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

FORM 10-Q

(Mark one)		A OF THE CECUPITIES	EVOLANCE ACT OF	400.4
☑ QUARTERLY REPORT PURSUANT TO S	,		EXCHANGE ACT OF	1934
F	or the quarterly period OR	ended June 30, 2020		
☐ TRANSITION REPORT PURSUANT TO) OF THE SECURITIES	EXCHANGE ACT OF	1934
	or the transition period f			
	Commission File Nur	nber: 001-12209		
	ANGE RESOURCES (Exact Name of Registrant as			
Delaware (State or Other Jurisdiction of Incorporation or Organization)			34-1312571 (IRS Employer Identification No.)	
100 Throckmorton Street, Suite 12 Fort Worth, Texas (Address of Principal Executive Offices)			76102 (Zip Code)	
Securities registered pursuant to Section 12(b) of the A	Act: Trading Symbol(s)	Name of	each exchange on which registere	ad.
Common Stock, (Par Value \$0.01)	RRC	N	ew York Stock Exchange	.u
	Registrant's telephone numb (817) 870-			
Indicate by check mark whether the registrant (1) during the preceding 12 months (or for such shorter perior requirements for the past 90 days.				
	Yes ☑ N			
Indicate by check mark whether the registrant has Regulation S-T (§ 232.405 of this chapter) during the pre-		such shorter period that the reg		
Indicate by check mark whether the registrant is a emerging growth company. See the definitions of "large a in Rule 12b-2 of the Exchange Act.				
Large Accelerated Filer	√	Accelerated Filer		
Non-Accelerated Filer		Smaller Reporting Company		
	1	Emerging Growth Company		
If an emerging growth company, indicate by check new or revised financial accounting standards provided provide			d transition period for comp	lying with any
Indicate by check mark whether the registrant is a	shell company (as define Yes 🗀 N		ge Act).	
256,080,133 Common Shares were outstanding or	n July 31, 2020			

RANGE RESOURCES CORPORATION FORM 10-Q Quarter Ended June 30, 2020

Unless the context otherwise indicates, all references in this report to "Range Resources," "Range," "we," "us," or "our" are to Range Resources Corporation and its directly and indirectly owned subsidiaries. For certain industry specific terms used in this Form 10-Q, please see "Glossary of Certain Defined Terms" in our 2019 Annual Report on Form 10-K.

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RANGE RESOURCES CORPORATION CONSOLIDATED BALANCE SHEETS

(In thousands, except per share data)

(in thousands, except per share data)					
		June 30,	December 31,		
		2020		2019	
	(Unaudited)			
Assets					
Current assets:					
Cash and cash equivalents	\$	568	\$	546	
Accounts receivable, less allowance for doubtful accounts of \$5,901 and \$8,784		169,151		272,900	
Derivative assets		143,252		136,848	
Other current assets		18,868		17,508	
Total current assets		331,839		427,802	
Derivative assets		2,984		706	
Natural gas properties, successful efforts method		10,363,419		10,213,737	
Accumulated depletion and depreciation		(4,369,793)		(4,172,702)	
		5,993,626		6,041,035	
Other property and equipment		83,483		102,083	
Accumulated depreciation and amortization		(79,760)		(96,708)	
		3,723		5,375	
Operating lease right-of-use assets		52,367		62,053	
Other assets		67,672		75,432	
Total assets	\$	6,452,211	\$	6,612,403	
Liabilities					
Current liabilities:					
Accounts payable	\$	97,494	\$	155,341	
Asset retirement obligations		2,393		2,393	
Accrued liabilities		312,866		356,392	
Accrued interest		52,860		39,299	
Derivative liabilities		5,306		13,119	
Current maturities of long-term debt		59,334		_	
Total current liabilities		530,253		566,544	
Bank debt		628,221		464,319	
Senior notes		2,510,256		2,659,844	
Senior subordinated notes		26,656		48,774	
Deferred tax liabilities		167,548		160,196	
Derivative liabilities		10,001		949	
Deferred compensation liabilities		58,676		64,070	
Operating lease liabilities		35,104		41,068	
Asset retirement obligations and other liabilities		149,680		259,151	
Total liabilities		4,116,395		4,264,915	
Commitments and contingencies					
Stockholders' Equity					
Preferred stock, \$1 par, 10,000,000 shares authorized, none issued and outstanding		_		_	
Common stock, \$0.01 par, 475,000,000 shares authorized, 256,080,133 issued at		2.560		2.514	
June 30, 2020 and 251,438,936 issued at December 31, 2019		2,560		2,514	
Common stock held in treasury, 10,007,327 shares at June 30, 2020 and 1,808,133 shares at December 31, 2019		(20.104)		(7 226)	
·		(30,194)		(7,236) 5,659,832	
Additional paid-in capital		5,672,596		, ,	
Accumulated other comprehensive loss Retained deficit		(644)		(788)	
		(3,308,502)		(3,306,834)	
Total stockholders' equity	d d	2,335,816	đ	2,347,488	
Total liabilities and stockholders' equity	\$	6,452,211	\$	6,612,403	
The accompanying notes are an integral part of these consolidated	l financial statem	onto			

