, employee or agent of the Corporation or any other Enterprise, (ii) the date of final termination of any Proceeding then pending in respect of which Indemnitee is granted rights of indemnification or advancement hereunder and of any

proceeding commenced by Indemnitee pursuant to Section 12 of this Agreement relating thereto or (iii) the expiration of all statutes of limitation applicable to possible Proceedings to which Indemnitee may be subject arising out of the Indemnitee's Corporate Status. The indemnification provided under this Agreement shall continue as to the Indemnitee even though he or she may have ceased to be a director of the Corporation or of any the Corporation's direct or indirect subsidiaries or to have Corporate Status. This Agreement shall be binding upon the Corporation and its successors and assigns and shall inure to the benefit of Indemnitee and Indemnitee's heirs, executors and administrators. This Agreement shall not be deemed an employment contract between the Corporation (or any of its subsidiaries or any other Enterprise) and Indemnitee. Indemnitee specifically acknowledges that Indemnitee's employment with the Corporation (or any of its subsidiaries or any other Enterprise), if any, is at will, and Indemnitee may be discharged at any time for any reason, with or without cause, except as may be otherwise provided in any written employment contract between Indemnitee and the Corporation (or any of its subsidiaries or any other Enterprise), other applicable formal severance policies duly adopted by the Board, or, with respect to service as a director of the Corporation, by the Certificate of Incorporation, the Bylaws or the DGCL.

Section 15 Severability. If any provision or provisions of this Agreement shall be held to be invalid, illegal or unenforceable for any reason whatsoever: (a) the validity, legality and enforceability of the remaining provisions of this Agreement (including, without limitation, each portion of any Section of this Agreement containing any such provision held to be invalid, illegal or unenforceable that is not itself invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby and shall remain enforceable to the fullest extent permitted by applicable law; (b) such provision or provisions shall be deemed reformed to the extent necessary to conform to applicable law and to give the maximum effect to the intent of the parties hereto; and (c) to the fullest extent possible, the provisions of this Agreement (including, without limitation, each portion of any Section of this Agreement containing any such provision held to be invalid, illegal or unenforceable that is not itself invalid, illegal or unenforceable) shall be construed so as to give effect to the intent manifested thereby.

Section 16 Enforcement.

(a) The Corporation expressly confirms and agrees that it has entered into this Agreement and assumed the obligations imposed on it hereby in order to induce Indemnitee to serve as a director, officer, employee or agent of the Corporation, and the Corporation acknowledges that Indemnitee is relying upon this Agreement in serving as a director, officer, employee or agent of the Corporation.

(b) This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter hereof and supersedes all prior agreements and understandings, oral, written and implied, between the parties hereto with respect to the subject matter hereof; provided, however, that this Agreement is a supplement to and in furtherance of the Certificate of Incorporation, the Bylaws and applicable law, and shall not be deemed a substitute therefore, nor diminish or abrogate any rights of Indemnitee thereunder.

Section 17 Modification and Waiver. No supplement, modification or amendment of this Agreement shall be binding unless executed in writing by the parties thereto. No waiver of any of the provisions of this Agreement shall be deemed to be or shall constitute a waiver of any other provision of this Agreement nor shall any waiver constitute a continuing waiver.

Section 18 Notices. All notices, requests, demands and other communications under this Agreement shall be in writing and shall be deemed to have been duly given if (a) delivered by hand and receipted for by the party to whom said notice or other communication shall have been directed, (b) mailed by certified or registered mail with postage prepaid, on the third business day after the date on which it is so mailed, (c) mailed by reputable overnight courier and receipted for by the party to whom said notice or other communication shall have been directed or (d) sent by facsimile transmission, with receipt of oral confirmation that such transmission has been received:

(i) If to Indemnitee, at such address as Indemnitee shall provide to the Corporation.

(ii) If to the Corporation to:

Ramaco Resources, Inc.

250 West Main Street, Suite 1800

Lexington, Kentucky 40507

Attention: Board of Directors

or to any other address as may have been furnished to Indemnitee by the Corporation.

Section 19 Contribution. To the fullest extent permissible under applicable law, if the indemnification provided for in this Agreement is unavailable to Indemnitee for any reason whatsoever, the Corporation, in lieu of indemnifying Indemnitee, shall contribute to the amount incurred by Indemnitee, whether for Liabilities or for Expenses, in connection with any claim relating to an indemnifiable event under this Agreement, in such proportion as is deemed fair and reasonable in light of all of the circumstances of such Proceeding in order to reflect (a) the relative benefits received by the Corporation and Indemnitee as a result of the event(s) and transaction(s) giving cause to such Proceeding; and (b) the relative fault of the Corporation (and its directors, officers, employees and agents) and Indemnitee in connection with such event(s) and transaction(s).

Section 20 Applicable Law. This Agreement and the legal relations among the parties shall be governed by, and construed and enforced in accordance with, the laws of the State of Delaware, without regard to its conflict of laws rules.

Section 21 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall for all purposes be deemed to be an original but all of which together shall constitute one and the same Agreement. Only one such counterpart signed by the party against whom enforceability is sought needs to be produced to evidence the existence of this Agreement.

Section 22 Miscellaneous. Use of the masculine pronoun shall be deemed to include usage of the feminine pronoun where appropriate. The headings of the paragraphs of this Agreement are inserted for convenience only and shall not be deemed to constitute part of this Agreement or to affect the construction thereof.

IN WITNESS WHEREOF, the parties have caused this Agreement to be signed effective as of the day and year first above written.

RAMACO RESOURCES, INC.

By: /s/ Randall W. Atkins
Name: Randall W. Atkins
Title: Chairman and Chief Executive

INDEMNITEE

By: /s/ E. Forrest Jones, Jr.
Name: E. Forrest Jones, Jr.

[Signature Page to Indemnification Agreement]

SEPARATION AND CONSULTING AGREEMENT

THIS SEPARATION AND CONSULTING AGREEMENT ("***Agreement***") is effective as of December 31, 2020, between Ramaco Resources, Inc., a Delaware corporation (the "***Company***") and Michael D. Bauersachs ("***Consultant***").

W I T N E S S E T H:

WHEREAS, Consultant is currently employed by the Company and serves as the Chief Executive Officer of the Company;

WHEREAS, Consultant will separate from employment with the Company in order to pursue business opportunities with Ramaco Royalty, LLC, an entity related to but separate from the Company and which entity currently leases and subleases a majority of the coal currently controlled by the Company and its subsidiaries, pursuant to the terms set forth herein;

WHEREAS, the Company wishes to engage Consultant to provide advisory services to the Company until the second anniversary of the date hereof;

WHEREAS, Consultant wishes to provide advisory services to the Company;

WHEREAS, in consideration of the mutual promises contained herein, Consultant voluntarily enters into this Agreement upon the terms and conditions herein set forth; and

WHEREAS, in consideration of the mutual promises contained herein, the Company is willing to enter into this Agreement upon the terms and conditions herein set forth.

