

---

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
WASHINGTON, DC 20549

---

**FORM 10-Q**

(Mark One)

**Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the quarterly period ended **March 31, 2019**

**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: **1-13105**



**ArchCoal**

**Arch Coal, Inc.**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction  
of incorporation or organization)

**One CityPlace Drive, Suite 300, St. Louis, Missouri**

(Address of principal executive offices)

**43-0921172**

(I.R.S. Employer  
Identification Number)

**63141**

(Zip code)

Registrant's telephone number, including area code: **(314) 994-2700**

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes  No

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

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

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

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. Yes  No

At April 19, 2019, there were 16,809,849 shares of the registrant's common stock outstanding.

---

TABLE OF CONTENTS

	<u>Page</u>
<a href="#">Part I FINANCIAL INFORMATION</a>	<a href="#">3</a>
<a href="#">Item 1. Financial Statements</a>	<a href="#">3</a>
<a href="#">Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations</a>	<a href="#">26</a>
<a href="#">Item 3. Quantitative and Qualitative Disclosure About Market Risk</a>	<a href="#">36</a>
<a href="#">Item 4. Controls and Procedures</a>	<a href="#">37</a>
<a href="#">Part II OTHER INFORMATION</a>	<a href="#">38</a>
<a href="#">Item 1. Legal Proceedings</a>	<a href="#">38</a>
<a href="#">Item 1A. Risk Factors</a>	<a href="#">38</a>
<a href="#">Item 2. Unregistered Sales of Equity Securities and Use of Proceeds</a>	<a href="#">38</a>
<a href="#">Item 4. Mine Safety Disclosures</a>	<a href="#">38</a>
<a href="#">Item 6. Exhibits</a>	<a href="#">39</a>
<a href="#">Signatures</a>	<a href="#">42</a>

**Part I**  
**FINANCIAL INFORMATION**

**Item 1. Financial Statements.**

**Arch Coal, Inc. and Subsidiaries**  
**Condensed Consolidated Income Statements**  
**(in thousands, except per share data)**

	<b>Three Months Ended March 31,</b>	
	<b>2019</b>	<b>2018</b>
	<b>(Unaudited)</b>	
<b>Revenues</b>	\$ 555,183	\$ 575,295
<b>Costs, expenses and other operating</b>		
Cost of sales (exclusive of items shown separately below)	438,471	454,780
Depreciation, depletion and amortization	25,273	29,703
Accretion on asset retirement obligations	5,137	6,992
Amortization of sales contracts, net	65	3,051
Change in fair value of coal derivatives and coal trading activities, net	(12,981)	(3,414)
Selling, general and administrative expenses	24,089	25,948
Other operating income, net	(1,650)	(6,932)
	<u>478,404</u>	<u>510,128</u>
Income from operations	76,779	65,167
<b>Interest expense, net</b>		
Interest expense	(4,432)	(5,395)
Interest and investment income	2,143	1,273
	<u>(2,289)</u>	<u>(4,122)</u>
Income before nonoperating expenses	74,490	61,045
<b>Nonoperating expenses</b>		
Non-service related pension and postretirement benefit costs	(1,766)	(1,303)
Reorganization items, net	87	(301)
	<u>(1,679)</u>	<u>(1,604)</u>
Income before income taxes	72,811	59,441
Provision for (benefit from) income taxes	70	(544)
<b>Net income</b>	<u>\$ 72,741</u>	<u>\$ 59,985</u>
<b>Net income per common share</b>		
Basic earnings per common share	<u>\$ 4.16</u>	<u>\$ 2.87</u>
Diluted earnings per common share	<u>\$ 3.91</u>	<u>\$ 2.74</u>
<b>Weighted average shares outstanding</b>		
Basic weighted average shares outstanding	<u>17,494</u>	<u>20,901</u>
Diluted weighted average shares outstanding	<u>18,599</u>	<u>21,875</u>
Dividends declared per common share	<u>\$ 0.45</u>	<u>\$ 0.40</u>

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

**Arch Coal, Inc. and Subsidiaries**  
**Condensed Consolidated Statements of Comprehensive Income (Loss)**  
**(in thousands)**

	<b>Three Months Ended March 31,</b>	
	<b>2019</b>	<b>2018</b>
	<b>(Unaudited)</b>	
<b>Net income</b>	\$ 72,741	\$ 59,985
<b>Derivative instruments</b>		
Comprehensive income (loss) before tax	2,717	6,557
Income tax benefit (provision)	—	—
	<u>2,717</u>	<u>6,557</u>
<b>Pension, postretirement and other post-employment benefits</b>		
Comprehensive income (loss) before tax	—	—
Income tax benefit (provision)	—	—
	<u>—</u>	<u>—</u>
<b>Available-for-sale securities</b>		
Comprehensive income (loss) before tax	377	(658)
Income tax benefit (provision)	—	—
	<u>377</u>	<u>(658)</u>
Total other comprehensive income (loss)	3,094	5,899
Total comprehensive income	<u>\$ 75,835</u>	<u>\$ 65,884</u>

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

**Arch Coal, Inc. and Subsidiaries**  
**Condensed Consolidated Balance Sheets**  
(in thousands, except per share data)

	March 31, 2019 (Unaudited)	December 31, 2018
<b>Assets</b>		
<b>Current assets</b>		
Cash and cash equivalents	\$ 218,750	\$ 264,937
Short term investments	164,664	162,797
Trade accounts receivable	195,095	200,904
Other receivables	44,528	48,926
Inventories	145,607	125,470
Other current assets	64,192	75,749
Total current assets	832,836	878,783
<b>Property, plant and equipment, net</b>	848,749	834,828
<b>Other assets</b>		
Equity investments	105,419	104,676
Other noncurrent assets	76,197	68,773
Total other assets	181,616	173,449
Total assets	\$ 1,863,201	\$ 1,887,060
<b>Liabilities and Stockholders' Equity</b>		
<b>Current Liabilities</b>		
Accounts payable	\$ 138,935	\$ 128,024
Accrued expenses and other current liabilities	143,586	183,514
Current maturities of debt	15,210	17,797
Total current liabilities	297,731	329,335
Long-term debt	297,733	300,186
Asset retirement obligations	233,614	230,304
Accrued pension benefits	15,452	16,147
Accrued postretirement benefits other than pension	81,296	83,163
Accrued workers' compensation	168,851	174,303
Other noncurrent liabilities	68,577	48,801
Total liabilities	1,163,254	1,182,239
<b>Stockholders' equity</b>		
Common stock, \$0.01 par value, authorized 300,000 shares, issued 25,047 shares at March 31, 2019 and December 31, 2018, respectively	250	250
Paid-in capital	723,143	717,492
Retained earnings	592,296	527,666
Treasury stock, 8,088 shares and 7,216 shares at March 31, 2019 and December 31, 2018, respectively, at cost	(662,132)	(583,883)
Accumulated other comprehensive income	46,390	43,296
Total stockholders' equity	699,947	704,821
Total liabilities and stockholders' equity	\$ 1,863,201	\$ 1,887,060

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

**Arch Coal, Inc. and Subsidiaries**  
**Condensed Consolidated Statements of Cash Flows**  
(in thousands)

	Three Months Ended March 31,	
	2019	2018
	(Unaudited)	
<b>Operating activities</b>		
Net income	\$ 72,741	\$ 59,985
Adjustments to reconcile to cash provided by operating activities:		
Depreciation, depletion and amortization	25,273	29,703
Accretion on asset retirement obligations	5,137	6,992
Amortization of sales contracts, net	65	3,051
Deferred income taxes	—	12,127
Employee stock-based compensation expense	5,651	3,845
(Gains) losses on disposals and divestitures, net	(475)	134
Amortization relating to financing activities	907	1,080
Changes in:		
Receivables	7,410	(28,728)
Inventories	(20,137)	(14,871)
Accounts payable, accrued expenses and other current liabilities	(17,861)	(26,052)
Income taxes, net	76	11,596
Other	6,197	8,005
Cash provided by operating activities	84,984	66,867
<b>Investing activities</b>		
Capital expenditures	(39,147)	(9,453)
Minimum royalty payments	(63)	(62)
Proceeds from disposals and divestitures	608	54
Purchases of short term investments	(27,902)	(38,458)
Proceeds from sales of short term investments	26,500	49,400
Investments in and advances to affiliates, net	(2,196)	—
Cash provided by (used in) investing activities	(42,200)	1,481
<b>Financing activities</b>		
Payments on term loan due 2024	(750)	(750)
Net payments on other debt	(4,633)	(3,431)
Dividends paid	(7,839)	(8,335)
Purchases of treasury stock	(75,749)	(38,186)
Other	—	10
Cash used in financing activities	(88,971)	(50,692)
Increase (decrease) in cash and cash equivalents, including restricted cash	(46,187)	17,656
Cash and cash equivalents, including restricted cash, beginning of period	264,937	273,602
Cash and cash equivalents, including restricted cash, end of period	\$ 218,750	\$ 291,258
<b>Cash and cash equivalents, including restricted cash, end of period</b>		
Cash and cash equivalents	\$ 218,750	\$ 288,332
Restricted cash	—	2,926
	\$ 218,750	\$ 291,258

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

**Arch Coal, Inc. and Subsidiaries**  
**Condensed Consolidated Statements of Stockholders' Equity**  
(in thousands)

	Common Stock	Paid-In Capital	Retained Earnings	Treasury Stock at Cost	Accumulated Other Comprehensive Income	Total
(In thousands)						
<b>Balances, January 1, 2019</b>	\$ 250	\$ 717,492	\$ 527,666	\$ (583,883)	\$ 43,296	\$ 704,821
Dividends on common shares (\$0.45/share)	—	—	(8,111)	—	—	\$ (8,111)
Total comprehensive income	—	—	72,741	—	3,094	75,835
Employee stock-based compensation	—	5,651	—	—	—	5,651
Purchase of 872,317 shares of common stock under share repurchase program	—	—	—	(78,249)	—	(78,249)
<b>Balances at March 31, 2019</b>	<u>\$ 250</u>	<u>\$ 723,143</u>	<u>\$ 592,296</u>	<u>\$ (662,132)</u>	<u>\$ 46,390</u>	<u>\$ 699,947</u>
<b>Balances, January 1, 2018</b>	\$ 250	\$ 700,125	\$ 247,232	\$ (302,109)	\$ 20,367	\$ 665,865
Dividends on common shares (\$0.40/share)	—	—	(8,553)	—	—	\$ (8,553)
Total comprehensive income	—	—	59,985	—	5,899	65,884
Employee stock-based compensation	—	3,845	—	—	—	3,845
Purchase of 407,091 shares of common stock under share repurchase program	—	—	—	(38,589)	—	(38,589)
Warrants exercised	—	10	—	—	\$ —	10
<b>Balances at March 31, 2018</b>	<u>\$ 250</u>	<u>\$ 703,980</u>	<u>\$ 298,664</u>	<u>\$ (340,698)</u>	<u>\$ 26,266</u>	<u>\$ 688,462</u>

**Arch Coal, Inc. and Subsidiaries**  
**Notes to Condensed Consolidated Financial Statements**  
**(unaudited)**

## **1. Basis of Presentation**

The accompanying unaudited condensed consolidated financial statements include the accounts of Arch Coal, Inc. (“Arch Coal”) and its subsidiaries (the “Company”). Unless the context indicates otherwise, the terms “Arch” and the “Company” are used interchangeably in this Quarterly Report on Form 10-Q. The Company’s primary business is the production of thermal and metallurgical coal from surface and underground mines located throughout the United States, for sale to utility, industrial and steel producers both in the United States and around the world. The Company currently operates mining complexes in West Virginia, Illinois, Wyoming and Colorado. All subsidiaries are wholly-owned. Intercompany transactions and accounts have been eliminated in consolidation.

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States for interim financial reporting and U.S. Securities and Exchange Commission regulations. In the opinion of management, all adjustments, consisting of normal, recurring accruals considered necessary for a fair presentation, have been included. Results of operations for the three months ended March 31, 2019 are not necessarily indicative of results to be expected for the year ending December 31, 2019. These financial statements should be read in conjunction with the audited financial statements and related notes as of and for the year ended December 31, 2018 included in the Company’s Annual Report on Form 10-K filed with the U.S. Securities and Exchange Commission.

## **2. Accounting Policies**

### ***Recently Adopted Accounting Guidance***

In February 2016, the FASB established Topic 842, Leases, by issuing ASU No. 2016-02, “Leases” which requires lessees to recognize leases on-balance sheet and disclose key information about leasing arrangements. The ASU was subsequently amended by ASU 2018-01, “Land Easements Practical Expedient for Transition to Topic 842;” ASU 2018-10, “Codification Improvements to Topic 842, Leases;” and ASU 2018-11, “Targeted Improvements.” The new standard establishes a right-of-use (“ROU”) model that requires a lessee to recognize an ROU asset and lease liability on the balance sheet for all leases with a term longer than 12 months. The standard also requires a lessee to recognize a single lease cost, calculated so that the cost of the lease is allocated over the term of the lease, on a generally straight line basis. Leases of mineral reserves and related land leases have been exempted from the standard. The Company adopted ASU 2016-02 effective January 1, 2019 and elected the option to not restate comparative periods in transition and also elected the “package of practical expedients” within the standard which permits the Company not to reassess its prior conclusions about lease identification, lease classification and initial direct costs. Additionally, the Company made an election to not separate lease and non-lease components for all leases, and will not use hindsight. Finally, the Company will continue its current policy for accounting for land easements as executory contracts. The adoption of the standard had no impact on the Company’s consolidated income statement or statement of cash flows.

In April 2017, the FASB issued ASU No. 2017-08, “Receivables-Nonrefundable Fees and Other Costs (Subtopic 310-20), Premium Amortization on Purchased Callable Debt Securities.” The new guidance shortens the amortization period for the premium on certain purchased callable debt securities to the earliest call date. The new guidance does not change the accounting for purchased callable debt securities held at a discount. The Company adopted ASU 2017-08 effective January 1, 2019 with no impact on the Company’s financial statements.