RANGE RESOURCES CORPORATION CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited, in thousands, except per share data)

	ē	Three Months Ended June 30,				Six Months Ended June 30,					
		2020		2019		2020		2019			
Revenues and other income:											
Natural gas, NGLs and oil sales	\$	349,258	\$	563,579	\$	781,354	\$	1,235,233			
Derivative fair value (loss) income		(6,303)		195,245		226,872		133,514			
Brokered natural gas, marketing and other		33,591		92,605		62,240		230,819			
Total revenues and other income		376,546		851,429		1,070,466		1,599,566			
Costs and expenses:											
Direct operating		24,394		33,981		56,429		67,208			
Transportation, gathering, processing and compression		278,875		301,219		563,640		603,874			
Production and ad valorem taxes		5,557		9,889		14,576		21,199			
Brokered natural gas and marketing		38,161		101,117		70,785		233,422			
Exploration		8,027		8,109		15,104		16,320			
Abandonment and impairment of unproved properties		5,524		12,770		10,937		25,429			
General and administrative		38,288		50,631		80,542		97,269			
Exit and termination costs		10,297		2,206		11,892		2,206			
Deferred compensation plan		12,587		(11,142)		4,050		(7,561)			
Interest		48,624		51,727		96,142		103,264			
Gain on early extinguishment of debt		(8,991)		_		(21,914)		_			
Depletion, depreciation and amortization		104,626		141,505		207,612		280,223			
Impairment of proved properties		_		_		77,000		_			
Loss (gain) on the sale of assets		426		(5,867)		(121,673)		(5,678)			
Total costs and expenses		566,395		696,145		1,065,122		1,437,175			
(Loss) income before income taxes		(189,849)		155,284		5,344	-	162,391			
Income tax (benefit) expense:		, , ,		,		,		ŕ			
Current		(3)		_		(366)					
Deferred		(43,277)		40,099		7,304		45,787			
		(43,280)		40,099		6,938		45,787			
Net (loss) income	\$	(146,569)	\$	115,185	\$	(1,594)	\$	116,604			
Net (loss) income per common share:					===	 -					
Basic	\$	(0.61)	\$	0.46	\$	(0.01)	\$	0.46			
Diluted	\$	(0.61)	\$	0.46	\$	(0.01)	\$	0.46			
	Φ	(0.01)	_		Ф	(0.01)	_				
Dividends paid per common share			\$	0.02			\$	0.04			
Weighted average common shares outstanding:											
Basic		239,472		247,770		242,717		247,773			
Diluted		239,472		248,436		242,717		249,042			

RANGE RESOURCES CORPORATION CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME (Unaudited, in thousands)

	Three Months	Ended Ju	ne 30,	Six Months Ended June 30,						
	 2020		2019		2020		2019			
Net (loss) income	\$ (146,569)	\$	115,185	\$	(1,594)	\$	116,604			
Other comprehensive loss:										
Postretirement benefits:										
Actuarial (loss) gain			(12)		7		(24)			
Amortization of prior service costs	93		92		185		184			
Income tax expense	 (22)		(20)		(48)		(40)			
Total comprehensive (loss) income	\$ (146,498)	\$	115,245	\$	(1,450)	\$	116,724			

RANGE RESOURCES CORPORATION CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited, in thousands)

