UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 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 June 30, 2021
or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from______ to ______

Commission file number: 1-13283

PENN VIRGINIA CORPORATION

PENN VIRGINIA CORPORATION
(Exact name of registrant as specified in its charter)

Virginia	**23-1184320**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

16285 PARK TEN PLACE, SUITE 500
HOUSTON, TX 77084
(Address of principal executive offices) (Zip Code)
(713) 722-6500
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.01 Par Value	**PVAC**	**Nasdaq Global Select Market**

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 ("Exchange Act") 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, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer	☐	Accelerated Filer	☒
Non-accelerated Filer	☐	Smaller Reporting Company	☒
		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 Exchange Act subsequent to the distribution of securities under a plan confirmed by a court. Yes ☒ No ☐

As of July 30, 2021, there were 37,861,271 shares of common stock and common stock equivalents outstanding, including 15,312,273 shares of common stock and equity with economic and voting power equal to 22,548,998 shares of common stock (as further described in this Quarterly Report on Form 10-Q).

PENN VIRGINIA CORPORATION
QUARTERLY REPORT ON FORM 10-Q

For the Quarterly Period Ended June 30, 2021

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Part I. FINANCIAL INFORMATION

Item 1. ***Financial Statements***

PENN VIRGINIA CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS – unaudited
(in thousands, except per share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Revenues and other				
Crude oil	$ 116,314	$ 41,197	$ 198,227	$ 127,505
Natural gas liquids	4,388	1,578	7,950	3,471
Natural gas	3,087	2,020	5,920	4,710
Other operating income, net	910	687	1,157	1,175
Total revenues and other	124,699	45,482	213,254	136,861
Operating expenses				
Lease operating	9,728	9,094	18,553	19,626
Gathering, processing and transportation	5,173	5,593	9,847	11,037
Production and ad valorem taxes	6,721	2,630	12,234	8,784
General and administrative	6,985	7,986	20,162	15,216
Depreciation, depletion and amortization	28,795	37,135	52,679	77,853
Impairments of oil and gas properties	—	35,509	1,811	35,509
Total operating expenses	57,402	97,947	115,286	168,025
Operating income (loss)	67,297	(52,465)	97,968	(31,164)
Other income (expense)				
Interest expense, net of amounts capitalized	(5,303)	(8,536)	(10,700)	(16,716)
Loss on extinguishment of debt	—	—	(1,231)	—
Derivatives	(54,227)	(34,349)	(98,595)	116,770
Other, net	—	(55)	(6)	(63)
Income (loss) before income taxes	7,767	(95,405)	(12,564)	68,827
Income tax (expense) benefit	(171)	690	139	(448)
Net income (loss)	7,596	(94,715)	(12,425)	68,379
Net (income) loss attributable to Noncontrolling interest	(4,551)	—	1,898	—
Net income (loss) attributable to common shareholders	$ 3,045	$ (94,715)	$ (10,527)	$ 68,379
Net income (loss) per share:				
Basic	$ 0.20	$ (6.24)	$ (0.69)	$ 4.51
Diluted	$ 0.20	$ (6.24)	$ (0.69)	$ 4.48
Weighted average shares outstanding – basic	15,311	15,167	15,287	15,159
Weighted average shares outstanding – diluted	38,372	15,167	15,287	15,268

See accompanying notes to condensed consolidated financial statements.

PENN VIRGINIA CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS) – unaudited
(in thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	**2020**	**2021**	**2020**
Net income (loss)	$ 7,596	$ (94,715)	$ (12,425)	$ 68,379
Other comprehensive income (loss):				
Change in pension and postretirement obligations, net of tax	2	(1)	4	(2)
	2	(1)	4	(2)
Comprehensive income (loss)	7,598	(94,716)	(12,421)	68,377
Net (income) loss attributable to Noncontrolling interest	(4,551)	—	1,898	—
Other comprehensive income attributable to Noncontrolling interest	(1)	—	(2)	—
Comprehensive income (loss) attributable to common shareholders	$ 3,046	$ (94,716)	$ (10,525)	$ 68,377

See accompanying notes to condensed consolidated financial statements.

PENN VIRGINIA CORPORATION
CONDENSED CONSOLIDATED BALANCE SHEETS – **unaudited**
(in thousands, except share data)

	June 30, 2021	December 31, 2020
Assets		
Current assets		
Cash and cash equivalents	$ 49,694	$ 13,020
Accounts receivable, net of allowance for credit losses	79,605	45,849
Derivative assets	6,025	75,506
Prepaid and other current assets	12,760	19,045
Total current assets	148,084	153,420
Property and equipment, net (full cost method)	833,723	723,549
Derivative assets	2,693	25,449
Other assets	5,378	4,908
Total assets	$ 989,878	$ 907,326
Liabilities and Shareholders' Equity		
Current liabilities		
Accounts payable and accrued liabilities	$ 133,151	$ 63,089
Derivative liabilities	64,346	85,106
Current portion of long-term debt	7,500	—
Total current liabilities	204,997	148,195
Deferred income taxes	458	—
Derivative liabilities	21,425	28,434
Other non-current liabilities	8,286	8,362
Long-term debt, net	372,049	509,497
Commitments and contingencies (Note 11)		
Equity		
Preferred stock of $0.01 par value – 5,000,000 shares authorized; 225,489.98 and none issued at June 30, 2021 and December 31, 2020, respectively	2	—
Common stock of $0.01 par value – 110,000,000 shares authorized; 15,312,273 and 15,200,435 shares issued as of June 30, 2021 and December 31, 2020, respectively	153	152
Paid-in capital	156,086	203,463
Retained earnings (Accumulated deficit)	(1,173)	9,354
Accumulated other comprehensive loss	(129)	(131)
Penn Virginia shareholders' equity	154,939	212,838
Noncontrolling interest	227,724	—
Total equity	382,663	212,838
Total liabilities and shareholders' equity	$ 989,878	$ 907,326

See accompanying notes to condensed consolidated financial statements.

PENN VIRGINIA CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS – unaudited
(in thousands)

	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020
Cash flows from operating activities		
Net income (loss)	$ (12,425)	$ 68,379
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Loss on exchange of debt	1,231	—
Depreciation, depletion and amortization	52,679	77,853
Impairments of oil and gas properties	1,811	35,509
Derivative contracts:		
Net (gains) losses	98,595	(116,770)
Cash settlements and premiums received (paid), net	(23,803)	58,877
Deferred income tax expense (benefit)	(249)	1,534
Gain on sales of assets, net	(4)	(14)
Non-cash interest expense	1,179	2,537
Share-based compensation	3,208	1,807
Other, net	13	14
Changes in operating assets and liabilities, net	476	(831)
Net cash provided by operating activities	122,711	128,895
Cash flows from investing activities		
Capital expenditures	(95,706)	(112,827)
Proceeds from sales of assets, net	153	83
Net cash used in investing activities	(95,553)	(112,744)
Cash flows from financing activities		
Proceeds from credit facility borrowings	20,000	46,000
Repayment of credit facility borrowings	(95,500)	(49,000)
Repayment of second lien facility	(55,015)	—
Proceeds from redeemable common units	151,160	—
Proceeds from redeemable preferred stock	2	—
Transaction costs paid on behalf of Noncontrolling interest	(5,543)	—
Issue costs paid for Noncontrolling interest securities	(3,758)	—
Debt issuance costs paid	(1,830)	(72)
Other, net	—	1,068
Net cash provided by (used in) financing activities	9,516	(2,004)
Net increase in cash and cash equivalents	36,674	14,147
Cash and cash equivalents – beginning of period	13,020	7,798
Cash and cash equivalents – end of period	$ 49,694	$ 21,945
Supplemental disclosures:		
Cash paid for:		
Interest, net of amounts capitalized	$ 9,638	$ 14,316
Income taxes, net of (refunds)	$ 360	$ (2,471)
Non-cash investing and financing activities:		
Changes in property and equipment related to capital contributions	$ (38,561)	$ —
Changes in asset retirement obligation related to capital contributions	$ 14	$ —
Changes in accrued liabilities related to capital contributions	$ 146	$ —
Changes in accrued liabilities related to capital expenditures	$ 22,891	$ (20,294)

See accompanying notes to condensed consolidated financial statements.

PENN VIRGINIA CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF EQUITY
(in thousands)

	Preferred Stock	Common Stock	Paid-in Capital	Retained Earnings/(Accumulated Deficit)	Accumulated Other Comprehensive Loss	Noncontrolling interest	Total Equity
Balance as of December 31, 2020	$ —	$ 152	$ 203,463	$ 9,354	$ (131)	$ —	$ 212,838
Net loss	—	—	—	(13,572)	—	(6,449)	(20,021)
Issuance of preferred stock	2	—	—	—	—	—	2
Issuance of Noncontrolling interest	—	—	(50,068)	—	—	229,620	179,552
All other changes [1]	—	1	1,769	—	1	1	1,772
Balance as of March 31, 2021	$ 2	$ 153	$ 155,164	$ (4,218)	$ (130)	$ 223,172	$ 374,143
Net income	—	—	—	3,045	—	4,551	7,596
All other changes [1]	—	—	922	—	1	1	924
Balance as of June 30, 2021	$ 2	$ 153	$ 156,086	$ (1,173)	$ (129)	$ 227,724	$ 382,663

[1] Includes equity-classified share-based compensation of $3.2 million during the six months ended June 30, 2021. During the six months ended June 30, 2021, 105,038 and 6,800 shares of common stock were issued in connection with the vesting of certain time-vested restricted stock units ("RSUs") and performance restricted stock units ("PRSUs"), net of shares withheld for income taxes.

	Common Stock	Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total Equity
Balance as of December 31, 2019	$ 151	$ 200,666	$ 319,987	$ (59)	$ 520,745
Net income	—	—	163,094	—	163,094
Cumulative effect of change in accounting principle [1]	—	—	(76)	—	(76)
All other changes [2]	1	556	—	(1)	556
Balance as of March 31, 2020	$ 152	$ 201,222	$ 483,005	$ (60)	$ 684,319
Net loss	—	—	(94,715)	—	(94,715)
All other changes [2]	—	936	—	(1)	935
Balance as of June 30, 2020	$ 152	$ 202,158	$ 388,290	$ (61)	$ 590,539

[1] Attributable to the adoption of Accounting Standards Update 2016–13, *Measurement of Credit Losses on Financial Instruments,* as of January 1, 2020.
[2] Includes equity-classified share-based compensation of $1.8 million during the six months ended June 30, 2020. During the six months ended June 30, 2020, 36,174 and 3,895 shares of common stock were issued in connection with the vesting of certain RSUs and PRSUs, net of shares withheld for income taxes.

See accompanying notes to condensed consolidated financial statements.

1. Nature of Operations

Penn Virginia Corporation (together with its consolidated subsidiaries, unless the context otherwise requires, "Penn Virginia," the "Company," "we," "us" or "our") is an independent oil and gas company focused on the onshore development and production of oil, natural gas liquids ("NGLs") and natural gas. Our current operations consist of drilling unconventional horizontal development wells and operating our producing wells in the Eagle Ford Shale (the "Eagle Ford") in Gonzales, Lavaca, Fayette and DeWitt Counties in South Texas. We operate in and report our financial results and disclosures as one segment, which is the development and production of crude oil, NGLs and natural gas.

2. Basis of Presentation

Our unaudited condensed consolidated financial statements include the accounts of Penn Virginia and all of our subsidiaries. Intercompany balances and transactions have been eliminated. A substantial noncontrolling interest in our subsidiaries is provided for in our condensed consolidated statements of operations and comprehensive income (loss) as well as our condensed consolidated balance sheets as of and for the period ended June 30, 2021 (see Note 3 for additional detail including the basis of presentation of the noncontrolling interest). Our condensed consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP"). Preparation of these statements involves the use of estimates and judgments where appropriate. In the opinion of management, all adjustments, consisting of normal recurring accruals, considered necessary for a fair presentation of our condensed consolidated financial statements, have been included. Our condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes included in our Annual Report on Form 10-K for the year ended December 31, 2020. Operating results for the periods presented are not necessarily indicative of the results that may be expected for the full year. Certain reclassifications have been made to prior period amounts to conform to the current period presentation. Such reclassifications did not have a material impact on prior period financial statements.

3. Juniper Transactions

On January 15, 2021 (the "Closing Date"), the Company consummated the previously announced transactions (collectively, the "Juniper Transactions") contemplated by: (i) the Contribution Agreement, dated November 2, 2020 (the "Contribution Agreement"), by and among the Company, PV Energy Holdings, L.P. (the "Partnership") and JSTX Holdings, LLC ("JSTX"), an affiliate of Juniper Capital Advisors, L.P. ("Juniper Capital" and, together with JSTX and Rocky Creek, "Juniper"); and (ii) the Contribution Agreement, dated November 2, 2020 (the "Asset Agreement," and, together with the Contribution Agreement, the "Juniper Transaction Agreements"), by and among Rocky Creek Resources, LLC, an affiliate of Juniper Capital ("Rocky Creek"), the Company and the Partnership.

In connection with the consummation of the Juniper Transactions, the Company completed a reorganization into an up-C structure which is intended to, among other things, result in the holders of the Series A Preferred Stock, par value $0.01 per share, of the Company ("Series A Preferred Stock") having a voting interest in the Company that is commensurate with such holders' economic interest in the Partnership, including (i) the conversion of each of the Company's corporate subsidiaries into limited liability companies which are disregarded for U.S. federal income tax purposes, including the conversion of Penn Virginia Holding Corp. into Penn Virginia Holdings, LLC, a Delaware limited liability company ("Holdings"), and (ii) the Company's contribution of all of its equity interests in Holdings to the Partnership in exchange for 15,268,686 newly issued common units representing limited partner interests (the "Common Units").

On the Closing Date, (i) pursuant to the terms of the Contribution Agreement, JSTX contributed to the Partnership, as a capital contribution, $150 million in cash in exchange for 17,142,857 newly issued Common Units and the Company issued to JSTX 171,428.57 shares of Series A Preferred Stock at a price equal to the par value of the shares acquired, and (ii) pursuant to the terms of the Asset Agreement, including certain closing adjustments based on a September 1, 2020 effective date (the "Effective Date"), Rocky Creek contributed to our operating subsidiary certain oil and gas assets in exchange for 5,405,252 newly issued Common Units and the Company issued to Rocky Creek 54,052.52 shares of Series A Preferred Stock (5,406,141 Common Units and 54,061.41 shares of Series A Preferred Stock after post-closing adjustments) at a price equal to the par value of the shares acquired, including 495,900 Common Units and 4,959 shares of Series A Preferred Stock placed in an indemnity escrow to support post-closing indemnification claims, 50% of such escrowed amount to be disbursed 180 days after the Closing and the remainder one year after the Closing. In connection with the contribution of the oil and gas assets under the Asset Agreement, we received $1.2 million of revenues attributable to production from the Rocky Creek assets for the period from December 1, 2020 through the Closing Date.

We incurred a total of $19.0 million of professional fees, including advisory, legal, consulting fees and other costs in connection with the Juniper Transactions. A total of $5.0 million were attributable to services and costs incurred and recognized in 2020 as general and administrative expenses ("G&A"). The remaining $14.0 million of costs were incurred in January 2021 or otherwise incurred contingent upon the closing of the Juniper Transactions, including $5.5 million of transaction costs incurred by Juniper that were required to be paid by the Company under the Juniper Transaction Agreements as well as $3.8 million of costs incurred by us related to the issuance of the Series A Preferred Stock and Common Units. Collectively, these amounts were classified as a reduction to the capital contribution on our condensed consolidated balance sheet. The remainder of $4.7 million, representing professional fees and other costs, was recognized as a component of G&A in the quarter ended March 31, 2021.

In determining the appropriate accounting for the Partnership and Juniper's interest, we considered the guidance in Accounting Standards Codification ("ASC") 810, *Consolidation*. The Partnership is considered a variable interest entity for which the Company is the primary beneficiary as it has a controlling financial interest in the Partnership and has the power to direct the activities most significant to the Partnership's economic performance, as well as the obligation to absorb losses and receive benefits that are potentially significant. As such, the Partnership is reflected as a consolidated subsidiary in the condensed consolidated financial statements. The ownership interest in the Partnership held by Juniper (the "Noncontrolling interest") is included in the condensed consolidated balance sheet as Noncontrolling interest, which is classified within permanent equity. The Noncontrolling interest is classified in permanent equity as it does not meet the definition of a liability under ASC 480, *Distinguishing Liabilities from Equity* and, among other considerations, the Common Units are optionally redeemable by the holder for a fixed number of shares (on a one-for-one basis) and there is no fixed or determinable date or fixed or determinable price for redemption; further, while the Common Units may be redeemed with Common Stock or cash, the method of settlement is solely at the discretion of the Company, with the Company having the ability to settle the redemption in shares. Additionally, while the holders of the Series A Preferred Stock, who also own the Common Units, could cause the Noncontrolling interest to be redeemed through an event that is not solely within the control of the Company such as a change-in-control, through their majority voting rights, all holders of equally and more subordinated equity interests in the Company would be entitled to receive the same form of consideration upon such event.

The Noncontrolling interest percentage is based on the proportionate amount of the number of Common Units held by Juniper to the total Common Units outstanding which is also equivalent to the voting power in the Company associated with the Series A Preferred Stock held by Juniper. The Noncontrolling interest was initially measured on the Closing Date as the sum of (i) total Shareholders' equity immediately prior to the closing of the Juniper Transactions, (ii) the fair value of Juniper's and Rocky Creek's contributions provided in exchange for Common Units and Series A Preferred Stock (net of the Juniper transaction costs and securities issuance costs paid by the Company and including the cash received directly by the Company for a portion of the Rocky Creek revenues as discussed above and asset retirement obligations ("AROs") associated with the contributed properties); and (iii) a deferred income tax adjustment attributable to the Juniper Transactions, the total of which was then multiplied by the Noncontrolling interest percentage. The difference between the calculated Noncontrolling interest and the fair value of the consideration received was recorded as a reduction to paid-in capital.

The following table reconciles the initial investment by Juniper and the carrying value of their Noncontrolling interest as of the Closing Date (after post-closing adjustments):

Cash contribution	$	150,000
Issue costs paid for Noncontrolling interest securities		(3,758)
Transaction costs paid on behalf of Noncontrolling interest		(5,543)
Fair value of Rocky Creek oil and gas properties contributed		38,561
Revenues received attributable to contributed properties		1,160
Suspense revenues attributable to the contributed properties		(146)
Asset retirement obligations of the contributed properties		(14)
Fair value of capital contributions		180,260
Income tax adjustment attributable to the Juniper Transactions		(708)
Total shareholders' equity prior to the Closing Date		205,558
	$	385,110
Juniper voting power through Series A Preferred Stock		59.6 %
Noncontrolling interest as of the Closing Date	$	229,620

4. Revenue Recognition

Revenue from Contracts with Customers

Crude oil. We sell our crude oil production to our customers at either the wellhead or a contractually agreed-upon delivery point, including certain regional central delivery point terminals or pipeline inter-connections. We recognize revenue when control transfers to the customer, considering factors associated with custody, title, risk of loss and other contractual provisions as appropriate. Pricing is based on a market index with adjustments for product quality, location differentials and, if applicable, deductions for intermediate transportation. Costs incurred by us for gathering and transporting the products to an agreed-upon delivery point are recognized as a component of Gathering, processing and transportation ("GPT") in our condensed consolidated statements of operations.

NGLs. We have natural gas processing contracts in place with certain midstream processing vendors. We deliver "wet" natural gas to our midstream processing vendors at the inlet of their processing facilities through gathering lines, certain of which we own and others which are owned by gathering service providers. Subsequent to processing, NGLs are delivered or otherwise transported to a third-party customer. Currently, for these contracts, we have determined that we are the agent and the midstream processing vendor is our customer. Accordingly, we recognize these revenues on a net basis with processing costs presented as a reduction of revenue.

Natural gas. Subsequent to the processing of "wet" natural gas and the separation of NGL products, the "dry" or residue gas is delivered to us at the tailgate of the midstream processing vendors' facilities and we market the product to our customers, most of whom are interstate pipelines. We recognize revenue when control transfers to the customer, considering factors associated with custody, title, risk of loss and other contractual provisions as appropriate. Pricing is based on a market index with adjustments for product quality and location differentials, as applicable. Costs incurred by us for gathering and transportation from the wellhead through the processing facilities are recognized as a component of GPT in our condensed consolidated statements of operations.

Performance obligations

We record revenue in the month that our oil and gas production is delivered to our customers. However, the collection of revenues from oil and gas production may take up to 60 days following the month of production. Therefore, we make accruals for revenues and accounts receivable based on estimates of our share of production. We record any differences, which historically have not been significant, between the actual amounts ultimately received and the original estimates in the period they become finalized.

We apply a practical expedient which provides for an exemption from disclosure of the transaction price allocated to remaining performance obligations if the performance obligation is part of a contract that has an original expected duration of one year or less. Under our commodity product sales contracts, we bill our customers and recognize revenue when our performance obligations have been satisfied. At that time, we have determined that payment is unconditional. Accordingly, our commodity sales contracts do not create contract assets or liabilities.

Our accounts receivable consists mainly of trade receivables from commodity sales and joint interest billings due from partners on properties we operate. Our allowance for credit losses is entirely attributable to receivables from joint interest partners. The following table summarizes our accounts receivable by type as of the dates presented:

	June 30, 2021	December 31, 2020
Customers	$ 64,660	$ 39,672
Joint interest partners	10,693	3,079
Derivative settlements from counterparties	4,585	3,287
Other	8	8
Total	79,946	46,046
Less: Allowance for credit losses	(341)	(197)
Accounts receivable, net of allowance for credit losses	$ 79,605	$ 45,849

Major Customers

For the six months ended June 30, 2021,three customers accounted for $98.5 million, or approximately 46%, of our consolidated product revenues. The revenues generated from these customers during the six months ended June 30, 2021, were $34.7 million, $33.4 million and $30.4 million, or 16%, 16% and 14% of the consolidated total, respectively. For the six months ended June 30, 2020, four customers accounted for $99.2 million, or approximately 73%, of our consolidated product revenues. As of June 30, 2021 and December 31, 2020, $43.8 million and $24.1 million, or approximately 68% and 61%, respectively, of our consolidated accounts receivable from customers was related to the three customers referenced above. No significant uncertainties exist related to the collectability of amounts owed to us by any of these customers.

5. Derivative Instruments

We utilize derivative instruments, typically swaps, put options and call options which are placed with financial institutions that we believe are acceptable credit risks, to mitigate our financial exposure to commodity price volatility associated with anticipated sales of our future production and volatility in interest rates attributable to our variable rate debt instruments. For our commodity derivatives, we typically combine swaps, purchased put options, purchased call options, sold put options and sold call options in order to achieve various hedging objectives. Certain of these objectives result in combinations that operate as collars which include purchased put options and sold call options, three-way collars, which include purchased put options, sold put options and sold call options, and enhanced swaps, which include either sold put options or sold call options with the associated premiums rolled into an enhanced fixed price swap, among others.

Our derivative instruments are not formally designated as hedges for accounting purposes. While the use of derivative instruments limits the risk of adverse commodity price and interest rate movements, such use may also limit the beneficial impact of future product revenues and interest expense from favorable commodity price and interest rate movements. From time to time, we may enter into incremental derivative contracts in order to increase the notional volume of production we are hedging, restructure existing derivative contracts or enter into other derivative contracts resulting in modification to the terms of existing contracts. In accordance with our internal policies, we do not utilize derivative instruments for speculative purposes.

Commodity Derivatives

The following table sets forth our commodity derivative positions, presented on a net basis by period of maturity, as of June 30, 2021:

	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23
NYMEX WTI Crude Swaps										
Average Volume Per Day (bbl)	815	815								
Weighted Average Swap Price ($/bbl)	$ 45.54	$ 45.54								
NYMEX WTI Crude Collars										
Average Volume Per Day (bbl)	14,130	9,783	5,417	4,533	4,484	4,484	2,917	2,885		
Weighted Average Purchased Put Price ($/bbl)	$ 44.27	$ 42.00	$ 40.00	$ 40.00	$ 40.00	$ 40.00	$ 40.00	$40.00		
Weighted Average Sold Call Price ($/bbl)	$ 59.21	$ 54.92	$ 53.49	$ 52.47	$ 52.47	$ 52.47	$ 50.00	$50.00		
NYMEX WTI Crude CMA Roll Basis Swaps										
Average Volume Per Day (bbl)	17,935	17,935	6,667	6,593						
Weighted Average Swap Price ($/bbl)	$ 0.17	$ 0.17	$ 0.63	$ 0.63						
NYMEX HH Collars										
Average Volume Per Day (MMBtu)	9,783	9,783		13,187	13,043	13,043		11,538	11,413	11,413
Weighted Average Purchased Put Price ($/MMBtu)	$ 2.607	$ 2.607		$ 2.500	$ 2.500	$ 2.500		$2.500	$2.500	$2.500
Weighted Average Sold Call Price($/MMBtu)	$ 3.117	$ 3.117		$ 3.220	$ 3.220	$ 3.220		$2.682	$2.682	$2.682
NYMEX HH Sold Puts										
Average Volume Per Day (MMBtu)	6,522	6,522								
Weighted Average Sold Put Price ($/MMBtu)	$ 2.000	$ 2.000								
OPIS Mt Belv Ethane Swaps										
Average Volume per Day (gal)	35,870			28,022	27,717	27,717		98,901		
Weighted Average Fixed Price ($/gal)	$ 0.2288			$ 0.2500	$ 0.2500	$ 0.2500		$ 0.2288		

Interest Rate Derivatives

We have a series of interest rate swap contracts (the “Interest Rate Swaps”) establishing fixed interest rates on a portion of our variable interest rate indebtedness under the credit agreement (the “Credit Facility”) and the Second Lien Credit Agreement, dated as of September 29, 2017 (the “Second Lien Facility”). The notional amount of the Interest Rate Swaps totals $300 million, with us paying a weighted average fixed rate of1.36% on the notional amount, and the counterparties paying a variable rate equal to LIBOR through May 2022.