NOW, THEREFORE, for and in consideration of the mutual promises, covenants and obligations contained herein, the Company and Consultant agree as follows:

ARTICLE I
RESIGNATION AND TREATMENT OF BENEFITS

1.1 Resignation as Officer and Director. Effective as of December 31, 2020, Consultant hereby resigns as Chief Executive Officer and from any and all director or other officer (or equivalent) positions he holds with the Company. Consultant agrees to take any and all further acts necessary to accomplish these resignations.

1.2 Resignation from Employment. Effective as of December 31, 2020 (the "***Resignation Date***"), Consultant hereby resigns as an employee of the Company.

1.3 Termination of Benefits. Consultant will be entitled to any and all compensation and benefits accrued through the Resignation Date under any of the Company's employee benefit plans, programs or arrangements, the amount of such benefits will be payable in accordance with the terms and conditions of such employee benefits plans, programs or arrangements regardless of whether such benefits are payable after the Resignation Date. Such benefits shall include, without limitation, any cash bonus earned by Consultant through the Resignation Date as well as any matching payment under the Company's 401K plan. For the avoidance of doubt, the continued

vesting of Consultant's outstanding restricted stock awards as of the Resignation Date will be controlled by Article IV below.

1.4 Health Plans. If Consultant elects to continue coverage for Consultant and Consultant's spouse and eligible dependents, if any, under the Company's group health plans under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("***COBRA***"), Consultant may continue COBRA benefits at his sole cost and expense.

1.5 No Other Benefits. Except as specified in this Agreement, Consultant will not be entitled to any severance payments and, subsequent to the Resignation Date, Consultant will not be eligible to receive any awards under any incentive plan of the Company or any other benefits under any plan or arrangement of the Company. Without limiting the foregoing, Consultant hereby waives any and all right to benefits under the Company's Change in Control and Severance Plan (the "**Severance Plan**").

1.6 Post-Employment Release. Consultant acknowledges that this Article I of the Agreement provides Consultant with additional rights and privileges to which Consultant would not otherwise be entitled, and, in exchange for the same, the Company requires the binding execution by Consultant (without revocation) of the Waiver and Release attached hereto as Exhibit A (the "***Waiver and Release***"), which must be executed and returned during the period beginning on the Resignation Date and ending on the thirtieth (30th) day after the Resignation Date, which Consultant hereby agrees provides him with at least 21 calendar days to consider whether to sign and return the Waiver and Release to the Company. Notwithstanding any provision herein to the contrary, if Consultant has not delivered to the Company an executed and irrevocable Waiver and Release on or before the thirtieth (30th) day after the Resignation Date, the Company will have no further obligations to Consultant pursuant to this Agreement.

ARTICLE II
CONSULTING SERVICES

2.1 Engagement; Resignation Date. The Company agrees to engage Consultant for the provision of consulting and advisory services, and Consultant agrees to provide such services to the Company, pursuant to the terms of this Agreement beginning as of the Resignation Date and continuing for the period of time set forth in Article III of this Agreement, subject to the terms and conditions of this Agreement.

2.2 Consulting Services. Consultant agrees to devote such time and efforts as may reasonably be required to perform, and to perform diligently, such consulting and advisory services as requested by the Company and such other services as the parties may mutually agree upon from time to time (the "***Consulting Services***"). In furtherance of the Consulting Services, Consultant shall be entitled, within reason, and upon reasonable notice to and approval by Company, to use office related services for the common good of Company and its lessors and sublessors.

2.3 Independent Contractor. Consultant will not be an employee of the Company during the Consulting Term, but will act in the capacity of an independent contractor. Consultant will act solely in a consulting capacity hereunder and will not have authority to act for the Company or to give instructions or orders on behalf of the Company or otherwise to make

commitments for or on behalf of the Company. The Company will not exercise control over the detail, manner or methods of the performance of the services by Consultant during the Consulting Term.

ARTICLE III
TERM AND TERMINATION

3.1 Term. Unless sooner terminated pursuant to other provisions in this Agreement, the Company agrees to engage Consultant for the period beginning on the Resignation Date and ending on December 31, 2022 (the "***Consulting Term***"). Any continued engagement for the provision of services by the Company that continues beyond the end of the Consulting Term will not be governed by the terms of this Agreement unless the parties extend the Consulting Term by mutual written agreement.

3.2 Termination. The Company may terminate this Agreement, and the Consulting Services, for Cause upon written notice with the opportunity to cure within five (5) days. "***Cause***" will mean Consultant's material failure to perform the Consulting Services upon reasonable request by the Company or Consultant's material breach of this Agreement. Consultant may terminate this Agreement at any time by giving the Company ten (10) days advance written notice.

ARTICLE IV
COMPENSATION

4.1 Compensation. For the Consulting Term, Consultant will be entitled to compensation for his services in the amount of $200,000 per annum, payable in equal installments, on a monthly basis at the beginning of each month. (the "***Consulting Fee***"). The Consulting Fee shall be paid to MDB Energy Advisors, LLC, a consulting company in which Consultant is the sole member, and Consultant acknowledges and agrees that payment of the Consulting Fee identified in this Section 4.1 to MDB Energy Advisors, LLC shall fully satisfy any obligation to pay such Consulting Fee hereunder.

4.2 Continued Vesting of Awards.

(a) Continued Vesting. Provided that Consultant serves continuously through the Consulting Term, Consultant will continue to vest in all the restricted stock awards issued under the Ramaco Resources, Inc. Long-Term Incentive Plan ("LTIP") that remain outstanding as of the Resignation Date. The awards will vest pursuant to and in accordance with the vesting schedule in the LTIP on the normal dates of vesting as if Consultant had been employed directly by the Company. Consultant also currently holds certain stock options. Such options shall also be enforceable through their term.

(b) Waiver of Change in Control Provisions. Consultant waives any rights to accelerated vesting under the Severance Plan for those awards that remain outstanding as of the Resignation Date, provided, however, with respect to the Consultant's restricted stock awards only, should there be a change in control event (as defined in the Severance Plan) during the Consulting Period, Consultant shall be entitled to accelerated vesting of such awards. The agreement herein to limited accelerated vesting shall have no effect on Consultant's waiver contained herein.