		Six Months Ended June 30,			
		2020		2019	
Operating activities:					
Net (loss) income	\$	(1,594)	\$	116,604	
Adjustments to reconcile net (loss) income to net cash provided from					
operating activities:					
Deferred income tax expense		7,304		45,787	
Depletion, depreciation and amortization and impairment of proved properties		284,612		280,223	
Abandonment and impairment of unproved properties		10,937		25,429	
Derivative fair value income		(226,872)		(133,514)	
Cash settlements on derivative financial instruments		219,429		58,341	
Allowance for bad debt		400		_	
Amortization of deferred financing costs and other		3,398		3,243	
Deferred and stock-based compensation		23,113		13,727	
Gain on the sale of assets		(121,673)		(5,678)	
Gain on early extinguishment of debt		(21,914)		_	
Changes in working capital:					
Accounts receivable		103,390		201,428	
Other current assets		(4,056)		(5,035)	
Accounts payable		(27,353)		(29,132)	
Accrued liabilities and other		(45,853)		(125,907)	
Net cash provided from operating activities		203,268		445,516	
Investing activities:					
Additions to natural gas properties		(254,073)		(380,718)	
Additions to field service assets		(1,851)		(697)	
Acreage purchases		(14,486)		(31,920)	
Proceeds from disposal of assets		1,071		34,366	
Purchases of marketable securities held by the deferred compensation plan		(11,509)		(15,170)	
Proceeds from the sales of marketable securities held by the deferred					
compensation plan		16,489		18,226	
Net cash used in investing activities		(264,359)		(375,913)	
Financing activities:					
Borrowings on credit facilities		1,045,000		1,151,000	
Repayments on credit facilities		(883,000)		(1,199,000)	
Issuance of senior notes		550,000			
Repayment of senior or senior subordinated notes		(617,982)		_	
Dividends paid				(10,049)	
Treasury stock purchases		(22,992)			
Debt issuance costs		(8,360)		_	
Taxes paid for shares withheld		(2,352)		(3,343)	
Change in cash overdrafts		657		(8,762)	
Proceeds from the sales of common stock held by the deferred compensation plan		142		513	
Net cash provided from (used in) financing activities		61,113		(69,641)	
Increase (decrease) in cash and cash equivalents		22		(38)	
Cash and cash equivalents at beginning of period		546		545	
Cash and cash equivalents at organisms of period	¢	568	<u>¢</u>	507	
Cash and Cash equivalents at end of period	\$	500	\$	50/	

RANGE RESOURCES CORPORATION CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (Unaudited, in thousands)

Fiscal Year 2020	Commo	on stock	(Common stock held in		Additional paid-	Retained (deficit)			ccumulated other nprehensive	
	Shares	Par value	1	treasury		in capital		earnings		loss	Total
Balance as of December 31, 2019	251,439	\$ 2,514	\$	(7,236)	\$	5,659,832	\$	(3,306,834)	\$	(788)	\$ 2,347,488
Issuance of common stock	4,246	42		. —		(1,406)		_		· —	(1,364)
Stock-based compensation											
expense	_	_		_		5,963		_		_	5,963
Treasury stock	_	_		(22,514)		(33)		_		_	(22,547)
Other comprehensive income	_	_		_		_		_		73	73
Net income				<u> </u>				144,975			 144,975
Balance as of March 31, 2020	255,685	2,556	<u>-</u>	(29,750)		5,664,356		(3,161,859)		(715)	2,474,588
Issuance of common stock	376	4		_		854		_		_	858
Issuance of common stock upon											
vesting of PSUs	19	_		_		74		(74)		_	_
Stock-based compensation											
expense	_	_		_		7,312		_		_	7,312
Treasury stock	_	_		(444)		_		_		_	(444)
Other comprehensive income	_	_		_		_		_		71	71
Net loss							_	(146,569)			 (146,569)
Balance as of June 30, 2020	256,080	\$ 2,560	\$	(30,194)	\$	5,672,596	\$	(3,308,502)	\$	(644)	\$ 2,335,816

RANGE RESOURCES CORPORATION CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (Unaudited, in thousands, except per share data)