Financial Statement Impact of Derivatives

The impact of our derivative activities on income is included within Derivatives on our condensed consolidated statements of operations. Derivative contracts that have expired at the end of a period, but for which cash had not been received or paid as of the balance sheet date, have been recognized as components of Accounts receivable (see Note 4) and Accounts payable and accrued liabilities (see Note 9) on the condensed consolidated balance sheets. The effects of derivative gains and (losses) and cash settlements are reported as adjustments to reconcile net income (loss) to net cash provided by operating activities. These items are recorded within the Derivative contracts section of our condensed consolidated statements of cash flows under Net (gains) losses and Cash settlements and premiums received (paid), net.

The following table summarizes the effects of our derivative activities for the periods presented:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	**2020**	**2021**	**2020**
Interest Rate Swap gains (losses) recognized in the condensed consolidated statements of operations	$ 4	$ (876)	$ 36	$ (7,559)
Commodity gains (losses) recognized in the condensed consolidated statements of operations	(54,231)	(33,473)	(98,631)	124,329
	$ (54,227)	$ (34,349)	$ (98,595)	$ 116,770
Interest rate cash settlements recognized in the condensed consolidated statements of cash flows	$ (956)	$ (436)	$ (1,878)	$ (368)
Commodity cash settlements and premiums received (paid) recognized in the condensed consolidated statements of cash flows	(15,678)	59,582	(21,925)	59,245
	$ (16,634)	$ 59,146	$ (23,803)	$ 58,877

The following table summarizes the fair values of our derivative instruments, which we elect to present on a gross basis, as well as the locations of these instruments on our condensed consolidated balance sheets as of the dates presented:

		June 30, 2021		December 31, 2020	
Type	**Balance Sheet Location**	**Derivative Assets**	**Derivative Liabilities**	**Derivative Assets**	**Derivative Liabilities**
Interest rate contracts	Derivative assets/liabilities – current	$ —	$ 3,386	$ —	$ 3,655
Commodity contracts	Derivative assets/liabilities – current	6,025	60,960	75,506	81,451
Interest rate contracts	Derivative assets/liabilities – non-current	—	—	—	1,645
Commodity contracts	Derivative assets/liabilities – non-current	2,693	21,425	25,449	26,789
		$ 8,718	$ 85,771	$ 100,955	$ 113,540

As of June 30, 2021, we reported net commodity derivative liabilities of $73.7 million and net Interest Rate Swap liabilities of $3.4 million. The contracts associated with these positions are with seven counterparties for commodity derivatives and four counterparties for Interest Rate Swaps, all of which are investment grade financial institutions and are participants in the Credit Facility. This concentration may impact our overall credit risk in that these counterparties may be similarly affected by changes in economic or other conditions. Non-performance risk is incorporated by utilizing discount rates adjusted for the credit risk of our counterparties if the derivative is in an asset position, and our own credit risk if the derivative is in a liability position.

The agreements underlying our derivative instruments include provisions for the netting of settlements with the counterparties for contracts of similar type. We have neither paid to, nor received from, our counterparties any cash collateral in connection with our derivative positions. Furthermore, our derivative contracts are not subject to margin calls or similar accelerations. No significant uncertainties exist related to the collectability of amounts that may be owed to us by these counterparties.

See Note 10 for information regarding the fair value of our derivative instruments.

6. Property and Equipment

The following table summarizes our property and equipment as of the dates presented:

	June 30, 2021	December 31, 2020
Oil and gas properties:		
Proved	$ 1,701,353	$ 1,545,910
Unproved	58,525	49,935
Total oil and gas properties	1,759,878	1,595,845
Other property and equipment	28,185	27,746
Total properties and equipment	1,788,063	1,623,591
Accumulated depreciation, depletion, amortization and impairments	(954,340)	(900,042)
Total property and equipment, net	$ 833,723	$ 723,549

Unproved property costs of $58.5 million and $49.9 million have been excluded from amortization as of June 30, 2021 and December 31, 2020, respectively. An additional $1.2 million of costs, associated with wells in-progress for which we had not previously recognized any proved undeveloped reserves, were excluded from amortization as of December 31, 2020. We transferred $13.5 million and $4.4 million of undeveloped leasehold costs associated with acreage unlikely to be drilled or associated with proved undeveloped reserves, including capitalized interest, from unproved properties to the full cost pool during the six months ended June 30, 2021 and 2020, respectively. We capitalized internal costs of $1.7 million and $1.2 million and interest of $1.6 million and $1.4 million during the six months ended June 30, 2021 and 2020, respectively, in accordance with our accounting policies. Average depreciation, depletion and amortization per barrel of oil equivalent of proved oil and gas properties was $12.82 and $16.66 for the six months ended June 30, 2021 and 2020, respectively.

At the end of each quarterly reporting period, the unamortized cost of our oil and gas properties, net of deferred income taxes, is limited to the sum of the estimated after-tax discounted future net revenues from proved properties adjusted for costs excluded from amortization (the "Ceiling Test"). During the three and six months ended June 30, 2021, the Company recorded zero and a $1.8 million impairment of its oil and gas properties, respectively. During the three and six months ended June 30, 2020, the Company recorded an impairment of its oil and gas properties of $35.5 million.

7. Long-Term Debt

The following table summarizes our debt obligations as of the dates presented:

	June 30, 2021	December 31, 2020
Credit Facility	$ 238,900	$ 314,400
Second Lien Facility	144,985	200,000
Totals	383,885	514,400
Less: Unamortized discount [1]	(1,012)	(1,604)
Less: Unamortized deferred issuance costs [1, 2]	(3,324)	(3,299)
Totals, net	$ 379,549	$ 509,497
Less: Current portion	(7,500)	—
Long-term debt	$ 372,049	$ 509,497

1 Discount and issuance costs of the Second Lien Facility are being amortized over the term of the underlying loan using the effective-interest method.

2 Excludes issuance costs of the Credit Facility, which represent costs attributable to the access to credit over its contractual term, that have been presented as a component of Other assets (see Note 9) and are being amortized over the term of the Credit Facility using the straight-line method.

Credit Facility

The Credit Facility provides for a $1.0 billion revolving commitment and a $375 million borrowing base, including a $25 million sublimit for the issuance of letters of credit. Availability under the Credit Facility may not exceed the lesser of the aggregate commitments or the borrowing base; however, outstanding borrowings under the Credit Facility are limited to a maximum of $350 million. The borrowing base under the Credit Facility is redetermined semi-annually, generally in the Spring and Fall of each year. Additionally, we and the Credit Facility lenders generally may, upon request, initiate a redetermination at any time during the six-month period between scheduled redeterminations. However, we have the option to forego a redetermination until Fall 2021 assuming we continue to satisfy certain minimum hedging conditions that became effective with the Agreement and Amendment No. 9 to Credit Agreement (the "Ninth Amendment") in January 2021. The Credit Facility is available to us for general corporate purposes, including working capital. The Credit Facility is scheduled to mature in May 2024. We had $0.4 million in letters of credit outstanding as of June 30, 2021 and December 31, 2020. During the six months ended June 30, 2021, we incurred and capitalized approximately $0.4 million of issue costs associated with the Ninth Amendment.

The outstanding borrowings under the Credit Facility bear interest at a rate equal to, at our option, either (a) a customary reference rate plus an applicable margin ranging from 1.50% to 2.50%, determined based on the utilization level under the Credit Facility or (b) a Eurodollar rate, including LIBOR through 2021, plus an applicable margin ranging from 2.50% to 3.50%, determined based on the utilization level under the Credit Facility. Interest on reference rate borrowings is payable quarterly in arrears and is computed on the basis of a year of 365/366 days, and interest on Eurodollar borrowings is payable every one, three or six months, at the election of the borrower, and is computed on the basis of a year of 360 days. As of June 30, 2021, the actual weighted-average interest rate on the outstanding borrowings under the Credit Facility was 3.08%. Unused commitment fees are charged at a rate of 0.50%.

The Credit Facility is guaranteed by the Partnership and all of its subsidiaries, excluding the borrower subsidiary and the escrow subsidiary (the "Guarantor Subsidiaries"). See Note 14 for additional information related to the escrow subsidiary. The guarantees under the Credit Facility are full and unconditional and joint and several. Substantially all of our consolidated assets are held by the Guarantor Subsidiaries. There are no significant restrictions on the ability of the borrower or any of the Guarantor Subsidiaries to obtain funds through dividends, advances or loans. The obligations under the Credit Facility are secured by a first priority lien on substantially all of our subsidiaries' assets.

The Credit Facility requires us to maintain (1) a minimum current ratio (as defined in the Credit Facility, which considers the unused portion of the total commitment as a current asset), measured as of the last day of each fiscal quarter of 1.00 to 1.00, (2) a maximum leverage ratio (consolidated indebtedness to adjusted earnings before interest, taxes, depreciation, depletion, amortization and exploration expenses, both as defined in the Credit Facility), measured as of the last day of each fiscal quarter of 3.50 to 1.00 and (3) a maximum first lien leverage ratio (consolidated secured indebtedness to adjusted earnings before interest, taxes, depreciation, depletion, amortization and exploration expenses, both as defined in the Credit Facility), measured as of the last day of each fiscal quarter, of 2.50 to 1.00.

The Credit Facility also contains customary affirmative and negative covenants, including as to compliance with laws (including environmental laws, ERISA and anti-corruption laws), maintenance of required insurance, delivery of quarterly and annual financial statements, oil and gas engineering reports and budgets, weekly cash balance reports, maintenance and operation of property (including oil and gas properties), restrictions on the incurrence of liens and indebtedness, merger, consolidation or sale of assets, payment of dividends, and transactions with affiliates and other customary covenants. In addition, the Credit Facility contains certain anti-cash hoarding provisions, including the requirement to repay outstanding loans and cash collateralize outstanding letters of credit on a weekly basis in the amount of any cash on the balance sheet (subject to certain exceptions) in excess of $25 million.

The Credit Facility contains events of default and remedies. If we do not comply with the financial and other covenants in the Credit Facility, the lenders may, subject to customary cure rights, require immediate payment of all amounts outstanding under the Credit Facility.

As of June 30, 2021, we were in compliance with all of the covenants under the Credit Facility.

See Note 14 for subsequent events related to Amendment No. 10 to the Credit Agreement.

Second Lien Facility

We entered into the $200 million Second Lien Facility in September 2017 to fund a significant acquisition as well as related fees and expenses. In January 2021, the amendment dated November 2, 2020 (the "Second Lien Amendment") became effective at which time we made a $50.0 million prepayment as well as a $1.3 million principal payment to a single participant lender to liquidate their interest in the Second Lien Facility. The Second Lien Amendment provided for (i) the extension of the maturity date of the Second Lien Facility to September 29, 2024, (ii) an increase to the margin applicable to advances under the Second Lien Facility, (iii) the imposition of certain limitations on capital expenditures, acquisitions and investments if the Asset

Coverage Ratio (as defined therein) at the end of any fiscal quarter is less than1.25 to 1.00, (iv) the requirement for maximum and, in certain circumstances as described therein, minimum hedging arrangements, (v) beginning in 2021, a requirement to make quarterly amortization payments equal to $1.875 million and (vi) a provision for the replacement of the LIBOR interest rate upon its expiration. During the first quarter 2021, we incurred and capitalized $1.4 million of issue costs in connection with the Second Lien Amendment and wrote off $1.2 million of previously capitalized issue costs and original issue discount allocable to the aforementioned prepayments as a loss on the extinguishment of debt.

The outstanding borrowings under the Second Lien Facility bear interest at a rate equal to, at our option, either (a) a customary reference rate plus an applicable margin of 7.25% or (b) a Eurodollar rate, including LIBOR through 2021, with a floor of1.00%, plus an applicable margin of 8.25%; provided that the applicable margin will increase to 8.25% and 9.25%, respectively, during any quarter in which the quarterly amortization payment is not made. As of June 30, 2021, the actual interest rate of outstanding borrowings under the Second Lien Facility was 9.25%. Interest on reference rate borrowings is payable quarterly in arrears and is computed on the basis of a year of 365/366 days, and interest on Eurodollar borrowings is payable every one or three months (including in three month intervals if we select a six-month interest period), at our election and is computed on the basis of a 360-day year.

We have the right, to the extent permitted under the Credit Facility and an intercreditor agreement between the lenders under the Credit Facility and the lenders under the Second Lien Facility, to prepay loans under the Second Lien Facility at any time, subject to prepayment premiums (in addition to customary breakage costs with respect to Eurodollar loans) during the twelve-month period beginning on January 15th of the years indicated below:

Date	Prepayment premium
2021	102%
2022	101%
Thereafter	No premium

The Second Lien Facility also provides for the following prepayment premiums in the event of a change-in-control that results in an offer of prepayment that is accepted by the lenders under the Second Lien Facility during the twelve-month period beginning on January 15th of the years indicated below:

Date	Prepayment premium
2021	102%
2022	101%
Thereafter	No premium

The Second Lien Facility is collateralized by substantially all of the Partnership's and its subsidiaries' assets with lien priority subordinated to the liens securing the Credit Facility. The obligations under the Second Lien Facility are guaranteed by the Partnership and the Guarantor Subsidiaries.

The Second Lien Facility has no financial covenants, but contains affirmative and negative covenants, including as to compliance with laws (including environmental laws, ERISA and anti-corruption laws), maintenance of required insurance, delivery of quarterly and annual financial statements, oil and gas engineering reports and budgets, maintenance and operation of property (including oil and gas properties), limitations on capital expenditures, investments, the incurrence of liens and indebtedness, merger, consolidation or sale of assets, payment of dividends and transactions with affiliates and other customary covenants.

As of June 30, 2021, we were in compliance with all of the covenants under the Second Lien Facility.

8. Income Taxes

The income tax provision resulted in an expense of $0.2 million and a benefit of $0.1 million for the three and six months ended June 30, 2021, respectively. The federal portion was fully offset by an adjustment to the valuation allowance against our net deferred tax assets resulting in an effective tax rate of 1.1%, which is fully attributable to the State of Texas. In connection with the Juniper Transactions, we recorded an adjustment of $0.7 million to Paid-in capital (see Note 3) attributable to certain state deferred income tax effects associated with the change in legal entity structure. Our net deferred income tax liability balance of $0.5 million as of June 30, 2021 is also fully attributable to the State of Texas and primarily related to property.

We recognized a federal and state income tax benefit of $0.7 million and an expense of $0.4 million the three and six months ended June 30, 2020, respectively. The federal and state tax expense was offset by an adjustment to the valuation allowance against our net deferred tax assets resulting in an effective tax rate of 0.7% which was fully attributable to the State of Texas.

The provision also reflected a reclassification of $1.2 million from deferred tax assets to current income taxes receivable for certain refundable alternative minimum tax credit carryforwards that were later received in June 2020.

We had no liability for unrecognized tax benefits as of June 30, 2021 and December 31, 2020. There were no interest and penalty charges recognized during the three and six months ended June 30, 2021 and 2020. Tax years from 2015 forward remain open to examination by the major taxing jurisdictions to which the Company is subject; however, net operating losses originating in prior years are subject to examination when utilized.

9. Supplemental Balance Sheet Detail

The following table summarizes components of selected balance sheet accounts as of the dates presented:

	June 30, 2021	December 31, 2020
Prepaid and other current assets:		
Inventories [1]	$ 7,023	$ 4,274
Prepaid expenses [2]	5,737	14,771
	$ 12,760	$ 19,045
Other assets:		
Deferred issuance costs of the Credit Facility, net of amortization	$ 2,336	$ 2,349
Right-of-use assets – operating leases	2,096	2,432
Other	946	127
	$ 5,378	$ 4,908
Accounts payable and accrued liabilities:		
Trade accounts payable	$ 30,701	$ 7,055
Drilling and other lease operating costs	31,892	16,088
Royalties	46,123	26,615
Production, ad valorem and other taxes	6,994	3,094
Derivative settlements to counterparties	11,943	321
Compensation	3,270	4,222
Interest	386	504
Current operating lease obligations	959	936
Other [3]	883	4,254
	$ 133,151	$ 63,089
Other non-current liabilities:		
Asset retirement obligations	$ 5,809	$ 5,461
Non-current operating lease obligations	1,363	1,752
Postretirement benefit plan obligations	1,114	1,149
	$ 8,286	$ 8,362

1 Includes tubular inventory and well materials of $ 6.7 million and $3.9 million and crude oil volumes in storage of $ 0.3 million and $0.4 million as June 30, 2021 and December 31, 2020, respectively.
2 The balances as of June 30, 2021 and December 31, 2020 include $ 3.6 million and $13.6 million, respectively, for the prepayment of drilling and completion materials and services.
3 The balance as of December 31, 2020 includes $3.5 million of accrued costs attributable to Juniper Transaction expenses.

10. Fair Value Measurements

We apply the authoritative accounting provisions included in GAAP for measuring the fair value of both our financial and nonfinancial assets and liabilities. Fair value is an exit price representing the expected amount we would receive upon the sale of an asset or that we would expect to pay to transfer a liability in an orderly transaction with market participants at the measurement date.

Our financial instruments, including cash and cash equivalents, accounts receivable, and accounts payable approximate fair value due to their short-term maturities. As of June 30, 2021 and December 31, 2020, the carrying values of the borrowings outstanding under our credit facilities approximate fair value as the borrowings bear interest at variables rates tied to current market rates and the applicable margins represent market rates.

Recurring Fair Value Measurements

The fair values of our derivative instruments are measured at fair value on a recurring basis on our condensed consolidated balance sheets.The following tables summarize the valuation of those assets and (liabilities) as of the dates presented:

	As of June 30, 2021			
	Fair Value	Fair Value Measurement Classification		
Description	**Measurement**	**Level 1**	**Level 2**	**Level 3**
Assets:				
Commodity derivative assets – current	$ 6,025	$ —	$ 6,025	$ —
Commodity derivative assets – non-current	$ 2,693	$ —	$ 2,693	$ —
Liabilities:				
Interest rate swap liabilities – current	$ (3,386)	$ —	$ (3,386)	$ —
Interest rate swap liabilities – non-current	$ —	$ —	$ —	$ —
Commodity derivative liabilities – current	$ (60,960)	$ —	$ (60,960)	$ —
Commodity derivative liabilities – non-current	$ (21,425)	$ —	$ (21,425)	$ —

	As of December 31, 2020			
	Fair Value	Fair Value Measurement Classification		
Description	**Measurement**	**Level 1**	**Level 2**	**Level 3**
Assets:				
Commodity derivative assets – current	$ 75,506	$ —	$ 75,506	$ —
Commodity derivative assets – non-current	$ 25,449	$ —	$ 25,449	$ —
Liabilities:				
Interest rate swap liabilities – current	$ (3,655)	$ —	$ (3,655)	$ —
Interest rate swap liabilities – non-current	$ (1,645)	$ —	$ (1,645)	$ —
Commodity derivative liabilities – current	$ (81,451)	$ —	$ (81,451)	$ —
Commodity derivative liabilities – non-current	$ (26,789)	$ —	$ (26,789)	$ —

We used the following methods and assumptions to estimate fair values for the financial assets and liabilities described below:

- *Commodity derivatives*: We determine the fair values of our commodity derivative instruments using industry-standard models that consider various assumptions including current market and contractual prices for the underlying instruments, implied volatilities, time value and non-performance risk. For the current market prices, we use third-party quoted forward prices, as applicable, for NYMEX WTI, MEH crude oil, NYMEX HH natural gas and OPIS Mt Belv Ethane natural gas liquids closing prices as of the end of the reporting periods. Each of these is a Level 2 input.
- *Interest rate swaps*: We determine the fair values of our interest rate swaps using an income approach valuation technique which discounts future cash flows back to a single present value. We estimate the fair value of the swaps based on published interest rate yield curves as of the date of the estimate. Each of these is a Level 2 input.

Non-performance risk is incorporated by utilizing discount rates adjusted for the credit risk of our counterparties if the derivative is in an asset position, and our own credit risk if the derivative is in a liability position. See Note 5 for additional details on our derivative instruments.

Non-Recurring Fair Value Measurements

In addition to the fair value measurements applied with respect to assets contributed in the Juniper Transactions, the most significant non-recurring fair value measurements utilized in the preparation of our condensed consolidated financial statements are those attributable to the initial determination of AROs associated with the ongoing development of new oil and gas properties and certain share-based compensation awards. The determination of the fair value of AROs is based upon regional market and facility specific information. The amount of an ARO and the costs capitalized represent the estimated future cost to satisfy the abandonment obligation using current prices that are escalated by an assumed inflation factor after discounting the future cost back to the date that the abandonment obligation was incurred using a rate commensurate with the risk, which approximates our cost of funds. Because these significant fair value inputs are typically not observable, we have categorized the initial estimates as Level 3 inputs.

11. Commitments and Contingencies

Drilling and Completion Commitments

As of June 30, 2021, we had contractual commitments on a pad-to-pad basis for two drilling rigs. Additionally, we have an agreement, effective January 2, 2021, which can be terminated with 30 days' notice by either party, to utilize certain frac services and related materials, with no minimum commitment, through December 31, 2021. In March 2021, we made a prepayment of $12 million under the frac services agreement in advance of completion projects for the second quarter of 2021 for which a balance of $0.3 million was remaining as of June 30, 2021.

Gathering and Intermediate Transportation Commitments

We have long-term agreements with Nuevo G&T and Nuevo Dos Marketing, LLC ("Nuevo Marketing" and together with Nuevo G&T, collectively "Nuevo") to provide gathering and intermediate pipeline transportation services for a substantial portion of our crude oil and condensate production in as well as volume capacity support for certain downstream interstate pipeline transportation.

Nuevo is obligated to gather and transport our crude oil and condensate from within a dedicated area in the Eagle Ford via a gathering system and intermediate takeaway pipeline connecting to a downstream interstate pipeline operated by a third party through 2041. We have a minimum volume commitment ("MVC") of 8,000 gross barrels of oil per day to Nuevo through 2031 under the gathering agreement. We are obligated to deliver the first 20,000 gross barrels of oil per day produced from Gonzales, Lavaca, Fayette and DeWitt Counties, Texas.

Under a marketing agreement, we have a commitment to sell 8,000 barrels per day of crude oil (gross) to Nuevo, or to any third party, utilizing Nuevo Marketing's capacity on a downstream interstate pipeline through 2026.

Under each of the agreements with Nuevo, credits for deliveries of volumes in excess of the volume commitment may be applied to any deficiency arising in the succeeding 12-month period.

Excluding the application of existing credits that we have earned during the preceding 12-month period ended June 30, 2021 for deliveries of volumes in excess of the volume commitment, and the potential impact of the effects of price escalation from commodity price changes, if any, the minimum fee requirements attributable to the MVC under the gathering, transportation and marketing agreements are as follows: $7.0 million for the remainder of 2021, approximately $13.9 million per year for 2022 through 2025, $7.8 million for 2026, $3.8 million per year for 2027 through 2030 and $0.6 million for 2031.

Crude Oil Storage

As a component of the crude oil gathering agreement referenced above, we have access to up to approximately 180,000 barrels of dedicated tank capacity for no additional charge at the service provider's central delivery point facility ("CDP"), in Lavaca County, Texas through February 2041. We have also contracted for access to up to an additional 70,000 barrels of tank capacity at the CDP on a month-to-month basis which can be terminated by either party with 45-days' notice to the counterparty. We have also contracted for crude oil storage capacity for up to 90,000 barrels with a downstream interstate pipeline at a facility in DeWitt County, Texas, on a month-to-month basis which can be terminated by either party with 45-days' notice to the counterparty. Finally, we have an agreement with a marketing affiliate of the aforementioned downstream interstate pipeline to utilize up to 62,000 barrels of capacity within their system on a firm basis and an additional 120,000 barrels, if available, on a flexible basis. Costs associated with these agreements are in the form of monthly fixed rate short-term leases and are charged as incurred on a monthly basis to GPT in our condensed consolidated statements of operations.

Legal, Environmental Compliance and Other Claims

We are involved, from time to time, in various legal proceedings arising in the ordinary course of business. While the ultimate results of these proceedings cannot be predicted with certainty, our management believes that these claims will not have a material effect on our financial position, results of operations or cash flows. We had AROs of approximately $5.8 million and $5.5 million attributable to the plugging of abandoned wells as of June 30, 2021 and December 31, 2020, respectively. As of June 30, 2021 and December 31, 2020, we had an estimated reserve of approximately $0.1 million for certain claims made against us regarding previously divested operations included in Accounts payable and accrued liabilities on our condensed consolidated balance sheets.

12. Share-Based Compensation and Other Benefit Plans

Share-Based Compensation

We reserved a total of 4,424,600 shares of common stock for issuance under the Penn Virginia Corporation Management Incentive Plan (the "Plan") for share-based compensation awards. A total of 760,220 RSUs and 484,197 PRSUs have been granted to employees and directors through June 30, 2021. As of June 30, 2021, a total of 273,962 RSUs and 351,518 PRSUs are unvested and outstanding.

We recognized $3.2 million, including approximately $1.9 million as a result of the change-in-control event associated with the Juniper Transactions, and $1.0 million of expense attributable to the RSUs and PRSUs for the six months ended June 30, 2021 and 2020, respectively.