4.3 Expenses and Other. Consultant will be reimbursed directly by the Company for all out of pocket expenses incurred in connection with performing the Consulting Services under this Agreement, including reimbursement of mileage, in the same manner as the Company has historically accepted. For all expenses, Consultant will furnish to the Company detailed statements, receipts and vouchers to verify the expenses, and will submit the expenses on a weekly basis. Such expenses will be paid within thirty days of their submission to the Company. Company confirms that Consultant shall continue to be eligible to receive third party coal related publications during the Consulting Term. Consultant shall also maintain access to that certain email address Michael.Bauersachs@ramacometc.com. Consultant shall use its best efforts to communicate outside of the company with a different email.

4.4 Benefits; Responsibility for Taxes. During the Consulting Term, Consultant will not be entitled to participate in any employee benefit plan of the Company based on Consultant's role as an independent contractor. This provision will not prevent Consultant from taking advantage of the continuing right to health coverage under COBRA. Consultant will be solely responsible for, and will pay all social security, federal income taxes, unemployment insurance, worker's compensation insurance, pensions, annuities or other liabilities or taxes incurred by or on behalf or for the benefit of Consultant arising out of the performance by Consultant of his obligations under this Agreement.

ARTICLE V
PROTECTION OF INFORMATION

5.1 Disclosure to and Property of the Company. For purposes of this Article V, the term "the Company" will include the Company and any of its affiliates. All information, trade secrets, designs, ideas, concepts, improvements, product developments, discoveries and inventions, whether patentable or not, that are conceived, made, developed, disclosed to or acquired by Consultant, individually or in conjunction with others, during the period of, and in connection with, Consultant's engagement by the Company (whether during business hours or otherwise and whether on the Company's premises or otherwise) that relate to the Company's or any of its affiliates' businesses, trade secrets, products or services (including, without limitation, all such information relating to corporate opportunities, strategies, business plans, product specifications, compositions, manufacturing and distribution methods and processes, research, financial and sales data, pricing terms, evaluations, opinions, interpretations, acquisition prospects, the identity of customers or their requirements, the identity of key contacts within the customer's organizations or within the organization of acquisition prospects, or production, marketing and merchandising techniques, prospective names and marks) and all writings or materials of any type embodying any of such information, ideas, concepts, improvements, discoveries, inventions and other similar forms of expression (collectively, "***Confidential Information***") will be disclosed to the Company and are and will be the sole and exclusive property of the Company or its affiliates, as applicable. Moreover, all documents, videotapes, written presentations, brochures, drawings, memoranda, notes, records, files, correspondence, manuals, models, specifications, computer programs, E-mail, voice mail, electronic databases, maps, drawings, architectural renditions, models and all other writings or materials of any type embodying any of such information, ideas, concepts, improvements, discoveries, inventions and other similar forms of expression (collectively, "***Work Product***") are and will be the sole and exclusive property of the Company (or its affiliates). Consultant agrees to perform all actions reasonably requested by the Company or

its affiliates to establish and confirm such exclusive ownership. Upon termination of Consultant's engagement by the Company, for any reason, Consultant promptly will deliver such Confidential Information and Work Product, and all copies thereof, to the Company.

5.2 Disclosure to Consultant. The Company will disclose to Consultant and place Consultant in a position to have access to or develop Confidential Information and Work Product of the Company (or its affiliates); and will entrust Consultant with business opportunities of the Company (or its affiliates); and will place Consultant in a position to develop business good will on behalf of the Company (or its affiliates).

5.3 No Unauthorized Use or Disclosure Consultant agrees to preserve and protect the confidentiality of all Confidential Information and Work Product of the Company and its affiliates. Consultant agrees that Consultant will not, at any time during or after the Consulting Term, make any unauthorized disclosure of, and Consultant will not remove from the Company premises, Confidential Information or Work Product of the Company or its affiliates, or make any use thereof, except, in each case, in the carrying out of Consultant's responsibilities hereunder. Consultant will use all reasonable efforts to cause all persons or entities to whom any Confidential Information will be disclosed by Consultant hereunder to preserve and protect the confidentiality of such Confidential Information. Provided, however, that Consultant may use or disclose Confidential Information or Work Product to the extent reasonably necessary to perform services for Ramaco Royalty, LLC, any successor to Ramaco Royalty, LLC (collectively, "Ramaco Royalty") or any other affiliate of the Company, and that such use or disclosure shall not be a violation of this Agreement. Consultant will have no obligation hereunder to keep confidential any Confidential Information if and to the extent disclosure thereof is specifically required by law; provided, however, that in the event disclosure is required by applicable law, Consultant will provide the Company with prompt notice of such requirement prior to making any such disclosure, so that the Company may seek an appropriate protective order. At the request of the Company at any time, Consultant agrees to deliver to the Company all Confidential Information that Consultant may possess or control. Consultant agrees that all Confidential Information of the Company (whether now or hereafter existing) conceived, discovered or made by Consultant during the period of Consultant's provision of consulting services to the Company exclusively belongs to the Company (and not to Consultant), and upon request by the Company for specified Confidential Information, Consultant will promptly disclose such Confidential Information to the Company and perform all actions reasonably requested by the Company to establish and confirm such exclusive ownership. Affiliates of the Company will be third party beneficiaries of Consultant's obligations under this Article V. As a result of Consultant's provision of consulting services to the Company, Consultant may also from time to time have access to, or knowledge of, Confidential Information or Work Product of third parties, such as customers, suppliers, partners, joint venturers, and the like, of the Company and its affiliates. Consultant also agrees to preserve and protect the confidentiality of such third-party Confidential Information and Work Product.

5.4 Assistance by Consultant. Except as set forth in this Agreement, during the period of Consultant's provision of consulting services to the Company, Consultant will assist the Company and its nominee, at any time, in the protection of the Company's or its affiliates' worldwide right, title and interest in and to Confidential Information and Work Product and the execution of all formal assignment documents requested by the Company or its nominee(s) and the execution of all lawful oaths and applications for patents and registration of copyright in the

United States and foreign countries. After Consultant's provision of consulting services to the Company terminates, at the request from time to time and expense of the Company or its affiliates, Consultant will assist the Company or its nominee(s) in the protection of the Company's or its affiliates' worldwide right, title and interest in and to Confidential Information and Work Product and the execution of all formal assignment documents requested by the Company or its nominee and the execution of all lawful oaths and applications for patents and registration of copyright in the United States and foreign countries.