Fiscal Year 2019			Common		Accumulated						
_	Commo	on stock	stock held in	Additional paid-	Retained (deficit)	other comprehensive					
	Shares	Par value	treasury	in capital	earnings	loss	Total				
Balance as of December 31, 2018	249,520	\$ 2,495	\$ (391)	\$ 5,628,447	\$ (1,570,462)	\$ (658)	\$ 4,059,431				
Issuance of common stock	1,628	17	_	(2,396)	_	_	(2,379)				
Issuance of common stock upon vesting of PSUs	_	_	_	4	(4)	_	_				
Stock-based compensation expense	_	_	_	9,155	_	_	9,155				
Cash dividends paid (\$0.02 per share)	_	_	_	_	(5,023)	_	(5,023)				
Other comprehensive income	_	_	_	_	_	60	60				
Net income					1,419		1,419				
Balance as of March 31, 2019	251,148	2,512	(391)	5,635,210	(1,574,070)	(598)	4,062,663				
Issuance of common stock	206	2	_	1,547	_	_	1,549				
Issuance of common stock upon vesting of PSUs	_	_	_	1	(1)	_	_				
Stock-based compensation expense	_	_	_	7,822	_	_	7,822				
Cash dividends paid (\$0.02 per share)	_	_	_	_	(5,026)	_	(5,026)				
Other comprehensive income	_	_	_	_	_	60	60				
Net income					115,185		115,185				
Balance as of June 30, 2019	251,354	\$ 2,514	\$ (391)	\$ 5,644,580	\$ (1,463,912)	<u>\$ (538</u>)	\$ 4,182,253				

RANGE RESOURCES CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

(1) SUMMARY OF ORGANIZATION AND NATURE OF BUSINESS

Range Resources Corporation is a Fort Worth, Texas-based independent natural gas and natural gas liquids ("NGLs") company primarily engaged in the exploration, development and acquisition of natural gas properties in the Appalachian region of the United States. Our objective is to build stockholder value through returns-focused development of natural gas properties. Range is a Delaware corporation with our common stock listed and traded on the New York Stock Exchange under the symbol "RRC".

(2) BASIS OF PRESENTATION

These consolidated financial statements are unaudited but, in the opinion of management, reflect all adjustments necessary for a fair statement of the results for the periods reported. All adjustments are of a normal recurring nature unless otherwise disclosed. These consolidated financial statements, including selected notes, have been prepared in accordance with the applicable rules of the SEC and do not include all of the information and disclosures required by accounting principles generally accepted in the United States of America ("U.S. GAAP") for complete financial statements.

These interim financial statements should be read in conjunction with the consolidated financial statements and notes thereto included in our 2019 Annual Report on Form 10-K filed with the Securities and Exchange Commission (the "SEC") on February 27, 2020. The results of operations for second quarter and six months ended June 30, 2020 are not necessarily indicative of the results to be expected for the full year.

(3) NEW ACCOUNTING STANDARDS

Not Yet Adopted

None that are expected to have a material impact on our financial statements.

Recently Adopted

Financial Instruments - Credit Losses

In June 2016, an accounting standards update was issued that changes the impairment model for trade receivables, net investments in leases, debt securities, loans and certain other instruments. The standards update requires the use of a forward-looking "expected loss" model as opposed to the current "incurred loss" model. This new standards update was effective for us in first quarter 2020. The adoption of this standards update did not have a material impact on our financial statements.

Fair Value Measurement

In August 2018, an accounting standards update was issued which provides additional disclosure requirements for fair value measurements. This new standards update eliminates the requirement to disclose transfers between Level 1 and Level 2 of the fair value hierarchy and provides for additional disclosures for Level 3 fair value measurements. This new standards update was effective for us in first quarter 2020. The adoption of this standards update did not have a material impact on our financial statements.

Lease Accounting Standard

In February 2016, an accounting standards update was issued that requires an entity to recognize a right-of-use ("ROU") asset and lease liability for all leases. Classification of leases as either a finance or operating lease determines the recognition, measurement and presentation of expenses. This accounting standards update also required certain quantitative and qualitative disclosures about leasing arrangements. The new standard was effective for us in first quarter 2019 and we adopted the new standard using a modified retrospective approach, with the date of initial application effective on January 1, 2019. Consequently, upon transition, we recognized a ROU asset (or operating lease right-of-use asset) and a lease liability with no retained earnings impact. Our adoption did not have a material impact on our consolidated balance sheet as of January 1, 2019, with the primary impact relating to the recognition of ROU assets and operating lease liabilities for operating leases which represents approximately a 1% change to total assets and total liabilities.