The table below presents the number of RSUs granted, the average grant-date fair value and the number of shares vested for the following periods:

	Six Months Ended June 30,	
	2021	**2020**
RSUs granted	118,223	223,882
Average grant-date fair value	$13.84	$2.78
Issued upon vesting, net to shares withheld for income taxes	105,038	36,174

Compensation expense for RSUs is being charged to expense on a straight-line basis over a range of less than one to three years.

The table below presents the number of PRSUs granted and the number of shares vested for the following periods:

	Six Months Ended June 30,	
	2021	**2020**
PRSUs granted [1]	282,706	87,899
Average grant-date fair value [2]	$13.63	—
Issued upon vesting, net to shares withheld for income taxes	6,800	3,895

[1] The 2021 PRSU grants include two executive officers' inducement awards that were originally granted in August 2020 and January 2021 that were amended in April 2021 to conform vesting conditions to the other PRSU awards granted in 2021.

[2] Represents the average grant-date fair value of 2021 PRSU grants based on the Company's ROCE performance (as defined below) and excludes the average grant-date fair value of PRSU grants based on the Company's TSR performance (as defined below), which are provided in the table below.

Compensation expense for PRSUs with a market condition is being charged to expense, on a straight-line basis for the 2021 grants and graded-vesting for the 2020 and 2019 grants, over a range of less than one to three years. Compensation expense for PRSUs with a performance condition is recognized on a straight-line basis over three years, when it is considered probable that the performance condition will be achieved and such grants are expected to vest.

The 2021 PRSU grants are based 50% on the Company's return on average capital employed ("ROCE") relative to a defined peer group and 50% based on absolute total shareholder return and total shareholder return ("TSR") relative to a defined peer group. The 2021 PRSUs cliff vest from zero to 200 percent of the original grant at the end of a three-year performance period based on satisfaction of the respective underlying conditions.

Vesting of PRSUs granted in 2020 and 2019 range fromzero to 200 percent of the original grant based on the performance of our common stock (TSR-based) relative to a defined peer group. Due to the market condition for the 2019, 2020 and a portion of the 2021 PRSU grants, the grant-date fair value is derived by using a Monte Carlo model. The ranges for the assumptions used in the Monte Carlo model for these PRSUs granted during 2021, 2020 and 2019 are presented as follows:

	2021	2020	2019
Monte Carlo grant date fair value	$17.74 to $33.31	$2.40 to $16.02	$34.02
Expected volatility	131.74% to 134.74%	101.32% to 117.71%	49.9 %
Dividend yield	0.0 %	0.0 %	0.0 %
Risk-free interest rate	0.22% to 0.29%	0.18% to 0.51%	1.66 %
Performance period	2021-2023	2020-2022	2020-2022

PRSUs with a market condition do not allow for the reversal of previously recognized expense, even if the market condition is not achieved and no shares ultimately vest.

We recognize share-based compensation expense as a component of G&A expenses in our condensed consolidated statements of operations.

Other Benefit Plans

We maintain the Penn Virginia Corporation and Affiliated Companies Employees 401(k) Plan (the "401(k) Plan"), a defined contribution plan, which covers substantially all of our employees. We recognized $0.1 million and $0.3 million of expense attributable to the 401(k) Plan for the three and six months ended June 30, 2021, respectively. We recognized $0.2 million and $0.4 million of expense attributable to the 401(k) Plan for the three and six months ended June 30, 2020, respectively. The charges for the 401(k) Plan are recorded as a component of G&A expenses in our condensed consolidated statements of operations.

We maintain unqualified legacy defined benefit pension and defined benefit postretirement plans that cover a limited number of former employees, all of whom retired prior to January 1, 2000. The combined expense recognized with respect to these plans was less than $0.1 million for each of the three and six months ended June 30, 2021 and 2020. The charges for these plans are recorded as a component of Other income (expense) in our condensed consolidated statements of operations.

13. Earnings per Share

Basic net earnings (loss) per share is calculated by dividing the net income (loss) available to common shareholders, excluding net income or loss attributable to Noncontrolling interest, as applicable to the six months ended June 30, 2021 (see Note 3), by the weighted average common shares outstanding for the period.

In computing diluted earnings (loss) per share, basic net earnings (loss) per share is adjusted based on the assumption that dilutive RSUs and PRSUs have vested and outstanding Common Units and shares of Series A Preferred Stock held by Juniper as a Noncontrolling interest in the Partnership are exchanged for common shares, as applicable to the six months ended June 30, 2021 (see Note 3). Accordingly, our reported net income (loss) attributable to common shareholders is adjusted to reflect the reallocation of the net income (loss) attributable to the Noncontrolling interest assuming exchange of the Common Units and Series A Preferred Stock held by Noncontrolling interest.

The following table provides a reconciliation of the components used in the calculation of basic and diluted earnings (loss) per share for the periods presented:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Net income (loss)	$ 7,596	$ (94,715)	$ (12,425)	$ 68,379
Net income (loss) attributable to Noncontrolling interest	(4,551)	—	1,898	—
Net income (loss) attributable to common shareholders (basic)	3,045	(94,715)	(10,527)	68,379
Reallocation of Noncontrolling interest net income (loss)	4,551	—	(1,898)	—
Net income (loss) attributable to common shareholders (diluted)	$ 7,596	$ (94,715)	$ (12,425)	$ 68,379
Weighted-average shares – basic	15,311	15,167	15,287	15,159
Effect of dilutive securities:				
Common Units and Series A Preferred Stock that are exchangeable for common shares	22,549	—	—	—
RSUs and PRSUs	512	—	—	109
Weighted-average shares – diluted [1]	38,372	15,167	15,287	15,268

[1] For the six months ended June 30, 2021, approximately 22.8 million potentially dilutive securities represented by approximately 22.5 million Common Units and less than 0.2 million shares of Series A Preferred Stock as well as 0.3 million of RSUs and PRSUs, respectively, had the effect of being anti-dilutive and were excluded from the calculation of diluted earnings per share. For the three months ended June 30, 2020, approximately 0.1 million potentially dilutive securities, represented by RSUs and PRSUs, had the effect of being anti-dilutive and were excluded from the calculation of diluted earnings per share.

14. Subsequent Events

Announced Acquisition of Lonestar Resources

On July 10, 2021, we entered into a definitive merger agreement (the “Merger Agreement”) with Lonestar Resources US Inc. (“Lonestar”) under which Penn Virginia will acquire Lonestar in an all-stock transaction (the “Merger”). Under the terms of the merger agreement, Lonestar shareholders will receive 0.51 shares of Penn Virginia for each Lonestar share. The transaction is expected to close in the second half of 2021, subject to the satisfaction of customary closing conditions, including obtaining the requisite shareholder and regulatory approvals. The transaction has been unanimously approved by the Boards of Directors of both companies. In addition, following the execution of the merger agreement, Lonestar shareholders holding approximately 80% of the voting power of Lonestar and Penn Virginia shareholders holding approximately60% of the voting power of Penn Virginia signed binding support agreements obligating them to vote in favor of the transaction. Upon completion of the transaction, Penn Virginia shareholders will own approximately 87% of the combined company, and Lonestar shareholders will own approximately13% of the combined company. Following the transaction completion, Lonestar will have the right to nominate one independent director to the Penn Virginia Board of Directors.

Offering of Senior Unsecured Notes

On July 27, 2021, our indirect, wholly owned subsidiary Penn Virginia Escrow LLC (the “Escrow Issuer”) priced an offering of $400 million aggregate principal amount of senior unsecured notes due 2026 (the “Notes”). The closing date is anticipated to be on or about August 10, 2021 and the Notes will bear interest at 9.25%. The Notes were initially sold at 99.018% of par. The gross proceeds of the offering and other funds will initially be deposited in an escrow account pending satisfaction of certain conditions, including the expected consummation of the Merger on or prior to November 26, 2021. Upon satisfaction of the escrow release conditions, Penn Virginia Holdings, LLC (“Holdings”) will assume the obligations under the Notes, the Escrow Issuer will be merged with and into Holdings (with Holdings as the surviving entity), the Notes will be guaranteed by the subsidiaries of Holdings that guarantee its reserve-based revolving Credit Facility, and the escrowed proceeds relating to the offering of the Notes will be released.

Upon the release of the funds from escrow, we intend to use the proceeds from the Notes to repay and discharge the long-term debt of Lonestar and to use the remainder, along with cash on hand, to repay our Second Lien Facility loan in full and pay related expenses.

If escrow release conditions are not satisfied on or before November 26, 2021, or at any time prior to such date the Merger has been terminated or we have decided that we will not pursue the consummation of the Merger (or determined that the consummation of the Merger is not reasonably likely to be satisfied by such date), then the escrowed funds will be applied to the mandatory redemption of the Notes at a price equal to 100% of the principal amount of the Notes, plus accrued and unpaid interest, if any, to, but excluding, the redemption date.

The Notes were offered and sold in a private placement to persons reasonably believed to be qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended (the “Securities Act”), and to non-U.S. persons in transactions outside the United States pursuant to Regulation S under the Securities Act.

The Notes were not registered under the Securities Act or any state securities laws and may not be offered or sold in the United States or to, or for the benefit of, U.S. persons absent registration under, or an applicable exemption from, the registration requirements of the Securities Act and applicable state securities laws.

In July 2021, we entered into Amendment No. 10 to the Credit Agreement (the “Tenth Amendment”) permitting certain actions to be executed in accordance with the escrow arrangement of the Notes as described above.

Forward-Looking Statements

Certain statements contained herein that are not descriptions of historical facts are “forward-looking” statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. We use words such as “anticipate,” “guidance,” “assumptions,” “projects,” “estimates,” “expects,” “continues,” “intends,” “plans,” “believes,” “forecasts,” “future,” “potential,” “may,” “possible,” “could” and variations of such words or similar expressions to identify forward-looking statements. Because such statements include risks, uncertainties and contingencies, actual results may differ materially from those expressed or implied by such forward-looking statements. These risks, uncertainties and contingencies include, but are not limited to, the following:

- risks related to the proposed acquisition of Lonestar, including the risk that acquisition will not be completed on the timeline or terms currently contemplated, that the benefits of the acquisition may not be fully realized or may take longer to realize than expected, and that management attention will be diverted to transaction-related issues;
- risks related to the recently completed transactions with Juniper and its affiliates, including the risk that the benefits of the transactions may not be fully realized or may take longer to realize than expected, and that management attention will be diverted to transaction-related issues;
- risks related to completed acquisitions, including our ability to realize their expected benefits;
- the decline in, sustained market uncertainty of, and volatility of commodity prices for crude oil, natural gas liquids, or NGLs, and natural gas;
- the continued impact of the COVID-19 pandemic, including reduced demand for oil and natural gas, economic slowdown, governmental actions, stay-at-home orders, interruptions to our operations or our customer’s operations;
- risks related to and the impact of actual or anticipated other world health events;
- risks related to acquisitions and dispositions, including our ability to realize their expected benefits;
- our ability to satisfy our short-term and long-term liquidity needs, including our ability to generate sufficient cash flows from operations or to obtain adequate financing, including access to the capital markets, to fund our capital expenditures and meet working capital needs;
- our ability to access capital, including through lending arrangements and the capital markets, as and when desired;
- negative events or publicity adversely affecting our ability to maintain our relationships with our suppliers, service providers, customers, employees, and other third parties;
- plans, objectives, expectations and intentions contained in this report that are not historical;
- our ability to execute our business plan in volatile and depressed commodity price environments;
- our ability to develop, explore for, acquire and replace oil and gas reserves and sustain production;
- changes to our drilling and development program;
- our ability to generate profits or achieve targeted reserves in our development and exploratory drilling and well operations;
- our ability to meet guidance, market expectations and internal projections, including type curves;
- any impairments, write-downs or write-offs of our reserves or assets;
- the projected demand for and supply of oil, NGLs and natural gas;
- our ability to contract for drilling rigs, frac crews, materials, supplies and services at reasonable costs;
- our ability to renew or replace expiring contracts on acceptable terms;
- our ability to obtain adequate pipeline transportation capacity or other transportation for our oil and gas production at reasonable cost and to sell our production at, or at reasonable discounts to, market prices;
- the uncertainties inherent in projecting future rates of production for our wells and the extent to which actual production differs from that estimated in our proved oil and gas reserves;
- use of new techniques in our development, including choke management and longer laterals;
- drilling, completion and operating risks, including adverse impacts associated with well spacing and a high concentration of activity;
- our ability to compete effectively against other oil and gas companies;
- leasehold terms expiring before production can be established and our ability to replace expired leases;
- environmental obligations, costs and liabilities that are not covered by an effective indemnity or insurance;
- the timing of receipt of necessary regulatory permits;
- the effect of commodity and financial derivative arrangements with other parties and counterparty risk related to the ability of these parties to meet their future obligations;
- the occurrence of unusual weather or operating conditions, including force majeure events;
- our ability to retain or attract senior management and key employees;
- our reliance on a limited number of customers and a particular region for substantially all of our revenues and production;
- compliance with and changes in governmental regulations or enforcement practices, especially with respect to environmental, health and safety matters;
- physical, electronic and cybersecurity breaches;
- uncertainties relating to general domestic and international economic and political conditions;
- the impact and costs associated with litigation or other legal matters;
- sustainability initiatives; and
- other factors set forth in our periodic filings with the Securities and Exchange Commission, or SEC, including the risks set forth in this Quarterly Report on Form 10-Q and in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2020.

The effects of the COVID-19 pandemic may give rise to risks that are currently unknown or amplify the risks associated with many of these factors.

Additional information concerning these and other factors can be found in our press releases and public filings with the SEC. Many of the factors that will determine our future results are beyond the ability of management to control or predict. Readers should not place undue reliance on forward-looking statements, which reflect management’s views only as of the date hereof. All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by these cautionary statements. We undertake no obligation to revise or update any forward-looking statements, or to make any other forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by applicable law.

Item 2. ***Management's Discussion and Analysis of Financial Condition and Results of Operations***

The following discussion and analysis of the financial condition and results of operations of Penn Virginia Corporation and its consolidated subsidiaries ("Penn Virginia," the "Company," "we," "us" or "our") should be read in conjunction with our condensed consolidated financial statements and notes thereto included in Part I, Item 1, "Financial Statements." All dollar amounts presented in the tables that follow are in thousands unless otherwise indicated. Also, due to the combination of different units of volumetric measure, the number of decimal places presented and rounding, certain results may not calculate explicitly from the values presented in the tables. Certain statistics for the prior period have been reclassified to conform to the current period presentation. References to "quarters" represent the three months ended June 30, 2021 or 2020, as applicable.

Overview and Executive Summary

We are an independent oil and gas company focused on the onshore development and production of crude oil, natural gas liquids ("NGLs"), and natural gas. Our current operations consist of drilling unconventional horizontal development wells and operating our producing wells in the Eagle Ford Shale in Gonzales, Lavaca, Fayette and DeWitt counties in South Texas.

Recent Developments

Announced Acquisition of Lonestar Resources

On July 10, 2021, we entered into a definitive merger agreement (the "Merger Agreement") with Lonestar Resources US Inc. ("Lonestar") under which Penn Virginia will acquire Lonestar in an all-stock transaction (the "Merger"). Under the terms of the merger agreement, Lonestar shareholders will receive 0.51 shares of Penn Virginia for each Lonestar share. The transaction is expected to close in the second half of 2021, subject to the satisfaction of customary closing conditions, including obtaining the requisite shareholder and regulatory approvals. The transaction has been unanimously approved by the Boards of Directors of both companies. In addition, following the execution of the merger agreement, Lonestar shareholders holding approximately 80% of the voting power of Lonestar and Penn Virginia shareholders holding approximately 60% of the voting power of Penn Virginia signed binding support agreements obligating them to vote in favor of the transaction. Upon completion of the transaction, Penn Virginia shareholders will own approximately 87% of the combined company, and Lonestar shareholders will own approximately 13% of the combined company. Following the transaction completion, Lonestar will have the right to nominate one independent director to the Penn Virginia Board of Directors.

Offering of Senior Unsecured Notes

On July 27, 2021, our indirect, wholly owned subsidiary Penn Virginia Escrow LLC (the "Escrow Issuer") priced an offering of $400 million aggregate principal amount of senior unsecured notes due 2026 (the "Notes"). The closing date is anticipated to be on or about August 10, 2021 and the Notes will bear interest at 9.25%. The Notes were initially sold at 99.018% of par. The gross proceeds of the offering and other funds will initially be deposited in an escrow account pending satisfaction of certain conditions, including the expected consummation of the Merger on or prior to November 26, 2021. Upon satisfaction of the escrow release conditions, Penn Virginia Holdings, LLC ("Holdings") will assume the obligations under the Notes, the Escrow Issuer will be merged with and into Holdings (with Holdings as the surviving entity), the Notes will be guaranteed by the subsidiaries of Holdings that guarantee its reserve-based revolving Credit Facility, and the escrowed proceeds relating to the offering of the Notes will be released.

Upon the release of the funds from escrow, we intend to use the proceeds from the offering to repay and discharge the long-term debt of Lonestar and to use the remainder, along with cash on hand, to repay our Second Lien Facility loan in full and pay related expenses.

If escrow release conditions are not satisfied on or before November 26, 2021, or at any time prior to such date the Merger has been terminated or we have decided that we will not pursue the consummation of the Merger (or determined that the consummation of the Merger is not reasonably likely to be satisfied by such date), then the escrowed funds will be applied to the mandatory redemption of the Notes at a price equal to 100% of the principal amount of the Notes, plus accrued and unpaid interest, if any, to, but excluding, the redemption date.

The Notes were offered and sold in a private placement to persons reasonably believed to be qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended (the "Securities Act"), and to non-U.S. persons in transactions outside the United States pursuant to Regulation S under the Securities Act.

The Notes were not registered under the Securities Act or any state securities laws and may not be offered or sold in the United States or to, or for the benefit of, U.S. persons absent registration under, or an applicable exemption from, the registration requirements of the Securities Act and applicable state securities laws.

Industry Environment and Recent Operating and Financial Highlights

Commodity Price and Other Economic Conditions

As an oil and gas development and production company, we are exposed to a number of risks and uncertainties that are inherent to our industry. In addition to such industry-specific risks, the global public health crisis associated with the novel coronavirus ("COVID-19") continues to have an adverse effect on global economic activity with the impact of travel restrictions, business closures, limitations to person-to-person contact and the institution of quarantining and other restrictions on movement in many communities. The slowdown in global economic activity attributable to COVID-19 resulted in a dramatic decline in the demand for energy beginning in March 2020, which directly impacted our industry and the Company. While we have seen improvement in global market stability and commodity prices, energy demand and commodity prices remain volatile. In addition, there remains a high level of uncertainty regarding the volatility of energy supply and demand as the Organization of the Petroleum Exporting Countries ("OPEC") and Russia (together with OPEC, collectively "OPEC+") recently reached an agreement in July 2021 to increase production over the next several months beginning in August 2021.

Our crude oil production is sold at a premium or deduct differential to the prevailing NYMEX West Texas Intermediate ("NYMEX WTI") price. The differential reflects adjustments for location, quality and transportation and gathering costs, as applicable. Historically, our crude oil volume sold was largely priced using either Light Louisiana Sweet ("LLS"), or Magellan East Houston ("MEH") grade differentials; however, beginning in 2020 our contracts continued to shift more heavily to MEH pricing and by year-end 2020 we were selling all of our crude oil volumes under MEH pricing contracts. While both LLS and MEH have historically been at a premium to NYMEX WTI, LLS has had a more favorable differential than MEH.

Natural gas prices vary by region and locality, depending upon the distance to markets, availability of pipeline capacity, and supply and demand relationships in that region or locality. Similar to crude oil, our natural gas production price has a premium or deduct differential to the prevailing NYMEX Henry Hub ("NYMEX HH") price primarily due to differential adjustments for the location and the energy content of the natural gas. Location differentials result from variances in natural gas transportation costs based on the proximity of the natural gas to its major consuming markets that correspond with the ultimate delivery point as well as individual interaction of supply and demand.

A summary of these pricing differentials is provided in the discussion of "*Results of Operations – Realized Differentials*" that follows.

In addition to the volatility of commodity prices, we are subject to inflationary and other factors that could result in higher costs for products, materials and services that we utilize in both our capital projects and with respect to our operating expenses. Where possible, we have taken certain actions with vendors and other service providers to secure products and services at fixed prices and to pay for certain materials and services in advance in order to lock-in favorable costs.

Capital Expenditures, Development Progress and Production

We currently operate two drilling rigs and during the three and six months ended June 30, 2021, incurred capital expenditures of approximately $68.7 million and $122.9 million, respectively, substantially all of which was directed to drilling and completion projects. During the second quarter 2021, a total of 11 gross (9.2 net) wells were drilled, completed and turned in line, but one gross well did not produce commercial sales until the third quarter of 2021. As of July 31, 2021, we turned an additional three gross (2.5 net) wells in line and two gross (1.9 net) wells were completing and four gross (3.9 net) wells were in progress.

As of June 30, 2021, we had approximately 102,400 gross (90,400 net) acres in the Eagle Ford, net of expirations, of which approximately 91% is held by production and substantially all is operated by us.

Total sales volume for the second quarter of 2021 was 2,261 Mboe, or 24,844 boe/d, with approximately 81%, or 1,831 Mbbls, of sales volume from crude oil, 11% from NGLs and 8% from natural gas.

Strategic Investment by Juniper

In January 2021, we consummated the previously announced Juniper Transactions whereby affiliates of Juniper contributed $150 million in cash and certain oil and gas assets in Lavaca and Fayette Counties in Texas to us in exchange for equity that entitles Juniper to both vote and share in any dividend on the same basis as 22,548,998 shares of common stock (after post-closing adjustments). Each holder of Common Units has the right to cause the Company to redeem on or after July 14, 2021, all or a portion of its Common Units (together with one one-hundredth (1/100th) of a share of Preferred Stock for each Common Unit to be redeemed), in exchange for, at the Partnership's option, shares of Common Stock, on a one-for-one basis, or cash. Each 1/100th of a share of preferred Stock has no economic rights but entitles its holder to one vote on all matters to be voted on by shareholders generally. Further, because Penn Virginia is a holding company with no independent means of generating revenues and the assets of the consolidated Company all reside in operating subsidiaries, the holders of Common Units would be entitled to participate in any cash distribution or dividend on the same basis as the Common Stock whether or not the Common Units and Preferred Stock are redeemed or exchanged. Because the Common Units and Preferred Stock entitle

Juniper to both vote and share in any distribution or dividend on the same basis as 22,548,998 shares of common stock, we view them as common stock equivalents. For additional information regarding the Juniper Transactions, see Note 3 to the condensed consolidated financial statements included in Part I, Item 1, "Financial Statements."

Amendments to Credit Facility and Affirmation of Borrowing Base

In January 2021, we entered into Amendment No. 9 to the Credit Agreement (the "Ninth Amendment") permitting the Juniper Transactions and affirming our borrowing base at $375 million with borrowings limited to a maximum of $350 million. In addition, the Ninth Amendment: (i) provides for certain minimum hedging conditions, (ii) a first lien leverage ratio covenant of 2.50 times, tested quarterly and (iii) permits amortization payments of up to $1.875 million per quarter to be made under the Second Lien Credit Agreement, dated as of September 29, 2017 (the "Second Lien Facility") until January 2022 if no default exists both before and after giving effect to the payments and thereafter using available free cash flow upon the satisfaction of certain conditions (including maintaining a leverage ratio of 2.00 to 1.00 and availability of at least 25% under the Credit Facility after giving pro forma effect to the payment). Concurrent with the Ninth Amendment, we paid down $80.5 million of outstanding borrowings under the Credit Facility plus accrued interest of $0.1 million which was funded with the proceeds from the Juniper Transactions. We incurred and capitalized $0.4 million of issue and other costs associated with the Ninth Amendment in January 2021.

In July 2021, we entered into Amendment No. 10 to the Credit Agreement (the "Tenth Amendment") permitting certain actions to be executed in accordance with the escrow arrangement of the Notes as described above.

Amendment to the Second Lien Facility

In January 2021, we paid down $50.0 million of outstanding loans under the Second Lien Facility plus accrued interest of $0.2 million attributable to lenders and $1.3 million including accrued interest to a non-consenting lender which was funded with the proceeds from the Juniper Transaction. We incurred and capitalized $1.4 million of issue and other costs and wrote-off $1.2 million of unamortized issuance costs in connection with the Second Lien Amendment in January 2021 as a loss on the extinguishment of debt.

For additional information on our credit facilities, see Note 7 to the condensed consolidated financial statements included in Part I, Item 1, "Financial Statements."