5.5 Non-Disparagement; Statements Concerning the Company Consultant will refrain, both during and after the termination of the consulting relationship, from publishing any oral, online, or written statements about the Company, any of its affiliates or any of the Company's or such affiliates' directors, officers, or employees, as well as any consultants, agents or representatives of the Company or its affiliates who are known to Consultant that (a) are slanderous, libelous or defamatory, or (b) place the Company, any of its affiliates, or any of the Company's or any such affiliates' directors, officers, employees, consultants, agents or representatives in a false light before the public. The Company's officers and directors shall have a corresponding obligation not to disparage or otherwise defame Consultant. A violation or threatened violation of this prohibition may be enjoined by the courts. The rights afforded the Company and its affiliates and Consultant under this provision are in addition to all rights and remedies otherwise afforded by law.

5.6 Protected Activity. Nothing in this Agreement prohibits Consultant from filing a charge with, or reporting possible violations of federal law or regulation to any governmental agency or entity, including but not limited to the U.S. Equal Opportunity Commission, the Department of Justice, the Securities and Exchange Commission, Congress, and any agency Inspector General, or making other disclosures that are protected under the whistleblower provisions of federal law or regulation. This Agreement does not limit Consultant's ability to communicate with any government agencies or participate in any investigation or proceeding that may be conducted by any government agency, including providing documents or other information, without notice to the Company. In addition, this Agreement does not limit Consultant's right to receive an award for information provided to any government agencies. Further, Consultant is advised that an individual will not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that (i) is made (A) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney; and (B) solely for the purpose of reporting or investigating a suspected violation of law; or (ii) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. Consultant acknowledges that an individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual (x) files any document containing the trade secret under seal; and (y) does not disclose the trade secret, except pursuant to court order.

5.7 Remedies. Consultant acknowledges that money damages would not be a sufficient remedy for any breach of this Article V by Consultant, and the Company or its affiliates will be entitled to enforce the provisions of this Article V by terminating payments then owing to Consultant under this Agreement or otherwise and to specific performance and injunctive relief as remedies for such breach or any threatened breach. Such remedies will not be deemed the

exclusive remedies for a breach of this Article V but will be in addition to all remedies available at law or in equity, including the recovery of damages from Consultant and Consultant's agents. However, if it is determined that Consultant has not committed a breach of this Article V, then the Company will resume the payments and benefits due under this Agreement and pay to Consultant all payments and benefits that had been suspended pending such determination.

ARTICLE VI
NON-COMPETITION AGREEMENT

6.1 Definitions. As used in this Article VI, the following terms will have the following meanings:

"Business" means the operation and development of high quality, low cost metallurgical coal mines and other products and services that are functionally equivalent to the foregoing.

"Competing Business" means any business, individual, partnership, firm, corporation or other entity which engages in any business competing with the Business. In no event will the Company or any of its affiliates, including, but not limited to, Ramaco Royalty, be deemed a Competing Business and Consultant's services to and on behalf of Ramaco Royalty shall not violate this Article VI, provided, however, should Ramaco Royalty cease to be affiliated with Company and/or Consultant cease to be affiliated with Ramaco Royalty, the exclusions from non-competition identified herein shall no longer apply.

"Governmental Authority" means any governmental, quasi-governmental, state, county, city or other political subdivision of the United States or any other country, or any agency, court or instrumentality, foreign or domestic, or statutory or regulatory body thereof.

"Legal Requirement" means any law, statute, code, ordinance, order, rule, regulation, judgment, decree, injunction, franchise, permit, certificate, license, authorization, or other directional requirement (including, without limitation, any of the foregoing that relates to environmental standards or controls, energy regulations and occupational, safety and health standards or controls including those arising under environmental laws) of any Governmental Authority.

"Prohibited Period" means the period of two years after the Resignation Date.

6.2 Non-Competition; Non-Solicitation. Consultant and the Company agree to the non-competition and non-solicitation provisions of this Article VI in consideration for the compensation identified in Article IV and confidential information provided by the Company to Consultant pursuant to Article V of this Agreement, to protect the trade secrets and confidential information of the Company or its affiliates disclosed or entrusted to Consultant by the Company or its affiliates or created or developed by Consultant for the Company or its affiliates, to protect the business goodwill of the Company or its affiliates developed through the efforts of Consultant and/or the business opportunities disclosed or entrusted to Consultant by the Company or its affiliates and as an additional incentive for the Company to enter into this Agreement.

(a) Subject to the exceptions set forth in Section 6.2(b) below, Consultant expressly covenants and agrees that during the Prohibited Period (i) Consultant will refrain from carrying on or engaging in any Competing Business and (ii) Consultant will not, and Consultant will cause Consultant's affiliates not to, own, manage, operate, join, become an employee of, partner in, owner or member of (or an independent contractor to,) control or participate in, be connected with or loan money to, sell or lease equipment or property to, or otherwise be affiliated with any business, individual, partnership, firm, corporation or other entity which engages in a Competing Business, as Consultant expressly agrees that each of the foregoing activities would represent carrying on or engaging in a Competitive Business, as prohibited by this Section 6.2(a).

(b) Notwithstanding the restrictions contained in Section 6.2(a), Consultant or any of Consultant's affiliates may own an aggregate of not more than 2% of the outstanding stock of any class of any corporation engaged in a Competing Business, if such stock is listed on a national securities exchange or regularly traded in the over-the counter market by a member of a national securities exchange, without violating the provisions of Section 6.2(a), provided that neither Consultant nor any of Consultant's affiliates has the power, directly or indirectly, to control or direct the management or affairs of any such corporation and is not involved in the management of such corporation.

(c) Consultant further expressly covenants and agrees that during the Prohibited Period, Consultant will not, and Consultant will cause Consultant's affiliates not to (i) engage or employ, or solicit or contact with a view to the engagement or employment of, or recommend or refer to any person or entity (other than the Company or one of its affiliates) for engagement or employment any person who is an officer or employee of the Company or any of its affiliates or (ii) canvass, solicit, approach or entice away or cause to be canvassed, solicited, approached or enticed away from the Company or any of its affiliates any person or entity who or which is a customer of any of such entities during the Consulting Term or during the period during which Consultant is employed by the Company.

(d) Before accepting employment with any other person or entity while providing consulting services to the Company or during the Prohibited Period, Consultant will inform such person or entity of the restrictions and prohibitions contained in the Article VI. The Company reserves the right to provide a copy of this Agreement to any such person or entity.