In August 2017, the FASB issued ASU No. 2017-12, “Targeted Improvements to Accounting for Hedging Activities.” The new guidance provides targeted improvements to the accounting for hedging activities to better align an entity’s risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedging results. The Company adopted ASU 2017-12 effective January 1, 2019 with no impact on the Company’s financial statements.

In February 2018, the FASB issued ASU 2018-02, “Income Statement-Reporting Comprehensive Income (Topic 220) Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income.” ASU 2018-02 provides an option to reclassify stranded tax effects within accumulated other comprehensive income to retained earnings due to the change in the U.S. federal tax rate in the Tax Cuts and Jobs Act of 2017. The Company adopted ASU 2018-02 effective January 1, 2019 with no impact on the Company’s financial statements.



In June 2018, the FASB issued ASU 2018-07, "Compensation-Stock Compensation (Topic 718), Improvements to Non-employee Share-Based Payment Accounting." ASU 2018-07 aligns the measurement and classification guidance for share-based payments to non-employees with the guidance for share-based payments to employees. The Company adopted ASU 2018-07 effective January 1, 2019 with no impact on the Company's financial statements.

In October 2018, the FASB issued ASU 2018-16, "Derivatives and Hedging (Topic 815), Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap (OIS) Rate as a Benchmark Interest Rate of Hedge Accounting Purposes." The Company adopted ASU 2018-16 effective January 1, 2019 with no impact on the Company's financial statements.

### 3. Accumulated Other Comprehensive Income

The following items are included in accumulated other comprehensive income ("AOCI"):

	Derivative Instruments	Pension, Postretirement and Other Post- Employment Benefits	Available-for- Sale Securities	Accumulated Other Comprehensive Income
(In thousands)				
Balance at December 31, 2018	\$ 3,328	\$ 40,311	\$ (343)	\$ 43,296
Unrealized gains	3,593	—	377	3,970
Amounts reclassified from AOCI	(876)	—	—	(876)
Balance at March 31, 2019	<u>\$ 6,045</u>	<u>\$ 40,311</u>	<u>\$ 34</u>	<u>\$ 46,390</u>

The following amounts were reclassified out of AOCI:

Details About AOCI Components	Three Months Ended March 31,		Line Item in the Condensed Consolidated Statement of Operations
	2019	2018	
(In thousands)			
Coal hedges	\$ 361	\$ —	Revenues
Interest rate hedges	515	140	Interest expense
	—	—	Provision for (benefit from) income taxes
	<u>\$ 876</u>	<u>\$ 140</u>	Net of tax
Available-for-sale securities	\$ —	\$ —	Interest and investment income
	—	—	Provision for (benefit from) income taxes
	<u>\$ —</u>	<u>\$ —</u>	Net of tax

#### 4. Inventories

Inventories consist of the following:

	March 31, 2019	December 31, 2018
(In thousands)		
Coal	\$ 57,147	\$ 40,982
Repair parts and supplies	88,460	84,488
	<u>\$ 145,607</u>	<u>\$ 125,470</u>

The repair parts and supplies are stated net of an allowance for slow-moving and obsolete inventories of \$1.2 million at March 31, 2019 and \$0.6 million at December 31, 2018.

#### 5. Investments in Available-for-Sale Securities

The Company has invested in marketable debt securities, primarily highly liquid U.S. Treasury securities and investment grade corporate bonds. These investments are held in the custody of a major financial institution. These securities are classified as available-for-sale securities and, accordingly, the unrealized gains and losses are recorded through other comprehensive income.

The Company's investments in available-for-sale marketable securities are as follows:

	March 31, 2019					
	Cost Basis	Gross Unrealized		Fair Value	Balance Sheet Classification	
		Gains	Losses		Short-Term Investments	Other Assets
(In thousands)						
Available-for-sale:						
U.S. government and agency securities	\$ 94,586	\$ 58	\$ (37)	\$ 94,607	\$ 94,607	\$ —
Corporate notes and bonds	70,044	98	(85)	70,057	70,057	—
Total Investments	<u>\$ 164,630</u>	<u>\$ 156</u>	<u>\$ (122)</u>	<u>\$ 164,664</u>	<u>\$ 164,664</u>	<u>\$ —</u>
December 31, 2018						
	Cost Basis	Gross Unrealized		Fair Value	Balance Sheet Classification	
		Gains	Losses		Short-Term Investments	Other Assets
(In thousands)						
Available-for-sale:						
U.S. government and agency securities	\$ 100,003	\$ 11	\$ (126)	\$ 99,888	\$ 99,888	\$ —
Corporate notes and bonds	63,137	4	(232)	62,909	62,909	—
Total Investments	<u>\$ 163,140</u>	<u>\$ 15</u>	<u>\$ (358)</u>	<u>\$ 162,797</u>	<u>\$ 162,797</u>	<u>\$ —</u>

The aggregate fair value of investments with unrealized losses that were owned for less than a year was \$31.1 million and \$115.2 million at March 31, 2019 and December 31, 2018, respectively. The aggregate fair value of investments with unrealized losses that were owned for over a year was \$9.0 million and \$32.4 million at March 31, 2019 and December 31, 2018, respectively. The unrealized losses in the Company's portfolio at March 31, 2019 are the result of normal market fluctuations. The Company does not currently intend to sell these investments before recovery of their amortized cost base.

The debt securities outstanding at March 31, 2019 have maturity dates ranging from the second quarter of 2019 through the third quarter of 2020. The Company classifies its investments as current based on the nature of the investments and their availability to provide cash for use in current operations.

**6. Sales Contracts**

The sales contracts reflected in the Condensed Consolidated Balance Sheets are as follows:

	March 31, 2019			December 31, 2018		
	Assets	Liabilities	Net Total	Assets	Liabilities	Net Total
	(In thousands)			(In thousands)		
Original fair value	\$ 97,196	\$ 31,742		\$ 97,196	\$ 31,742	
Accumulated amortization	(97,051)	(31,098)		(96,812)	(30,924)	
<b>Total</b>	<b>\$ 145</b>	<b>\$ 644</b>	<b>\$ (499)</b>	<b>\$ 384</b>	<b>\$ 818</b>	<b>\$ (434)</b>
Balance Sheet classification:						
Other current	\$ 145	\$ 425		\$ 384	\$ 570	
Other noncurrent	\$ —	\$ 219		\$ —	\$ 248	

The Company anticipates the majority of the remaining net book value of sale contracts to be amortized in 2019 based upon expected shipments.

**7. Derivatives***Interest rate risk management*

The Company has entered into interest rate swaps to reduce the variability of cash outflows associated with interest payments on its variable rate term loan. These swaps have been designated as cash flow hedges. For additional information on these arrangements, see Note 9, "Debt and Financing Arrangements," in the Condensed Consolidated Financial Statements.

*Diesel fuel price risk management*

The Company is exposed to price risk with respect to diesel fuel purchased for use in its operations. The Company anticipates purchasing approximately 40 to 47 million gallons of diesel fuel for use in its operations annually. To protect the Company's cash flows from increases in the price of diesel fuel for its operations, the Company uses forward physical diesel purchase contracts, purchased heating oil call options and New York Mercantile Exchange ("NYMEX") gulf coast diesel swaps. At March 31, 2019, the Company had protected the price on the majority of its expected diesel fuel purchases for the remainder of 2019 with approximately 18 million gallons of heating oil call options with an average strike price of \$2.33 per gallon and 18 million gallons of NYMEX gulf coast diesel swaps at an average price of approximately \$1.91 per gallon. Additionally, the Company has protected approximately 9% of its expected 2020 purchases using heating oil call options with an average strike price of \$2.31 per gallon. At March 31, 2019, the Company had outstanding heating oil call options and NYMEX gulf coast swaps of approximately 40 million gallons for the purpose of managing the price risk associated with future diesel purchases. These positions are not designated as hedges for accounting purposes, and therefore, changes in the fair value are recorded immediately to earnings.

*Coal price risk management positions*

The Company may sell or purchase forward contracts, swaps and options in the over-the-counter coal market in order to manage its exposure to coal prices. The Company has exposure to the risk of fluctuating coal prices related to forecasted, index-priced sales or purchases of coal or to the risk of changes in the fair value of a fixed price physical sales contract. Certain derivative contracts may be designated as hedges of these risks.

At March 31, 2019, the Company held derivatives for risk management purposes that are expected to settle in the following years:

(Tons in thousands)	2019	2020	Total
Coal sales	2,196	344	2,540
Coal purchases	1,131	93	1,224

The Company has also entered into a minimal quantity of natural gas put options to protect the Company from decreases in natural gas prices, which could impact thermal coal demand. These options are not designated as hedges.

### Coal trading positions

The Company may sell or purchase forward contracts, swaps and options in the over-the-counter coal market for trading purposes. The Company is exposed to the risk of changes in coal prices on the value of its coal trading portfolio. The estimated future realization of the value of the trading portfolio is \$0.6 million of losses during the remainder of 2019 and \$0.2 million of losses during 2020.

### Tabular derivatives disclosures

The Company has master netting agreements with all of its counterparties which allow for the settlement of contracts in an asset position with contracts in a liability position in the event of default or termination. Such netting arrangements reduce the Company's credit exposure related to these counterparties. For classification purposes, the Company records the net fair value of all the positions with a given counterparty as a net asset or liability in the Condensed Consolidated Balance Sheets. The amounts shown in the table below represent the fair value position of individual contracts, and not the net position presented in the accompanying Condensed Consolidated Balance Sheets. The fair value and location of derivatives reflected in the accompanying Condensed Consolidated Balance Sheets are as follows:

Fair Value of Derivatives (In thousands)	March 31, 2019		December 31, 2018		
	Asset Derivative	Liability Derivative	Asset Derivative	Liability Derivative	
<b>Derivatives Designated as Hedging Instruments</b>					
Coal	\$ 5,461	\$ (297)	\$ 2,342	\$ (805)	
<b>Derivatives Not Designated as Hedging Instruments</b>					
Heating oil -- diesel purchases	1,734	(228)	532	—	
Coal -- held for trading purposes	33,091	(33,932)	10,329	(10,701)	
Coal -- risk management	22,552	(23,033)	5,672	(19,579)	
Natural gas	19	—	4	(4)	
<b>Total</b>	<b>\$ 57,396</b>	<b>\$ (57,193)</b>	<b>\$ 16,537</b>	<b>\$ (30,284)</b>	
Total derivatives	\$ 62,857	\$ (57,490)	\$ 18,879	\$ (31,089)	
Effect of counterparty netting	(57,490)	57,490	(17,801)	17,801	
<b>Net derivatives as classified in the balance sheets</b>	<b>\$ 5,367</b>	<b>\$ —</b>	<b>\$ 5,367</b>	<b>\$ (13,288)</b>	<b>\$ (12,210)</b>

	March 31, 2019	December 31, 2018
<b>Net derivatives as reflected on the balance sheets (in thousands)</b>		
<b>Heating oil and coal</b>	Other current assets \$ 5,367	\$ 1,078
<b>Coal</b>	Accrued expenses and other current liabilities —	(13,288)
	<b>\$ 5,367</b>	<b>\$ (12,210)</b>

The Company had a current asset representing cash collateral posted to a margin account for derivative positions primarily related to coal derivatives of \$13.1 million and \$24.7 million at March 31, 2019 and December 31, 2018, respectively. These amounts are not included with the derivatives presented in the table above and are included in "other current assets" in the accompanying Condensed Consolidated Balance Sheets.

The effects of derivatives on measures of financial performance are as follows:

**Derivatives used in Cash Flow Hedging Relationships (in thousands)**  
**Three Months Ended March 31,**

	Gain (Loss) Recognized in Other Comprehensive Income (Effective Portion)		Gains (Losses) Reclassified from Other Comprehensive Income into Income (Effective Portion)	
	2019	2018	2019	2018
Coal sales	(1) \$ 5,237	\$ 5,231	\$ 1,044	\$ —
Coal purchases	(2) (566)	(542)	(683)	—
Totals	\$ 4,671	\$ 4,689	\$ 361	\$ —

No ineffectiveness or amounts excluded from effectiveness testing relating to the Company's cash flow hedging relationships were recognized in the results of operations in the three month periods ended March 31, 2019 and 2018.

**Derivatives Not Designated as Hedging Instruments (in thousands)**  
**Three Months Ended March 31,**

	Gain (Loss) Recognized	
	2019	2018
Coal trading — realized and unrealized	(3) \$ (383)	\$ 558
Coal risk management — unrealized	(3) 13,425	2,875
Natural gas trading— realized and unrealized	(3) (61)	(19)
Change in fair value of coal derivatives and coal trading activities, net total	\$ 12,981	\$ 3,414
Coal risk management— realized	(4) \$ (4,411)	\$ (1,031)
Heating oil — diesel purchases	(4) \$ 637	\$ 18

**Location in statement of operations:**

- (1) — Revenues
- (2) — Cost of sales
- (3) — Change in fair value of coal derivatives and coal trading activities, net
- (4) — Other operating (income) expense, net

Based on fair values at March 31, 2019, amounts on derivative contracts designated as hedge instruments in cash flow hedges to be reclassified from other comprehensive income into earnings during the next twelve months are gains of approximately \$4.1 million.

**8. Accrued Expenses and Other Current Liabilities**

Accrued expenses and other current liabilities consist of the following:

	March 31, 2019	December 31, 2018
	(In thousands)	
Payroll and employee benefits	\$ 35,520	\$ 57,166
Taxes other than income taxes	70,894	75,017
Interest	225	156
Acquired sales contracts	425	570
Workers' compensation	18,187	20,044
Asset retirement obligations	12,297	13,113
Other	6,038	17,448
	\$ 143,586	\$ 183,514

**9. Debt and Financing Arrangements**

	March 31, 2019	December 31, 2018
	(In thousands)	
Term loan due 2024 (\$294.0 million face value)	\$ 292,924	\$ 293,626
Other	25,849	30,449
Debt issuance costs	(5,830)	(6,092)
	312,943	317,983
Less: current maturities of debt	15,210	17,797
Long-term debt	\$ 297,733	\$ 300,186

**Term Loan Facility**

In 2017, the Company entered into a senior secured term loan credit agreement (the “Credit Agreement”) in an aggregate principal amount of \$300 million (the “Term Loan Debt Facility”) with Credit Suisse AG, Cayman Islands Branch, as administrative agent and collateral agent, and the other financial institutions from time to time party thereto (collectively, the “Lenders”). The Term Loan Debt Facility was issued at 99.50% of the face amount and will mature on March 7, 2024. The term loans provided under the Term Loan Debt Facility (the “Term Loans”) are subject to quarterly principal amortization payments in an amount equal to \$750,000.