Commodity Hedging Program

As of July 16, 2021, we have hedged a portion of our estimated future crude oil and natural gas production from July 1, 2021 through the first quarter of 2024. The following table summarizes our net hedge positions for the periods presented:

	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24
NYMEX WTI Crude Swaps											
Average Volume Per Day (bbl)	1,902	815									
Weighted Average Swap Price ($/bbl)	$ 59.95	$ 45.54									
NYMEX WTI Collars											
Average Volume Per Day (bbl)	14,130	13,043	7,083	6,181	4,484	4,484	2,917	2,885			
Weighted Average Purchased Put Price ($/bbl)	$ 44.27	$ 47.75	$ 44.71	$ 45.33	$ 40.00	$ 40.00	$ 40.00	$ 40.00			
Weighted Average Sold Call Price ($/bbl)	$ 59.21	$ 59.19	$ 58.05	$ 57.23	$ 52.47	$ 52.47	$ 50.00	$ 50.00			
NYMEX WTI Purchased Puts											
Average Volume Per Day (bbl)	1,630	3,261									
Weighted Average Purchased Put Price ($/bbl)	$ 55.00	$ 55.00									
NYMEX WTI Crude CMA Roll Basis Swaps											
Average Volume Per Day (bbl)	17,935	17,935	6,667	6,593							
Weighted Average Swap Price ($/bbl)	$ 0.17	$ 0.17	$ 0.63	$ 0.63							
NYMEX HH Collars											
Average Volume Per Day (MMBtu)	9,783	9,783		13,187	13,043	13,043		11,538	11,413	11,413	11,538
Weighted Average Purchased Put Price($/MMBtu)	$ 2.607	$ 2.607		$ 2.500	$ 2.500	$ 2.500		$ 2.500	$ 2.500	$ 2.500	$ 2.500
Weighted Average Sold Call Price ($/MMBtu)	$ 3.117	$ 3.117		$ 3.220	$ 3.220	$ 3.220		$ 2.682	$ 2.682	$ 2.682	$ 3.650
NYMEX HH Sold Puts											
Average Volume Per Day (MMBtu)	6,522	6,522									
Weighted Average Sold Put Price ($/MMBtu)	$ 2.000	$ 2.000									
OPIS Mt Belv Ethane Swaps											
Average Volume per Day (gal)	35,870			28,022	27,717	27,717		98,901			
Weighted Average Fixed Price ($/gal)	$ 0.2288			$ 0.2500	$ 0.2500	$ 0.2500		$ 0.2288			

Results of Operations

The following table sets forth certain historical summary operating and financial statistics for the periods presented:

	Three Months Ended			Six Months Ended	
	June 30,	March 31,	June 30,	June 30,	
	2021	2021	2020	2021	2020
Total sales volume (Mboe) [1]	2,261	1,848	2,240	4,109	4,674
Average daily sales volume (boe/d) [1]	24,844	20,534	24,617	22,701	25,679
Crude oil sales volume (Mbbl) [1]	1,831	1,469	1,719	3,300	3,599
Crude oil sold as a percent of total [1]	81 %	80 %	77 %	80 %	77 %
Product revenues	$ 123,789	$ 88,308	$ 44,795	$ 212,097	$ 135,686
Crude oil revenues	$ 116,314	$ 81,913	$ 41,197	$ 198,227	$ 127,505
Crude oil revenues as a percent of total	94 %	93 %	92 %	93 %	94 %
Realized prices:					
Crude oil ($/bbl)	$ 63.54	$ 55.76	$ 23.97	$ 60.07	$ 35.42
NGLs ($/bbl)	$ 18.31	$ 16.95	$ 5.21	$ 17.68	$ 5.69
Natural gas ($/Mcf)	$ 2.70	$ 2.80	$ 1.54	$ 2.75	$ 1.69
Aggregate ($/boe)	$ 54.75	$ 47.79	$ 20.00	$ 51.62	$ 29.03
Realized prices, including effects of derivatives, net [2]					
Crude oil ($/bbl)	$ 52.70	$ 44.80	$ 50.37	$ 49.18	$ 52.34
NGLs ($/bbl)	$ 17.87	$ 16.95	$ 5.21	$ 17.44	$ 5.69
Natural gas ($/Mcf)	$ 2.71	$ 2.84	$ 1.79	$ 2.77	$ 1.85
Aggregate ($/boe)	$ 45.93	$ 39.10	$ 40.41	$ 42.86	$ 42.16
Production and lifting costs:					
Lease operating ($/boe)	$ 4.30	$ 4.78	$ 4.06	$ 4.52	$ 4.20
Gathering, processing and transportation ($/boe)	$ 2.29	$ 2.53	$ 2.50	$ 2.40	$ 2.36
Production and ad valorem taxes ($/boe)	$ 2.97	$ 2.98	$ 1.17	$ 2.98	$ 1.88
General and administrative ($/boe) [3]	$ 3.09	$ 7.13	$ 3.56	$ 4.91	$ 3.26
Depreciation, depletion and amortization ($/boe)	$ 12.74	$ 12.92	$ 16.58	$ 12.82	$ 16.66

[1] All volumetric statistics presented above represent volumes of commodity production that were sold during the periods presented. Volumes of crude oil physically produced in excess of volumes sold are placed in temporary storage to be sold in subsequent periods.

[2] Realized prices, including effects of derivatives, net is a non-GAAP measure (see discussion and reconciliation to GAAP measure below in "*Results of Operations – Effects of Derivatives*" that follows).

[3] Includes combined amounts of $0.43, $3.86 and $0.42 per boe for the three months ended June 30, 2021, March 31, 2021 and June 30, 2020 and $1.97 and $0.39 per boe for the six months ended June 30, 2021 and 2020, respectively, attributable to share-based compensation and significant special charges related to organizational restructuring and acquisition, divestiture and strategic transaction costs, as described in the discussion of *"Results of Operations - General and Administrative"* that follows.

Sequential Quarterly Analysis

The following summarizes our key operating and financial highlights for the three months ended June 30, 2021, with comparison to the three months ended March 31, 2021. The year-over-year highlights for the quarterly periods ended June 30, 2021 and 2020 are addressed in further detail in the discussions that follow below in *Year over Year Analysis of Operating and Financial Results*.

- Daily sales volume increased to 24,844 barrels of oil equivalent ("boe") per day from 20,534 boe per day due primarily to the impacts of Winter Storm Uri that occurred in February 2021 and resulted in shut-ins of our wells for a portion of several days during the first quarter 2021. Additionally, the second quarter of 2021 was impacted by 8.2 net wells turned to sales during the period. Total sales volume increased 22% to 2,261 thousand barrels of oil equivalent ("Mboe") from 1,848 Mboe due primarily to the impact of the aforementioned factors.
- Product revenues increased 40% to $123.8 million from $88.3 million due primarily to higher crude oil sales volume, or $20.2 million, coupled with 14% higher crude oil prices, or $14.2 million. NGL revenues were 23% higher due to 14% higher sales volume, or $0.5 million coupled with 8% higher prices, or $0.3 million. Natural gas revenues were 9% higher with 13% higher volume partially offset by 4% lower pricing for an overall increase of $0.3 million.
- Production and lifting costs, consisting of Lease operating expenses ("LOE") and Gathering, processing and transportation expenses ("GPT"), increased on an absolute basis to $14.9 million from $13.5 million and declined on a per unit basis to $6.59 per boe from $7.31 per boe due primarily to the effects of 22% higher sales volume.
- Production and ad valorem taxes increased marginally on an absolute and per unit basis to $6.7 million and $2.97 per boe from $5.5 million and $2.98 per boe, respectively, due to the overall effects of 15% higher aggregate realized product pricing, partially offset by lower estimated ad valorem tax assessments.
- General and administrative ("G&A") expenses decreased on an absolute and per unit basis to $7.0 million and $3.09 per boe from $13.2 million and $7.13 per boe, respectively, due primarily to certain non-recurring costs occurring in the first quarter 2021. The first quarter 2021 non-recurring costs primarily consisted of: (i) $1.9 million of costs associated with share-based compensation awards, including awards whose vesting was accelerated by the Juniper Transactions, (ii) $4.7 million of transaction costs associated with the Juniper Transactions and (iii) $0.2 million of executive restructuring charges including severance costs and termination benefits. In addition, higher sales volume during the second quarter of 2021 had the effect of reducing the per unit costs.
- Depreciation, depletion and amortization ("DD&A") increased to $28.8 million and decreased on a per unit basis to $12.74 per boe during the second quarter of 2021 as compared to $23.9 million and $12.92 per boe during the first quarter 2021 due primarily to higher production volume, partially offset by the effects of a lower depletion rate from increased reserves.
- We did not record any impairments of our oil and gas properties during the second quarter 2021 and recorded an impairment of $1.8 million during the first quarter 2021.
- Operating income was $67.3 million in the second quarter 2021 compared to $30.7 million in first quarter 2021 due to the combined impact of the matters noted above.

Year over Year Analysis of Operating and Financial Results

Sales Volume

The following tables set forth a summary of our total and average daily sales volumes by product for the periods presented:

	Total Sales Volume [1]			Average Daily Sales Volume [1]		
	Three Months Ended June 30,		2021 vs. 2020 Favorable (Unfavorable)	Three Months Ended June 30,		2021 vs. 2020 Favorable (Unfavorable)
	2021	2020		2021	2020	
Crude oil (Mbbl and bbl/d)	1,831	1,719	112	20,117	18,888	1,229
NGLs (Mbbl and bbl/d)	240	303	(63)	2,633	3,329	(696)
Natural gas (MMcf and MMcf/d)	1,143	1,311	(168)	13	14	(1)
Total (Mboe and boe/d)	2,261	2,240	21	24,844	24,617	227

	Six Months Ended June 30,		2021 vs. 2020 Favorable (Unfavorable)	Six Months Ended June 30,		2021 vs. 2020 Favorable (Unfavorable)
	2021	2020		2021	2020	
Crude oil (Mbbl and bbl/d)	3,300	3,599	(299)	18,231	19,777	(1,546)
NGLs (Mbbl and bbl/d)	450	610	(160)	2,485	3,352	(867)
Natural gas (MMcf and MMcf/d)	2,156	2,784	(628)	12	15	(3)
Total (Mboe and boe/d)	4,109	4,674	(565)	22,701	25,679	(2,978)

[1] All volumetric statistics represent volumes of commodity production that were actually sold during the periods presented. Volumes of crude oil physically produced in excess of volumes sold are placed in temporary storage to be sold in subsequent periods.

Total sales volume were relatively flat during the three month period in 2021 as compared to the corresponding period in 2020. The effect of 8.2 net wells turned to sales in the 2021 period as compared to 2.8 net wells in the corresponding period in 2020 were substantially offset by the cumulative volumetric effect of fewer wells turned to sales in the second half of 2020. Total sales volume decreased 12% during the six month period in 2021 when compared to the corresponding period in 2020. While the number of net wells turned to sales were higher in the six months of 2021 (19.8 net vs. 13.8 net), several were turned to sales in the final month of the 2021 period such that their impact was not as significant as the cumulative volumetric effect of fewer wells turned to sales in the second half of 2020.

Approximately 81% of total sales volume during the three and six month periods in 2021 was attributable to crude oil when compared to approximately 77% during the corresponding periods in 2020. The increase in the crude oil composition of total sales volume was due primarily to drilling in the oilier northern and eastern portions of our acreage holdings and focus on development plans with emphasis in such portions.

Product Revenues and Prices

The following tables set forth a summary of our revenues and prices per unit of volume by product for the periods presented:

	Total Product Revenues			Product Revenues per Unit of Volume		
	Three Months Ended June 30,		2021 vs. 2020 Favorable (Unfavorable)	Three Months Ended June 30,		2021 vs. 2020 Favorable (Unfavorable)
	2021	2020		2021	2020	
				($ per unit of volume)		
Crude oil	$ 116,314	$ 41,197	$ 75,117	$ 63.54	$ 23.97	$ 39.57
NGLs	4,388	1,578	2,810	$ 18.31	$ 5.21	$ 13.10
Natural gas	3,087	2,020	1,067	$ 2.70	$ 1.54	$ 1.16
Total	$ 123,789	$ 44,795	$ 78,994	$ 54.75	$ 20.00	$ 34.75

	Six Months Ended June 30,		2021 vs. 2020 Favorable (Unfavorable)	Six Months Ended June 30,		2021 vs. 2020 Favorable (Unfavorable)
	2021	2020		2021	2020	
				($ per unit of volume)		
Crude oil	$ 198,227	$ 127,505	$ 70,722	$ 60.07	$ 35.42	$ 24.65
NGLs	7,950	3,471	4,479	$ 17.68	$ 5.69	$ 11.99
Natural gas	5,920	4,710	1,210	$ 2.75	$ 1.69	$ 1.06
Total	$ 212,097	$ 135,686	$ 76,411	$ 51.62	$ 29.03	$ 22.59

The following table provides an analysis of the changes in our revenues for the periods presented:

	Three Months Ended June 30, 2021 vs. 2020			Six Months Ended June 30, 2021 vs. 2020		
	Revenue Variance Due to			Revenue Variance Due to		
	Volume	Price	Total	Volume	Price	Total
Crude oil	$ 2,680	$ 72,437	$ 75,117	$ (10,612)	$ 81,334	$ 70,722
NGLs	(330)	3,140	2,810	(912)	5,391	4,479
Natural gas	(258)	1,325	1,067	(1,063)	2,273	1,210
	$ 2,092	$ 76,902	$ 78,994	$ (12,587)	$ 88,998	$ 76,411

Our product revenues during the three and six month period in 2021 increased compared to the corresponding periods in 2020 due primarily to a partial economic recovery following the easing of COVID-19 restrictions that resulted in increases to the WTI benchmark price of 136% and 69% for the three and six month periods, respectively, as well as an increase of 7% in crude oil volume in the three month period, partially offset by lower NGL and natural gas volume. Total crude oil revenues remain over 90% of our total product revenues during both the three and six month periods in 2021 and 2020.

Realized Differentials

The following table reconciles our realized price differentials from average NYMEX-quoted prices for WTI crude oil and HH natural gas for the periods presented:

	Three Months Ended June 30,		2021 vs. 2020 Favorable	Six Months Ended June 30,		2021 vs. 2020 Favorable
	2021	2020	(Unfavorable)	2021	2020	(Unfavorable)
Realized crude oil prices ($/bbl)	$ 63.54	$ 23.97	$ 39.57	$ 60.07	$ 35.42	$ 24.65
Average WTI prices	66.17	28.00	38.17	62.22	36.82	25.40
Realized differential to WTI	$ (2.63)	$ (4.03)	$ 1.40	$ (2.15)	$ (1.40)	$ (0.75)
Realized natural gas prices ($/Mcf)	$ 2.70	$ 1.54	$ 1.16	$ 2.75	$ 1.69	$ 1.06
Average HH prices ($/MMBtu)	2.88	1.65	1.23	3.13	1.76	1.37
Realized differential to HH	$ (0.18)	$ (0.11)	$ (0.07)	$ (0.38)	$ (0.07)	$ (0.31)

Beginning in March 2020, the adverse impact of COVID-19 and instability in the global energy markets effectively eliminated our premium margin to the NYMEX West Texas Intermediate ("NYMEX WTI") index price for crude oil. Average NYMEX WTI crude oil prices have rebounded as stabilization continued, with crude oil averaging approximately $66 per bbl for the second quarter 2021. Our differential to NYMEX WTI for the three month period in 2021 is primarily due to the change during 2020 from selling our production volumes based on LLS and MEH pricing to selling fully based on MEH pricing for the three month period in 2021. While both LLS and MEH have historically been at a premium to NYMEX WTI, MEH is less of a premium than LLS. NYMEX Henry Hub ("NYMEX HH") pricing was also impacted by COVID-19 and the overall industry instability, as well as by the colder than normal weather during the winter of 2021. Average NYMEX HH prices were also impacted by COVID-19 and the overall industry instability noted above, as well as by the colder-than-normal weather during first quarter 2021 that affected most of the Lower 48 states and caused significant natural gas supply and demand imbalances, particular in February 2021. See also the discussion of *Commodity Price and Other Economic Conditions* in the Overview above.

Effects of Derivatives

We present realized prices for crude oil and natural gas, as adjusted for the effects of derivatives, net as we believe these measures are useful to management and stakeholders in determining the effectiveness of our price-risk management program that is designed to reduce the volatility associated with our operations. Realized prices for crude oil and natural gas, as adjusted for the effects of derivatives, net, are supplemental financial measures that are not prepared in accordance with generally accepted accounting principles ("GAAP").

The following table presents the calculation of our non-GAAP realized prices for crude oil and natural gas, as adjusted for the effects of derivatives, net and reconciles to realized prices for crude oil and natural gas determined in accordance with GAAP:

	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)
Realized crude oil prices ($/bbl)	$ 63.54	$ 23.97	$ 39.57	$ 60.07	$ 35.42	$ 24.65
Effects of derivatives, net ($/bbl)	(10.84)	26.40	(37.24)	(10.89)	16.92	(27.81)
Crude oil realized prices, including effects of derivatives, net ($/bbl)	$ 52.70	$ 50.37	$ 2.33	$ 49.18	$ 52.34	$ (3.16)
Realized natural gas liquid prices ($/bbl)	$ 18.31	$ 5.21	$ 13.10	$ 17.68	$ 5.69	$ 11.99
Effects of derivatives, net ($/bbl))	(0.44)	—	(0.44)	(0.24)	—	(0.24)
Natural gas liquids realized prices, including effects of derivatives, net ($/bbl)	$ 17.87	$ 5.21	$ 12.66	$ 17.44	$ 5.69	$ 11.75
Realized natural gas prices ($/Mcf)	$ 2.70	$ 1.54	$ 1.16	$ 2.75	$ 1.69	$ 1.06
Effects of derivatives, net ($/Mcf)	0.01	0.25	(0.24)	0.02	0.16	(0.14)
Natural gas realized prices, including effects of derivatives, net ($/Mcf)	$ 2.71	$ 1.79	$ 0.92	$ 2.77	$ 1.85	$ 0.92

Effects of derivatives, net include, as applicable to the period presented: (i) current period commodity derivative settlements; (ii) the impact of option premiums paid or received in prior periods related to current period production; (iii) the impact of prior period cash settlements of early-terminated derivatives originally designated to settle against current period production; (iv) the exclusion of option premiums paid or received in current period related to future period production; and (v) the exclusion of the impact of current period cash settlements for early-terminated derivatives originally designated to settle against future period production.

Other operating income, net

Other operating income, net includes fees for marketing and water disposal services that we charge to third parties, net of related expenses, as well as other miscellaneous revenues and credits attributable to our current operations and gains and losses on the sale or disposition of assets other than our oil and gas properties. In addition, charges attributable to credit losses associated with our trade and joint venture partner receivables are included in this caption as a contra-revenue item.

The following table sets forth the total Other revenues, net recognized for the periods presented:

	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)
Other operating income, net	$ 910	$ 687	$ 223	$ 1,157	$ 1,175	$ (18)

Our water disposal fees, net of operating costs, and marketing fees increased in the three month period in 2021 due primarily to higher overall sales volume. Our water disposal fees, net of operating costs, and marketing fees were relatively flat during the six month period during 2021 and 2020.

Lease Operating Expenses

LOE includes costs that we incur to operate our producing wells and field operations. The most significant costs include compression and gas-lift, chemicals, water disposal, repairs and maintenance, including down-hole repairs, field labor, pumping and well-tending, equipment rentals, utilities and supplies, among others.

The following table sets forth our LOE for the periods presented:

	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)
Lease operating	$ 9,728	$ 9,094	$ (634)	$ 18,553	$ 19,626	$ 1,073
Per unit ($/boe)	$ 4.30	$ 4.06	$ (0.24)	$ 4.52	$ 4.20	$ (0.32)
% change per unit			(5.9) %			(7.6) %

LOE increased on an absolute basis and per unit basis during the three month period in 2021 when compared to the corresponding period in 2020 due primarily to higher variable costs and greater utilization of gas lift partially offset by the effect of higher sales volumes in the three month period in 2021. These costs were partially offset by lower water disposal costs attributable to protective measures from offset stimulation activities in the 2020 period and lower maintenance costs as substantial work was completed during the prior year during shut-in periods. LOE decreased on an absolute basis during the six month period in 2021 when compared to the corresponding period in 2020. The absolute decrease was due primarily to a combination of lower overall sales volume, cost-containment efforts and the application of operational improvements. These broad reductions were partially offset by higher gas lift costs due, in part, to the colder than usual months during the first quarter of 2021 and greater overall gas lift utilization. The increase on a per unit basis is due primarily to the decrease in sales volumes during the first half of 2021.

Gathering, Processing and Transportation

GPT expense includes costs that we incur to gather and aggregate our crude oil and natural gas production from our wells and deliver them via pipeline or truck to a central delivery point, downstream pipelines or processing plants, and blend or process, as necessary, depending upon the type of production and the specific contractual arrangements that we have with the applicable midstream operators. In addition, GPT expense includes short-term rental charges for crude oil storage tanks.

The following table sets forth our GPT expense for the periods presented:

	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)
GPT	$ 5,173	$ 5,593	$ 420	$ 9,847	$ 11,037	$ 1,190
Per unit ($/boe)	$ 2.29	$ 2.50	$ 0.21	$ 2.40	$ 2.36	$ (0.04)
% change per unit			8.4 %			(1.7) %

GPT expense declined on an absolute basis during the three and six month periods in 2021 as compared to the corresponding periods in 2020 due primarily to lower gas gathering costs attributable to lower natural gas sales volumes of 13% and 23%, respectively, as well as the effects of an increase in the mix of crude oil volume sold at the wellhead, resulting in lower transportation costs. These favorable variances were partially offset by higher costs associated with short-term rental charges with multiple vendors to temporarily store a portion of our crude oil production. GPT decreased on a per unit basis during the three month period in 2021 due primarily to higher crude oil sales volumes, partially offset by the effects of lower natural gas sales volumes. GPT expense was relatively flat on a per unit basis during the six month period in 2021 as compared to the corresponding period in 2020.

Production and Ad Valorem Taxes

Production or severance taxes represent taxes imposed by the states in which we operate for the removal of resources including crude oil, NGLs and natural gas. Ad valorem taxes represent taxes imposed by certain jurisdictions, primarily counties, in which we operate, based on the assessed value of our operating properties. The assessments for ad valorem taxes are generally based on a published index prices.

The following table sets forth our production and ad valorem taxes for the periods presented:

	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)
Production/severance taxes	$ 5,777	$ 1,540	$ (4,237)	$ 10,019	$ 5,618	$ (4,401)
Ad valorem taxes	944	1,090	146	2,215	3,166	951
	$ 6,721	$ 2,630	$ (4,091)	$ 12,234	$ 8,784	$ (3,450)
Per unit ($/boe)	$ 2.97	$ 1.17	$ (1.80)	$ 2.98	$ 1.88	$ (1.10)
Production/severance tax rate as a percent of product revenues	4.7 %	3.4 %		4.7 %	4.1 %	

Production taxes increased on an absolute basis and per unit basis during the three and six month periods in 2021 when compared to the corresponding periods in 2020 due primarily to the increases in aggregate commodity sales prices in the three and six month periods in 2021. Our accruals for ad valorem taxes are based on our most recent estimates for assessments which reflect lower property values primarily due to the collapse of commodity prices during 2020.

General and Administrative

Our G&A expenses include employee compensation, benefits and other related costs for our corporate management and governance functions, rent and occupancy costs for our corporate facilities, insurance, and professional fees and consulting costs supporting various corporate-level functions, among others. In order to facilitate a meaningful discussion and analysis of our results of operations with respect to G&A expenses, we have disaggregated certain costs into three components as presented in the table below. Primary G&A encompasses all G&A costs except share-based compensation and certain significant special charges that are generally attributable to material stand-alone transactions or corporate actions that are not otherwise in the normal course.

The following table sets forth the components of our G&A for the periods presented:

	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)
Primary G&A	$ 6,023	$ 7,035	$ 1,012	$ 12,060	$ 13,409	$ 1,349
Share-based compensation	962	951	(11)	3,208	1,807	(1,401)
Significant special charges:						
Organizational restructuring, including severance	—	—	—	239	—	(239)
Acquisition, divestiture and strategic transaction costs	—	—	—	4,655	—	(4,655)
Total G&A	$ 6,985	$ 7,986	$ 1,001	$ 20,162	$ 15,216	$ (4,946)
Per unit ($/boe)	$ 3.09	$ 3.56	$ 0.47	$ 4.91	$ 3.26	$ (1.65)
Per unit of excluding share-based compensation and other significant special charges identified above ($/boe)	$ 2.66	$ 3.14	$ 0.48	$ 2.94	$ 2.87	$ (0.07)

Our primary G&A expenses decreased on an absolute basis during the three and six month periods in 2021 compared to the corresponding periods in 2020. The absolute decrease is due primarily to a lower level of employee headcount resulting from reductions in force that occurred during the second half of 2020. The lower headcount also resulted in lower overall support costs. The decrease was partially offset by higher incentive compensation accruals.

Our total G&A expenses were lower on a per unit basis during the three month period in 2021 as compared to the corresponding period in 2020 due to the lower overall level of costs and the effect of higher sales volume. Our total G&A expenses increased on a per unit basis during the six month period in 2021 compared to the corresponding period in 2020 due primarily to lower total sales volume in the 2021 period.

Share-based compensation charges during the periods presented are attributable to the amortization of compensation cost, net of forfeitures, associated with the grants of time-vested restricted stock units (“RSUs”), and performance-based restricted stock units (“PRSUs”). The grants of RSUs and PRSUs are described in greater detail in Note 12 to the condensed consolidated financial statements included in Part I, Item 1, “Financial Statements.” As a result of the Juniper Transactions which qualified as a change-in-control event, all of the RSUs granted before 2019 vested as of the Closing Date in accordance with their terms. This resulted in an incremental charge of approximately $1.9 million during the first quarter 2021. All of our share-based compensation represents non-cash expenses.

In connection with the restructuring and elimination of certain executive management positions, we incurred incremental G&A costs including severance costs and termination benefits during 2021. During the first quarter of 2021, we incurred certain professional fees and consulting costs, including certain success-based fees of approximately $4.7 million in connection with the Juniper Transactions.

Depreciation, Depletion and Amortization

DD&A expense includes charges for the allocation of property costs based on the volume of production, depreciation of fixed assets other than oil and gas assets as well as the accretion of our asset retirement obligations.