6.3 Relief. Consultant and the Company agree and acknowledge that the limitations as to time, geographical area and scope of activity to be restrained as set forth in Section 6.2 are reasonable and do not impose any greater restraint than is necessary to protect the legitimate business interests of the Company. Consultant and the Company also acknowledge that money damages would not be sufficient remedy for any breach of this Article VI by Consultant, and the Company or its affiliates will be entitled to enforce the provisions of this Article VI by specific performance and injunctive relief as remedies for such breach or any threatened breach, and by terminating payments then owing to Consultant under this Agreement or otherwise. Such remedies will not be deemed the exclusive remedies for a breach of this Article VI but will be in addition to all remedies available at law or in equity, including the recovery of damages from Consultant and Consultant's agents. However, if it is determined that Consultant has not committed a breach of this Article VI, then the Company will resume the payments and benefits due under this Agreement

and pay to Consultant all payments and benefits that had been suspended pending such determination.

6.4 Reasonableness; Enforcement. Consultant hereby represents to the Company that Consultant has read and understands, and agrees to be bound by, the terms of this Article VI. Consultant acknowledges that the scope and duration of the covenants contained in this Article VI are the result of arm's-length bargaining and are fair and reasonable in light of (a) the nature and wide geographic scope of the operations of the Business, (b) Consultant's level of control over and contact with the Business in all jurisdictions in which it is conducted, and (c) the amount of Confidential Information that Consultant is receiving in connection with the performance of Consultant's services hereunder. It is the desire and intent of the parties that the provisions of this Article VI be enforced to the fullest extent permitted under applicable Legal Requirements, whether now or hereafter in effect and therefore, to the extent permitted by applicable Legal Requirements, Consultant and the Company hereby waive any provision of applicable Legal Requirements that would render any provision of this Article VI invalid or unenforceable.

6.5 Reformation. The Company and Consultant agree that the foregoing restrictions are reasonable under the circumstances and that any breach of the covenants contained in this Article VI would cause irreparable injury to the Company. Consultant understands that the foregoing restrictions may limit Consultant's ability to engage in certain business activities anywhere in the Restricted Area during the Prohibited Period, but acknowledges that Consultant will receive sufficient consideration from the Company to justify such restriction. Further, Consultant acknowledges that Consultant's skills are such that Consultant can be gainfully engaged or employed in noncompetitive employment, and that the agreement not to compete will not prevent Consultant from earning a living. Nevertheless, if any of the aforesaid restrictions are found by a court of competent jurisdiction to be unreasonable, or overly broad as to geographic area or time, or otherwise unenforceable, the parties intend for the restrictions herein set forth to be modified by the court making such determination so as to be reasonable and enforceable and, as so modified, to be fully enforced. By agreeing to this contractual modification prospectively at this time, the Company and Consultant intend to make this provision enforceable under the law or laws of all applicable States, Provinces and other jurisdictions so that the entire agreement not to compete and this Agreement as prospectively modified will remain in full force and effect and will not be rendered void or illegal. Such modification will not affect the payments made to Consultant under this Agreement.

ARTICLE VII
DISPUTE RESOLUTION

7.1 Arbitration. All claims or disputes between Consultant and the Company or its parents, subsidiaries and affiliates (including, without limitation, claims relating to the validity, scope, and enforceability of this Article VII and claims arising under any federal, state or local law regarding the terms and conditions of Consultant's engagement or prohibiting discrimination in engagement of contractors or governing the service provider relationship in any way) will be submitted for final and binding arbitration in Houston, Texas in accordance with the then-applicable rules for resolution of employment disputes of the American Arbitration Association ("***AAA***"). The arbitration will be conducted by a single arbitrator chosen pursuant to the then-applicable rules for resolution of employment disputes of the AAA, and the parties will each bear

half the costs of such arbitration. For the avoidance of doubt, the division of costs referenced in the previous sentence applies to the costs of the AAA only, and does not include attorney or expert fees or other fees or costs incurred by the parties. The arbitrator will apply the substantive law of the State of Texas (excluding Texas choice-of-law principles that might call for the application of some other state's law), or federal law, or both as applicable to the claims asserted. The results of the arbitration and the decision of the arbitrator will be final and binding on the parties and each party agrees and acknowledges that these results will be enforceable in a court of law. No demand for arbitration may be made after the date when the institution of legal or equitable proceedings based on such claim or dispute would be barred by the applicable statute(s) of limitations. In the event either party must resort to the judicial process to enforce the provisions of this Agreement, the award of an arbitrator or equitable relief granted by an arbitrator, the party successfully seeking enforcement will be entitled to recover from the other party all costs of such litigation including, but not limited to, reasonable attorneys' fees and court costs. To the fullest extent permitted by law, all proceedings conducted pursuant to this agreement to arbitrate, including any order, decision or award of the arbitrator, will be kept confidential by all parties. Notwithstanding the foregoing, Consultant and the Company further acknowledge and agree that a court of competent jurisdiction residing in Houston, Texas will have the power to maintain the status quo pending the arbitration of any dispute under this Article VII, and this Article VII will not require the arbitration of any application for emergency, temporary or preliminary injunctive relief (including temporary restraining orders) by either party pending arbitration, including, without limitation, any application for emergency, temporary or preliminary injunctive relief for any claim arising out of Article V or Article VI of this Agreement; provided, however, that the remainder of any such dispute beyond the application for such emergency, temporary or preliminary injunctive relief shall be subject to arbitration under this Article VII. **THE PARTIES ACKNOWLEDGE THAT, BY SIGNING THIS AGREEMENT, THEY ARE KNOWINGLY AND VOLUNTARILY WAIVING ANY RIGHTS THAT THEY MAY HAVE TO A JURY TRIAL OR, EXCEPT AS EXPRESSLY PROVIDED HEREIN, A COURT TRIAL OF ANY CLAIM THAT IS SUBJECT TO THIS ARTICLE VII.**

ARTICLE VIII
MISCELLANEOUS

8.1 Notices. For purposes of this Agreement, notices and all other communications provided for herein shall be in writing and shall be deemed to have been duly given (a) when received if delivered personally or by courier, (b) on the date receipt is acknowledged if delivered by certified mail, postage prepaid, return receipt requested or (c) one day after transmission if sent by facsimile transmission with confirmation of transmission, as follows:

If to the Company, addressed to:
Ramaco Resources, Inc.
250 West Main Street, Suite 1800
Lexington, Kentucky 40507
Attention: General Counsel

If to Consultant, addressed to:
Michael D. Bauersachs
12180 Morestead Ct.
Glen Allen, VA 23059

or the Consultant's last address in the Company's records or to such other address as either party may furnish to the other in writing in accordance herewith, except that notices or changes of address shall be effective only upon receipt.

8.2 Applicable Law; Submission to Jurisdiction.

This Agreement is entered into under, and shall be governed for all purposes by, the laws of the State of Kentucky, without regard to conflicts of laws principles thereof.