During 2018, the Company entered into the Second Amendment (the “Second Amendment”) to its Credit Agreement. The Second Amendment reduced the interest rate on its Term Loan Debt Facility to, at the option of Arch Coal, either (i) the London interbank offered rate (“LIBOR”) plus an applicable margin of 2.75%, subject to a 1.00% LIBOR floor, or (ii) a base rate plus an applicable margin of 1.75%. The Second Amendment also reset the 1.00% call premium to apply to repricing events that occur on or prior to October 3, 2018. The LIBOR floor remains at 1.00%. There is no change to the maturities as a result of the Second Amendment.

The Term Loan Debt Facility is guaranteed by all existing and future wholly owned domestic subsidiaries of the Company (collectively, the “Subsidiary Guarantors”) and, together with Arch Coal, the “Loan Parties”), subject to customary exceptions, and is secured by first priority security interests on substantially all assets of the Loan Parties, including 100% of the voting equity interests of directly owned domestic subsidiaries and 65% of the voting equity interests of directly owned foreign subsidiaries, subject to customary exceptions.

The Company has the right to prepay Term Loans at any time, and from time to time, in whole or in part without premium or penalty, upon written notice, except that any prepayment of Term Loans that bear interest at the LIBOR Rate other than at the end of the applicable interest periods therefor shall be made with reimbursement for any funding losses and redeployment costs of the Lenders resulting therefrom.

The Term Loan Debt Facility is subject to certain usual and customary mandatory prepayment events, including 100% of net cash proceeds of (i) debt issuances (other than debt permitted to be incurred under the terms of the Term Loan Debt Facility) and (ii) non-ordinary course asset sales or dispositions, subject to customary thresholds, exceptions and reinvestment rights.

The Term Loan Debt Facility contains customary affirmative covenants and representations.

The Term Loan Debt Facility also contains customary negative covenants, which, among other things, and subject to certain exceptions, include restrictions on (i) indebtedness, (ii) liens, (iii) liquidations, mergers, consolidations and acquisitions, (iv) disposition of assets or subsidiaries, (v) affiliate transactions, (vi) creation or ownership of certain subsidiaries, partnerships and joint ventures, (vii) continuation of or change in business, (viii) restricted payments, (ix) prepayment of subordinated and junior lien indebtedness, (x) restrictions in agreements on dividends, intercompany loans and granting liens on the collateral, (xi) loans and investments, (xii) sale and leaseback transactions, (xiii) changes in organizational documents and fiscal year and (xiv) transactions with respect to bonding subsidiaries. The Term Loan Debt Facility does not contain any financial maintenance covenant.

The Term Loan Debt Facility contains customary events of default, subject to customary thresholds and exceptions, including, among other things, (i) nonpayment of principal and nonpayment of interest and fees, (ii) a material inaccuracy of a representation or warranty at the time made, (iii) a failure to comply with any covenant, subject to customary grace periods in

the case of certain affirmative covenants, (iv) cross-events of default to indebtedness of at least \$50 million, (v) cross-events of default to surety, reclamation or similar bonds securing obligations with an aggregate face amount of at least \$50 million, (vi) uninsured judgments in excess of \$50 million, (vii) any loan document shall cease to be a legal, valid and binding agreement, (viii) uninsured losses or proceedings against assets with a value in excess of \$50 million, (ix) certain ERISA events, (x) a change of control or (xi) bankruptcy or insolvency proceedings relating to the Company or any material subsidiary of the Company.

### **Accounts Receivable Securitization Facility**

In 2018, the Company extended and amended its existing trade accounts receivable securitization facility provided to Arch Receivable Company, LLC, a special-purpose entity that is a wholly owned subsidiary of Arch Coal (“Arch Receivable”) (the “Extended Securitization Facility”), which supports the issuance of letters of credit and requests for cash advances. The amendment to the Extended Securitization Facility maintained the \$160 million borrowing capacity and extended the maturity date to the date that is three years after the Securitization Facility Closing Date. Additionally, the amendment provided the Company the opportunity to use credit insurance to increase the pool of eligible receivables for borrowing. Pursuant to the Extended Securitization Facility, Arch Receivable also agreed to a revised schedule of fees payable to the administrator and the providers of the Extended Securitization Facility.

The Extended Securitization Facility will terminate at the earliest of (i) three years from the Securitization Facility Closing Date, (ii) if the Liquidity (defined in the Extended Securitization Facility and consistent with the definition in the Inventory Facility) is less than \$175 million for a period of 60 consecutive days, the date that is the 364th day after the first day of such 60 consecutive day period, and (iii) the occurrence of certain predefined events substantially consistent with the existing transaction documents. Under the Extended Securitization Facility, Arch Receivable, Arch Coal and certain of Arch Coal’s subsidiaries party to the Extended Securitization Facility have granted to the administrator of the Extended Securitization Facility a first priority security interest in eligible trade accounts receivable generated by such parties from the sale of coal and all proceeds thereof. As of March 31, 2019, letters of credit totaling \$15.7 million were outstanding under the facility with \$81.5 million available for borrowings. As a result, there was no cash collateral required to be posted in the facility.

### **Inventory-Based Revolving Credit Facility**

In 2017, the Company and certain subsidiaries of Arch Coal entered into a senior secured inventory-based revolving credit facility in an aggregate principal amount of \$40 million (the “Inventory Facility”) with Regions Bank (“Regions”) as administrative agent and collateral agent, as lender and swingline lender (in such capacities, the “Lender”) and as letter of credit issuer. Availability under the Inventory Facility is subject to a borrowing base consisting of (i) 85% of the net orderly liquidation value of eligible coal inventory, (ii) the lesser of (x) 85% of the net orderly liquidation value of eligible parts and supplies inventory and (y) 35% of the amount determined pursuant to clause (i), and (iii) 100% of Arch Coal’s Eligible Cash (defined in the Inventory Facility), subject to reduction for reserves imposed by Regions.

In 2018, the Company and certain subsidiaries of Arch Coal amended and extended the Inventory Facility by increasing the facility size by \$10 million, bringing the total aggregate amount available to \$50 million, subject to borrowing base calculations described above.

The commitments under the Inventory Facility will terminate on the date that is the earliest to occur of (i) the date, if any, that is 364 days following the first day that Liquidity (defined in the Inventory Facility and consistent with the definition in the Extended Securitization Facility (as defined below)) is less than \$250 million for a period of 60 consecutive days and (ii) the date, if any, that is 60 days following the maturity, termination or repayment in full of the Extended Securitization Facility.

Revolving loan borrowings under the Inventory Facility bear interest at a per annum rate equal to, at the option of Arch Coal, either the base rate or the London interbank offered rate plus, in each case, a margin ranging from 2.00% to 2.50% (in the case of LIBOR loans) and 1.00% to 1.50% (in the case of base rate loans) determined using a Liquidity-based grid. Letters of credit under the Inventory Facility are subject to a fee in an amount equal to the applicable margin for LIBOR loans, plus customary fronting and issuance fees.

All existing and future direct and indirect domestic subsidiaries of Arch Coal, subject to customary exceptions, will either constitute co-borrowers under or guarantors of the Inventory Facility (collectively with Arch Coal, the “Loan Parties”). The Inventory Facility is secured by first priority security interests in the ABL Priority Collateral (defined in the Inventory Facility) of the Loan Parties and second priority security interests in substantially all other assets of the Loan Parties, subject to customary exceptions (including an exception for the collateral that secures the Extended Securitization Facility).

Arch Coal has the right to prepay borrowings under the Inventory Facility at any time and from time to time in whole or in part without premium or penalty, upon written notice, except that any prepayment of such borrowings that bear interest at the LIBOR rate other than at the end of the applicable interest periods therefore shall be made with reimbursement for any funding losses and redeployment costs of the Lender resulting therefrom.

The Inventory Facility is subject to certain usual and customary mandatory prepayment events, including non-ordinary course asset sales or dispositions, subject to customary thresholds, exceptions (including exceptions for required prepayments under Arch Coal's term loan facility) and reinvestment rights.

The Inventory Facility contains certain customary affirmative and negative covenants; events of default, subject to customary thresholds and exceptions; and representations, including certain cash management and reporting requirements that are customary for asset-based credit facilities. The Inventory Facility also includes a requirement to maintain Liquidity equal to or exceeding \$175 million at all times. As of March 31, 2019, letters of credit totaling \$35.7 million were outstanding under the facility with \$14.3 million available for borrowings.

### Interest Rate Swaps

The Company has entered into a series of interest rate swaps to fix a portion of the LIBOR interest rate within the term loan. The interest rate swaps qualify for cash flow hedge accounting treatment and as such, the change in the fair value of the interest rate swaps is recorded on the Company's Condensed Consolidated Balance Sheet as an asset or liability with the effective portion of the gains or losses reported as a component of accumulated other comprehensive income and the ineffective portion reported in earnings. As interest payments are made on the term loan, amounts in accumulated other comprehensive income will be reclassified into earnings through interest expense to reflect a net interest on the term loan equal to the effective yield of the fixed rate of the swap plus 2.75% which is the spread on the revised LIBOR term loan. In the event that an interest rate swap is terminated prior to maturity, gains or losses in accumulated other comprehensive income will remain deferred and be reclassified into earnings in the periods which the hedged forecasted transaction affects earnings.

Below is a summary of the Company's outstanding interest rate swap agreements designated as hedges as of March 31, 2019:

Notional Amount (in millions)	Effective Date	Fixed Rate	Receive Rate	Expiration Date
\$250.0	June 29, 2018	1.662%	1-month LIBOR	June 28, 2019
\$250.0	June 28, 2019	2.025%	1-month LIBOR	June 30, 2020
\$200.0	June 30, 2020	2.249%	1-month LIBOR	June 30, 2021
\$100.0	June 30, 2021	2.315%	1-month LIBOR	June 30, 2023

The fair value of the interest rate swaps at March 31, 2019 is an asset of \$0.9 million which is recorded within Other noncurrent assets with the offset to accumulated other comprehensive income on the Company's Condensed Consolidated Balance Sheet. The Company realized \$0.5 million of gains during the three months ended March 31, 2019 related to settlements of the interest rate swaps which was recorded to interest expense on the Company's Condensed Consolidated Income Statements. The interest rate swaps are classified as level 2 within the fair value hierarchy.



## 10. Income Taxes

A reconciliation of the statutory federal income tax provision (benefit) at the statutory rate to the actual provision for (benefit from) income taxes follows:

	Three Months Ended March 31,	
	2019	2018
(In thousands)		
Income tax provision (benefit) at statutory rate	\$ 15,290	\$ 12,483
Percentage depletion allowance	(4,307)	(4,607)
State taxes, net of effect of federal taxes	1,012	754
Change in valuation allowance	(12,513)	(10,639)
Current expense associated with uncertain tax positions	593	1,389
Other, net	(5)	76
Provision for (benefit from) income taxes	<u>\$ 70</u>	<u>\$ (544)</u>

## 11. Fair Value Measurements

The hierarchy of fair value measurements assigns a level to fair value measurements based on the inputs used in the respective valuation techniques. The levels of the hierarchy, as defined below, give the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities and the lowest priority to unobservable inputs.

- Level 1 is defined as observable inputs such as quoted prices in active markets for identical assets. Level 1 assets include U.S. Treasury securities, and coal swaps and futures that are submitted for clearing on the New York Mercantile Exchange.
- Level 2 is defined as observable inputs other than Level 1 prices. These include quoted prices for similar assets or liabilities in an active market, quoted prices for identical assets and liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. The Company's level 2 assets and liabilities include U.S. government agency securities, coal commodity contracts and interest rate swaps with fair values derived from quoted prices in over-the-counter markets or from prices received from direct broker quotes.
- Level 3 is defined as unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions. These include the Company's commodity option contracts (coal, natural gas and heating oil) valued using modeling techniques, such as Black-Scholes, that require the use of inputs, particularly volatility, that are rarely observable. Changes in the unobservable inputs would not have a significant impact on the reported Level 3 fair values at March 31, 2019.

The table below sets forth, by level, the Company's financial assets and liabilities that are recorded at fair value in the accompanying Condensed Consolidated Balance Sheet:

	March 31, 2019			
	Total	Level 1	Level 2	Level 3
(In thousands)				
<b>Assets:</b>				
Investments in marketable securities	\$ 164,664	\$ 94,607	\$ 70,057	\$ —
Derivatives	6,249	3,063	2,335	851
Total assets	<u>\$ 170,913</u>	<u>\$ 97,670</u>	<u>\$ 72,392</u>	<u>\$ 851</u>
<b>Liabilities:</b>				
Derivatives	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

The Company's contracts with its counterparties allow for the settlement of contracts in an asset position with contracts in a liability position in the event of default or termination. For classification purposes, the Company records the net fair value of all the positions with these counterparties as a net asset or liability. Each level in the table above displays the underlying contracts according to their classification in the accompanying Condensed Consolidated Balance Sheet, based on this counterparty netting.

The following table summarizes the change in the fair values of financial instruments categorized as Level 3.

	<b>Three Months Ended March 31, 2019</b>	
	<b>(In thousands)</b>	
Balance, beginning of period	\$	532
Realized and unrealized gains recognized in earnings, net		(144)
Purchases		463
Issuances		—
Settlements		—
Ending balance	\$	<u>851</u>

Net unrealized losses of \$0.1 million were recognized in the Condensed Consolidated Income Statements within Other operating income, net during the three months ended March 31, 2019, respectively, related to Level 3 financial instruments held on March 31, 2019.