The following table sets forth total and per unit costs for DD&A for the periods presented:

	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)
DD&A expense	$ 28,795	$ 37,135	$ 8,340	$ 52,679	$ 77,853	$ 25,174
DD&A rate ($/boe)	$ 12.74	$ 16.58	$ 3.84	$ 12.82	$ 16.66	$ 3.84

DD&A decreased on an absolute and a per unit basis during the three and six month periods in 2021 when compared to the corresponding periods in 2020. Lower production volume provided for decreases of $9.4 million and lower DD&A rates resulted in decreases of $15.8 million in the first half of 2021. The lower DD&A rate in 2021 is primarily attributable to the effect of adding additional reserves in the first half of 2021 as well as the effect of the impairments recorded in the fourth quarter 2020 and in the first quarter 2021.

Impairment of Oil and Gas Properties

We assess our oil and gas properties on a quarterly basis based on the results of a comparison of the unamortized cost of our oil and gas properties, net of deferred income taxes, to the sum of our estimated after-tax discounted future net revenues from proved properties adjusted for costs excluded from amortization (the "Ceiling Test") in accordance with the full cost method of accounting for oil and gas properties.

	Three Months Ended June 30,		2021 vs. 2020 Favorable	Six Months Ended June 30,		2021 vs. 2020 Favorable
	2021	2020	(Unfavorable)	2021	2020	(Unfavorable)
Impairment of oil and gas properties	$ —	$ 35,509	$ 35,509	$ 1,811	$ 35,509	$ 33,698

We did not record an impairment of our oil and gas properties during the three month period in 2021, compared to an impairment of $35.5 million recorded in the corresponding period in 2020. During the six month period in 2021, we recorded an impairment of $1.8 million, compared to the $35.5 million recorded in the second quarter 2020. These impairments were the result of the decline in the twelve-month average prices of crude oil, NGLs and natural gas as indicated by the respective quarterly Ceiling Test under the full cost method of accounting for oil and gas properties.

Interest Expense

Interest expense includes charges for outstanding borrowings under the Credit Facility and the Second Lien Facility, derived from internationally-recognized interest rates with a premium based on our credit profile and the level of credit outstanding. In addition, we are assessed certain fees for the overall credit commitments provided to us as well as fees for credit utilization and letters of credit. Also included is the accretion of original issue discount ("OID") on the Second Lien Facility and the amortization of issuance costs capitalized attributable to the Credit Facility and the Second Lien Facility. These costs are partially offset by interest amounts that we capitalize on unproved property costs while we are engaged in the evaluation of projects for the underlying acreage.

The following table summarizes the components of our interest expense for the periods presented:

	Three Months Ended June 30,		2021 vs. 2020 Favorable	Six Months Ended June 30,		2021 vs. 2020 Favorable
	2021	2020	(Unfavorable)	2021	2020	(Unfavorable)
Interest on borrowings and related fees	$ 5,533	$ 7,524	$ 1,991	$ 11,165	$ 15,569	$ 4,404
Accretion of original issue discount	85	201	116	190	397	207
Amortization of debt issuance costs	483	1,513	1,030	989	2,140	1,151
Capitalized interest	(798)	(702)	96	(1,644)	(1,390)	254
Total interest expense, net of capitalized interest	$ 5,303	$ 8,536	$ 3,233	$ 10,700	$ 16,716	$ 6,016

Interest expense decreased during the three and six month periods in 2021 as compared to the corresponding periods in 2020 due primarily to the effect of lower outstanding balances under the Credit Facility and Second Lien Facility during the three and six month periods in 2021 and lower interest rates associated with the Credit Facility, due primarily to lower applicable margins resulting from lower utilization levels. The weighted-average balances under the Credit Facility were lower in the three and six month periods in 2021 by approximately $135 million and $133 million, respectively. The weighted-average interest rates during the same periods were lower by 44 and 47 basis points, respectively. The accretion of OID is entirely attributable to the Second Lien Facility and the amortization of debt issuance costs includes amounts attributable to both the Credit Facility and Second Lien Facility. We capitalized a larger portion of interest during the three and six month periods in 2021 as we maintained a higher portion of unproved property as compared to the corresponding period in 2020 due primarily to the property contribution from the Juniper Transactions.

Derivatives

The gains and losses for our derivatives portfolio reflect changes in the fair value attributable to changes in market values relative to our hedged commodity prices and interest rate swaps.

The following table summarizes the gains and (losses) attributable to our commodity derivatives portfolio and interest rate swaps for the periods presented:

	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)
Commodity derivative gains (losses)	$ (54,231)	$ (33,473)	$ (20,758)	$ (98,631)	$ 124,329	$ (222,960)
Interest rate swap gains (losses)	4	(876)	880	36	(7,559)	7,595
Total	$ (54,227)	$ (34,349)	$ (19,878)	$ (98,595)	$ 116,770	$ (215,365)

In the three month period in 2021, commodity prices recovered to levels that were significantly higher on an average aggregate basis than those during the corresponding period in 2020. Accordingly, the derivative losses in the three month period in 2021 reflect the decline in the mark-to-market values consistent with the increase in prices attributable to open positions. The effect in the three month period in 2020 was in the opposite direction as the mark-to-market gains associated were attributable to the substantial collapse in prices for the underlying commodities relative to our hedged positions. In the second quarter of 2021, we began hedging a portion of our NGL production. Realized settlement payments, net for crude oil, NGL and natural gas derivatives were $15.7 million and $21.9 million during the three and six months ended June 30, 2021 as compared to realized settlement receipts of $45.7 million and $61.4 million during the three and six months ended June 30, 2020, respectively. In 2020, we began hedging a portion of our exposure to variable interest rates associated with our Credit Facility and Second Lien Facility. For the three and six months ended June 30, 2021, we paid $0.9 million and $1.9 million, respectively, of net settlements from our interest rate swaps. For both the three and six months ended June 30, 2020, we paid $0.4 million of net settlements from our interest rate swaps.

Income Taxes

Income taxes represent our income tax provision as determined in accordance with generally accepted accounting principles. It considers taxes attributable to our obligations for federal taxes under the Internal Revenue Code as well as to the various states in which we operate, primarily Texas, or otherwise have continuing involvement.

The following table summarizes our income taxes for the periods presented:

	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020	2021 vs. 2020 Favorable (Unfavorable)
Income tax (expense) benefit	$ (171)	$ 690	$ (861)	$ 139	$ (448)	$ 587
Effective tax rate	2.2 %	0.7 %		1.1 %	0.7 %	

The income tax provision resulted in an expense of $0.2 million and a benefit of $0.1 million for the three and six months ended June 30, 2021, respectively. The federal portion was fully offset by an adjustment to the valuation allowance against our net deferred tax assets resulting in an effective tax rate of 1.1%, which is fully attributable to the State of Texas. In connection with the Juniper Transactions, we recorded an adjustment of $0.7 million to Paid-in capital (see Note 3 to the condensed consolidated financial statements) attributable to certain state deferred income tax effects associated with the change in legal entity structure. Our net deferred income tax liability balance of $0.5 million as of June 30, 2021 is also fully attributable to the State of Texas and primarily related to property.

We recognized a federal and state income tax benefit of $0.7 million and an expense of $(0.4) million the three and six months ended June 30, 2020, respectively. The federal and state tax expense was offset by an adjustment to the valuation allowance against our net deferred tax assets resulting in an effective tax rate of 0.7% which was fully attributable to the State of Texas. The provision also reflected a reclassification of $1.2 million from deferred tax assets to current income taxes receivable for certain refundable alternative minimum tax credit carryforwards that were later received in June 2020.

Liquidity and Capital Resources

Liquidity

Our primary sources of liquidity include our cash on hand, cash provided by operating activities and borrowings under the Credit Facility. As of June 30, 2021, we had liquidity of $160.4 million, comprised of cash and cash equivalents of $49.7 million and availability under our Credit Facility of $110.7 million (factoring in letters of credit). The Credit Facility provides us with up to $1.0 billion in borrowing commitments. The current borrowing base under the Credit Facility is $375 million with availability further limited to a maximum of $350 million. As of July 30, 2021, we had $110.7 million available under the Credit Facility.

On July 27, 2021, our indirect, wholly owned subsidiary Penn Virginia Escrow LLC (the “Escrow Issuer”) priced an offering of $400 million aggregate principal amount of senior unsecured notes due 2026 (the “Notes”). The closing date is anticipated to be on or about August 10, 2021 and the Notes will bear interest at 9.25%. The Notes were initially sold at 99.018% of par. The gross proceeds of the offering and other funds will initially be deposited in an escrow account pending satisfaction of certain conditions, including the expected consummation of the Merger on or prior to November 26, 2021. Upon satisfaction of the escrow release conditions, Penn Virginia Holdings, LLC (“Holdings”) will assume the obligations under the Notes, the Escrow Issuer will be merged with and into Holdings (with Holdings as the surviving entity), the Notes will be guaranteed by the subsidiaries of Holdings that guarantee its reserve-based revolving Credit Facility, and the escrowed proceeds relating to the offering of the Notes will be released.

Our cash flows from operating activities are subject to significant volatility due to changes in commodity prices for crude oil, NGL and natural gas products, as well as variations in our production. The prices for these commodities are driven by a number of factors beyond our control, including global and regional product supply and demand, weather, product distribution, refining and processing capacity and other supply chain dynamics, among other factors. All of these factors have been negatively impacted by the continuing COVID-19 pandemic and the related instability in the global energy markets. In order to mitigate this volatility, we are extensively utilizing derivative contracts with a number of financial institutions, all of which are participants in our Credit Facility, hedging a portion of our estimated future crude oil, NGLs and natural gas production through the first half of 2023. The level of our hedging activity and duration of the financial instruments employed depends on our desired cash flow protection, available hedge prices, the magnitude of our capital program and our operating strategy.

We continually evaluate potential sales of assets, including certain non-strategic oil and gas properties and undeveloped acreage, among others. Additionally, from time-to-time and under market conditions that we believe are favorable to us, we may consider capital market transactions, including the offering of debt and equity securities. We maintain an effective shelf registration statement to allow for optionality.

Capital Resources

Our 2021 capital budget, which we have not revised to account for the pending Lonestar Merger, contemplates capital expenditures from $210 to $240 million, of which $205 to $235 million has been allocated to drilling and completion activities. We plan to fund our 2021 capital program and our operations for the next twelve months primarily with cash on hand, cash from operating activities and, to the extent necessary, supplemental borrowings under the Credit Facility. Based upon current price and production expectations for the remainder of 2021, we believe that our cash on hand, cash from operating activities and borrowings under our Credit Facility, as necessary, will be sufficient to fund our capital spending and operations for at least the next twelve months; however, future cash flows are subject to a number of variables including the length and magnitude of the current global economic uncertainties associated with the COVID-19 pandemic and related instability in the global energy markets.

Cash Flows

The following table summarizes our cash flows for the periods presented:

	Six Months Ended	
	June 30, 2021	June 30, 2020
Net cash provided by operating activities	122,711	128,895
Net cash used in investing activities	(95,553)	(112,744)
Net cash provided by (used in) financing activities	9,516	(2,004)
Net increase in cash and cash equivalents	$ 36,674	$ 14,147

Cash Flows from Operating Activities. The decrease of $6.2 million in net cash provided by operating activities for the six months ended June 30, 2021 compared to the corresponding period in 2020 was primarily attributable to the effect of 12% lower total sales volume, partially offset by the timing effect of revenues receipts as 2021 included cash receipts that were derived from higher average prices than in 2020. The adverse impact on cash received from realized revenues in the six months ended June 30, 2021 was exacerbated by: (i) higher net payments for commodity derivatives settlements and premiums, (ii) transaction costs paid in connection with the Juniper Transactions and (iii) executive restructuring costs including severance payments. These items were partially offset by lower interest payments, net of interest rate swap settlements, due to substantially lower outstanding borrowings and lower weighted-average variable rates in 2021 as compared to 2020.

Cash Flows from Investing Activities. Our cash payments for capital expenditures were higher during the six months ended June 30, 2021 as compared to the corresponding period in 2020, due primarily to the suspension of the drilling and completion program during a portion of 2020 as a result of the COVID-19 pandemic impacts. In addition, we received lower proceeds from the sale of scrap tubular and well materials during the six months ended June 30, 2021 compared to the corresponding period in 2020.

The following table sets forth costs related to our capital expenditures program for the periods presented:

	Six Months Ended	
	June 30, 2021	June 30, 2020
Drilling and completion	$ 122,115	$ 86,312
Lease acquisitions, land-related costs, and geological and geophysical (seismic) costs	1,219	2,571
Pipeline, gathering facilities and other equipment, net [1]	(481)	1,056
Total capital expenditures incurred	$ 122,853	$ 89,939

[1] Includes certain capital charges to our working interest partners for completion services.

The following table reconciles the total costs of our capital expenditures program with the net cash paid for capital expenditures as reported in our condensed consolidated statements of cash flows for the periods presented:

	Six Months Ended	
	June 30, 2021	June 30, 2020
Total capital expenditures program costs (from above)	$ 122,853	$ 89,939
Decrease (increase) in accounts payable for capital items and accrued capitalized costs	(22,891)	20,294
Net purchases/(transfers) from tubular inventory and well materials [1]	2,851	6
Prepayments for drilling and completion services, net of transfers	(10,023)	—
Capitalized internal labor, capitalized interest and other	2,916	2,588
Total cash paid for capital expenditures	$ 95,706	$ 112,827

[1] Includes purchases made in advance of drilling.

Cash Flows from Financing Activities. In January 2021, we received over $150 million of proceeds from the issuance of Common Units and Series A Preferred Stock in connection with the Juniper Transactions. These proceeds were used to fund the repayments of $80.5 million and $50.0 million under the Credit Facility and Second Lien Facility, respectively. The remainder of the proceeds were used to pay: (i) $3.8 million of issue costs associated with the redeemable securities (Common Units and Series A Preferred Stock), (ii) $5.5 million of transaction costs attributable to Juniper's Noncontrolling interest, (iii) $1.8 million of issue costs associated with the amendments to the Credit Facility and Second Lien Facility in connection with the Juniper Transactions, (iv) $1.3 million to liquidate outstanding Second Lien Facility advances attributable to a single participant lender and (v) a portion of interest payments and other Juniper Transactions costs, both of which are presented as cash disbursements included in net cash provided by operating activities above. The six months ended June 30, 2021 includes additional net borrowings of $5 million under the Credit Facility and $3.750 million quarterly amortization payments under the Second Lien Facility. The six months ended June 30, 2020 includes borrowings of $46.0 million and repayments of $49.0 million under the Credit Facility which were used to fund a portion of the capital program during that period as well as less than $0.1 million of debt issue costs.

Capitalization

The following table summarizes our total capitalization as of the dates presented:

	June 30, 2021	December 31, 2020
Credit facility	$ 238,900	$ 314,400
Second lien facility, net	140,649	195,097
Total debt, net	379,549	509,497
Total equity	382,663	212,838
	$ 762,212	$ 722,335
Debt as a % of total capitalization	50 %	71 %

Credit Facility. The Credit Facility provides a $1.0 billion revolving commitment and a $375 million borrowing base including a $25 million sublimit for the issuance of letters of credit. Availability under the Credit Facility may not exceed the lesser of the aggregate commitments or the borrowing base; however, outstanding borrowings under the Credit Facility are limited to a maximum of $350 million. The borrowing base under the Credit Facility is redetermined semi-annually, generally in the Spring and Fall of each year. Additionally, we and the Credit Facility lenders generally may, upon request, initiate a redetermination at any time during the six-month period between scheduled redeterminations. However, we have the option to forego a redetermination until Fall 2021 assuming we continue to satisfy certain minimum hedging conditions. The Credit Facility is available to us for general corporate purposes including working capital. The Credit Facility is scheduled to mature in May 2024. We had $0.4 million in letters of credit outstanding as of June 30, 2021 and December 31, 2020.

The outstanding borrowings under the Credit Facility bear interest at a rate equal to, at our option, either (a) a customary reference rate plus an applicable margin ranging from 1.50% to 2.50%, determined based on the utilization level under the Credit Facility or (b) a Eurodollar rate, including the London interbank offered rate (“LIBOR”) through 2021, plus an applicable margin ranging from 2.50% to 3.50%, determined based on the utilization level under the Credit Facility. Interest on reference rate borrowings is payable quarterly in arrears and is computed on the basis of a year of 365/366 days, and interest on Eurodollar, including LIBOR, borrowings is payable every one, three or six months, at our election, and is computed on the basis of a year of 360 days. As of June 30, 2021, the actual weighted-average interest rate on the outstanding borrowings under the Credit Facility was 3.08%. Unused commitment fees are charged at a rate of 0.50%.

The following table summarizes our borrowing activity under the Credit Facility for the periods presented:

	Borrowings Outstanding			
	End of Period	Weighted-Average	Maximum	Weighted-Average Rate
Three months ended June 30, 2021	$ 238,900	$ 246,263	$ 248,900	3.10 %
Six months ended June 30, 2021	$ 238,900	$ 244,961	$ 314,400	3.14 %

The Credit Facility is guaranteed by the Partnership and all of its subsidiaries excluding the borrower subsidiary and the escrow subsidiary (the “Guarantor Subsidiaries”). For additional information related to the escrow subsidiary see “Overview” above. The guarantees under the Credit Facility are full and unconditional and joint and several. Substantially all of our consolidated assets are held by the Guarantor Subsidiaries. There are no significant restrictions on our ability or any of the Guarantor Subsidiaries to obtain funds through dividends, advances or loans. The obligations under the Credit Facility are secured by a first priority lien on substantially all of our subsidiaries’ assets.

In July 2021, we entered into Amendment No. 10 to the Credit Agreement (the “Tenth Amendment”) permitting certain actions to be executed in accordance with the escrow arrangement of the Notes as described above in the “Overview.”

Second Lien Facility. In accordance with the recent amendment, the maturity date of the Second Lien Facility was extended to September 29, 2024.

The Company is required to make quarterly amortization payments of $1.875 million and outstanding borrowings under the Second Lien Facility bear interest at a rate equal to, at our option, either (a) a customary reference rate based on the prime rate plus an applicable margin of 7.25% or (b) a Eurodollar rate, including LIBOR through 2021, with a floor of 1.00%, plus an applicable margin of 8.25%; provided that the applicable margin will increase to 8.25% and 9.25%, respectively, during any quarter in which the quarterly amortization payment is not made. As of June 30, 2021, the actual interest rate of outstanding borrowings under the Second Lien Facility was 9.25%. Interest on reference rate borrowings is payable quarterly in arrears and is computed on the basis of a year of 365/366 days, and interest on Eurodollar borrowings is payable every one or three months (including in three month intervals if we select a six-month interest period), at our election and is computed on the basis of a 360-day year.

We have the right, to the extent permitted under the Credit Facility and an intercreditor agreement between the lenders under the Credit Facility and the lenders under the Second Lien Facility, to prepay loans under the Second Lien Facility at any time, subject to prepayment premiums (in addition to customary breakage costs with respect to Eurodollar loans) during the twelve-month period beginning on January 15th of the years indicated below:

Date	Prepayment premium
2021	102%
2022	101%
Thereafter	No premium

The Second Lien Facility also provides for the following prepayment premiums in the event of a change-in-control that results in an offer of prepayment that is accepted by the lenders under the Second Lien Facility during the twelve-month period beginning on January 15th of the years indicated below:

Date	Prepayment premium
2021	102%
2022	101%
Thereafter	No premium

The Second Lien Facility is collateralized by substantially all of our subsidiaries' assets with lien priority subordinated to the liens securing the Credit Facility. The obligations under the Second Lien Facility are guaranteed by the Partnership and the Guarantor Subsidiaries.

Covenant Compliance. The Credit Facility requires us to maintain (1) a minimum current ratio (as defined in the Credit Facility, which considers the unused portion of the total commitment as a current asset) of 1.00 to 1.00, (2) a maximum leverage ratio (consolidated indebtedness to EBITDAX, each as defined in the Credit Facility), in each case measured as of the last day of each fiscal quarter of 3.50 to 1.00. and (3) a maximum first lien leverage ratio (consolidated secured indebtedness to adjusted earnings before interest, taxes, depreciation, depletion, amortization and exploration expenses, both as defined in the Credit Facility), measured as of the last day of each fiscal quarter, of 2.50 to 1.00.

The Credit Facility and Second Lien Facility also contain affirmative and negative covenants, including as to compliance with laws (including environmental laws, ERISA and anti-corruption laws), maintenance of required insurance, delivery of quarterly and annual financial statements, oil and gas engineering reports and budgets, maintenance and operation of property (including oil and gas properties), limitations on capital expenditures, investments, the incurrence of liens and indebtedness, merger, consolidation or sale of assets, payment of dividends, and transactions with affiliates and other customary covenants. In addition, the Credit Facility contains certain anti-cash hoarding provisions, including the requirement to repay outstanding loans and cash collateralize outstanding letters of credit on a weekly basis in the amount of any cash on the balance sheet (subject to certain exceptions) in excess of $25 million.

The Credit Facility and Second Lien Facility contain events of default and remedies. If we do not comply with the financial and other covenants in the Credit Facility and Second Lien Facility, as applicable, the lenders thereto may, subject to customary cure rights, require immediate payment of all amounts outstanding under the Credit Facility and Second Lien Facility.

As of June 30, 2021, we were in compliance with all of the covenants under the Credit Facility and the Second Lien Facility.

We intend to repay in full and terminate the Second Lien Facility with the proceeds from the Notes.

Off Balance Sheet Arrangements

As of June 30, 2021, we had no off-balance sheet arrangements other than information technology licensing, service agreements, in-kind commodity recovery arrangements for imbalances and letters of credit, all of which are customary in our business.

Critical Accounting Estimates

The process of preparing financial statements in accordance with accounting principles generally accepted in the United States of America ("GAAP") requires our management to make estimates and judgments regarding certain items and transactions. It is possible that materially different amounts could be recorded if these estimates and judgments change or if the actual results differ from these estimates and judgments. Disclosure of our most critical accounting estimates that involve the judgment of our management can be found in our Annual Report on Form 10-K for the year ended December 31, 2020.

As described in this Quarterly Report on Form 10-Q as well as the Critical Accounting Estimates disclosures in the Annual Report on Form 10-K, we apply the full cost method to account for our oil and gas properties. At the end of each quarterly reporting period, we perform a Ceiling Test in order to determine if our oil and gas properties have been impaired. For purposes of the Ceiling Test, estimated discounted future net revenues are determined using the prior 12-month's average price based on closing prices on the first day of each month, adjusted for differentials, discounted at 10%. The calculation of the Ceiling Test and provision for DD&A are based on estimates of proved reserves. There are significant uncertainties inherent in estimating quantities of proved reserves and projecting future rates of production, timing and plan of development. The carrying value of our proved oil and gas properties exceeded the limit determined by the Ceiling Test as of March 31, 2021, resulting in a $1.8 million impairment. There was no such impairment of our proved oil and gas properties during the second quarter of 2021.

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

Market risk is the risk of loss arising from adverse changes in market rates and prices. The principal market risks to which we are exposed are interest rate risk and commodity price risk.

Interest Rate Risk

All of our long-term debt instruments are subject to variable interest rates. As of June 30, 2021, we had borrowings of $238.9 million under the Credit Facility and $145.0 million under the Second Lien Facility at interest rates of 3.08% and 9.25%, respectively. Assuming a constant borrowing level under the Credit Facility and Second Lien Facility, an increase (decrease) in the interest rate of one percent would result in an increase (decrease) in aggregate interest payments of approximately $3.8 million on an annual basis, excluding the offsetting impact of our interest rate swap derivatives.

Commodity Price Risk

We produce and sell crude oil, NGLs and natural gas. As a result, our financial results are affected when prices for these commodities fluctuate. Our price risk management programs permit the utilization of derivative financial instruments (such as collars and swaps) to seek to mitigate the price risks associated with fluctuations in commodity prices as they relate to a portion of our anticipated production. The derivative instruments are placed with major financial institutions that we believe are of acceptable credit risk. The fair values of our derivative instruments are significantly affected by fluctuations in the prices of crude oil, NGLs and natural gas.

As of June 30, 2021, our commodity derivative portfolio was in a net liability position in the amount of $73.7 million. The contracts associated with this position are with seven counterparties, all of which are investment grade financial institutions. This concentration may impact our overall credit risk, either positively or negatively, in that these counterparties may be similarly affected by changes in economic or other conditions. We have neither paid to, nor received from, our counterparties any cash collateral in connection with our derivative positions. Furthermore, our derivative contracts are not subject to margin calls or similar accelerations. No significant uncertainties exist related to the collectability of amounts that may be owed to us by these counterparties.

During the six months ended June 30, 2021, we reported a net commodity derivative loss of $98.6 million. We have experienced and could continue to experience significant changes in the estimate of derivative gains or losses recognized due to fluctuations in the value of our derivative instruments. Our results of operations are affected by the volatility of unrealized gains and losses and changes in fair value, which fluctuate with changes in crude oil, NGL and natural gas prices. These fluctuations could be significant in a volatile pricing environment. See Note 5 to the condensed consolidated financial statements included in Part I, Item 1, “Financial Statements” for a further description of our commodity price risk management activities.

The following table illustrates the estimated impact on the fair values of our derivative financial instruments and operating income attributable to hypothetical changes in the underlying commodity prices. This illustration assumes that crude oil and natural gas prices and production volumes remain constant at anticipated levels. The estimated changes in operating income exclude potential cash receipts or payments in settling these derivative positions.