8.3 No Waiver. No failure by either party hereto at any time to give notice of any breach by the other party of, or to require compliance with, any condition or provision of this Agreement shall be deemed a waiver of similar or dissimilar provisions or conditions at the same or at any prior or subsequent time.

8.4 Severability. If a court of competent jurisdiction determines that any provision of this Agreement is invalid or unenforceable, then the invalidity or unenforceability of that provision shall not affect the validity or enforceability of any other provision of this Agreement, and all other provisions shall remain in full force and effect.

8.5 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which together will constitute one and the same agreement.

8.6 Headings. The Section headings have been inserted for purposes of convenience and shall not be used for interpretive purposes.

8.7 Gender and Plurals. Wherever the context so requires, the masculine gender includes the feminine or neuter, and the singular number includes the plural and conversely.

8.8 Affiliate and Subsidiary. As used in this Agreement, (a) the term "affiliate" as used with respect to a particular person or entity shall mean any other person or entity which owns or controls, is owned or controlled by, or is under common ownership or control with, such particular person or entity, and (b) the term "subsidiary" as used with respect to a particular entity shall mean a direct or indirect subsidiary of such entity.

8.9 Successors. This Agreement shall be binding upon and inure to the benefit of the Company and any successor or assign of the Company. The Company shall use commercially reasonable efforts, but makes no enforceable promise, to require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business or assets of the Company expressly to assume and agree to perform this Agreement to the same extent that the Company would be required to perform it if no succession had taken place. Except as provided in the preceding sentences, this Agreement, and the rights and obligations of the parties hereunder, are personal and neither this Agreement, nor any right, benefit or obligation of either party hereto, shall be subject to voluntary or involuntary assignment, alienation or transfer, whether by operation of law or otherwise, without the prior written consent of the other party. In addition, any payment owed to Consultant hereunder after the date of Consultant's death shall be paid to Consultant's estate.

8.10 Survival; Continuing Obligations. Termination of this Agreement shall not affect any right or obligation of any party which is accrued or vested prior to such termination. Without limiting the scope of the preceding sentence, the provisions of Article V, Article VI and Article VII will survive any termination of the consulting relationship and/or of this Agreement.

8.11 Entire Agreement. Except as provided in any signed written agreement contemporaneously or hereafter executed by the Company and Consultant and any agreement referred to within this Agreement, this Agreement constitutes the entire agreement of the parties with regard to the subject matter hereof, and contains all the covenants, promises, representations, warranties and agreements between the parties with respect to the engagement of Consultant by the Company. Without limiting the scope of the preceding sentence, all understandings and agreements preceding the date of execution of this Agreement and relating to the subject matter hereof including, without limitation, any prior employment or consulting agreement between Consultant and the Company, are hereby null and void and of no further force and effect.

8.12 Modification; Waiver. Any modification to or waiver of this Agreement will be effective only if it is in writing and signed by the parties to this Agreement.

8.13 Delayed Payment Restriction.

(a) "***Code***" will mean the Internal Revenue Code of 1986, as amended.

(b) "**Section 409A Payment Date**" will mean the earlier of (a) the date of Consultant's death or (b) the date that is six months after Consultant's "separation from service" with the Company within the meaning of Section 409A(a)(2)(A)(i) of the Code and applicable administrative guidance issued thereunder.

(c) Each payment and benefit hereunder is intended to be exempt from Section 409A of the Code pursuant to the short-term deferral exemption as specified in Treasury Regulation § 1.409A-1(b)(4), and the provisions of this Agreement will be administered, interpreted and construed accordingly. Notwithstanding any provision in this Agreement to the contrary, if any payment or benefit provided for herein would be subject to additional taxes and interest under Section 409A of the Code if Consultant's receipt of such payment or benefit is not delayed until the Section 409A Payment Date, then such payment or benefit will not be provided to Consultant (or Consultant's estate, if applicable) until the Section 409A Payment Date.

[*Signature Page Follows*]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of December 31, 2020.

RAMACO RESOURCES, INC.

By: /s/ Randall W. Atkins
Randall W. Atkins
Executive Chairman

MICHAEL D. BAUERSACHS

/s/ Michael D. Bauersachs

EXHIBIT A

RELEASE

This Release (this "***Release***") constitutes the release referred to in that certain Separation and Consulting Agreement (the "***Agreement***") dated as of December [Day], 2020, between Michael D. Bauersachs (***Executive***"), and Ramaco Resources, Inc., a Delaware corporation (the "***Company***").

1. **General Release**.

(a) For good and valuable consideration, including additional rights and privileges to which Executive would not otherwise be entitled, Executive hereby releases, discharges and forever acquits the Company, its affiliates and subsidiaries, the past, present and future stockholders, members, partners, directors, managers, employees, agents, attorneys, heirs, legal representatives, successors and assigns of the foregoing, as well as all employee benefit plans maintained by the Company or any of its affiliates or subsidiaries and all fiduciaries and administrators of any such plan, in their personal and representative capacities (collectively, the "***Company Parties***"), from liability for, and hereby waives, any and all claims, rights, damages, or causes of action of any kind related to Executive's employment with any Company Party, the termination of such employment, and any other acts or omissions related to any matter on or prior to the date of this Agreement (collectively, the "***Released Claims***").

(b) The Released Claims include without limitation those arising under or related to: (i) the Age Discrimination in Employment Act of 1967; (ii) Title VII of the Civil Rights Act of 1964; (iii) the Civil Rights Act of 1991; (iv) sections 1981 through 1988 of Title 42 of the United States Code; (v) the Employee Retirement Income Security Act of 1974, including, but not limited to, sections 502(a)(1)(A), 502(a)(1)(B), 502(a)(2), and 502(a)(3) to the extent the release of such claims is not prohibited by applicable law; (vi) the Immigration Reform Control Act; (vii) the Americans with Disabilities Act of 1990; (viii) the National Labor Relations Act; (ix) the Occupational Safety and Health Act; (x) the Family and Medical Leave Act of 1993; (xi) any state or federal anti-discrimination law; (xii) any state or federal wage and hour law; (xiii) any other local, state or federal law, regulation or ordinance; (xiv) any public policy, contract, tort, or common law; (xv) costs, fees, or other expenses including attorneys' fees incurred in these matters; (xvi) any employment contract, incentive compensation plan or stock option plan with any Company Party or to any ownership interest in any Company Party except as expressly provided in the Agreement and any stock option or other equity compensation agreement between Executive and the Company; and (xvii) compensation or benefits of any kind not expressly set forth in the Agreement or any such stock option or other equity compensation agreement.