*Fair Value of Long-Term Debt*

At March 31, 2019 and December 31, 2018, the fair value of the Company's debt, including amounts classified as current, was \$319.8 million and \$318.6 million, respectively. Fair values are based upon observed prices in an active market, when available, or from valuation models using market information, which fall into Level 2 in the fair value hierarchy.

## 12. Earnings per Common Share

The Company computes basic net income per share using the weighted average number of common shares outstanding during the period. Diluted net income per share is computed using the weighted average number of common shares and the effect of potentially dilutive securities outstanding during the period. Potentially dilutive securities may consist of warrants, restricted stock units or other contingently issuable shares. The dilutive effect of outstanding warrants, restricted stock units and other contingently issuable shares is reflected in diluted earnings per share by application of the treasury stock method.

The following table provides the basis for basic and diluted earnings per share by reconciling the denominators of the computations:

	<b>Three Months Ended March 31,</b>	
	<b>2019</b>	<b>2018</b>
	<b>(In thousands)</b>	
Weighted average shares outstanding:		
Basic weighted average shares outstanding	17,494	20,901
Effect of dilutive securities	<u>1,105</u>	<u>974</u>
Diluted weighted average shares outstanding	<u>18,599</u>	<u>21,875</u>

### 13. Workers Compensation Expense

The Company is liable under the Federal Mine Safety and Health Act of 1969, as subsequently amended, to provide for pneumoconiosis (occupational disease) benefits to eligible employees, former employees and dependents. The Company currently provides for federal claims principally through a self-insurance program. The Company is also liable under various state workers' compensation statutes for occupational disease benefits. The occupational disease benefit obligation represents the present value of the actuarially computed present and future liabilities for such benefits over the employees' applicable years of service.

In addition, the Company is liable for workers' compensation benefits for traumatic injuries which are calculated using actuarially-based loss rates, loss development factors and discounted based on a risk free rate. Traumatic workers' compensation claims are insured with varying retentions/deductibles, or through state-sponsored workers' compensation programs.

Workers' compensation expense consists of the following components:

	Three Months Ended March 31,	
	2019	2018
	(In thousands)	
Self-insured occupational disease benefits:		
Service cost	\$ 1,669	\$ 1,860
Interest cost <sup>(1)</sup>	1,354	1,195
Total occupational disease	\$ 3,023	\$ 3,055
Traumatic injury claims and assessments	2,144	3,011
Total workers' compensation expense	\$ 5,167	\$ 6,066

(1) In accordance with the adoption of ASU 2017-07, "Compensation-Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost," these costs are recorded within Nonoperating expenses in the Condensed Consolidated Income Statements on the line item "Non-service related pension and postretirement benefit costs."

### 14. Employee Benefit Plans

The following table details the components of pension benefit costs (credits):

	Three Months Ended March 31,	
	2019	2018
	(In thousands)	
Interest cost <sup>(1)</sup>	\$ 2,258	\$ 2,271
Expected return on plan assets <sup>(1)</sup>	(2,723)	(3,081)
Net benefit credit	\$ (465)	\$ (810)

The following table details the components of other postretirement benefit costs:

	Three Months Ended March 31,	
	2019	2018
	(In thousands)	
Service cost	\$ 120	\$ 140
Interest cost <sup>(1)</sup>	876	918
Net benefit cost	\$ 996	\$ 1,058

(1) In accordance with the adoption of ASU 2017-07, "Compensation-Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost," these costs are recorded within

Nonoperating expenses in the Condensed Consolidated Income Statements on the line item “Non-service related pension and postretirement benefit costs.”

## **15. Commitments and Contingencies**

The Company accrues for costs related to contingencies when a loss is probable and the amount is reasonably determinable. Disclosure of contingencies is included in the financial statements when it is at least reasonably possible that a material loss or an additional material loss in excess of amounts already accrued may be incurred.

In addition, the Company is a party to numerous other claims and lawsuits with respect to various matters. The ultimate resolution of any such legal matter could result in outcomes which may be materially different from amounts the Company has accrued for such matters. The Company believes it has recorded adequate reserves for these matters.

## 16. Segment Information

The Company's reportable business segments are based on two distinct lines of business, metallurgical and thermal, and may include a number of mine complexes. The Company manages its coal sales by market, not by individual mining complex. Geology, coal transportation routes to customers, and regulatory environments also have a significant impact on the Company's marketing and operations management. Mining operations are evaluated based on Adjusted EBITDA, per-ton cash operating costs (defined as including all mining costs except depreciation, depletion, amortization, accretion on asset retirement obligations, and pass-through transportation expenses), and on other non-financial measures, such as safety and environmental performance. Adjusted EBITDA is not a measure of financial performance in accordance with generally accepted accounting principles, and items excluded from Adjusted EBITDA are significant in understanding and assessing the Company's financial condition. Therefore, Adjusted EBITDA should not be considered in isolation, nor as an alternative to net income, income from operations, cash flows from operations or as a measure of our profitability, liquidity or performance under generally accepted accounting principles. The Company uses Adjusted EBITDA to measure the operating performance of its segments and allocate resources to the segments. Furthermore, analogous measures are used by industry analysts and investors to evaluate the Company's operating performance. Investors should be aware that the Company's presentation of Adjusted EBITDA may not be comparable to similarly titled measures used by other companies. The Company reports its results of operations primarily through the following reportable segments: Powder River Basin (PRB) segment containing the Company's primary thermal operations in Wyoming; the Metallurgical (MET) segment, containing the Company's metallurgical operations in West Virginia, and the Other Thermal segment containing the Company's supplementary thermal operations in Colorado, Illinois, and West Virginia.

Operating segment results for the three months ended March 31, 2019 and 2018, are presented below. The Company measures its segments based on "adjusted earnings before interest, taxes, depreciation, depletion, amortization, accretion on asset retirements obligations, and nonoperating expenses (Adjusted EBITDA)." Adjusted EBITDA does not reflect mine closure or impairment costs, since those are not reflected in the operating income reviewed by management. The Corporate, Other and Eliminations grouping includes these charges, as well as the change in fair value of coal derivatives and coal trading activities, net; corporate overhead; land management activities; other support functions; and the elimination of intercompany transactions.

	PRB	MET	Other Thermal	Corporate, Other and Eliminations	Consolidated
	(in thousands)				
<b>Three Months Ended March 31, 2019</b>					
Revenues	\$ 212,729	\$ 253,262	\$ 85,978	\$ 3,214	\$ 555,183
Adjusted EBITDA	20,583	91,534	6,119	(10,982)	107,254
Depreciation, depletion and amortization	4,865	16,382	3,435	591	25,273
Accretion on asset retirement obligation	3,135	531	603	868	5,137
Total assets	230,329	568,367	139,306	925,199	1,863,201
Capital expenditures	414	31,224	6,250	1,259	39,147
<b>Three Months Ended March 31, 2018</b>					
Revenues	\$ 245,428	\$ 238,347	\$ 91,520	\$ —	\$ 575,295
Adjusted EBITDA	27,502	83,742	15,669	(22,000)	104,913
Depreciation, depletion and amortization	8,423	16,986	3,835	459	29,703
Accretion on asset retirement obligation	4,885	469	565	1,073	6,992
Total assets	383,823	548,804	130,132	913,919	1,976,678
Capital expenditures	698	5,829	1,206	1,720	9,453

A reconciliation of net income to adjusted EBITDA follows:

	Three Months Ended March 31,	
	2019	2018
	(In thousands)	
Net income	\$ 72,741	\$ 59,985
Provision for (benefit from) income taxes	70	(544)
Interest expense, net	2,289	4,122
Depreciation, depletion and amortization	25,273	29,703
Accretion on asset retirement obligations	5,137	6,992
Amortization of sales contracts, net	65	3,051
Non-service related pension and postretirement benefit costs	1,766	1,303
Reorganization items, net	(87)	301
Adjusted EBITDA	<u>\$ 107,254</u>	<u>\$ 104,913</u>

**17. Revenue Recognition**

ASC 606-10-50-5 requires that entities disclose disaggregated revenue information in categories (such as type of good or service, geography, market, type of contract, etc.) that depict how the nature, amount, timing, and uncertainty of revenue and cash flow are affected by economic factors. ASC 606-10-55-89 explains that the extent to which an entity's revenue is disaggregated depends on the facts and circumstances that pertain to the entity's contracts with customers and that some entities may need to use more than one type of category to meet the objective for disaggregating revenue.

In general, the Company's business segmentation is aligned according to the nature and economic characteristics of its coal and customer relationships and provides meaningful disaggregation of each segment's results. The company has further disaggregated revenue between North America and Seaborne revenues which depicts the pricing and contract differences between the two. North America revenue is characterized by contracts with a term of one year or longer and typically the pricing is fixed; whereas Seaborne revenue generally is derived by spot or short term contracts with an indexed based pricing mechanism.

	PRB	MET	Other Thermal	Corporate, Other and Eliminations	Consolidated
<b>(in thousands)</b>					
<b>Three Months Ended March 31, 2019</b>					
North America revenues	\$ 212,729	\$ 44,666	\$ 46,529	\$ 3,214	\$ 307,138
Seaborne revenues	—	208,596	39,449	—	248,045
Total revenues	\$ 212,729	\$ 253,262	\$ 85,978	\$ 3,214	\$ 555,183
<b>Three Months Ended March 31, 2018</b>					
North America revenues	\$ 244,360	\$ 29,678	\$ 43,667	—	\$ 317,705
Seaborne revenues	1,068	208,669	47,853	—	257,590
Total revenues	\$ 245,428	\$ 238,347	\$ 91,520	—	\$ 575,295

As of March 31, 2019, the Company has outstanding performance obligations for the remainder of 2019 of 59.3 million tons of fixed price contracts and 4.0 million tons of variable price contracts. Additionally, the Company has outstanding performance obligations beyond 2019 of approximately 41.9 million tons of fixed price contracts and 4.6 million tons of variable price contracts.

**18. Leases**

The Company has operating leases for mining equipment, office equipment and office space with remaining lease terms ranging from less than 1 year to approximately 8 years. Some of these leases include both lease and non-lease components which are accounted for as a single lease component as the Company has elected the practical expedient to combine these components for all leases. As most of the leases do not provide an implicit rate, the Company calculated the right-of-use assets and lease liabilities using its' secured incremental borrowing rate at the lease commencement date. The Company currently does not have any finance leases outstanding.

Information related to leases was as follows:

	<b>Three Months Ended March 31, 2019</b>	
	<b>(In thousands)</b>	
<b>Operating lease information:</b>		
Operating lease cost	\$	917
Operating cash flows from operating leases		871
Weighted average remaining lease term in years		5.06
Weighted average discount rate		5.6%

Future minimum lease payments under non-cancellable leases as of March 31, 2019 were as follows:

Year	Amount	
	<b>(In thousands)</b>	
2019	\$	2,412
2020		2,456
2021		2,207
2022		2,203
2023		2,172
Thereafter		7,504
Total minimum lease payments	\$	18,954
Less imputed interest		(3,601)
Total operating lease liability	\$	15,353
<b>As reflected on balance sheet:</b>		
Accrued expenses and other current liabilities	\$	2,353
Other noncurrent liabilities		13,000
Total operating lease liability	\$	15,353

At March 31, 2019, the Company had a \$14.7 million right-of-use operating lease asset recorded within "Other noncurrent assets" on the Condensed Consolidated Balance Sheet.



## 19. Subsequent Events

On April 22, 2019, the board of directors of Arch Coal authorized an incremental \$300 million increase to the share repurchase program bringing the total authorization to \$1.05 billion. The timing of any future share purchases, and the ultimate number of shares to be purchased, will depend on a number of factors, including business and market conditions, or the Company's future financial performance, and other capital priorities. The shares will be acquired in the open market or through private transactions in accordance with Securities and Exchange Commission requirements. As of March 31, 2019, the Company had repurchased 8,088,147 shares at an average share price of \$81.86 per share for an aggregate purchase price of approximately \$662.1 million since inception of the stock repurchase program. At March 31, 2019, with the increase noted above, the Company has \$388 million remaining under its existing authorization.

The purchases under the share repurchase program may be made in the open market or through privately negotiated transactions from time to time and in accordance with applicable laws, rules and regulations. Repurchases may also be made pursuant to a Rule 10b5-1 plan, which permits shares to be repurchased in accordance with pre-determined criteria when the Company might otherwise be prohibited from doing so under insider trading laws or because of self-imposed trading blackout periods. The share repurchase program may be amended, suspended or discontinued at any time and does not commit the Company to repurchase shares of its common stock. The actual number and value of the shares to be purchased will depend on the performance of the Company's stock price and other market conditions.

## Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

### Cautionary Notice Regarding Forward-Looking Statements

This report contains “forward-looking statements” - that is, statements related to future, not past, events. In this context, forward-looking statements often address our expected future business and financial performance, and often contain words such as “expects,” “anticipates,” “intends,” “plans,” “believes,” “seeks,” or “will.” Forward-looking statements by their nature address matters that are, to different degrees, uncertain. For us, particular uncertainties arise from our emergence from Chapter 11 bankruptcy protection; changes in the demand for our coal by the electric generation and steel industries; from legislation and regulations relating to the Clean Air Act and other environmental initiatives; from competition within our industry and with producers of competing energy sources; from our ability to successfully acquire or develop coal reserves; from operational, geological, permit, labor and weather-related factors, from the Tax Cuts and Jobs Act and other tax reforms; from the effects of foreign and domestic trade policies, actions or disputes; from fluctuations in the amount of cash we generate from operations which could impact, among other things, our ability to pay dividends or repurchase shares in accordance with our announced capital allocation plan; from our ability to successfully integrate the operations that we acquire; and from numerous other matters of national, regional and global scale, including those of a political, economic, business, competitive or regulatory nature. These uncertainties may cause our actual future results to be materially different than those expressed in our forward-looking statements. We do not undertake to update our forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by law. For a more detailed description of some of the risks and uncertainties that may affect our future results, you should see the “Risk Factors” in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2018 and subsequent Form 10-Q filings.