	Change of 10% per bbl of Crude Oil ($ in millions)	
	Increase	**Decrease**
Effect on the fair value of crude oil derivatives [1]	$ (32.0)	$ 24.2
Effect of crude oil price changes for the remainder of 2021 on operating income, excluding derivatives [2]	$ 37.8	$ (37.8)

[1] Based on derivatives outstanding as of June 30, 2021.

[2] These sensitivities are subject to significant change.

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

(a) Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, performed an evaluation of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Exchange Act) as of June 30, 2021. Our disclosure controls and procedures are designed to ensure that information required to be disclosed by us in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported on a timely basis and that such information is accumulated and communicated to management, including our Chief Executive Officer and our Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Based on that evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that, as of June 30, 2021, such disclosure controls and procedures were effective.

(b) Changes in Internal Control Over Financial Reporting

During the quarter ended June 30, 2021, there were no changes to our internal control over financial reporting 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 not aware of any material pending legal or governmental proceedings against us, any material proceedings by governmental officials against us that are pending or contemplated to be brought against us and no such proceedings have been terminated during the period covered by this Quarterly Report on Form 10-Q. See Note 11 to our condensed consolidated financial statements included in Part I, Item 1, "Financial Statements" for additional information regarding our legal and regulatory matters.

Item 1A. ***Risk Factors***

Other than the risk factors as set forth below, there have been no material changes to the risk factors disclosed in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2020.

We may not consummate the Lonestar Merger.

There can be no assurances that the Lonestar Merger (the "Merger") will be consummated on the terms previously disclosed or at all, or that the consummation of the transaction will not be delayed beyond the expected closing date. If we do not complete the Merger, we will not have the opportunity to attempt to realize the benefits we believe the acquisition will afford us.

We may not realize all of the anticipated benefits of the Merger.

There can be no assurance that we will be able to realize the anticipated benefits of the Merger. The success of the proposed acquisition will depend, in part, on our ability to realize the operating and marketing opportunities and synergies from the transaction. Our ability to realize these anticipated benefits, and the timing of this realization, depend upon a number of factors and future events, many of which we cannot control, including undisclosed liabilities, unanticipated costs, delays or other operational or financial problems related to the Merger or the acquired assets, any of which may divert our management's attention from other business issues and opportunities and restrict the full realization of the anticipated benefits of the Merger within the expected timeframe or at all. Further, Lonestar currently has hedges outstanding that must be canceled, novated or transferred to a new counterparty in connection with the Merger. If canceled, we could be responsible for the mark-to-mark value of such hedges as of such date, which could impact our liquidity. Additionally, if the Lonestar Merger does not close, we will be required to redeem the Notes. These and other challenges that may arise could have a material adverse effect on us, our business and our results of operations.

Item 5. ***Other Information***

None.

Item 6. ***Exhibits***

(3.1) *	Third Amended and Restated Articles of Incorporation of Penn Virginia Corporation, effective as of May 12, 2021.
(3.2)	Sixth Amended and Restated Bylaws of Penn Virginia Corporation, effective as of May 3, 2021 (incorporated by reference to Exhibit 3.1 to Registrant's Current Report on Form 8-K filed on May 4, 2021).
(10.1)	Penn Virginia Corporation's 2019 Management Incentive Plan as Amended (incorporated by reference to Annex A to Registrant's Proxy Statement filed on April 7, 2021).
(10.2) *	Form of Performance Restricted Stock Unit Award Agreement (Officer).
(31.1) *	Certification Pursuant to Rule 13a-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
(31.2) *	Certification Pursuant to Rule 13a-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
(32.1) †	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
(32.2) †	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
(101.INS) *	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
(101.SCH) *	Inline XBRL Taxonomy Extension Schema Document
(101.CAL) *	Inline XBRL Taxonomy Extension Calculation Linkbase Document
(101.DEF) *	Inline XBRL Taxonomy Extension Definition Linkbase Document
(101.LAB) *	Inline XBRL Taxonomy Extension Label Linkbase Document
(101.PRE) *	Inline XBRL Taxonomy Extension Presentation Linkbase Document
(104) *	The cover page of Penn Virginia Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021, formatted in Inline XBRL (included within the Exhibit 101 attachments).

* Filed herewith.

† Furnished herewith.

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.

PENN VIRGINIA CORPORATION

August 4, 2021	By:	/s/ RUSSELL T KELLEY, JR.
		Russell T Kelley, Jr.
		Senior Vice President, Chief Financial Officer and Treasurer
		(Principal Financial Officer)
August 4, 2021	By:	/s/ KAYLA D. BAIRD
		Kayla D. Baird
		Vice President, Chief Accounting Officer and Controller
		(Principal Accounting Officer)

THIRD AMENDED AND RESTATED ARTICLES OF INCORPORATION OF PENN VIRGINIA CORPORATION

ARTICLE I NAME

The name of the corporation is Penn Virginia Corporation (hereinafter, the "Corporation").

ARTICLE II REGISTERED OFFICE AND AGENT

The address of the Corporation's registered office in the Commonwealth of Virginia is 4701 Cox Road, Suite 285, Glen Allen, Henrico County, Virginia 23060. The name of its registered agent at such address is CT Corporation System. The registered office and registered agent of the Corporation may be amended or modified from time to time pursuant to the Bylaws of the Corporation (as may be amended, modified or supplemented from time to time in accordance with the terms thereof, the "Bylaws") and by filing the appropriate documents with the Virginia State Corporation Commission.

ARTICLE III PURPOSE

The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the Virginia Stock Corporation Act (as the same exists or may hereafter be amended from time to time, the "VSCA").

ARTICLE IV CAPITAL STOCK

Section 4.1 Authorized Shares. The total number of shares of capital stock that the Corporation shall have authority to issue is 115,000,000 shares, consisting of (i) 110,000,000 shares of common stock, par value $0.01 per share ("Common Stock"), and (ii) 5,000,000 shares of preferred stock, par value $0.01 per share ("Preferred Stock"). The number of authorized shares of Preferred Stock or Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority in voting power of the stock of the Corporation entitled to vote thereon, unless the vote of the holders of any of the Common Stock or the Preferred Stock voting separately as a class shall be required therefor pursuant to these Third Amended and Restated Articles of Incorporation (including any Preferred Stock Designation (as defined below)).

Section 4.2 Common Stock. Each holder of record of Common Stock shall be entitled to one (1) vote for each share of Common Stock that is registered in such holder's name on the books of the Corporation. The holders of record of Common Stock shall vote together as a single class on all matters on which holders of the Common Stock are entitled to vote except as otherwise required by applicable law. Holders of shares of Common Stock shall be entitled to receive equally, on a per share basis, such dividends or distributions as are lawfully declared on the Common Stock, to have notice of any authorized meeting of holders of Common Stock, and, upon liquidation, dissolution or winding up of the affairs of the Corporation, to share equally, on a per share basis, in the assets thereof that may be available for distribution after satisfaction of creditors and of the preferences of shares of Preferred Stock. Except as otherwise required by law, holders of Common Stock shall not be entitled to vote on any amendment to these Third Amended and Restated Articles of Incorporation (including any Preferred Stock Designation (as defined below)) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together with the holders of one or more other such series, to vote thereon pursuant to these Third Amended and Restated Articles of Incorporation (including any Preferred Stock Designation (as defined below)) or pursuant to the VSCA, provided that such amendment does not alter or change the designations, powers, preferences or rights of the shares of Common Stock so as to affect them adversely.

Section 4.3 **Preferred Stock**. Shares of Preferred Stock may be issued from time to time in one or more series. The Board of Directors of the Corporation is hereby authorized, to the fullest extent now or hereafter permitted by the laws of the Commonwealth of Virginia and without shareholder action, to provide for the issuance of shares of Preferred Stock in one or more series, to establish from time to time the number of shares to be included in each such series, and to fix the designations, powers, preferences and rights of the shares of each such series and any qualifications, limitations or restrictions thereof by adoption of an amendment to the articles of incorporation (any such amendment of the articles of incorporation adopted by the Board of Directors of the Corporation designating the designations, powers, preferences and rights, and qualifications, limitations, or restrictions, of shares of Preferred Stock, a "Preferred Stock Designation"). The authority of the Board of Directors of the Corporation with respect to each series shall include, but not be limited to, determination of the following:

(a) the designation of the series, which may be by distinguishing number, letter or title;

(b) the number of shares of the series, which number the Board of Directors of the Corporation may thereafter increase or decrease (but not below the number of shares thereof then outstanding);

(c) the amounts payable on, and the preferences, if any, of shares of the series in respect of dividends, and whether such dividends, if any, shall be cumulative or noncumulative;

(d) dates at which dividends, if any, shall be payable;

(e) the redemption rights and price or prices, if any, for shares of the series;

(f) the terms and amount of any sinking fund providing for the purchase or redemption of shares of the series;

(g) the amounts payable on, and the preferences (if any) of, shares of the series in the event of any voluntary or involuntary liquidation, dissolution or winding up of the affairs of the Corporation;

(h) whether the shares of the series shall be convertible or exercisable into or exchangeable for shares of any other class or series, or any other security, of the Corporation or any other corporation or entity, and, if so, the specification of such other class or series or such other security, the conversion, exercise or exchange price or prices or rate or rates, any adjustments thereof, the date or dates at which such shares shall be convertible, exercisable or exchangeable and all other terms and conditions upon which such conversion, exercise or exchange may be made;

(i) restrictions on the issuance of shares of the same series or of any other class or series; and

(j) subject to Section 4.6, the voting rights and powers of the holders of shares of the series.

Except as otherwise required by law, holders of a series of Preferred Stock, as such, shall be entitled only to such voting rights, if any, as shall be expressly granted thereto by these Third Amended and Restated Articles of Incorporation (including any Preferred Stock Designation). Except as may be provided in these Third Amended and Restated Articles of Incorporation or in any Preferred Stock Designation, holders of Preferred Stock shall not be entitled to receive notice of any meeting of shareholders at which they are not entitled to vote.

Section 4.4 No Preemptive Rights. Subject to preemptive rights, if any, in respect of issuances of capital stock by the Corporation or its subsidiaries of (a) the holders of shares of any class or series of capital stock of the Corporation set forth in that certain Shareholders Agreement, dated as of the Effective Date (as defined in the Plan Confirmation Order), by and among the Corporation and each of the shareholders identified therein, as may be amended from time to time (the "Shareholders Agreement"), or (b) the holders of shares of any class or series of Preferred Stock then outstanding set forth in the Preferred Stock Designation applicable thereto, no holders of shares of the Corporation shall have any preemptive rights.

Section 4.5 Record Holders. The Corporation shall be entitled to treat the person or entity in whose name any share of its stock is registered as the owner thereof for all purposes and shall not be bound to recognize any equitable or other claim to, or interest in, such share on the part of any other person or entity, whether or not the Corporation shall have notice thereof, except as expressly provided by applicable law.

Section 4.6 Nonvoting Stock. To the extent prohibited by Section 1123 of Chapter 11 of the Bankruptcy Code, as amended, the Corporation shall not issue any class or series of nonvoting stock; provided, however, that the foregoing (a) will have no further force and effect beyond that required under Section 1123 of the Bankruptcy Code, (b) will have such force and effect, if any, only for so long as such Section 1123 is in effect and applicable to the Corporation and (c) may be amended or eliminated in accordance with applicable law as from time to time in effect. For the purposes of this Section 4.6, any class or series of stock that has only such voting rights as are mandated by the VSCA shall be deemed to be nonvoting for purposes of the restrictions of this Section 4.6.

Section 4.7 [Reserved].

Section 4.8 [Reserved].

Section 4.9 **Action Without a Meeting**. Until the date on which the Corporation completes a Public Listing or an IPO, any action required or permitted to be taken at any annual or special meeting of shareholders of the Corporation may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock of the Corporation having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the Corporation by delivery to its registered office in the Commonwealth of Virginia, its principal place of business, or to an officer or agent of the Corporation having custody of the book in which proceedings of meetings of shareholders are recorded. Following the date on which the Corporation completes a Public Listing or an IPO, any action required or permitted to be taken at any annual or special meeting of shareholders of the Corporation may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by all the holders of outstanding stock of the Corporation entitled to vote thereon.

Section 4.10 **Series A Preferred Stock**. The provisions in this Section 4.10, which shall apply notwithstanding anything in these Third Amended and Restated Articles of Incorporation to the contrary, constitute a Preferred Stock Designation.

(a) Designation and Number of Shares. Pursuant to these Third Amended and Restated Articles of Incorporation, there is hereby created out of the authorized and unissued shares of Preferred Stock a series of Preferred Stock consisting of 300,000 shares of Preferred Stock designated as "Series A Preferred Stock" (the "Series A Preferred Stock").

(b) Permitted Owners. Shares of the Series A Preferred Stock may be issued only to, and registered in the name of, JSTX Holdings, LLC and Rocky Creek Resources, LLC (collectively, the "Investors"), their respective successors and permitted assigns in accordance with Section 4.10(f) (including all subsequent successors and permitted assigns) (the Investors together with such persons, collectively, the "Permitted Series A Owners").

(c) Voting.

(i) Each one one-hundredth (1/100th) of a share of Series A Preferred Stock shall entitle the holder thereof to one vote on all matters submitted to a vote of the holders of common stock, par value $0.01 per share, of the Corporation (the "Common Stock"), as adjusted to account for any subdivision (by stock split, subdivision, exchange, stock dividend, reclassification, recapitalization or otherwise) or combination (by reverse stock split, exchange, reclassification, recapitalization or otherwise) or similar reclassification or recapitalization of the outstanding shares of Common Stock into a greater or lesser number of shares of Common Stock occurring after the effective date of these Third Amended and Restated Articles of Incorporation.

(ii) Except as otherwise provided in this Section 4.10 or in any other Articles of Amendment creating a class or series of preferred stock or any similar stock, or by applicable law, the holders of Series A Preferred Stock, the holders of shares of Common Stock, and the holders of any other class or series of capital stock of the Corporation entitled to vote generally together with the Common Stock shall vote together as one class on all matters submitted to a vote of the holders of such Common Stock.

(iii) Except as otherwise required by law or these Third Amended and Restated Articles of Incorporation, for so long as any shares of Series A Preferred Stock shall remain outstanding, the Corporation shall not, without the prior vote or written consent of the holders of a majority of the shares of Series A Preferred Stock then outstanding, voting separately as a single class, amend, alter or repeal any provision of these Third Amended and Restated Articles of Incorporation, whether by merger, consolidation or otherwise, if such amendment, alteration or repeal would adversely alter or change the powers, preferences or relative, participating, optional or other or special rights of the Series A Preferred Stock. Any action required or permitted to be taken at any meeting of the holders of Series A Preferred Stock may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of the outstanding Series A Preferred Stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares of Series A Preferred Stock were present and voted and shall be delivered to the Corporation by delivery to its registered office in the State of Virginia, its principal place of business, or an officer or agent of the Corporation having custody of the book in which minutes of proceedings of shareholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Prompt written notice of the taking of corporate action without a meeting by less than unanimous written consent of the holders of Series A Preferred Stock shall, to the extent required by law, be given to those holders of Series A Preferred Stock who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for notice of such meeting had been the date that written consents signed by a sufficient number of holders of Series A Preferred Stock to take the action were delivered to the Corporation.

(iv) The holders of Series A Preferred Stock shall not have any voting rights except as set forth herein, in these Third Amended and Restated Articles of

Incorporation, in the Investor and Registration Rights Agreement, dated on or around January 15, 2021, by and among the Corporation and the other parties thereto (the "IRRA"), or as provided by applicable law.

(d) Board Representation.

(i) Prior the effective date of these Third Amended and Restated Articles of Incorporation, the Board increased the size of the Board by five directors (to nine total directors) and, promptly thereafter, but in any event upon effectiveness of the IRRA, the Board caused five of such newly created directorships to be filled with five individuals designated by the Permitted Series A Owners (in such capacity, each an "Investor Director" and together with any other person designated to replace any such person in accordance with the terms of this Section 4.10(d), and including both Investor Affiliated Directors and Investor Non-Affiliated Directors, the "Investor Directors"), all of whom may be Investor Affiliated Directors, by written consent or other written instrument delivered to the Corporation.

(ii) In addition to the vote in Section 4.10(c)(i), for so long as the Permitted Series A Owners have the right to redeem or exchange Common Units (as defined below) for Common Stock pursuant to the Limited Partnership Agreement (as defined below) in such percentages relative to the number of shares of Common Stock then outstanding as set forth below, the holders of a majority of the total number of outstanding shares of Series A Preferred Stock (the "Permitted Series A Owner Majority") shall have the exclusive right, voting separately as a class and to the exclusion of the Common Stock and any other class or series of capital stock of the Corporation, to designate to the Board the following number of Investor Directors:

(A) up to five Investor Directors, all of whom may be Investor Affiliated Directors, until such time as (X) the number of shares of Common Stock then issuable to the Permitted Series A Owners upon redemption or exchange of the Common Units for Common Stock pursuant to the Limited Partnership Agreement, plus (Y) the aggregate number of shares of Common Stock then held by the Permitted Series A Owners (such sum, the "Total Series A Ownership") continuously held is less than or equal to 50% of (1) the number of shares of Common Stock then issuable to the Permitted Series A Owners upon redemption or exchange of the Common Units for Common Stock pursuant to the Limited Partnership Agreement plus (2) the number of shares of Common Stock then outstanding (such sum, the "Total Shares") (the "First Step Down Event");

(B) up to four Investor Directors, each of whom may be Investor Affiliated Directors, until such time as the Total Series A Ownership continuously held is less than 40% of the Total Shares (the "Second Step Down Event");

(C) up to three Investor Directors, each of whom may be an Investor Affiliated Director, until such time as the Total Series A Ownership continuously held is less than 30% of the Total Shares (the "Third Step Down Event");

(D) up to two Investor Directors, each of whom may be an Investor Affiliated Director, until such time as the Total Series A Ownership continuously held is less than 20% of the Total Shares (the "Fourth Step Down Event"); and

(E) up to one Investor Director, who may be an Investor Affiliated Director, until such time as the Total Series A Ownership continuously held is less than 10% of the Total Shares (the "Fifth Step Down Event," and together with the First Step Down Event, the Second Step Down Event, the Third Step Down Event and the Fourth Step Down Event, each a "Step Down Event").

(iii) The Corporation shall take all actions within its power to cause all Investor Directors designated pursuant to this Section 4.10(d) to be included in the slate of nominees recommended by the Board for election as directors at each annual or special meeting called for the purpose of electing directors (and/or in connection with any election by written consent). Notwithstanding anything to the contrary herein, the Investor Directors designated pursuant to this Section 4.10(d) shall be elected by the Permitted Series A Owner Majority, voting separately as a class and to the exclusion of the Common Stock and any other class or series of capital stock of the Corporation, and may be elected, at the option of the Permitted Series A Owner Majority, either (i) by written consent of the Permitted Series A Owner Majority or (ii) at annual or special meetings called for the purpose of electing directors.

(iv) For so long as the Permitted Series A Owners have the right to designate directors pursuant to Section 4.10(d)(ii), the size of the Board shall not be decreased in a manner that would limit such designation rights.

(v) Each Investor Director designated pursuant to this Section 4.10(d) shall serve until his or her successor is designated or his or her earlier death, disability, resignation or removal. Any vacancy or newly created directorship in the position of an Investor Director may be filled only by the Permitted Series A Owner Majority, and may be filled with immediate effect by written consent of the Permitted Series A Owner Majority, subject to the fulfillment of the requirements set forth in Section 4.10(d)(vii). Subject to Section 4.10(d)(viii), each Investor Director may, during his or her term of office, be removed at any time, with or without cause, by and only by the Permitted Series A Owner Majority.

(vi) At all times while an Investor Director is serving as a member of the Board, and following any such Investor Director's death, disability, resignation or removal, such Investor Director shall be entitled to all rights to indemnification and exculpation as are then made available to any other member of the Board.

(vii) Each Investor Director shall satisfy the requirements set forth in Sections 3.02(c) and 3.02(d) of the IRRA.

(viii) Upon the occurrence of any Step Down Event, such Investor Directors then serving on the Board in excess of the entitled number pursuant to Section 4.10(d)(ii) (as selected by the Permitted Series A Owner Majority) shall promptly (and in any event prior to the time the Board next takes any action, whether at a meeting or by written consent) resign from the Board and the number of directors comprising the Board shall automatically be reduced consistent with Section 3.01(d) of the IRRA, and the corresponding right to designate directors pursuant to the applicable subsection of Section 4.10(d)(ii) shall automatically terminate, such that:

(A) upon the occurrence of the First Step Down Event (but prior to the Second Step Down Event), if there are five Investor Affiliated Directors then serving on the Board, one Investor Affiliated Director shall promptly resign, and such vacancy shall be filled by the Board based on the recommendation of the Nominating and Governance Committee, but in any event such replacement director shall be a Non-Affiliated Director, and the right to designate directors pursuant to Section 4.10(d)(ii)(A) shall automatically terminate;

(B) upon the occurrence of the Second Step Down Event (but prior to the Third Step Down Event), (x) if there are four Investor Directors then serving on the Board, one Investor Director shall promptly resign and (y) any director elected to fill a vacancy pursuant to Section 4.10(d)(viii)(A), shall promptly resign, and the size of the Board shall automatically be reduced by two directors (to seven total directors) and the right to designate directors pursuant to Section 4.10(d)(ii)(B) shall automatically terminate;

(C) upon the occurrence of the Third Step Down Event (but prior to the Fourth Step Down Event), if there are three Investor Directors then serving on the Board, one Investor Director shall promptly resign, the size of the Board shall automatically be reduced by one director (to six total directors) and the right to designate directors pursuant to Section 4.10(d)(ii)(C) shall automatically terminate;

(D) upon the occurrence of the Fourth Step Down Event (but prior to the Fifth Step Down Event), if there are two Investor Directors then serving on the Board, one Investor Director shall promptly resign, the size of the Board shall automatically be reduced by one director (to five total directors) and the right to designate directors pursuant to Section 4.10(d)(ii)(D) shall automatically terminate; and

(E) upon the occurrence of the Fifth Step Down Event, if there is an Investor Director then serving on the Board, that remaining Investor Director shall promptly resign from the Board, unless the Non-Affiliated Directors, by a majority vote, determine otherwise, and the right to designate directors pursuant to Section 4.10(d)(ii) shall automatically terminate.

(ix) If, following the redemption or exchange of Common Units for Common Stock pursuant to the Limited Partnership Agreement, or after termination of this Certificate of Designation or such time as no shares of Series A Preferred Stock remain outstanding, the Permitted Series A Owners would continue to satisfy the ownership percentages set forth in Section 4.10(d)(ii) as a result of their continuous ownership of Common Stock relative to the Total Shares, the Permitted Series A Owners may request the Corporation to enter into such agreements reflecting the rights set forth in this Section 4.10(d), which the Corporation and the Permitted Series A Owners shall enter into as promptly as practicable after such request (but in any event, no later than 30 days after such request).

(e) Dividends; Non-Economic Interest. Notwithstanding anything to the contrary in these Third Amended and Restated Articles of Incorporation and this Section 4.10, (i) dividends shall not be declared or paid on the Series A Preferred Stock and (ii) the Series A Preferred Stock shall otherwise be non-economic interests in the Corporation in all respects.

(f) Transfer of Series A Preferred Stock.

(i) Subject to Section 4.10(g)(iii), a holder of Series A Preferred Stock may surrender shares of Series A Preferred Stock (or fractions thereof) to the Corporation for no consideration at any time. Following the surrender of any shares of Series A Preferred Stock (or fractions thereof) to the Corporation, the Corporation will take all actions necessary to retire such shares (or fractions) and such shares (or fractions) shall not be re-issued by the Corporation.

(ii) A holder of Series A Preferred Stock may transfer shares of Series A Preferred Stock (or fractions thereof) to any transferee (other than the Corporation) only if, and only to the extent, (i) such transfer would be permitted by the Limited Partnership Agreement (as defined below) and (ii) such holder also simultaneously transfers one Common Unit for each one one-hundredth (1/100th) of a share of Series A Preferred Stock transferred to such transferee in compliance with the Amended and Restated Agreement of Limited Partnership of PV Energy Holdings, L.P., a Delaware limited partnership (the "Partnership"), dated on or around January 15, 2021, as such agreement may be further amended, restated, amended and restated, supplemented or otherwise modified from time to time (the "Limited Partnership Agreement"). The transfer restrictions described in this Section 4.10(f)(ii) are referred to as the "Restrictions."

(iii) Any purported transfer of shares of Series A Preferred Stock (or fractions thereof) in violation of the Restrictions shall be null and void. If, notwithstanding the Restrictions, a person shall, voluntarily or involuntarily, purportedly become or attempt to become, the purported owner ("Purported Owner") of shares of Series A Preferred Stock (or fractions thereof) in violation of the Restrictions, then the

Purported Owner shall not obtain any rights in and to such shares of Series A Preferred Stock (or fractions thereof) (the "Restricted Shares"), and the purported transfer of the Restricted Shares to the Purported Owner shall not be recognized by the Corporation's transfer agent (the "Transfer Agent").

(iv) The Board may, with the approval of a majority of the Non-Affiliated Directors if such approval is sought before the First Step Down Event, and to the extent permitted by law, from time to time establish, modify, amend or rescind, by bylaw or otherwise, regulations and procedures that are consistent with the provisions of this Section 4.10(f) for determining whether any transfer or acquisition of shares of Series A Preferred Stock would violate the Restrictions and for the orderly application, administration and implementation of the provisions of this Section 4.10(f). Any such procedures and regulations shall be kept on file with the Secretary of the Corporation and with its Transfer Agent and shall be made available for inspection by any prospective transferee and, upon written request, shall be mailed to holders of shares of Series A Preferred Stock.