(c) In no event will the Released Claims include (i) any claim which arises after the date of this Release, (ii) any rights of defense or indemnification which would be otherwise afforded to Executive under the Certificate of Incorporation, By-Laws or similar governing documents of the Company or its subsidiaries, or any indemnity agreement entered into with Executive, (iii) any rights of defense or indemnification which would be otherwise afforded to Executive under any director or officer liability or other insurance policy maintained by the

Company or its subsidiaries, (iv) any rights of Executive to benefits accrued under any employee benefit plan or arrangement, or (v) any rights under the Agreement.

(d) Notwithstanding this release of liability, nothing in this Release prevents Executive from filing any non-legally waivable claim (including a challenge to the validity of this Agreement) with the Equal Employment Opportunity Commission ("***EEOC***") or comparable state or local agency or participating in any investigation or proceeding conducted by the EEOC or comparable state or local agency.

(e) This Release is not intended to indicate that any such claims exist or that, if they do exist, they are meritorious. Rather, Executive is simply agreeing that, in exchange for the consideration recited in the first sentence of Section 1(a) of this Release, any and all potential claims of this nature that Executive may have against the Company Parties, regardless of whether they actually exist, are expressly settled, compromised and waived.

(f) By signing this Release, Executive is bound by it. Anyone who succeeds to Executive's rights and responsibilities, such as heirs or the executor of Executive's estate, is also bound by this Release. This Release also applies to any claims brought by any person or agency or class action under which Executive may have a right or benefit. **THIS RELEASE INCLUDES MATTERS ATTRIBUTABLE TO THE SOLE OR PARTIAL NEGLIGENCE (WHETHER GROSS OR SIMPLE) OR OTHER FAULT, INCLUDING STRICT LIABILITY, OF ANY OF THE COMPANY PARTIES.**

2. **Covenant Not to Sue; Executive's Representation** Executive agrees not to bring or join any lawsuit against any of the Company Parties in any court relating to any of the Released Claims, except to enforce any terms of the Agreement. Executive represents that Executive has not brought or joined any claim, lawsuit or arbitration against any of the Company Parties in any court or before any administrative agency or arbitral authority and has made no assignment of any rights Executive has asserted or may have against any of the Company Parties to any person or entity, in each case, with respect to any Released Claims. Executive expressly represents that, as of the date Executive executes this Release, Executive has been provided all leaves (paid and unpaid) and paid all wages and compensation owed to Executive by the Company Parties with the exception of all payments owed as a condition of Executive's executing (and not revoking) this Release.

3. **Acknowledgments**. By executing and delivering this Release, Executive acknowledges that:

(a) Executive has carefully read this Release;

(b) Executive has had at least twenty-one (21) days to consider this Release before the execution and delivery hereof to the Company;

(c) Executive has been and hereby is advised in writing that Executive may, at Executive's option, discuss this Release with an attorney of Executive's choice and that Executive has had adequate opportunity to do so; and

(d) Executive fully understands the final and binding effect of this Release; the only promises made to Executive to sign this Release are those stated in the Agreement and herein; and Executive is signing this Release voluntarily and of Executive's own free will, and that Executive understands and agrees to each of the terms of this Release.

4. **Revocation Right**. Executive may revoke this Release within the seven day period beginning on the date Executive signs this Release (such seven day period being referred to herein as the "***Release Revocation Period***"). To be effective, such revocation must be in writing signed by Executive and must be delivered to the Chief Executive Officer of the Company before 11:59 p.m., Houston, Texas time, on the last day of the Release Revocation Period. This Release is not effective, and no further consideration will be provided to Executive, unless the expiration of the Release Revocation Period expires without Executive's revocation. If an effective revocation is delivered in the foregoing manner and timeframe, this Release will be of no force or effect and will be null and void *ab initio*.

Executed on this ____ day of _____, 2021.

_____
Michael D. Bauersachs

STATE OF _____ §
COUNTY OF _____ §

BEFORE ME, the undersigned authority personally appeared Michael D. Bauersachs, by me known or who produced valid identification as described below, who executed the foregoing instrument and acknowledged before me that he subscribed to such instrument on this ___day of_____, 2021.

_____
NOTARY PUBLIC in and for the State of _____

My Commission Expires:

_____

Identification produced:

Exhibit 21.1

Subsidiaries of Ramaco Resources, Inc.

Entity	State of Formation
Ramaco Development, LLC	Delaware
RAM Mining, LLC	Delaware
RAMACO Coal Sales, LLC	Delaware
Ramaco Resources, LLC	Delaware
RAMACO Resources Land Holdings, LLC	Delaware
Ramaco Coal, Inc.	Delaware

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-215913) of Ramaco Resources, Inc. of our report dated February 18, 2021, with respect to the consolidated balance sheets of Ramaco Resources, Inc. as of December 31, 2020 and 2019, and the related consolidated statements of operations, equity, and cash flows for each of the years in the three-year period ended December 31, 2020, which report appears in the December 31, 2020 Annual Report on Form 10-K of Ramaco Resources, Inc.

/s/ Briggs & Veselka Co.

Briggs & Veselka Co.
Houston, Texas

February 18, 2021

Exhibit 23.2

CONSENT OF WEIR INTERNATIONAL, INC.

Weir International, Inc., as independent mining engineers and geologists, hereby consents to the use by Ramaco Resources, Inc. (the "Company") of information contained in our reserves and resource studies relating to the proven and probable coal reserves of the Company's Berwind, RAM Mine, Knox Creek and Elk Creek properties in the Company's Annual Report on Form 10-K for the year ended December 31, 2020 (and any amendments thereto) and incorporation by reference of such information in the Company's Registration Statement on Form S-8 (File No. 333-215913). We also consent to the reference to Weir International, Inc. in those filings and any amendments thereto.

WEIR INTERNATIONAL, INC.

/s/ Fran X. Taglia

Fran X. Taglia
President

February 18, 2021

Exhibit 23.3

CONSENT OF TRUE LINE, INC.

True Line, Inc., as independent mining engineers, hereby consents to the use by Ramaco Resources, Inc. (the "Company") of information contained in our reserves and resource studies relating to the proven and probable coal reserves of the "Company's Berwind, RAM Mine, Knox Creek and Elk Creek properties in the Company's Annual Report on Form 10-K for the year ended December 31, 2020 (and any amendments thereto) and incorporation by reference of such information in the Company's Registration Statement on Form S-8 (File No. 333-215913). We also consent to the reference to True Line, Inc. in those filings and any amendments thereto.

TRUE LINE, INC.