### Overview

Our results for the first quarter of 2019 benefited from continued strength in the metallurgical coal markets, while domestic and international thermal coal markets faced headwinds. Metallurgical coal markets remained strong in the first quarter of 2019, as economic growth moderated but continued, and supply constraints remain supportive of international coking coal prices. We believe both Atlantic and Pacific coking coal markets remain well balanced, and supported by continued strong global steel production. Some additional coking coal supply has come back into the market from existing and formerly idled operations, and some new development has occurred and is occurring. At the same time, normal depletion and disruptive events have removed some significant production sources. Overall, global capital investment in new production capacity appears to be limited. We also believe that this long term limited capital investment in the industry has increased the sensitivity of global coking coal markets to supply disruptions. Steel tariffs appear to have had little impact on coking coal pricing or demand to date, but longer term implications for coking coal markets and the global economy as a whole remain less certain.

Initially strong seasonal demand for domestic thermal coal in the current period was negatively impacted by off-site flooding in the high plains and downstream that disrupted rail transportation. Powder River Basin coal, in particular, was impacted by these disruptions. We believe the impacts from these disruptions will continue into the second quarter of 2019. Natural gas pricing began the current quarter at levels favorable to increased coal fired generation due to low levels of storage for the competing fuel. These elevated prices declined through the current quarter as natural gas production levels have increased significantly versus the prior year quarter, and seasonal demand moderated. Generator coal stockpiles are near historically normal levels based on days of burn. International thermal coal market pricing declined significantly during the current quarter; however, the forward positions we entered into in previous periods allowed certain of our operations to continue to economically ship coal into these markets throughout the current quarter.

## Results of Operations

### Three Months Ended March 31, 2019 and 2018

*Revenues.* Our revenues include sales to customers of coal produced at our operations and coal purchased from third parties. Transportation costs are included in cost of coal sales and amounts billed by us to our customers for transportation are included in revenues.

*Coal Sales.* The following table summarizes information about our coal sales during the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,		
	2019	2018	(Decrease) / Increase
	(In thousands)		
Coal sales	\$ 555,183	\$ 575,295	\$ (20,112)
Tons sold	20,725	23,664	(2,939)

On a consolidated basis, coal sales in the first quarter of 2019 was approximately \$20.1 million or 3.5% less than in the first quarter 2018, while tons sold decreased approximately 2.9 million tons or 12.4%. Coal sales from Metallurgical operations increased approximately \$14.9 million on increased pricing and shipment volume. Powder River Basin coal sales decreased approximately \$32.7 million primarily due to decreased volume, and Other Thermal coal sales decreased approximately \$5.5 million due to decreased volume partially offset by increased pricing. See discussion in “Operational Performance” for further information about segment results.

*Costs, expenses and other.* The following table summarizes costs, expenses and other components of operating income during the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,		
	2019	2018	Increase (Decrease) in Net Income
	(In thousands)		
Cost of sales (exclusive of items shown separately below)	\$ 438,471	\$ 454,780	\$ 16,309
Depreciation, depletion and amortization	25,273	29,703	4,430
Accretion on asset retirement obligations	5,137	6,992	1,855
Amortization of sales contracts, net	65	3,051	2,986
Change in fair value of coal derivatives and coal trading activities, net	(12,981)	(3,414)	9,567
Selling, general and administrative expenses	24,089	25,948	1,859
Other operating income, net	(1,650)	(6,932)	(5,282)
Total costs, expenses and other	<u>\$ 478,404</u>	<u>\$ 510,128</u>	<u>\$ 31,724</u>

*Cost of sales.* Our cost of sales for the first quarter of 2019 decreased approximately \$16.3 million or 3.6% versus the first quarter of 2018. The decrease consists primarily of reductions of approximately \$20.3 million in operating taxes and royalties, \$7.9 million in repairs and supplies, and \$2.7 million in purchased coal costs. These cost decreases were partially offset by increases of approximately \$11.0 million in transportation costs and \$4.8 million in labor related costs. See discussion in “Operational Performance” for further information about segment results.

*Depreciation, depletion, and amortization.* The decrease in depreciation, depletion, and amortization in the first quarter of 2019 versus the first quarter of 2018 is primarily due to reduced depreciation and development amortization in our Powder River Basin segment.

*Accretion on asset retirement obligations.* The decrease in accretion on asset retirement obligations in the first quarter of 2019 versus the first quarter of 2018 is related to the significant reduction in our Powder River Basin asset retirement obligation liability at the end of 2018 due to mine plan changes.

*Amortization of sales contracts, net.* The decrease in amortization of sales contracts, net in the first quarter of 2019 versus the first quarter of 2018 is primarily related to the value of certain Powder River Basin supply contracts being fully amortized at the end of 2018.

*Change in fair value of coal derivatives and coal trading activities, net.* The increased benefit in the first quarter of 2019 versus the prior year period is primarily related to mark-to-market gains on coal derivatives that we have entered to hedge our price risk for anticipated international thermal coal shipments. As international thermal markets declined during the current quarter, the market value of these positions increased.

*Selling, general and administrative expenses.* The decrease in selling, general and administrative expenses in the first quarter of 2019 versus the first quarter of 2018 is primarily due to reduced compensation costs (approximately \$1.0 million) and reduced contractor services (approximately \$1.3 million).

*Other operating income, net.* The decreased benefit from other operating income, net in the first quarter of 2019 versus the first quarter of 2018 consists primarily of reduced income from equity investments (approximately \$2.8 million), and the unfavorable impact of coal derivative settlements in the current period (approximately \$3.4 million), partially offset by the benefit from heating oil positions (approximately \$0.6 million).

*Nonoperating Expense.* The following table summarizes our nonoperating expense during the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,		
	2019	2018	Increase (Decrease) in Net Income
	(In thousands)		
Non-service related pension and postretirement benefit costs	\$ (1,766)	\$ (1,303)	\$ (463)
Reorganization items, net	87	(301)	388
Total nonoperating expense	<u>\$ (1,679)</u>	<u>\$ (1,604)</u>	<u>\$ (75)</u>

Nonoperating expenses increased slightly in the first quarter of 2019 versus the first quarter of 2018 due to an increase in non-service related pension and postretirement benefit costs partially offset by a small benefit in the current period from Chapter 11 reorganization costs.

*Provision for (Benefit from) income taxes.* The following table summarizes our Benefit from income taxes during the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,		
	2019	2018	Increase (Decrease) in Net Income
	(In thousands)		
Provision for (Benefit from) income taxes	\$ 70	\$ (544)	\$ (614)

See Note 10, "Income Taxes," to the Condensed Consolidated Financial Statements for a reconciliation of the statutory federal income tax provision (benefit) at the statutory rate to the actual provision for/(benefit from) income taxes.

**Operational Performance****Three Months Ended March 31, 2019 and 2018**

Our mining operations are evaluated based on Adjusted EBITDA, per-ton cash operating costs (defined as including all mining costs except depreciation, depletion, amortization, accretion on asset retirements obligations, and pass-through transportation expenses), and on other non-financial measures, such as safety and environmental performance. Adjusted EBITDA is defined as net income attributable to the Company before the effect of net interest expense, income taxes, depreciation, depletion and amortization, the amortization of sales contracts, the accretion on asset retirement obligations and nonoperating expenses. Adjusted EBITDA may also be adjusted for items that may not reflect the trend of future results by excluding transactions that are not indicative of our core operating performance. Adjusted EBITDA is not a measure of financial performance in accordance with generally accepted accounting principles, and items excluded from Adjusted EBITDA are significant in understanding and assessing our financial condition. Therefore, Adjusted EBITDA should not be considered in isolation, nor as an alternative to net income, income from operations, cash flows from operations or as a measure of our profitability, liquidity or performance under generally accepted accounting principles. Furthermore, analogous measures are used by industry analysts and investors to evaluate the Company's operating performance. Investors should be aware that our presentation of Adjusted EBITDA may not be comparable to similarly titled measures used by other companies.

The following table shows results by operating segment for the three months ended March 31, 2019 and March 31, 2018.

	Three Months Ended March 31,		
	2019	2018	Variance
<b>Powder River Basin</b>			
Tons sold (in thousands)	17,141	19,744	(2,603)
Coal sales per ton sold	\$ 12.18	\$ 12.15	\$ 0.03
Cash cost per ton sold	\$ 10.98	\$ 10.77	\$ (0.21)
Cash margin per ton sold	\$ 1.20	\$ 1.38	\$ (0.18)
Adjusted EBITDA (in thousands)	\$ 20,583	\$ 27,502	\$ (6,919)
<b>Metallurgical</b>			
Tons sold (in thousands)	1,793	1,754	39
Coal sales per ton sold	\$ 118.22	\$ 115.97	\$ 2.25
Cash cost per ton sold	\$ 67.27	\$ 68.33	\$ 1.06
Cash margin per ton sold	\$ 50.95	\$ 47.64	\$ 3.31
Adjusted EBITDA (in thousands)	\$ 91,534	\$ 83,742	\$ 7,792
<b>Other Thermal</b>			
Tons sold (in thousands)	1,686	2,166	(480)
Coal sales per ton sold	\$ 38.58	\$ 35.59	\$ 2.99
Cash cost per ton sold	\$ 35.28	\$ 28.53	\$ (6.75)
Cash margin per ton sold	\$ 3.30	\$ 7.06	\$ (3.76)
Adjusted EBITDA (in thousands)	\$ 6,119	\$ 15,669	\$ (9,550)

This table reflects numbers reported under a basis that differs from U.S. GAAP. See the "Reconciliation of Non-GAAP measures" below for explanation and reconciliation of these amounts to the nearest GAAP measures. Other companies may calculate these per ton amounts differently, and our calculation may not be comparable to other similarly titled measures.

*Powder River Basin* — Adjusted EBITDA for the three months ended March 31, 2019 declined versus the three months ended March 31, 2018, as a result of a decline in volume versus the prior year quarter. This volume decline was greatly exacerbated by the off-site flooding discussed in the Overview. Pricing increased slightly as the increase in the percentage of higher quality tons sold from scaling back operations at our lower quality Coal Creek mine more than offset the normal year end roll off and replacement of term contracts that had been executed during stronger market environments. Due to market weakness for lower quality Powder River Basin coal, we decided to reduce operations at our Coal Creek mine rather than pursue uneconomic business. This reduction is expected to last at least through the current year, and the resulting change in tons sold mix will put upward pressure on both coal sales per ton sold and cash cost per ton sold while in effect. Cash cost per ton sold increased due to the volume decrease, but the increase in cash cost per ton was mitigated somewhat by reduced repair and supply costs and the reversion of the Federal Black Lung Excise Tax rate to the pre-1986 rates. The current period Federal Black Lung Excise Tax rate for surface mines is \$0.25 per ton or 2% of gross selling price on all domestic sales, versus the prior year period rate of \$0.55 per ton sold or 4.4% of gross selling price.

*Metallurgical*—Adjusted EBITDA for the three months ended March 31, 2019, increased from the three months ended March 31, 2018 due to incremental improvement in pricing, volume of tons sold, and cash cost per ton sold. Given our significant exposure to international metallurgical coal pricing through various indexed and negotiated pricing mechanisms, our coal sales per ton sold continued to be supported by strength in international metallurgical coal markets in the current quarter. Tons sold volume was also supported by the strong market conditions and the absence of logistical disruptions in the current period. Our cash cost per ton sold for the three months ended March 31, 2019 declined due to the increased sales volume, cost containment efforts at all of our operations, decreased operating tax and royalty costs, and the absence of high cost purchased coal in the current year period.

Our metallurgical segment sold 1.5 million tons of coking coal and 0.3 million tons of associated thermal coal in the three months ended March 31, 2019, effectively matching the 1.5 million tons of coking coal and 0.3 million tons of associated thermal coal in the three months ended March 31, 2018. Longwall operations accounted for approximately 69% of our shipment volume in the three months ended March 31, 2019 and 70% of our shipment volume in the three months ended March 31, 2018.

*Other Thermal*— Adjusted EBITDA for the three months ended March 31, 2019 decreased versus the three months ended March 31, 2018 due to reduced sales volume and increased cash cost of tons sold. Volume decreased due to a planned current quarter reduction at our West Elk operation to accommodate customer delivery schedules and our longwall development requirements, and a reduction at our Coal-Mac operation as higher mining ratios led to a decrease in tons produced. The planned decline in West Elk tons sold volume is the driver of the increase in coal sales per ton sold due to the impact on segment volume mix. The volume reductions at both West Elk and Coal-Mac resulted in higher cash cost per ton sold.

**Reconciliation of Non-GAAP measures**
*Segment coal sales per ton sold*

Non-GAAP Segment coal sales per ton sold is calculated as segment coal sales revenues divided by segment tons sold. Segment coal sales revenues are adjusted for transportation costs, and may be adjusted for other items that, due to generally accepted accounting principles, are classified in "other income" on the statement of operations, but relate to price protection on the sale of coal. Segment coal sales per ton sold is not a measure of financial performance in accordance with generally accepted accounting principles. We believe segment coal sales per ton sold provides useful information to investors as it better reflects our revenue for the quality of coal sold and our operating results by including all income from coal sales. The adjustments made to arrive at these measures are significant in understanding and assessing our financial condition. Therefore, segment coal sales revenues should not be considered in isolation, nor as an alternative to coal sales revenues under generally accepted accounting principles.