(g) Conversion; Redemption; Cancellation of Series A Preferred Stock.

(i) The Series A Preferred Stock is not convertible into any other security of the Corporation.

(ii) To the extent that any Permitted Series A Owner exercises its right pursuant to the Limited Partnership Agreement to have its Common Units redeemed by the Partnership in accordance with the Limited Partnership Agreement, then simultaneously with the payment of the consideration due under the Limited Partnership Agreement to such Permitted Series A Owner, the Corporation shall cancel for no consideration a number of shares of Series A Preferred Stock (or fractions thereof) registered in the name of the redeeming or exchanging Permitted Series A Owner equal to one one-hundredth (1/100th) of the number of Common Units held by such Permitted Series A Owner that are redeemed or exchanged in such redemption or exchange transaction. The Corporation will at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of issuance upon redemption or exchange of the Common Units for Common Stock pursuant to the Limited Partnership Agreement, such number of shares of Common Stock that shall be issuable upon any such redemption or exchange pursuant to the Limited Partnership Agreement; provided that nothing contained herein shall be construed to preclude the Corporation from satisfying its obligations in respect of any such redemption of Common Units pursuant to the Limited Partnership Agreement by delivering to the holder of Common Units upon such redemption cash in lieu of shares of Common Stock in the amount permitted by and as provided in the Limited Partnership Agreement. All shares of Common Stock that shall be issued upon any such redemption or exchange will, upon issuance in accordance with the Limited Partnership Agreement, be validly issued, fully paid and nonassessable.

(iii) In the event of an Adjustment Surrender (as defined in the Limited Partnership Agreement), the Corporation shall cancel in exchange for the aggregate par value thereof a number of shares of Series A Preferred Stock (or fractions thereof) registered in the name of the applicable Permitted Series A Owner equal to one one-hundredth (1/100th) of the number of Common Units surrendered to the Partnership by such Permitted Series A Owner pursuant to Section 3.03(c)(i) of the Limited Partnership Agreement.

(iv) In the event that no Permitted Series A Owner owns any Common Units that are redeemable or exchangeable pursuant to the Limited Partnership Agreement, then all shares of Series A Preferred Stock (and fractions thereof) will be cancelled for no consideration, and the Corporation will take all actions necessary to retire such shares (and fractions thereof) and such shares (and fractions thereof) shall not be re-issued by the Corporation.

(h) Restrictive Legend. Unless otherwise determined by the Board, shares of the Series A Preferred Stock shall be issued in book-entry form and shall not be certificated. All book entries representing shares of Series A Preferred Stock shall bear a legend substantially in the following form (or in such other form as the Board may determine):

THE SECURITIES REPRESENTED BY THIS BOOK ENTRY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT") OR ANY STATE SECURITIES LAWS AND MAY NOT BE REOFFERED, SOLD, ASSIGNED, TRANSFERRED, PLEDGED, ENCUMBERED OR OTHERWISE DISPOSED OF IN THE ABSENCE OF SUCH REGISTRATION OR UNLESS SUCH TRANSACTION IS EXEMPT FROM, OR NOT SUBJECT TO, REGISTRATION. THE SECURITIES REPRESENTED BY THIS BOOK ENTRY ARE ALSO SUBJECT TO THE RESTRICTIONS (INCLUDING RESTRICTIONS ON TRANSFER) SET FORTH IN (1) THE THIRD AMENDED AND RESTATED ARTICLES OF INCORPORATION OF PENN VIRGINIA CORPORATION (A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE CORPORATION AND SHALL BE PROVIDED FREE OF CHARGE TO ANY SHAREHOLDER MAKING A REQUEST THEREFOR), (2) THE AMENDED AND RESTATED AGREEMENT OF LIMITED PARTNERSHIP OF PV ENERGY HOLDINGS, L.P., DATED ON OR AROUND JANUARY 15, 2021, AND (3) THE INVESTOR AND REGISTRATION RIGHTS AGREEMENT, DATED ON OR AROUND JANUARY 15, 2021, BY AND AMONG THE CORPORATION AND THE OTHER PARTIES THERETO.

(i) Fractional Shares. The Series A Preferred Stock may be issued in fractions of one one-hundredth (1/100th) of a share which shall entitle the holder, in proportion to such holder's fractional shares, to exercise voting rights and to have the benefit of all other rights of holders of Series A Preferred Stock, including those set forth in Section 4.10(k).

(j) Cancellation. At any time when there are no longer any shares of Series A Preferred Stock outstanding, this Section 4.10 automatically will be deemed null and void.

(k) Liquidation, Dissolution or Winding Up of the Corporation.

(i) In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, after payment or provision for payment of the debts and other liabilities of the Corporation, the holder of the Series A Preferred Stock shall be entitled to receive, out of the assets of the Corporation or proceeds thereof available for distribution to shareholders of the Corporation, before any distribution of such assets or proceeds is made to or set aside for the holders of Common Stock of the Corporation and any other stock of the Corporation ranking junior to the Series A Preferred Stock as to such distribution, payment in full in an amount equal to $0.01 per share of Series A Preferred Stock. To the extent a holder owns a fraction of a Series A Preferred Stock, such holder's number of Series A Preferred Stock (and all fractions thereof) will be rounded up to the next whole number of Series A Preferred Stock solely for purposes of this Section 4.10(k).

(ii) For purposes of this Section 4.10(k), the merger or consolidation of the Corporation with any other corporation or other entity, including a merger or consolidation in which the holders of Series A Preferred Stock receive cash, securities or other property for their shares, or the sale, lease or exchange (for cash, securities or other property) of all or substantially all of the assets of the Corporation, shall not constitute a liquidation, dissolution or winding up of the Corporation.

(l) Other Rights. The shares of Series A Preferred Stock shall not have any rights, preferences, privileges or voting powers or relative, participating, optional or other special rights, or qualifications, limitations or restrictions thereof, other than as set forth herein, in these Third Amended and Restated Articles of Incorporation, in the IRRA or as provided by applicable law.

(m) Definitions. As used in this Section 4.10, the terms set forth below shall have the following meanings:

(i) "Affiliate" means, with respect to any Person, any other Person that directly or indirectly controls, is controlled by, or is under common control with, such Person. The term "control" (including the terms "controlled by" and "under common control with") as used in this definition means the possession, directly or indirectly (including through one or more intermediaries), of the power or a authority to direct or cause the direction of management, whether through the ownership of voting securities, by contract or otherwise. For purposes of this Section 4.10, no member of the Investor Group shall be an Affiliate of the Corporation or any of its subsidiaries, and neither the Corporation nor any of its subsidiaries shall be an Affiliate of any member of the Investor Group.

(ii) "Investor Affiliated Director" means a director designated by the Permitted Series A Owners who is an Affiliate, or is employed by or otherwise serves as an officer or director (or equivalent position), of any member of the Investor Group.

(iii) "Investor Group" means Juniper Capital Advisors, L.P., a Delaware limited partnership, Juniper Capital Investment Management, L.P., a Delaware limited partnership, the Permitted Series A Owners and each of their respective controlled Affiliates.

(iv) "Investor Non-Affiliated Director" means a director designated by the Permitted Series A Owners who is not an Affiliate of, or employed by, any member of the Investor Group.

(v) "Non-Affiliated Directors" means a director who qualifies as "independent" under the rules of the Nasdaq Global Select Market or the rules of such other national securities exchange on which the Common Stock is then listed or trading and who is not (i) an Investor Director or (ii) otherwise an Affiliate of the Investor Group, or employed by or otherwise serves as an officer or director of a member of the Investor Group.

(vi) "Person" means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

Section 4.11 **Certain Voting Matters**. Except as otherwise required by these Third Amended and Restated Articles of Incorporation, or the VSCA, the vote required to constitute any voting group's approval of a plan of merger or share exchange shall be a majority of all the votes cast thereon by such voting group.

ARTICLE V
PERPETUAL EXISTENCE

The Corporation shall have perpetual existence.

ARTICLE VI
BOARD OF DIRECTORS

Section 6.1 **General Powers.** The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors of the Corporation. The Board of Directors of the Corporation shall exercise all of the powers and duties conferred by law except as provided by these Third Amended and Restated Articles of Incorporation, the Shareholders Agreement, or the Bylaws.

Section 6.2 **Number and Term.** The Board of Directors shall consist of one (1) or more members. Each director shall hold office until the next annual meeting of shareholders and until his or her successor is elected and qualified or until his or her earlier death, resignation, removal or incapacity. The number of directors may be changed from time to time by resolution of a majority of the Board of Directors. Directors need not be shareholders.

Section 6.3 **Elections.** Unless and except to the extent that the Bylaws of the Corporation shall so require, elections of directors need not be by written ballot.

Section 6.4 **Bylaws.** In furtherance and not in limitation of the powers conferred by law, the Board of Directors is hereby expressly authorized to make, repeal, alter, amend and rescind the Bylaws by a majority vote at any regular or special meeting of the Board of Directors at which a quorum is present or by written consent, in accordance with the terms of the Bylaws. The shareholders shall also have the power to make, repeal, alter, amend and rescind the Bylaws, including the Bylaws made by the Board of Directors, in accordance with the terms of the Bylaws.

ARTICLE VII
INDEMNIFICATION

Section 7.1 **Definitions.** For purposes of this Article VII the following definitions shall apply:

(a) "expenses" include counsel fees, expert witness fees, and costs of investigation, litigation and appeal, as well as any amounts expended in asserting a claim for indemnification;

(b) "indemnitee-related entities" means any corporation, limited liability company, partnership, joint venture, trust, employee benefit plan or other enterprise (other than the Corporation or any other corporation, limited liability company, partnership, joint venture, trust, employee benefit plan or other enterprise for which the Indemnitee has agreed, on behalf of the Corporation or at the Corporation's request, to serve as a director, officer, employee or agent and which service is covered by the indemnity described herein) from whom an Indemnitee may be entitled to indemnification or advancement of expenses with respect to which, in whole or in part, the Corporation may also have an indemnification or advancement obligation;

(c) "jointly indemnifiable claims" shall be broadly construed and shall include, without limitation, any action, suit or proceeding for which the Indemnitee shall be entitled to indemnification or advancement of expenses from both the indemnitee-related entities and the Corporation pursuant to applicable law, any agreement, articles of incorporation, bylaws, partnership agreement, operating agreement, certificate of formation, certificate of limited partnership or comparable organizational documents of the Corporation or the indemnitee-related entities, as applicable;

(d) "liability" means the obligation to pay a judgment, settlement, penalty, fine, or other such obligation, including, without limitation, any excise tax assessed with respect to an employee benefit plan;

(e) "legal entity" means a corporation, partnership, joint venture, trust, employee benefit plan or other enterprise;

(f) "predecessor entity" means a legal entity the existence of which ceased upon its acquisition by the Corporation in a merger or otherwise; and

(g) "proceeding" means any threatened, pending, or completed action, suit, proceeding or appeal whether civil, criminal, administrative or investigative and whether formal or informal.

Section 7.2 Indemnification of Directors and Officers. To the fullest extent permitted by the VSCA, as it exists on the date hereof or may hereafter be amended, the Corporation shall indemnify any individual who is, was or is threatened to be made a party to a proceeding (including a proceeding by or in the right of the Corporation) because such individual is or was a director or officer of the Corporation, or because such individual is or was serving the Corporation or any other legal entity in any capacity at the request of the Corporation (an "Indemnitee"), against all liabilities and reasonable expenses incurred in the proceeding. Service as a director or officer of a legal entity controlled by the Corporation shall be deemed service at the request of the Corporation. The determination that indemnification under this Section 7.2 is permissible and the evaluation as to the reasonableness of expenses in a specific case shall be made, in the case of a director, as provided by law, and in the case of an officer, as provided in Section 7.3? provided, however, that if a majority of the directors of the Corporation has changed after the date of the alleged conduct giving rise to a claim for indemnification, such determination and evaluation shall, at the option of the person claiming indemnification, be made by special legal counsel agreed upon by the Board of Directors and such person. Unless a determination has been made that indemnification is not permissible, the Corporation shall make advances and reimbursements for expenses incurred by a director or officer in a proceeding upon receipt of an undertaking from such director or officer to repay the same if it is ultimately determined that such director or officer is not entitled to indemnification. Such undertaking shall be an unlimited, unsecured general obligation of the director or officer and shall be accepted without reference to such director's or officer's ability to make repayment. The termination of a proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent shall not of itself create a presumption that a director or officer acted in such a manner as to make such director or officer ineligible for indemnification. The Corporation is authorized to contract in advance to indemnify and make advances and reimbursements for expenses to any of its directors or officers to the same extent provided in this Section 7.2. The rights of each person entitled to indemnification under this Article VII shall inure to the benefit of such person's heirs, executors and administrators. Special legal counsel selected to make determinations under this Article VII may be counsel for the Corporation.

Section 7.3 Procedures for Indemnification of Directors and Officers. Any indemnification or advancement of expenses under this Article VII shall be made promptly, and in any event within thirty (30) days, upon the written request of the Indemnitee, except in the case of a claim for an advancement of expenses, in which case the applicable period shall be twenty (20) days. If a determination by the Corporation that the Indemnitee is entitled to indemnification pursuant to this Article VII is required, and the Corporation fails to respond within sixty (60) days to a written request for indemnity, the Corporation shall be deemed to have approved the request. If the Corporation denies a written request for indemnification or advancement of expenses, in whole or in part, or if payment in full pursuant to such request is not made within thirty (30) days (or twenty (20) days in the case of a claim for advancement of expenses), the right to indemnification or advancement of expenses as granted by this Article VII shall be enforceable by the Indemnitee in any court of competent jurisdiction. Such Indemnitee's costs and expenses incurred in connection with successfully establishing the right to indemnification, in whole or in part, in any such action or in a suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, shall also be indemnified by the Corporation. It shall be a defense to any such action (other than an action brought to enforce a claim for expenses incurred in defending any proceeding in advance of its final disposition where the required undertaking, if any, has been tendered to the Corporation) that the Indemnitee has not met the standards of conduct which make it permissible under the VSCA for the Corporation to indemnify the Indemnitee for the amount claimed, but the burden of such defense shall be on the Corporation. Neither the failure of the Corporation (including its Board of Directors, independent legal counsel, or its shareholders) to have made a determination prior to the commencement of such action that indemnification of the Indemnitee is proper in the circumstances because he or she has met the applicable standard of conduct set forth in the VSCA nor an actual determination by the Corporation (including its Board of Directors, independent legal counsel, or its shareholders) that the Indemnitee has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that the claimant has not met the applicable standard of conduct. In any suit brought by the Indemnitee to enforce a right to indemnification or to an advancement of expenses hereunder, or brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the burden of proving that the Indemnitee is not entitled to be indemnified, or to such advancement of expenses, under this Article VII or otherwise, shall be on the Corporation.

Section 7.4 **Requested Services.** Without limiting the meaning of the phrase "serving at the request of the Corporation" as used herein, any person serving as a director, officer or equivalent executive of (a) another corporation of which a majority of the shares entitled to vote in the election of its directors is owned, directly or indirectly, by the Corporation, or (b) any employee benefit plan maintained or sponsored by the Corporation or any corporation referred to in clause (a), shall be deemed to be doing so at the request of the Corporation for purposes of Section 7.2.

Section 7.5 **Indemnification of Others**. The Corporation may, to a lesser extent or to the same extent that it is required to provide indemnification and make advances and reimbursements for expenses to its directors and officers pursuant to Section 7.2, provide indemnification and make advances and reimbursements for expenses to its employees and agents, the directors, officers, employees and agents of its subsidiaries and predecessor entities, and any person serving any other legal entity in any capacity at the request of the Corporation, and may contract in advance to do so. The determination that indemnification under this Section 7.5 is permissible, the authorization of such indemnification and the evaluation as to the reasonableness of expenses in a specific case shall be made as authorized from time to time by general or specific action of the Board of Directors, which action may be taken before or after a claim for indemnification is made, or as otherwise provided by law. No person's rights under Section 7.2 shall be limited by the provisions of this Section 7.5.

Section 7.6 **Contract Rights.** The provisions of this Article VII shall be deemed to be a contract right between the Corporation and each Indemnitee and such rights shall continue as to an Indemnitee who has ceased to be a director, officer, employee, fiduciary or agent, or if the relevant provisions of the VSCA or other applicable law cease to be in effect. Such contract right shall vest for each Indemnitee who is a director, officer, employee, fiduciary or agent at the time such person is elected or appointed to such position, and no repeal or modification of this Article VII or any such law shall affect any such vested rights or obligations then existing with respect to any state of facts or proceeding arising after such election or appointment and prior to such repeal or modification.

Section 7.7 **Insurance.** The Corporation may purchase and maintain insurance on its own behalf and on behalf of any person who is or was a director, officer, employee, fiduciary or agent of the Corporation or was serving at the request of the Corporation as a director, officer, employee, fiduciary or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power to indemnify such person against such liability under the VSCA or this Article VII.

Section 7.8 **Merger or Consolidation.** For purposes of this Article VII, references to "the Corporation" shall include, in addition to the resulting corporation, any constituent corporation (including, without limitation, any constituent of a constituent) absorbed in a consolidation or merged in a merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director or officer of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee, fiduciary or agent of another corporation or of a partnership, joint venture, trust or other enterprise, shall stand in the same position under this Article VII with respect to the resulting or surviving corporation as he or she would have with respect to such constituent corporation if its separate existence had continued.

Section 7.9 **Non-Exclusivity of Rights.** The rights to indemnification and the advancement of expenses and costs conferred under this Article VII shall not be exclusive of any other rights to which those seeking indemnification or advancement of expenses and costs may be entitled under any applicable law, provision of these Third Amended and Restated Articles of Incorporation, bylaw, agreement, vote of shareholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office. The Corporation is specifically authorized to enter into individual contracts with any or all of its directors or officers respecting indemnification and advances, to the fullest extent not prohibited by the VSCA or by any other applicable law.

Section 7.10 **Amendments**. No amendment, repeal or modification of, and no adoption of any provision inconsistent with, any provision of this Article VII shall adversely affect any right or protection of a director or officer of the Corporation existing by virtue of this Article VII at the time of such amendment, repeal, modification or adoption.

Section 7.11 Jointly Indemnifiable Claims. Given that certain jointly indemnifiable claims (as defined below) may arise due to the service of the Indemnitee as a director and/or officer of the Corporation at the request of the indemnitee-related entities (as defined below), the Corporation shall be fully and primarily responsible for the payment to the Indemnitee in respect of indemnification or advancement of expenses in connection with any such jointly indemnifiable claims, pursuant to and in accordance with the terms of this Article VII, irrespective of any right of recovery the Indemnitee may have from the indemnitee-related entities. Under no circumstance shall the Corporation be entitled to any right of subrogation against or contribution by the indemnitee-related entities and no right of advancement, indemnification or recovery the Indemnitee may have from the indemnitee-related entities shall reduce or otherwise alter the rights of the Indemnitee or the obligations of the Corporation under this Article VII. In the event that any of the indemnitee-related entities shall make any payment to the Indemnitee in respect of indemnification or advancement of expenses with respect to any jointly indemnifiable claim, the indemnitee-related entity making such payment shall be subrogated to the extent of such payment to all of the rights of recovery of the Indemnitee against the Corporation, and the Indemnitee shall execute all documents and instruments reasonably required and shall do all things that may be reasonably necessary to secure such rights, including the execution of such documents and instruments as may be necessary to enable the indemnitee-related entities effectively to bring suit to enforce such rights. Each of the indemnitee-related entities shall be third-party beneficiaries with respect to this Section 7.11 and entitled to enforce this Section 7.11.

ARTICLE VIII
LIMITED LIABILITY OF DIRECTORS

To the fullest extent permitted by the VSCA, as it exists on the date hereof or may hereafter be amended, a director or officer of the Corporation shall not be personally liable to the Corporation or its shareholders for monetary damages with respect to any transaction, occurrence or course of conduct, whether prior or subsequent to the date hereof. Any repeal or amendment or modification of this Article VIII, or the adoption of any provision of these Third Amended and Restated Articles of Incorporation inconsistent with this Article VIII, will, to the extent permitted by applicable law, be prospective only (except to the extent such amendment or change in applicable law permits the Corporation to provide a broader limitation on a retroactive basis than permitted prior thereto), and will not adversely affect any limitation on the personal liability of any director of the Corporation at the time of such repeal or amendment or modification or adoption of such inconsistent provision.

ARTICLE IX
ELECTION

The Corporation expressly elects not to be governed by Article 14 (Affiliated Transactions) of the VSCA.

ARTICLE X
CORPORATE OPPORTUNITIES

Section 10.1 **General**. To the greatest extent permitted by law and except as otherwise set forth in these Third Amended and Restated Articles of Incorporation and except as expressly agreed to by a Dual Role Person (as defined below) in a separate instrument signed by a Dual Role Person with the Corporation or any predecessor thereto:

(a) To the extent provided in this Article X, the Corporation renounces any interest or expectancy of the Corporation or any of its Affiliates in, or in being offered an opportunity to participate in, any Corporate Opportunity about which a Dual Role Person acquires knowledge. Subject to Section 10.1(c), no Dual Role Person or any of their respective Representatives shall owe any fiduciary duty to, nor shall any Dual Role Person or any of their respective Representatives be liable for breach of fiduciary duty to, the Corporation or any of its shareholders in connection with a Corporate Opportunity. No Dual Role Person or any of their respective Representatives shall violate a duty or obligation to the Corporation merely because such person's conduct furthers such person's own interest, except as specifically set forth in Section 10.1(c). Any Dual Role Person or any of their respective Representatives may lend money to, and transact other business with, the Corporation and its Representatives. The rights and obligations of any such person who lends money to, contracts with, borrows from or transacts business with the Corporation or any of its Representatives are the same as those of a person who is not involved with the Corporation or any of its Representatives, subject to other applicable law. No transaction between any Dual Role Person or any of their respective Representatives, on the one hand, with the Corporation or any of its Representatives, on the other hand, shall be voidable solely because any Dual Role Person or any of their respective Representatives has a direct or indirect interest in the transaction. Nothing herein contained shall prevent any Dual Role Person or any of their respective Representatives from conducting any other business, including serving as an officer, director, employee, or shareholder of any corporation, partnership or limited liability company, a trustee of any trust, an executor or administrator of any estate, or an administrative official of any other business or not-for-profit entity, or from receiving any compensation in connection therewith.

(b) No Dual Role Person nor any of their respective Representatives shall owe any duty to refrain from (i) engaging in the same or similar activities or lines of business as the Corporation and its Representatives or (ii) doing business with any of the Corporation's or its Representatives' clients or customers. In the event that any Dual Role Person or any of their respective Representatives acquires knowledge of a potential transaction or matter that may be a Corporate Opportunity for any Dual Role Person or any of their respective Representatives, on the one hand, and the Corporation or any of its Representatives, on the other hand, such Dual Role Person or Representatives, as the case may be, shall have no duty to communicate or offer such Corporate Opportunity to the Corporation or any of its Representatives, subject to Section 10.1(c). No Dual Role Person or any of their respective Representatives shall be liable to the Corporation, any of its shareholders or any of its Representatives for breach of any fiduciary duty by reason of the fact that any Dual Role Person or any of their respective Representatives pursues or acquires such Corporate Opportunity for itself, directs such Corporate

Opportunity to another person or does not present such Corporate Opportunity to the Corporation or any of its Representatives, subject to Section 10.1(c).

(c) If a third party presents a Corporate Opportunity to a person who is both a Representative of the Corporation and a Representative of a Dual Role Person, expressly and solely in such person's capacity as a Representative of the Corporation, and such person acts in good faith in a manner consistent with the policy that such Corporate Opportunity belongs to the Corporation, then such person (i) shall be deemed to have fully satisfied and fulfilled any fiduciary duty that such person has to the Corporation as a Representative of the Corporation with respect to such Corporate Opportunity, (ii) shall not be liable to the Corporation, any of its shareholders or any of its Representatives for breach of fiduciary duty by reason of such person's action or inaction with respect to such Corporate Opportunity, (iii) shall be deemed to have acted in good faith and in a manner that such person reasonably believed to be in, and not opposed to, the Corporation's best interests, and (iv) shall be deemed not to have breached such person's duty of loyalty to the Corporation and its shareholders and not have derived an improper personal benefit therefrom; provided that a Dual Role Person may pursue such Corporate Opportunity if the Corporation shall decide not to pursue such Corporate Opportunity.

(d) For purposes of this Article X:

(i) "Affiliate" means with respect to any Person, any other Person directly or indirectly controlling, controlled by or under common control with such Person. For purposes of the foregoing definition, the term "controls," "is controlled by," or "is under common control with" means the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

(ii) "Corporate Opportunity" means any business opportunity that the Corporation is financially able to undertake that is, from its nature, in the Corporation's lines of business, is of practical advantage to the Corporation and is one in which the Corporation has an interest or a reasonable expectancy, and in which, by embracing such opportunity, the self-interest of any Dual Role Person or their respective Representatives will be brought into conflict with the Corporation's self-interest.

(iii) "Dual Role Person" means any individual who is a director of the Corporation and is otherwise an employee, officer or a director of a shareholder.

(iv) "Representatives" means, with respect to any person, the directors, officers, employees, general partners or managing member of such person.

(e) Any person or entity purchasing or otherwise acquiring or obtaining any interest in any capital stock of the Corporation shall be deemed to have notice and to have consented to the provisions of this Article X.