/s/ Jim Corner
Jim Corner, PE, PS

February 18, 2021

Exhibit 31.1

Certification of Chief Executive Officer
pursuant to Rule 13a-14(a) and Rule 15d-14(a)
of the Securities Exchange Act OF 1934, as amended

I, Randall W. Atkins, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2020 of Ramaco Resources, Inc. (the "registrant");

2. Based on my knowledge, this 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 report;

3. Based on my knowledge, the financial statements, and other financial information included in this 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 report;

4. The registrant's other certifying officer(s) 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)) for the registrant and 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 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 conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation;

   d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) 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 18, 2021

/s/ Randall W. Atkins
Randall W. Atkins
Chairman and Chief Executive Officer

Exhibit 31.2

Certification of Chief Financial Officer
pursuant to Rule 13a-14(a) and Rule 15d-14(a)
of the Securities Exchange Act OF 1934, as amended

I, Jeremy R. Sussman, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2020 of Ramaco Resources, Inc. (the "registrant");

2. Based on my knowledge, this 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 report;

3. Based on my knowledge, the financial statements, and other financial information included in this 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 report;

4. The registrant's other certifying officer(s) 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)) for the registrant and 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 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 conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation;

   d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) 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 18, 2021

/s/ Jeremy R. Sussman
Jeremy R. Sussman
Chief Financial Officer

Exhibit 32.1

Certification of
Chief Executive Officer
under Section 906 of the
Sarbanes Oxley Act of 2002, 18 U.S.C. § 1350

In connection with the Annual Report on Form 10-K for the year ended December 31, 2020 of Ramaco Resources, Inc. (the "Company"), as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Randall W. Atkins, Chief Executive Officer of the Company, certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 18, 2021

/s/ Randall W. Atkins
Randall W. Atkins
Chairman and Chief Executive Officer

Exhibit 32.2

Certification of
Chief Financial Officer
under Section 906 of the
Sarbanes Oxley Act of 2002, 18 U.S.C. § 1350

In connection with the Annual Report on Form 10-K for the year ended December 31, 2020 of Ramaco Resources, Inc. (the "Company"), as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Jeremy R. Sussman, Chief Financial Officer of the Company, certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 18, 2021

/s/ Jeremy R. Sussman
Jeremy R. Sussman
Chief Financial Officer

Federal Mine Safety and Health Act Information

We work to prevent accidents and occupational illnesses. We have in place health and safety programs that include extensive employee training, safety incentives, drug and alcohol testing and safety audits. The objectives of our health and safety programs are to provide a safe work environment, provide employees with proper training and equipment and implement safety and health rules, policies and programs that foster safety excellence.

Our mining operations are subject to extensive and stringent compliance standards established pursuant to the Federal Mine Safety and Health Act of 1977 (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.

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. We present information below regarding certain mining safety and health violations, orders and citations, issued by MSHA and related assessments and legal actions and mine-related fatalities with respect to our coal mining operations. In evaluating this information, consideration should be given to factors such as: (i) the number of violations, orders and citations will vary depending on the size of the coal mine, (ii) the number of violations, orders and citations issued will vary from inspector to inspector and mine to mine, and (iii) violations, orders and citations can be contested and appealed, and in that process, are often reduced in severity and amount, and are sometimes dismissed.

The following tables include information required by the Dodd-Frank Act for the current year. 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. The tables below do not include any orders or citations issued to independent contractors at our mines.

Mine or Operating Name / MSHA Identification Number	*Section 104(a) S&S Citations[1]*	*Section 104(b) Orders[2]*	*Section 104(d) Citations and Orders[3]*	*Section 110(b)(2) Violations[4]*	*Section 107(a) Orders[5]*	*Total Dollar Value of MSHA Assessments Proposed (in thousands)[6]*
Active Operations						
Eagle Seam Deep Mine 46-09495	23	0	0	0	0	$ 45
Coal Creek Prep Plant (VA) 44-05236	9	0	0	0	0	$ 1
Elk Creek Prep Plant 46-02444	2	0	0	0	0	$ 14
Stonecoal Branch Mine No. 2 46-08663	43	0	3	0	0	$ 100
Ram Surface Mine No. 1 46-09537	0	0	0	0	0	$ 2
Highwall Miner No. 1 46-09219	0	0	0	0	0	$ 0
Berwind Deep Mine 46-09533	30	0	0	0	0	$ 68
No. 2 Gas Deep Mine 46-09541	19	0	0	0	0	$ 46
Tiller No.1 44-06804	0	0	0	0	0	$ 0

Mine or Operating Name / MSHA Identification Number	*Total Number of Mining Related Fatalities*	*Received Notice of Pattern of Violations Under Section 104(e) (yes/no)[7]*	*Legal Actions Pending as of Last Day of Period*	*Legal Actions Initiated During Period*	*Legal Actions Resolved During Period*
Active Operations					
Eagle Seam Deep Mine 46-09495	0	No	7	68	61
Coal Creek Prep Plant (VA) 44-05236	0	No	0	0	0
Elk Creek Prep Plant 46-02444	0	No	1	1	0
Stonecoal Branch Mine No. 2 46-08663	0	No	17	98	102
Ram Surface Mine No. 1 46-09537	0	No	0	0	0
Highwall Miner No. 1 46-09219	0	No	0	0	0
Berwind Deep Mine 46-09533	0	No	21	53	32
No. 2 Gas 46-09541	0	No	13	21	8
Tiller No.1 44-06804	0	No	0	0	0

The number of legal actions pending before the Federal Mine Safety and Health Review Commission as of December 31, 2020 that fall into each of the following categories is as follows:

Mine or Operating Name / MSHA Identification Number	*Contests of Citations and Orders*	*Contests of Proposed Penalties*	*Complaints for Compensation*	*Complaints of Discharge / Discrimination / Interference*	*Applications for Temporary Relief*	*Appeals of Judge's Ruling*
Active Operations						
Eagle Seam Deep Mine 46-09495	0	7	0	0	0	0
Coal Creek Prep Plant (VA) 44-05236	0	0	0	0	0	0
Elk Creek Prep Plant 46-02444	0	0	0	0	0	0
Stonecoal Branch Mine No. 2 46-08663	0	17	0	0	0	0
Ram Surface Mine No. 1 46-09537	0	0	0	0	0	0
Highwall Miner No. 1 46-09219	0	0	0	0	0	0
Berwind Deep Mine 46-09533	0	21	0	0	0	0
No. 2 Gas 46-09541	0	13	0	0	0	0
Tiller No.1 44-06804	0	0	0	0	0	0

(1) 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.

(2) Mine Act section 104(b) orders are for alleged failures to totally abate a citation within the time period specified in the citation.

(3) 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.

(4) 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.

(5) 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.

(6) Amounts shown include assessments proposed by MSHA on all citations and orders, including those citations and orders that are not required to be included within the above chart.

(7) 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.