Three Months Ended March 31, 2019	Powder River Basin	Metallurgical	Other Thermal	Idle and Other	Consolidated
<b>(In thousands)</b>					
GAAP Revenues in the consolidated statements of operations	\$ 212,729	\$ 253,262	\$ 85,978	\$ 3,214	\$ 555,183
<b>Less: Adjustments to reconcile to Non-GAAP Segment coal sales revenue</b>					
Coal risk management derivative settlements classified in "other income"	—	—	2,044	—	2,044
Coal sales revenues from idled or otherwise disposed operations and pass through agreements not included in segments	—	—	—	3,214	3,214
Transportation costs	4,006	41,298	18,882	—	64,186
Non-GAAP Segment coal sales revenues	\$ 208,723	\$ 211,964	\$ 65,052	\$ —	\$ 485,739
Tons sold	17,141	1,793	1,686		
Coal sales per ton sold	\$ 12.18	\$ 118.22	\$ 38.58		

Three Months Ended March 31, 2018	Powder River Basin	Metallurgical	Other Thermal	Idle and Other	Consolidated
<b>(In thousands)</b>					
GAAP Revenues in the consolidated statements of operations	\$ 245,427	\$ 238,348	\$ 91,520	\$ —	\$ 575,295
<b>Less: Adjustments to reconcile to Non-GAAP Segment coal sales revenue</b>					
Coal risk management derivative settlements classified in "other income"	—	—	1,031	—	1,031
Coal sales revenues from idled or otherwise disposed operations and pass through agreements not included in segments	—	—	—	—	—
Transportation costs	5,478	34,885	13,394	—	53,757
Non-GAAP Segment coal sales revenues	\$ 239,949	\$ 203,463	\$ 77,095	\$ —	\$ 520,507
Tons sold	19,744	1,754	2,166		
Coal sales per ton sold	\$ 12.15	\$ 115.97	\$ 35.59		

*Segment cash cost per ton sold*

Non-GAAP Segment cash cost per ton sold is calculated as segment cash cost of coal sales divided by segment tons sold. Segment cash cost of coal sales is adjusted for transportation costs, and may be adjusted for other items that, due to generally accepted accounting principles, are classified in "other income" on the statement of operations, but relate directly to the costs incurred to produce coal. Segment cash cost per ton sold is not a measure of financial performance in accordance with generally accepted accounting principles. We believe segment cash cost per ton sold better reflects our controllable costs and our operating results by including all costs incurred to produce coal. The adjustments made to arrive at these measures are significant in understanding and assessing our financial condition. Therefore, segment cash cost of coal sales should not be considered in isolation, nor as an alternative to cost of sales under generally accepted accounting principles.

Three Months Ended March 31, 2019	Powder River Basin	Metallurgical	Other Thermal	Idle and Other	Consolidated
<b>(In thousands)</b>					
GAAP Cost of sales in the consolidated statements of operations	\$ 191,648	\$ 161,911	\$ 78,366	\$ 6,546	\$ 438,471
<b>Less: Adjustments to reconcile to Non-GAAP Segment cash cost of coal sales</b>					
Diesel fuel risk management derivative settlements classified in "other income"	(638)	—	—	—	(638)
Transportation costs	4,006	41,298	18,882	—	64,186
Cost of coal sales from idled or otherwise disposed operations and pass through agreements not included in segments	—	—	—	4,239	4,239
Other (operating overhead, certain actuarial, etc.)	—	—	—	2,307	2,307
Non-GAAP Segment cash cost of coal sales	188,280	120,613	59,484	—	368,377
Tons sold	17,141	1,793	1,686		
Cash Cost Per Ton Sold	\$ 10.98	\$ 67.27	\$ 35.28		

Three Months Ended March 31, 2018	Powder River Basin	Metallurgical	Other Thermal	Idle and Other	Consolidated
<b>(In thousands)</b>					
GAAP Cost of sales in the consolidated statements of operations	\$ 218,526	\$ 154,763	\$ 75,188	\$ 6,303	\$ 454,780
<b>Less: Adjustments to reconcile to Non-GAAP Segment cash cost of coal sales</b>					
Diesel fuel risk management derivative settlements classified in "other income"	439	—	—	—	439
Transportation costs	5,478	34,885	13,394	—	53,757
Cost of coal sales from idled or otherwise disposed operations and pass through agreements not included in segments	—	—	—	4,232	4,232
Other (operating overhead, certain actuarial, etc.)	—	—	—	2,071	2,071
Non-GAAP Segment cash cost of coal sales	\$ 212,609	\$ 119,878	\$ 61,794	\$ —	\$ 394,281
Tons sold	19,744	1,754	2,166		
Cash Cost Per Ton Sold	\$ 10.77	\$ 68.33	\$ 28.53		



*Reconciliation of Segment Adjusted EBITDA to Net Income*

The discussion in “Results of Operations” above includes references to our Adjusted EBITDA for each of our reportable segments. Adjusted EBITDA is defined as net income attributable to the Company before the effect of net interest expense, income taxes, depreciation, depletion and amortization, the amortization of sales contracts, the accretion on asset retirement obligations and nonoperating expenses. Adjusted EBITDA may also be adjusted for items that may not reflect the trend of future results by excluding transactions that are not indicative of our core operating performance. We use Adjusted EBITDA to measure the operating performance of our segments and allocate resources to our segments. Adjusted EBITDA is not a measure of financial performance in accordance with generally accepted accounting principles, and items excluded from Adjusted EBITDA are significant in understanding and assessing our financial condition. Therefore, Adjusted EBITDA should not be considered in isolation, nor as an alternative to net income, income from operations, cash flows from operations or as a measure of our profitability, liquidity or performance under generally accepted accounting principles. Investors should be aware that our presentation of Adjusted EBITDA may not be comparable to similarly titled measures used by other companies. The table below shows how we calculate Adjusted EBITDA.

	<b>Three Months Ended March 31,</b>	
	<b>2019</b>	<b>2018</b>
	<b>(In thousands)</b>	
Net income	\$ 72,741	\$ 59,985
Provision for (benefit from) income taxes	70	(544)
Interest expense, net	2,289	4,122
Depreciation, depletion and amortization	25,273	29,703
Accretion on asset retirement obligations	5,137	6,992
Amortization of sales contracts, net	65	3,051
Non-service related pension and postretirement benefit costs	1,766	1,303
Reorganization items, net	(87)	301
Adjusted EBITDA	107,254	104,913
EBITDA from idled or otherwise disposed operations	(906)	2,579
Selling, general and administrative expenses	24,089	25,948
Other	(12,201)	(6,527)
Segment Adjusted EBITDA from coal operations	<u>\$ 118,236</u>	<u>\$ 126,913</u>

Other includes income from our equity investments, certain changes in fair value of heating oil derivatives we use to manage our exposure to diesel fuel pricing, certain changes in the fair value of coal derivatives and coal trading activities, EBITDA provided by our land company, and certain miscellaneous revenue.

**Liquidity and Capital Resources**

Our primary sources of liquidity are proceeds from coal sales to customers and certain financing arrangements. Excluding significant investing activity, we intend to satisfy our working capital requirements and fund capital expenditures and debt-service obligations with cash generated from operations and cash on hand. Our focus is prudently managing costs, including capital expenditures, maintaining a strong balance sheet, and ensuring adequate liquidity.

On April 27, 2017, our Board of Directors authorized a share repurchase program for up to \$300 million of our common stock. On October 26, 2017, our Board of Directors authorized an additional \$200 million for our share repurchase program, bringing the total authorization to \$500 million. On July 26, 2018, our Board of Directors authorized an additional \$250 million for our share repurchase program, bringing the total authorization to \$750 million. On April 22, 2019, our Board of Directors authorized an additional \$300 million for our share repurchase program, bringing the total authorization to \$1.05 billion. During the quarter ended March 31, 2019, we repurchased 872,317 shares of our stock for approximately \$78.2 million bringing total repurchases to 8,088,147 shares for approximately \$662.1 million. The timing of any future share purchases, and the ultimate number of shares to be purchased, will depend on a number of factors, including business and market conditions,

our future financial performance, and other capital priorities. The shares will be acquired in the open market or through private transactions in accordance with Securities and Exchange Commission requirements. Our share repurchase program may be amended, suspended or discontinued at any time and does not commit us to repurchase shares of our common stock.

On April 27, 2017, our Board of Directors authorized a quarterly common stock cash dividend of \$0.35 per share. On February 13, 2018, we announced an increase in the quarterly dividend to \$0.40 per share. On February 14, 2019, we announced an increase in the quarterly dividend to \$0.45 per share. A dividend of approximately \$7.8 million was paid on March 15, 2019 to stockholders of record at the close of business on March 5, 2019, bringing total dividends paid since initiation to approximately \$63.5 million.

Given the volatile nature of coal markets, we believe it is important to take a prudent approach to managing our balance sheet and liquidity. We plan to implement our dividend policy and share repurchase program in a manner that will result in maintaining liquidity levels between \$400 million and \$500 million, a significant portion of which will be cash. In the future, we will continue to evaluate our capital allocation initiatives in light of the current state of, and our outlook, for coal markets; the amount of our planned production that has been committed and priced; the capital needs of the business; and other strategic opportunities.

On March 7, 2017, we entered into a senior secured term loan credit agreement (the “Credit Agreement”) in an aggregate principal amount of \$300 million (the “Term Loan Debt Facility”) with Credit Suisse AG, Cayman Islands Branch, as administrative agent and collateral agent, and the other financial institutions from time to time party thereto. The Term Loan Debt Facility was issued at 99.50% of the face amount and will mature on March 7, 2024. The term loans provided under the Term Loan Debt Facility (the “Term Loans”) are subject to quarterly principal amortization payments in an amount equal to \$750,000. For further information regarding the Term Loan Debt Facility see Note 9 to the Consolidated Financial Statements “Debt and Financing Arrangements”.

During 2018, we entered into the Second Amendment (the “Second Amendment”) to the Term Loan Debt Facility. The Second Amendment reduced the interest rate on the Term Loan Debt Facility to, at our option, either (i) LIBOR plus an applicable margin of 2.75%, subject to a 1.00% LIBOR floor, or (ii) a base rate plus an applicable margin of 1.75%. There is no change to the maturities as a result of the First Amendment or Second Amendment. For further information regarding this amendment see Note 9, “Debt and Financing Arrangements” to the Condensed Consolidated Financial Statements.

We entered into a series of interest rate swaps to fix a portion of the LIBOR interest payments due under the term loan. As interest payments are made on the term loan, amounts in accumulated other comprehensive income will be reclassified into earnings through interest expense to reflect a net interest on the term loan equal to the effective yield of the fixed rate of the swap plus 2.75% which is the spread on the LIBOR term loan as amended. For further information regarding the interest rate swaps, including a table detailing fixed rates and amounts, see Note 9 to the Consolidated Financial Statements “Debt and Financing Arrangements.”

On August 27, 2018, we extended and amended our existing trade accounts receivable securitization facility (the “Extended Securitization Facility”), which supports the issuance of letters of credit and requests for cash advances. The amendment to the Extended Securitization Facility maintains the \$160 million borrowing capacity and extends the maturity date to the date that is three years after the Securitization Facility Closing Date. Additionally, the amendment provided the Company the opportunity to use credit insurance to increase the pool of eligible receivables for borrowing. As of March 31, 2019, letters of credit totaling \$15.7 million were outstanding under the facility with \$81.5 million available for borrowings. As a result, there was no cash collateral required to be posted in the facility. For further information regarding the Extended Securitization Facility see Note 9 to the Consolidated Financial Statements “Debt and Financing Arrangements.”

On November 19, 2018, we amended our senior secured inventory-based revolving credit facility to increase the aggregate principal amount to \$50 million (the “Inventory Facility”). As of March 31, 2019, we had letters of credit totaling \$35.7 million outstanding under the facility with \$14.3 million available for borrowings. For further information regarding the Inventory Facility see Note 9 to the Consolidated Financial Statements “Debt and Financing Arrangements.”

On March 31, 2019, we had total liquidity of approximately \$490 million including \$383 million in cash and equivalents, and short term investments in debt securities, with the remainder provided by availability under our credit facilities, and funds withdrawable from brokerage accounts.

The following is a summary of cash provided by or used in each of the indicated types of activities during the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,	
	2019	2018
	(In thousands)	
Cash provided by (used in):		
Operating activities	\$ 84,984	\$ 66,867
Investing activities	(42,200)	1,481
Financing activities	(88,971)	(50,692)

#### Cash Flow

Cash provided by operating activities in the three months ended March 31, 2019 increased from the three months ended March 31, 2018 mainly due to improved results from operations, and a large favorable year over year change in working capital, particularly in receivables, partially offset by receipt of an approximately \$24 million income tax refund in the prior period.

Cash was used in investing activities in the three months ended March 31, 2019 versus cash being provided by investing activities in three months ended March 31, 2018 due to increased capital expenditures, including approximately \$18 million on our Leer South development, and net purchases of short term investments in the current period versus net proceeds in the prior year period.

Cash used in financing activities in the three months ended March 31, 2019 increased from the three months ended March 31, 2018 primarily due to increased purchases of treasury stock of approximately \$38 million.

**Item 3. Quantitative and Qualitative Disclosures About Market Risk.**

We manage our commodity price risk for our non-trading, thermal coal sales through the use of long-term coal supply agreements, and to a limited extent, through the use of derivative instruments. Sales commitments in the metallurgical coal market are typically not long term in nature, and we are therefore subject to fluctuations in market pricing.

Our sales commitments for 2019 were as follows as of April 23, 2019:

	2019	
	Tons (in millions)	\$ per ton
<b>Metallurgical</b>		
Committed, North America Priced Coking	0.9	\$ 123.94
Committed, North America Unpriced Coking	0.8	—
Committed, Seaborne Priced Coking	1.6	132.25
Committed, Seaborne Unpriced Coking	3.1	
Committed, Priced Thermal	0.9	32.97
Committed, Unpriced Thermal	—	
<b>Powder River Basin</b>		
Committed, Priced	67.3	\$ 12.12
Committed, Unpriced	1.4	
<b>Other Thermal</b>		
Committed, Priced	6.8	\$ 40.28
Committed, Unpriced	1.0	

We are also exposed to commodity price risk in our coal trading activities, which represents the potential future loss that could be caused by an adverse change in the market value of coal. Our coal trading portfolio included swap and put and call option contracts at March 31, 2019. The estimated future realization of the value of the trading portfolio is \$0.6 million of losses during the remainder of 2019 and an immaterial amount of losses during 2020.