Section 10.2 Amendment. Neither the alteration, amendment, termination, expiration or repeal of this Article X nor the adoption of any provision inconsistent with this Article X shall eliminate or reduce the effect of this Article X in respect of any matter occurring, or any cause of action that, but for this Article X, would accrue or arise, prior to such alteration, amendment, termination, expiration, repeal or adoption.

Section 10.3 **Notice of Article**. To the fullest extent permitted by law, any Person purchasing or otherwise acquiring any interest in any shares of capital stock of the Corporation shall be deemed to have notice of and to have consented to the provisions of this Article X.

ARTICLE XI
FORUM

Unless the Corporation consents in writing to the selection of an alternative forum, to the fullest extent permitted by law, the sole and exclusive forum for (a) any derivative action or proceeding brought on behalf of the Corporation, (b) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or Corporation's shareholders, (c) any action asserting a claim arising pursuant to any provision of the VSCA, or (d) any action asserting a claim governed by the internal affairs doctrine shall be the United States District Court for the Eastern District of Virginia, (or, if United States District Court for the Eastern District of Virginia lacks subject matter jurisdiction, another state or federal court located within the Commonwealth of Virginia). Unless the Corporation consents in writing to the selection of an alternative forum, the sole and exclusive forum for any complaint asserting a cause of action arising under the Securities Act of 1933, as amended, to the fullest extent permitted by law, shall be the federal district courts of the United States of America. Any person or entity purchasing or otherwise acquiring or holding any interest in shares of capital stock of the Corporation shall be deemed to have notice of and consented to the provisions of this Article XI.

ARTICLE XII
AMENDMENTS

The Corporation reserves the right at any time from time to time to amend, alter, change or repeal any provision contained in these Third Amended and Restated Articles of Incorporation, and any other provisions authorized by the laws of the Commonwealth of Virginia at the time in force may be added or inserted, in the manner now or hereafter prescribed herein or by applicable law. All rights, preferences and privileges of whatsoever nature conferred upon shareholders by and pursuant to these Third Amended and Restated Articles of Incorporation in its present form or as hereafter amended are granted subject to the right reserved in this Article XII. Notwithstanding any other provision of these Third Amended and Restated Articles of Incorporation or any provision of law which might otherwise permit a lesser vote, but in addition to any vote required by law and any affirmative vote of the holders of any series of Preferred Stock required by law, by these Third Amended and Restated Articles of Incorporation, or by any Preferred Stock Designation providing for any such Preferred Stock, the affirmative vote of the holders of at least sixty-seven percent (67%) of the total voting power of all the shares of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required to amend, alter, change or repeal, or adopt any provision inconsistent with, Article X. Nothing in this Article XII shall limit the authority of the Board of Directors of the Corporation conferred by Section 6.1 hereof.

ARTICLE XIII
SEVERABILITY

If any provision or provisions of these Third Amended and Restated Articles of Incorporation shall be held to be invalid, illegal or unenforceable as applied to any circumstance for any reason whatsoever, then, to the fullest extent permitted by applicable law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of these Third Amended and Restated Articles of Incorporation (including, without limitation, each portion of any paragraph of these Third Amended and Restated Articles of Incorporation containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby.

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PERFORMANCE RESTRICTED STOCK UNIT AWARD AGREEMENT (OFFICER)

PENN VIRGINIA CORPORATION
2019 MANAGEMENT INCENTIVE PLAN

This Performance Restricted Stock Unit Award Agreement (this "Agreement") is made as of the __ day of _______, ___ (the "Grant Date") between Penn Virginia Corporation (the "Company"), and _____________ ("Participant"), and is made pursuant to the terms of the Penn Virginia Corporation 2019 Management Incentive Plan (as the same may be amended, the "Plan"). Any capitalized term used herein but not defined shall have the meaning set forth in the Plan.

Section 1. Grant of Restricted Stock Units. The Company hereby grants to Participant, subject to the terms and conditions set forth in this Agreement and the Plan, a target Restricted Stock Unit Award consisting of ______ restricted stock units (" Restricted Stock Units"), *provided* that, except as otherwise provided in this Agreement, the final number of Restricted Stock Units earned by the Participant (if any) shall be determined on the vesting date in accordance with the performance criteria set forth on Schedule I (the "Schedule"). As used in this Agreement, "Performance Period" shall refer to the Performance Period set forth on the Schedule. Subject to the terms and conditions set forth in this Agreement and the Plan, each Restricted Stock Unit represents the right to receive one share of Common Stock.

Section 2. Vesting of the Restricted Stock Units.

(a) Generally. The number of Restricted Stock Units that are earned (if any) for the Performance Period shall be based on the extent to which the Company has satisfied the performance conditions set forth on the Schedule, subject to Participant's continuous Service with the Company from the Grant Date through the last day of the Performance Period.

(b) Change in Control. Upon the occurrence of a Change in Control that involves a merger, reclassification, reorganization, or other similar transaction in which the surviving entity, the Company's successor or the direct or indirect parent of the surviving entity or the Company's successor, fails to assume this Restricted Stock Unit Award or substitute this Restricted Stock Unit Award with a substantially equivalent award, the Restricted Stock Units granted hereunder shall become earned and vest assuming that the Performance Period ended on the date of the Change in Control with performance assessed under the performance conditions set forth on the Schedule through the date of such Change in Control (or through the close of the last fiscal quarter ending on or prior to the Change in Control, as determined by the Committee in its sole discretion), subject to Participant's continuous Service with the Company from the Grant Date through the date of the Change of Control. Such earned and vested Restricted Stock Units shall be settled immediately prior to the consummation of, but contingent upon the occurrence of, the Change in Control.

Section 3. Termination of Service. Upon the occurrence of a termination of Participant's Service prior to the last day of the Performance Period, the Restricted Stock Units shall be treated as set forth below.

(a) Death; Disability; Termination by the Company without Cause; Resignation for Good Reason. Upon the occurrence of a termination of Participant's Service as a result of death or Disability,or by the Company or an Affiliate without Cause or by a resignation by the Participant for Good Reason, the continued service requirements that apply to the Restricted Stock Units granted hereunder shall cease to apply and a pro-rata number of Restricted Stock Units shall vest on the date of such termination of Service equal to (1) the number of Restricted Stock Units that would have otherwise been earned based on performance under the performance conditions set forth on the Schedule through the date of such termination of Service (or through the close of the last fiscal quarter ending on or prior to the date of such termination of Service, as determined by the Committee in its sole discretion) *multiplied by* (2) a fraction, the numerator of which is that number of days during the period commencing on the first day of the Performance Period and ending on the last day of employment, and the denominator of which is the total number of days in the Performance Period. Notwithstanding the foregoing, upon a termination of Participant's Service by the Company or an Affiliate without Cause or by a resignation by the Participant for Good Reason, in either case that occurs within twelve (12) months following a Change in Control, the continued service requirements that apply to the Restricted Stock Units granted hereunder shall cease to apply and a number of Restricted Stock Units shall vest on the date of such termination of Service equal to 100% of the number of Restricted Stock Units that would have otherwise been earned based on performance under the performance conditions set forth on the Schedule through the date of such termination of Service (or through the close of the last fiscal quarter ending on or prior to the date of such termination of Service, as determined by the Committee in its sole discretion).

(b) Definitions. For purposes of this Agreement, the terms set forth below shall have the following respective meanings:

(i) "Disability" shall mean a disability that entitles the Participant to benefits under the Company's long-term disability plan, as may be in effect from time to time, as determined by the plan administrator of the long-term disability plan.

(ii) "Good Reason" has the meaning ascribed to such term in any employment agreement between the Participant and the Company or, if none, means the occurrence of any of the following events or conditions: (i) a material diminution in the Participant's title, authority, duties or responsibilities, (ii) a material reduction in the Participant's base salary or annual cash incentive compensation opportunity or (iii) the relocation of the Participant to a location more than fifty (50) miles from the location at which the Participant is based on the Grant Date; provided, however, that such event or condition remains uncured forty-five (45) days following Participant's delivery to the Company of written notice of the specific grounds for Good Reason, which notice is delivered within forty-five (45) days following the initial occurrence of the event or condition giving rise to Good Reason.

(c) Other Terminations of Service. Upon the occurrence of a termination of Participant's Service for any reason other than as provided in Section 2 or Section 3(a), all unvested Restricted Stock Units shall be immediately forfeited and cancelled and Participant shall not be entitled to any compensation or other amount with respect thereto.

Section 4. Settlement. Any Restricted Stock Units that become vested and non-forfeitable pursuant to Section 2 or Section 3 ("Vested RSUs") shall be settled as set forth in Section 2(b) (if applicable), or as soon as administratively practicable following the vesting date, but in no event later than March 15th of the year following the year in which such vesting date occurs (if Section 2(b) is not applicable). Vested RSUs will be settled, unless otherwise determined by the Committee, by the Company through the delivery to the Participant of a number of shares of Common Stock equal to the number of Vested RSUs.

No fractional shares of Common Stock shall be issued. Any fractional earned Restricted Stock Units will be rounded down to the next whole number.

Section 5. Restrictions on Transfer. Except as permitted under Section 11 of the Plan, no Restricted Stock Units may be transferred, pledged, assigned, hypothecated or otherwise disposed of in any way by Participant, except by will or by the laws of descent and distribution. In the event that Participant becomes legally incapacitated, Participant's rights with respect to the Restricted Stock Units shall be exercisable by Participant's legal guardian or legal representative. The Restricted Stock Units shall not be subject to execution, attachment or similar process. Any attempted assignment, transfer, pledge, hypothecation or other disposition of the Restricted Stock Units contrary to the provisions hereof, and the levy of any execution, attachment or similar process upon any Restricted Stock Units, shall be null and void and without effect.

Section 6. Investment Representation. Upon any acquisition of the shares of Common Stock underlying the Restricted Stock Units at a time when there is not in effect a registration statement under the Securities Act relating to the shares of Common Stock, Participant hereby represents and warrants, and by virtue of such acquisition shall be deemed to represent and warrant, to the Company that such shares of Common Stock shall be acquired for investment and not with a view to the distribution thereof, and not with any present intention of distributing the same, and Participant shall provide the Company with such further representations and warranties as the Company may reasonably require in order to ensure compliance with applicable federal and state securities, blue sky and other laws. No shares of Common Stock underlying the Restricted Stock Units shall be acquired unless and until the Company and/or Participant have complied with all applicable federal or state registration, listing and/or qualification requirements and all other requirements of law or of any regulatory agencies having jurisdiction, unless the Committee reasonably determines that Participant may acquire such shares of Common Stock pursuant to an exemption from registration under the applicable securities laws.

Section 7. Adjustments. The Restricted Stock Units granted hereunder shall be subject to the provisions of the Plan, including Section 4.2 thereof.

Section 8. No Right of Continued Service. Nothing in the Plan or this Agreement shall confer upon Participant any right to continued Service with the Company or any Affiliate.

Section 9. **Limitation of Rights; Dividend Equivalents.** Participant shall not have any privileges of a stockholder of the Company with respect to any Restricted Stock Units, including, without limitation, any right to vote any shares of Common Stock underlying such Restricted Stock Units or to receive dividends or other distributions or payments of any kind in respect thereof or exercise any other right of a holder of any such securities, unless and until there is a date of settlement and issuance to Participant of the underlying shares of Common Stock. Notwithstanding the foregoing, the Restricted Stock Unit Award granted hereunder is hereby granted in tandem with corresponding dividend equivalents with respect to each share of Common Stock underlying the Restricted Stock Unit Award granted hereunder (each, a "Dividend Equivalent"), which Dividend Equivalent shall remain outstanding from the Grant Date until the earlier of the settlement or forfeiture of the Restricted Stock Unit to which it corresponds. Participant shall be entitled to accrue payments equal to dividends declared, if any, on the Common Stock underlying the Restricted Stock Unit to which such Dividend Equivalent relates, payable in cash and subject to the vesting of the Restricted Stock Unit to which it relates, at the time the Common Stock underlying the Restricted Stock Unit is settled and delivered to Participant pursuant to Section 4; provided, however, if any dividends or distributions are paid in shares of Common Stock, the shares of Common Stock shall be deposited with the Company, shall be deemed to be part of the Dividend Equivalent, and shall be subject to the same vesting requirements, restrictions on transferability and forfeitability as the Restricted Stock Units to which they correspond. Dividend Equivalents shall not entitle Participant to any payments relating to dividends declared after the earlier to occur of the settlement or forfeiture of the Restricted Stock Units underlying such Dividend Equivalents.

Section 10. **Construction.** The Restricted Stock Unit Award granted hereunder is granted pursuant to the Plan and is in all respects subject to the terms and conditions of the Plan. Participant hereby acknowledges that a copy of the Plan has been delivered to Participant and accepts the Restricted Stock Unit Award hereunder subject to all terms and provisions of the Plan, which are incorporated herein by reference. In the event of a conflict or ambiguity between any term or provision contained herein and a term or provision of the Plan, the Plan will govern and prevail. The construction of and decisions under the Plan and this Agreement are vested in the Board, whose determinations shall be final, conclusive and binding upon Participant.

Section 11. **Notices.** Any notice hereunder by Participant shall be given to the Company in writing and such notice shall be deemed duly given only upon receipt thereof by the General Counsel of the Company at the Company's principal executive offices. Any notice hereunder by the Company shall be given to Participant in writing at the most recent address as Participant may have on file with the Company.

Section 12. **Governing Law.** This Agreement shall be construed and enforced in accordance with, the laws of the Commonwealth of Virginia, without giving effect to the choice of law principles thereof.

Section 13. **Counterparts.** This Agreement may be executed in counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument.

<u>Section 14</u>. **<u>Binding Effect</u>.** This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective heirs, executors, administrators, successors and assigns.

<u>Section 15</u>. **<u>Section 409A</u>.** This Agreement is intended to comply with Section 409A of the Code ("<u>Section 409A</u>") or an exemption thereunder and shall be construed and administered in accordance with Section 409A. Notwithstanding any other provision of the Plan or this Agreement, payments provided under this Agreement may only be made upon an event and in a manner that complies with Section 409A or an applicable exemption. Any payments under this Agreement that may be excluded from Section 409A shall be excluded from Section 409A to the maximum extent possible. The Restricted Stock Units granted hereunder shall be subject to the provisions of Section 13.3 of the Plan. Notwithstanding the foregoing, the Company makes no representations that the payments and benefits provided under this Agreement comply with Section 409A, and in no event shall the Company or any of its Subsidiaries or Affiliates be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by Participant on account of non-compliance with Section 409A or otherwise.

<u>Section 16</u>. **<u>Entire Agreement</u>.** Participant acknowledges and agrees that this Agreement and the Plan constitute the entire agreement between the parties with respect to the subject matter hereof and thereof, superseding any and all prior agreements whether verbal or otherwise, between the parties with respect to such subject matter. Except as otherwise expressly set forth herein, the terms and conditions of the Restricted Stock Units will not be governed or affected by the terms of Participant's employment agreement or offer letter, or any severance, change of control or similar agreement or policy of the Company or any Affiliate to which Participant may be party or by which he or she may be covered.

<u>Section 17</u>. **<u>Clawback</u>.** The Restricted Stock Unit Award will be subject to recoupment in accordance with any clawback or recoupment policy of the Company, including without limitation, any clawback or recoupment policy that the Company is required to adopt pursuant to the listing standards of any national securities exchange or association on which the Company's securities are listed or as is otherwise required by the Dodd-Frank Wall Street Reform and Consumer Protection Act or other applicable law.

<u>Section 18</u>. **<u>Tax Withholding</u>**. This Agreement and the Restricted Stock Units shall be subject to withholding in accordance with Section 13.4 of the Plan, including the net settlement provision therein, Section 13.4(c).

<u>Section 19</u>. **<u>Certain Excise Taxes</u>**. Notwithstanding anything to the contrary in this Agreement, if Participant is a "disqualified individual" (as defined in Section 280G(c) of the Code), and the payments provided for under this Agreement, together with any other payments and benefits which Participant has the right to receive from the Company or any of its Affiliates, would constitute a "parachute payment" (as defined in Section 280G(b)(2) of the Code), then the payments provided for under this Agreement shall be either (a) reduced (but not below zero) so that the present value of such total amounts and benefits received by Participant from the Company and its Affiliates will be one dollar ($1.00) less than three times Participant's "base amount"(as defined in Section 280G(b)(3) of the Code) and so that no portion of such amounts and benefits received by Participant shall be subject to the excise tax imposed by Section 4999 of the Code or (b) paid in full, whichever produces the better net after-tax position to Participant (taking into account any applicable excise tax under Section 4999 of the Code and any other applicable taxes). The determination as to whether any such reduction in the amount of the payments provided hereunder is necessary shall be made by the Company in good faith. If a reduced payment is made or provided and through error or otherwise that payment, when aggregated with other payments and benefits from the Company (or its Affiliates) used in determining if a parachute payment exists, exceeds one dollar ($1.00) less than three times Participant's base amount, then Participant shall immediately repay such excess to the Company upon notification that an overpayment has been made. Nothing in this Agreement shall require the Company (or any of its Affiliates) to be responsible for, or have any liability or obligation with respect to, Participant's excise tax liabilities under Section 4999 of the Code.

(SIGNATURES ON FOLLOWING PAGE)

IN WITNESS WHEREOF, the parties hereto have executed this Agreement effective as of the date first above written.

PENN VIRGINIA CORPORATION

By:__
Name: Darrin Henke
Title: President and CEO

PARTICIPANT

__
Name:__
Date:__

Schedule I
Performance Conditions

The number of Restricted Stock Units that vest pursuant to Section 2(a) of the Agreement and this Schedule I shall be determined based on performance during the 3-year period commencing _______________ and ending ________________ (the "Performance Period") measured 1/2 based on Annualized Total Shareholder Return or Annualized TSR (as defined below) (the "TSR PBRSUs") and 1/2 based on the Company's ROCE (as defined below) (the "ROCE PBRSUs") as set forth in Schedule 1(a) and Schedule 1(b), respectively. Such Vested RSUs, if any, will be settled in accordance with Section 4 of the Agreement.

Schedule 1(a) – TSR PBRSUs

A total of [*insert number that is 1/2 of overall target Restricted Stock Units granted*] Restricted Stock Units shall be allocated as TSR PBRSUs. From 0% to 200% of the TSR PBRSUs will be earned based on both (A) the Company's absolute Annualized TSR performance and (B) the Company's Annualized TSR performance relative to the Peer Companies, in each case over the Performance Period based on the following chart:

	Absolute Annualized TSR Performance		
Relative Annualized TSR Performance	<=0% (a)	0.1% - 25.0% (b)	>25% (c)
<25th Percentile	0.0%	25.0%	50.0%
>=25th Percentile	0.0%	50.0%	100.0%
>=50th Percentile	25.0%	100.0%	150.0%
>=75th Percentile	50.0%	125.0%	200.0%

At the end of the Performance Period, the Company's absolute Annualized TSR for the Performance Period will be assessed to determine which columns of the chart above apply. In determining the relative Annualized TSR for the Performance Period, the Peer Companies and the Company shall be ranked together based on their respective Annualized TSRs for the Performance Period with the highest Annualized TSR being the total number of Peer Companies (for purposes of calculating the relative Annualized TSR, the number of Peer Companies shall include the Company) and the lowest Annualized TSR being number 1. Based on the Company's relative Annualized TSR rank among the Peer Companies, expressed as a percentile ranking calculated by dividing (x) the Company's number rank among the Peer Companies by (y) a number equal to the total number of Peer Companies (including the Company), the number of Restricted Stock Units that vest will be determined in accordance with the applicable row in the above chart.

If the Company's percentile ranking is between any of these payout levels, the percentage multiple of the Restricted Stock Units will be interpolated based on the actual percentile ranking of the Company (rounded to the nearest whole percentile) in relation to the payout levels.

"Annualized Total Shareholder Return" or "Annualized TSR" shall be calculated as follows:

$$\left(\frac{\text{Ending Average Stock Price} + \text{Reinvested Dividend Amount}}{\text{Beginning Average Stock Price}}\right)^{1/n} - 1$$

"Beginning Average Stock Price" means the applicable entity's average volume weighted closing common stock price for the twenty trading days preceding the first day of the Performance Period.

"Ending Average Stock Price" is the applicable entity's average volume weighted closing common stock price for the last twenty trading days of the Performance Period (or, in the event of a qualifying termination of Service or Change in Control under Section 2 or 3 of the Agreement prior to the end of the Performance Period, for the last ten trading days prior to the applicable measurement date specified under Section 2 or 3 of the Agreement).

"n" is the number of years in the Performance Period (subject to reduction in the event of a qualifying termination of Service or Change in Control under Section 2 or 3 of the Agreement prior to the end of the Performance Period).

"Reinvested Dividend Amount" means all dividends paid by the applicable entity in respect of the entity's common stock during the Performance Period (shortened as appropriate, in the event of a qualifying termination of Service or Change in Control under Section 2 or 3 of the Agreement prior to the end of the Performance Period).

Calculation of Annualized TSRs shall be adjusted to take into account any stock splits, stock dividends, reorganizations, or similar events that may affect the common stock prices of the Company or any of the Peer Companies.

The "Peer Companies" used for purposes of calculating relative Annualized TSR shall be the following companies:

[ ]

In the event that any of the Peer Companies ceases to be publicly traded during the applicable Performance Period, it shall be removed from the list of Peer Companies and shall be excluded completely when determining the Company's relative Annualized TSR for the Performance Period. Notwithstanding the foregoing, in the event that any of the Peer Companies files for bankruptcy pursuant to the U.S. Bankruptcy Code during the Performance Period, it shall remain a Peer Company and be given an Annualized TSR of -100% when determining the Company's relative Annualized TSR for the Performance Period.

Schedule 1(b) – ROCE PBRSUs

A total of [*insert number that is 1/2 of overall target Restricted Stock Units granted*] Restricted Stock Units shall be allocated as ROCE PBRSUs. From 0% to 200% of the ROCE PBRSUs will be earned based upon the Company's average annual return on capital employed ("ROCE") over the Performance Period, as reflected in the following chart:

	ROCE Performance	**Payout %**
Threshold	[ ]%	0%
Target	[ ]%	100%
Maximum	[ ]%	200%

The Company's average annual ROCE shall be determined by averaging the ROCE for each individual calendar year during the Performance Period. If the Company's average annual ROCE for the Performance Period is less than the threshold, no Restricted Stock Units will be earned. If the Company's average annual ROCE for the Performance Period is between threshold and target or between target and maximum, the percentage of the Restricted Stock Units earned will be interpolated in relation to the payout levels. In no event will more than 200% of the Restricted Stock Units be earned.

ROCE shall be calculated for each fiscal year in the Performance Period as follows:

$$\text{ROCE} = \left(\frac{\text{Adjusted EBIT}}{\text{Average Capital Employed}}\right)$$

"Adjusted EBIT" means the Company's earnings (loss) before interest and taxes and unrealized hedging gains or losses (including non-cash premiums paid or received).

"Average Capital Employed" means Beginning Capital Employed plus Ending Capital Employed divided by two.

"Beginning Capital Employed" means total assets less current liabilities (excluding the carrying value of short- and long-term unrealized derivative gains and losses) of the Company as of the last day prior to the first day of the applicable fiscal year, pro forma for the Juniper transaction.

"Ending Capital Employed" means total assets less current liabilities (excluding the carrying value of short- and long-term unrealized derivative gains and losses) of the Company, as of the last day of the applicable fiscal year.

In all events, Adjusted EBIT and Average Capital Employed shall be adjusted to give effect to cash payments made in connection with hedging transactions in the year incurred (regardless of the settlement date). Furthermore, Adjusted EBIT and Average Capital Employed may be adjusted at the discretion of the Committee to eliminate the effects of charges for restructurings, discontinued operations, any other unusual or infrequent items, and all items of gain, loss, income or expense determined to be unusual or infrequent in nature or related to the acquisition or disposal of assets, a segment of a business or formation of a joint venture or related to a change in accounting principles, all as determined in accordance with U.S. generally accepted accounting principles or otherwise identified in the Company's financial statements or notes to the financial statements.

Exhibit 31.1

CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Darrin J. Henke, President and Chief Executive Officer of Penn Virginia Corporation (the “Registrant”), certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of the Registrant (this “Report”);

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 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 and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant’s auditors and the audit committee of the Registrant’s board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant’s ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant’s internal control over financial reporting.

Date: August 4, 2021

/s/ DARRIN J. HENKE

Darrin J. Henke
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Russell T Kelley, Jr., Senior Vice President, Chief Financial Officer and Treasurer of Penn Virginia Corporation (the “Registrant”), certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of the Registrant (this “Report”);

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 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 and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant’s auditors and the audit committee of the Registrant’s board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant’s ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant’s internal control over financial reporting.

Date: August 4, 2021

/s/ RUSSELL T KELLEY, JR.

Russell T Kelley, Jr.
Senior Vice President, Chief Financial Officer and Treasurer

Exhibit 32.1

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of Penn Virginia Corporation (the "Company") on Form 10-Q for the quarter ended June 30, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Darrin J. Henke, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 4, 2021

/s/ DARRIN J. HENKE

Darrin J. Henke
President and Chief Executive Officer

This written statement is being furnished to the Securities and Exchange Commission as an exhibit to the Report. A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Penn Virginia Corporation (the “Company”) on Form 10-Q for the quarter ended June 30, 2021, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Russell T Kelley, Jr., Senior Vice President, Chief Financial Officer and Treasurer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 4, 2021

/s/ RUSSELL T KELLEY, JR.

Russell T Kelley, Jr.
Senior Vice President, Chief Financial Officer and Treasurer

This written statement is being furnished to the Securities and Exchange Commission as an exhibit to the Report. A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.