We monitor and manage market price risk for our trading activities with a variety of tools, including Value at Risk (VaR), position limits, management alerts for mark to market monitoring and loss limits, scenario analysis, sensitivity analysis and review of daily changes in market dynamics. Management believes that presenting high, low, end of year and average VaR is the best available method to give investors insight into the level of commodity risk of our trading positions. Illiquid positions, such as long-dated trades that are not quoted by brokers or exchanges, are not included in VaR.

VaR is a statistical one-tail confidence interval and down side risk estimate that relies on recent history to estimate how the value of the portfolio of positions will change if markets behave in the same way as they have in the recent past. The level of confidence is 95%. The time across which these possible value changes are being estimated is through the end of the next business day. A closed-form delta-neutral method used throughout the finance and energy sectors is employed to calculate this VaR. VaR is back tested to verify its usefulness.

On average, portfolio value should not fall more than VaR on 95 out of 100 business days. Conversely, portfolio value declines of more than VaR should be expected, on average, 5 out of 100 business days. When more value than VaR is lost due to market price changes, VaR is not representative of how much value beyond VaR will be lost.

While presenting VaR will provide a similar framework for discussing risk across companies, VaR estimates from two independent sources are rarely calculated in the same way. Without a thorough understanding of how each VaR model was calculated, it would be difficult to compare two different VaR calculations from different sources.

During the three months ended March 31, 2019, VaR for our coal trading positions that are recorded at fair value through earnings ranged from under \$0.1 million to \$0.2 million. The linear mean of each daily VaR was \$0.1 million. The final VaR at March 31, 2019 was \$0.1 million.

We are exposed to fluctuations in the fair value of coal derivatives that we enter into to manage the price risk related to future coal sales, but for which we do not elect hedge accounting. Gains or losses on these derivative instruments would be largely offset in the pricing of the physical coal sale. During the three months ended March 31, 2019, VaR for our risk management positions that are recorded at fair value through earnings ranged from \$0.7 million to \$1.5 million. The linear mean of each daily VaR was \$1.2 million. The final VaR at March 31, 2019 was \$1.4 million.

We are exposed to price risk with respect to diesel fuel purchased for use in our operations. We anticipate purchasing approximately 40 to 47 million gallons of diesel fuel for use in our operations annually. To protect our cash flows from increases in the price of diesel fuel for our operations, we use forward physical diesel purchase contracts, purchased heating oil call options and NYMEX gulf coast diesel swaps. At March 31, 2019, we had protected the price on the majority of our expected diesel fuel purchases for the remainder of 2019 with approximately 18 million gallons of heating oil call options with an average strike price of \$2.33 per gallon and 18 million gallons of NYMEX gulf coast diesel swaps at an average price of approximately \$1.91 per gallon. Additionally, we have protected approximately 9% of our expected 2020 purchases using heating oil call options with an average strike price of \$2.31 per gallon. At March 31, 2019, we had outstanding heating oil call options and NYMEX gulf coast swaps of approximately 40 million gallons for the purpose of managing the price risk associated with future diesel purchases. These positions are not designated as hedges for accounting purposes, and therefore, changes in the fair value are recorded immediately to earnings.

#### **Item 4. Controls and Procedures.**

We performed an evaluation under the supervision and with the participation of our management, including our chief executive officer and chief financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of March 31, 2019. Based on that evaluation, our management, including our chief executive officer and chief financial officer, concluded that the disclosure controls and procedures were effective as of such date. There were no changes in our internal control over financial reporting during the fiscal quarter to which this report relates that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**PART II**  
**OTHER INFORMATION**

**Item 1. Legal Proceedings**

We are involved in various claims and legal actions arising in the ordinary course of business, including employee injury claims. After conferring with counsel, it is the opinion of management that the ultimate resolution of these claims, to the extent not previously provided for, will not have a material adverse effect on our consolidated financial condition, results of operations or liquidity.

**Item 1A. Risk Factors**

*There have been no material changes to the "Risk Factors" disclosed in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2018.*

**Item 2. Unregistered Sales of Equity Securities and Use of Proceeds**

On July 26, 2018, the board of directors authorized an incremental \$250 million increase to the share repurchase program bringing the total authorization to \$750 million. On April 17, 2019, the board of directors authorized an additional \$300 million to the share repurchase program, bringing the total authorization since the program's launch to \$1.05 billion. The timing of any future share purchases, and the ultimate number of shares to be purchased, will depend on a number of factors, including business and market conditions, our future financial performance, and other capital priorities. The shares will be acquired in the open market or through private transactions in accordance with Securities and Exchange Commission requirements. The share repurchase program has no termination date, but may be amended, suspended or discontinued at any time and does not commit us to repurchase shares of our common stock. The actual number and value of the shares to be purchased will depend on the performance of our stock price and other market conditions.

The table below represents all share repurchases for the three months ended March 31, 2019:

Date	Total Number Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plan (in thousands) <sup>(1)</sup>
January 1 through January 31, 2019	185,416	\$ 84.94	185,416	\$ 450,368
February 1 through February 28, 2019	226,500	\$ 90.51	226,500	\$ 429,867
March 1 through March 31, 2019	460,401	\$ 91.22	460,401	\$ 387,868
Total	872,317	\$ 89.70	872,317	

<sup>(1)</sup> Amounts include the impact of the incremental \$300 million authorization on April 17, 2019.

As of March 31, 2019, we had repurchased 8,088,147 shares at an average share price of \$81.86 per share for an aggregate purchase price of approximately \$662 million since inception of the stock repurchase program, and the remaining authorized amount for stock repurchases under this program is approximately \$388 million.

**Item 4. Mine Safety Disclosures.**

The statement 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 to this Quarterly Report on Form 10-Q for the period ended March 31, 2019.

**Item 6. Exhibits.**

- 2.1 [Debtors' Fourth Amended Joint Plan of Reorganization Under Chapter 11 of the Bankruptcy Code \(incorporated by reference to Exhibit 2.1 of Arch Coal's Current Report on Form 8-K filed on September 15, 2016\).](#)
- 2.2 [Order Confirming Debtors' Fourth Amended Joint Plan of Reorganization Under Chapter 11 of the Bankruptcy Code on September 13, 2016 \(incorporated by reference to Exhibit 2.2 of Arch Coal's Current Report on Form 8-K filed on September 15, 2016\).](#)
- 3.1 [Amended and Restated Certificate of Incorporation of Arch Coal, Inc. 10.19 \(incorporated by reference to Exhibit 3.1 of Arch Coal's registration statement on Form 8-A filed on October 4, 2016\).](#)
- 3.2 [Bylaws of Arch Coal, Inc. \(incorporated by reference to Exhibit 3.2 of Arch Coal's registration statement on Form 8-A filed on October 4, 2016\).](#)
- 4.1 [Form of specimen Class A Common Stock certificate \(incorporated by reference to Exhibit 4.1 of Arch Coal's Current Report on Form 8-K filed on October 11, 2016\).](#)
- 4.2 [Form of specimen Class B Common Stock certificate \(incorporated by reference to Exhibit 4.2 of Arch Coal's Current Report on Form 8-K filed on October 11, 2016\).](#)
- 4.3 [Form of specimen Series A Warrant certificate \(incorporated by reference to Exhibit A of Exhibit 10.5 of Arch Coal's Current Report on Form 8-K filed on October 11, 2016\).](#)
- 10.1 [Credit Agreement, dated as of March 7, 2017, among Arch Coal, Inc. as borrower, the lenders from time to time party thereto and Credit Suisse AG, Cayman Islands Branch, in its capacities as administrative agent and as collateral agent \(incorporated by reference to Exhibit 10.1 of Arch Coal's Current Report on Form 8-K filed on March 8, 2017\).](#)
- 10.2 [First Amendment to Credit Agreement, dated as of September 25, 2017, among Arch Coal, Inc. as borrower, the lenders from time to time party thereto and Credit Suisse AG, Cayman Islands Branch, in its capacities as administrative agent and as collateral agent \(incorporated by reference to Exhibit 10.1 of Arch Coal's Current Report on Form 8-K filed on September 25, 2017\).](#)
- 10.3 [Second Amendment to Credit Agreement, dated as of April 3, 2018, among Arch Coal, Inc. as borrower, the lenders from time to time party thereto and Credit Suisse AG, Cayman Islands Branch, in its capacities as administrative agent and as collateral agent \(incorporated by reference to Exhibit 10.1 of Arch Coal's Current Report on Form 8-K filed on April 3, 2018\).](#)
- 10.4 [Credit Agreement, dated as of April 27, 2017, among Arch Coal, Inc. and certain of its subsidiaries, as borrowers, the lenders from time to time party thereto Regions Bank, in its capacities as administrative agent and as collateral agent \(incorporated by reference to Exhibit 10.1 of Arch Coal's Current Report on Form 8-K filed on May 2, 2017\).](#)
- 10.5 [First Amendment to Credit Agreement dated November 19, 2018 by and among Arch Coal, Inc. and certain of its subsidiaries, as borrowers, the lenders from time to time party thereto Regions Bank, in its capacities as administrative agent and as collateral agent \(incorporated by reference to Exhibit 10.5 to Arch Coal's Annual Report on Form 10-K for the year ended 2018\).](#)
- 10.6 [Third Amended and Restated Receivables Purchase Agreement among Arch Receivable Company, LLC, as seller, Arch Coal Sales Company, Inc., as initial servicer, PNC Bank, National Association as administrator and issuer of letters of credit thereunder and the other parties party thereto, as securitization purchasers \(incorporated by reference to Exhibit 10.2 of Arch Coal's Current Report on Form 8-K filed on October 11, 2016\).](#)
- 10.7 [First Amendment to Third Amended and Restated Receivables Purchase Agreement, dated as of April 27, 2017, among Arch Receivable Company, LLC, as seller, Arch Coal Sales Company, Inc., as servicer, PNC Bank, National Association as administrator and issuer of letters of credit thereunder and the other parties party thereto, as securitization purchasers \(incorporated by reference to Exhibit 10.2 of Arch Coal's Current Report on Form 8-K filed on May 2, 2017\).](#)
- 10.8 [Second Amendment to Third Amended and Restated Receivables Purchase Agreement, dated as of August 27, 2018, among Arch Receivable Company, LLC, as seller, Arch Coal Sales Company, Inc., as servicer, PNC Bank, National Association as administrator and issuer of letters of credit thereunder and the other parties party thereto, as securitization purchasers \(incorporated by reference to Exhibit 10.7 of Arch Coal's Quarterly Report on Form 10-Q for the period ended September 30, 2018\).](#)
- 10.9 [Second Amended and Restated Purchase and Sale Agreement among Arch Coal, Inc. and certain subsidiaries of Arch Coal, Inc., as originators \(incorporated by reference to Exhibit 10.3 of Arch Coal's Current Report on Form 8-K filed on October 11, 2016\).](#)
- 10.10 [First Amendment to the Second Amended and Restated Purchase and Sale Agreement, dated as of December 21, 2016, among Arch Coal, Inc. and certain subsidiaries of Arch Coal, Inc., as originators \(incorporated by reference to Exhibit 10.7 of Arch Coal's Current Report on Form 8-K filed on October 31, 2017\).](#)
- 10.11 [Second Amendment to the Second Amended and Restated Purchase and Sale Agreement, dated as of April 27, 2017, among the Arch Coal, Inc. and certain subsidiaries of the Arch Coal, Inc., as originators \(incorporated by reference to Exhibit 10.3 of Arch Coal's Current Report on Form 8-K filed on May 2, 2017\).](#)

- 10.12 [Second Amended and Restated Sale and Contribution Agreement between Arch Coal, Inc., as the transferor, and Arch Receivable Company, LLC \(incorporated by reference to Exhibit 10.4 of Arch Coal’s Current Report on Form 8-K filed on October 11, 2016\).](#)
- 10.13 [First Amendment to the Second Amended and Restated Sale and Contribution Agreement, dated as of April 27, 2017, between Arch Coal, Inc., as the transferor, and Arch Receivable Company, LLC \(incorporated by reference to Exhibit 10.4 of Arch Coal’s Current Report on Form 8-K filed on May 2, 2017\).](#)
- 10.14 [Warrant Agreement, dated as of October 5, 2016, between Arch Coal, Inc. and American Stock Transfer & Trust Company, LLC, as Warrant Agent \(incorporated by reference to Exhibit 10.5 of Arch Coal’s Current Report on Form 8-K filed on October 11, 2016\).](#)
- 10.15 [Indemnification Agreement between Arch Coal and the directors and officers of Arch Coal and its subsidiaries \(form\) \(incorporated by reference to Exhibit 10.6 of Arch Coal’s Current Report on Form 8-K filed on October 11, 2016\).](#)
- 10.16 [Registration Rights Agreement between Arch Coal and Monarch Alternative Capital LP and certain other affiliated funds \(incorporated by reference to Exhibit 10.1 of Arch Coal’s Current Report on Form 8-K filed on November 21, 2016\).](#)
- 10.17 Coal Lease Agreement dated as of March 31, 1992, among Allegheny Land Company, as lessee, and UAC and Phoenix Coal Corporation, as lessors, and related guarantee (incorporated herein by reference to the Current Report on Form 8-K filed by Ashland Coal, Inc. on April 6, 1992).
- 10.18 [Federal Coal Lease dated as of January 24, 1996 between the U.S. Department of the Interior and the Thunder Basin Coal Company \(incorporated herein by reference to Exhibit 10.20 to Arch Coal’s Annual Report on Form 10-K for the year ended December 31, 1998\).](#)
- 10.19 [Federal Coal Lease Readjustment dated as of November 1, 1967 between the U.S. Department of the Interior and the Thunder Basin Coal Company \(incorporated herein by reference to Exhibit 10.21 to Arch Coal’s Annual Report on Form 10-K for the year ended December 31, 1998\).](#)
- 10.20 [Federal Coal Lease effective as of May 1, 1995 between the U.S. Department of the Interior and Mountain Coal Company \(incorporated herein by reference to Exhibit 10.22 to Arch Coal’s Annual Report on Form 10-K for the year ended December 31, 1998\).](#)
- 10.21 [Federal Coal Lease dated as of January 1, 1999 between the Department of the Interior and Ark Land Company \(incorporated herein by reference to Exhibit 10.23 to Arch Coal’s Annual Report on Form 10-K for the year ended December 31, 1998\).](#)
- 10.22 [Federal Coal Lease effective as of March 1, 2005 by and between the United States of America and Ark Land LT, Inc. covering the tract of land known as “Little Thunder” in Campbell County, Wyoming \(incorporated by reference to Exhibit 99.1 to the Current Report on Form 8-K filed by Arch Coal on February 10, 2005\).](#)
- 10.23 [Modified Coal Lease \(WYW71692\) executed January 1, 2003 by and between the United States of America, through the Bureau of Land Management, as lessor, and Triton Coal Company, LLC, as lessee, covering a tract of land known as “North Rochelle” in Campbell County, Wyoming \(incorporated by reference to Exhibit 10.24 to Arch Coal’s Annual Report on Form 10-K for the year ended December 31, 2004\).](#)
- 10.24 [Coal Lease \(WYW127221\) executed January 1, 1998 by and between the United States of America, through the Bureau of Land Management, as lessor, and Triton Coal Company, LLC, as lessee, covering a tract of land known as “North Roundup” in Campbell County, Wyoming \(incorporated by reference to Exhibit 10.24 to Arch Coal’s Annual Report on Form 10-K for the year ended December 31, 2004\).](#)
- 10.25\* [Form of Employment Agreement for Executive Officers of Arch Coal, Inc. \(incorporated herein by reference to Exhibit 10.4 to Arch Coal’s Annual Report on Form 10-K for the year ended December 31, 2011\).](#)
- 10.26\* [Arch Coal, Inc. Deferred Compensation Plan \(incorporated herein by reference to Exhibit 10.26 to Arch Coal’s Annual Report on Form 10-K for the year ended December 31, 2014\).](#)
- 10.27 [Arch Coal, Inc. Outside Directors’ Deferred Compensation Plan \(incorporated herein by reference to Exhibit 10.4 of Arch Coal’s Current Report on Form 8-K filed on December 11, 2008\).](#)
- 10.28\* [Arch Coal, Inc. Supplemental Retirement Plan \(as amended on December 5, 2008\) \(incorporated herein by reference to Exhibit 10.2 to Arch Coal’s Current Report on Form 8-K filed on December 11, 2008\).](#)
- 10.29\* [Arch Coal, Inc. 2016 Omnibus Incentive Plan \(incorporated herein by reference to Exhibit 99.1 to Arch Coal’s Registration Statement on Form S-8 filed on November 1, 2016\).](#)
- 10.30\* [Form of Restricted Stock Unit Contract \(Time-Based Vesting\) \(incorporated herein by reference to Exhibit 10.1 to Arch Coal’s Current Report on Form 8-K filed on November 30, 2016\).](#)
- 10.31\* [Form of Restricted Stock Unit Contract \(Performance-Based Vesting\) \(incorporated herein by reference to Exhibit 10.2 to Arch Coal’s Current Report on Form 8-k filed on November 30, 2016\).](#)
- 10.32 [Stock Repurchase Agreement dated September 13, 2017, among Arch Coal, Inc. and Monarch Alternative Solutions Master Fund Ltd, Monarch Capital Master Partners III LP, MCP Holdings Master LP, Monarch Debt Recovery Master Fund Ltd and P Monarch Recovery Ltd \(incorporated by reference to Exhibit 10.1 of Arch Coal’s Current Report on Form 8-K filed on September 19, 2017\).](#)



- 10.33 [Stock Repurchase Agreement dated December 8, 2017, among Arch Coal, Inc. and Monarch Alternative Solutions Master Fund Ltd, Monarch Capital Master Partners III LP, MCP Holdings Master LP, and Monarch Debt Recovery Master Fund Ltd \(incorporated by reference to Exhibit 10.1 of Arch Coal’s Current Report on Form 8-K filed on December 11, 2017\).](#)
- 10.34\* [Form of Cash Retention Award Agreement for the Chief Executive Officer, Chief Operating Officer and Chief Financial Officer of the Company \(incorporated by reference to Exhibit 10.37 to Arch Coal’s Annual Report on Form 10-K for the year ended 2018\).](#)
- 31.1 [Rule 13a-14\(a\)/15d-14\(a\) Certification of John W. Eaves](#)
- 31.2 [Rule 13a-14\(a\)/15d-14\(a\) Certification of John T. Drexler.](#)
- 32.1 [Section 1350 Certification of John W. Eaves.](#)
- 32.2 [Section 1350 Certification of John T. Drexler.](#)
- 95 [Mine Safety Disclosure Exhibit.](#)
- 101 Interactive Data File (Form 10-Q for the three months ended March 31, 2019 filed in XBRL). The financial information contained in the XBRL-related documents is “unaudited” and “unreviewed.”

\* Denotes a management contract or compensatory plan or arrangement.

**Signatures**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Arch Coal, Inc.

By: /s/ John T. Drexler  
John T. Drexler  
Senior Vice President and Chief Financial Officer (On behalf  
of the registrant and as Principal Financial Officer)

April 23, 2019

**Certification**

I, John W. Eaves, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Arch Coal, Inc.;
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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) 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; and
  - (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):
  - (e) 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
  - (f) 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.

/s/ John W. Eaves

---

John W. Eaves

Chief Executive Officer, Director

Date: April 23, 2019

**Certification**

I, John T. Drexler, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Arch Coal, Inc.;
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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) 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; and
  - (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.

/s/ John T. Drexler

---

John T. Drexler

Senior Vice President and Chief Financial Officer

Date: April 23, 2019

---

**Certification of Periodic Financial Reports**

I, John W. Eaves, Chief Executive Officer, Director of Arch Coal, Inc., certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) the Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2019 (the "Periodic Report") which this statement accompanies fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and
- (2) information contained in the Periodic Report fairly presents, in all material respects, the financial condition and results of operations of Arch Coal, Inc.

/s/ John W. Eaves

---

John W. Eaves

Chief Executive Officer, Director

Date: April 23, 2019

---

**Certification of Periodic Financial Reports**

I, John T. Drexler, Senior Vice President and Chief Financial Officer of Arch Coal, Inc., certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) the Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2019 (the "Periodic Report") which this statement accompanies fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and
- (2) information contained in the Periodic Report fairly presents, in all material respects, the financial condition and results of operations of Arch Coal, Inc.

/s/ John T. Drexler

---

John T. Drexler

Senior Vice President and Chief Financial Officer

Date: April 23, 2019

---

**Mine Safety and Health Administration Safety Data**

We believe that Arch Coal, Inc. (“Arch Coal”) is one of the safest coal mining companies in the world. Safety is a core value at Arch Coal and at our subsidiary operations. We have in place a comprehensive safety program that includes extensive health & safety training for all employees, site inspections, emergency response preparedness, crisis communications training, incident investigation, regulatory compliance training and process auditing, as well as an open dialogue between all levels of employees. The goals of our processes are to eliminate exposure to hazards in the workplace, ensure that we comply with all mine safety regulations, and support regulatory and industry efforts to improve the health and safety of our employees along with the industry as a whole.

The operation of our mines is subject to regulation by the Federal Mine Safety and Health Administration (MSHA) under the Federal Mine Safety and Health Act of 1977 (Mine Act). MSHA inspects our mines on a regular basis and issues various citations, orders and violations when it believes a violation has occurred 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 the above information regarding mine safety and health, investors should take into account factors such as: (i) the number of citations and orders will vary depending on the size of a coal mine, (ii) the number of citations issued will vary from inspector to inspector and mine to mine, and (iii) citations and orders can be contested and appealed, and in that process are often reduced in severity and amount, and are sometimes dismissed or vacated.

The table below sets forth for the three months ended March 31, 2019 for each active MSHA identification number of Arch Coal and its subsidiaries, the total number of: (i) violations of mandatory health or safety standards that could significantly and substantially contribute to the cause and effect of a coal or other mine safety or health hazard under section 104 of the Mine Act for which the operator received a citation from MSHA; (ii) orders issued under section 104(b) of the Mine Act; (iii) citations and orders for unwarrantable failure of the mine operator to comply with mandatory health or safety standards under section 104(d) of the Mine Act; (iv) flagrant violations under section 110(b)(2) of the Mine Act; (v) imminent danger orders issued under section 107(a) of the Mine Act; (vi) proposed assessments from MSHA (regardless of whether Arch Coal has challenged or appealed the assessment); (vii) mining-related fatalities; (viii) notices from MSHA of a pattern of violations of mandatory health or safety standards that are of such nature as could have significantly and substantially contributed to the cause and effect of coal or other mine health or safety hazards under section 104(e) of the Mine Act; (ix) notices from MSHA regarding the potential to have a pattern of violations as referenced in (viii) above; and (x) pending legal actions before the Federal Mine Safety and Health Review Commission (as of March 31, 2019) involving such coal or other mine, as well as the aggregate number of legal actions instituted and the aggregate number of legal actions resolved during the reporting period.

Mine or Operating Name / MSHA Identification Number	Section 104 S&S Citations (#)	Section 104(b) Orders (#)	Section 104(d) Citations and Orders (#)	Section 110(b)(2) Violations (#)	Section 107(a) Orders (#)	Total Dollar Value of MSHA Assessments Proposed (in thousands) (\$)	Total Number of Mining Related Fatalities (#)	Received Notice of Pattern of Violations Under Section 104(e) (Yes/No)	Received Notice of Potential to Have Pattern of Violations Under Section 104(e) (Yes/No)	Legal Actions Initiated During Period (#)	Legal Actions Resolved During Period (#)	Legal Actions Pending as of Last Day of Period(1) (#)
<b><i>Active Operations</i></b>												
Vindex Cabin Run / 18-00133	—	—	—	—	—	—	—	No	No	—	—	—
Vindex Bismarck / 46-09369	—	—	—	—	—	—	—	No	No	—	—	—
Vindex Jackson Mt. / 18-00170	—	—	—	—	—	—	—	No	No	—	—	—
Vindex Wolf Den Run / 18-00790	—	—	—	—	—	—	—	No	No	—	—	—
Vindex Energy / Vindex / 46-02151	—	—	—	—	—	—	—	No	No	—	—	—
Vidnex Energy / Carlos Surface / 18-00769	—	—	—	—	—	—	—	No	No	—	—	—
Vindex Energy / Douglas Island / 18-00749	—	—	—	—	—	—	—	No	No	—	—	—
Vindex Energy / Dobbin Ridge Prep Plant / 46-07837	—	—	—	—	—	—	—	No	No	—	—	—
Vindex Energy / Frostburg Blend Yard / 18-00709	—	—	—	—	—	—	—	No	No	—	—	—
Beckley Pocahontas Mine / 46-05252	14	—	—	—	—	98.0	—	No	No	7	13	10
Beckley Pocahontas Plant / 46-09216	—	—	—	—	—	0.1	—	No	No	—	—	—
Coal Mac Holden #22 Prep Plant / 46-05909	—	—	—	—	—	—	—	No	No	—	—	—
Coal Mac Ragland Loadout / 46-08563	—	—	—	—	—	0.1	—	No	No	—	—	—
Coal Mac Holden #22 Surface / 46-08984	—	—	—	—	—	3.3	—	No	No	—	—	—
Eastern Birch River Mine / 46-07945	—	—	—	—	—	—	—	No	No	—	—	—
Sentinel Mine / 46-04168	12	—	—	—	—	13.0	—	No	No	—	—	—
Sentinel Prep Plant / 46-08777	—	—	—	—	—	1.0	—	No	No	—	—	—
Mingo Logan Mountaineer II / 46-09029	24	—	—	—	—	74.9	—	No	No	3	2	4
Mingo Logan Cardinal Prep Plant / 46-09046	—	—	—	—	—	7.5	—	No	No	—	—	—
Mingo Logan Daniel Hollow / 46-09047	—	—	—	—	—	—	—	No	No	—	—	—

Leer #1 Mine / 46-09192	12	—	—	—	—	45.4	—	No	No	3	5	3
Arch of Wyoming Elk Mountain / 48-01694	—	—	—	—	—	—	—	No	No	—	—	—
Black Thunder / 48-00977	—	—	—	—	—	2.4	—	No	No	—	—	—
Coal Creek / 48-01215	1	—	—	—	—	—	—	No	No	—	—	—
West Elk Mine / 05-03672	12	—	—	—	—	15.4	—	No	No	—	—	—
Viper Mine / 11-02664	5	—	—	—	—	16.3	—	No	No	—	—	—
Leer #1 Prep Plant / 46-09191	—	—	—	—	—	0.3	—	No	No	—	—	—
Wolf Run Mining – Sawmill Run Prep Plant / 46-05544	—	—	—	—	—	—	—	No	No	—	—	—
Wolf Run Mining / Imperial / 46-09115	—	—	—	—	—	—	—	No	No	—	—	—
Wolf Run Mining / Upshur / 46-05823	—	—	—	—	—	—	—	No	No	—	—	—

(1) See table below for additional details regarding Legal Actions Pending as of March 31, 2019.

Mine or Operating Name/MSHA Identification Number	Contests of Citations, Orders (as of March 31, 2019)	Contests of Proposed Penalties (as of March 31, 2019)	Complaints for Compensation (as of March 31, 2019)	Complaints of Discharge, Discrimination or Interference (as of March 31, 2019)	Applications for Temporary Relief (as of March 31, 2019)	Appeals of Judges' Decisions or Orders (as of March 31, 2019)
Beckley Pocahontas Mine / 46-05252	6	4	—	—	—	—
Mingo Logan Mountaineer II / 46-09029	—	4	—	—	—	—
Leer #1 / 46-09192	—	3	—	—	—	—