(4) DISPOSITIONS

We recognized a pretax net loss of \$426,000 on the sale of assets in second quarter 2020 compared to a pretax net gain of \$5.9 million in second quarter 2019 and a pretax net gain of \$121.7 million in first six months 2020 compared to a pretax net gain of \$5.7 million in first six months 2019. See discussion below for further details.

2020 Dispositions

Pennsylvania. In first quarter 2020, we completed the sale of our shallow legacy assets in Northwest Pennsylvania for proceeds of \$1.0 million. Based upon the receipt of approval from state governmental authorities of a change in operatorship during that quarter, we recognized a pretax gain of \$122.5 million primarily due to the elimination of the asset retirement obligation associated with these properties.

Other. In second quarter 2020, we sold miscellaneous inventory and other assets for proceeds of \$12,000 resulting in a pretax loss of \$216,000. In first quarter 2020, we sold miscellaneous inventory and other assets for proceeds of \$59,000, resulting in a pretax loss of \$617,000.

2019 Dispositions

Pennsylvania. In second quarter 2019, we sold natural gas and oil property, primarily representing over 20,000 unproved acres, for proceeds of \$34.0 million and recognized a pretax gain of \$5.9 million.

Other. In second quarter 2019, we sold miscellaneous inventory and other assets for proceeds of \$34,000 resulting in a pretax gain of \$2,000. In first quarter 2019, we sold miscellaneous inventory and other assets for proceeds of \$332,000 resulting in a pretax loss of \$189,000.

(5) REVENUES FROM CONTRACTS WITH CUSTOMERS

Disaggregation of Revenue

We have three material revenue streams in our business: natural gas sales, NGLs sales and crude oil and condensate sales (referred to below as "oil sales"). Brokered revenue attributable to each product sales type is included here because the volume of product that we purchase is subsequently sold to separate counterparties in accordance with existing sales contracts under which we also sell our production. Accounts receivable attributable to our revenue contracts with customers was \$141.2 million at June 30, 2020 and \$237.0 million at December 31, 2019. Revenue attributable to each of our identified revenue streams is disaggregated below (in thousands):

	Three Months Ended June 30,					Six Months Ended June 30,				
		2020		2019	2020			2019		
Natural gas sales	\$	214,207	\$	343,623	\$	467,456	\$	778,343		
NGLs sales		124,383		167,027		267,622		364,840		
Oil sales		10,668		52,929		46,276		92,050		
Total natural gas, NGLs and oil sales		349,258		563,579		781,354		1,235,233		
Sales of purchased natural gas		30,309		88,004		55,184		222,805		
Sales of purchased NGLs		1,006		1,184		2,146		1,608		
Other marketing revenue		2,276		3,417		4,910		6,406		
Total	\$	382,849	\$	656,184	\$	843,594	\$	1,466,052		

(6) INCOME TAXES

We evaluate and update our annual effective income tax rate on a quarterly basis based on current and forecasted operating results and tax laws. Consequently, based upon the mix and timing of our actual earnings compared to annual projections, our effective tax rate may vary quarterly and may make comparisons not meaningful (NM). Income tax (benefit) expense was as follows (in thousands):

	Three Months Ended				Six Months Ended					
	June 30,				June 30,					
	2020 2		2019		2020		2019			
Income tax (benefit) expense	\$ (43,280)	\$	40,099	\$	6,938	\$	45,787			
Effective tax rate	22.8%		25.8%		NM		28.2%			

Income taxes for discrete items are computed and recorded in the period that the specific transaction occurs. For the three and six months ended June 30, 2020 and 2019, our overall effective tax rate was different than the federal statutory rate due primarily to state income taxes, equity compensation and other tax items which are detailed below (in thousands).

		Three Mont	hs En	Six Months Ended					
		June 3	30,	June 30,					
	2020			2019	2020			2019	
Total (loss) income before income taxes	\$	(189,849)	\$	155,284	\$	5,344	\$	162,391	
U.S. federal statutory rate		21%		21%		21%		21%	
Total tax (benefit) expense at statutory rate		(39,868)		32,610		1,122		34,102	
State and local income taxes, net of federal benefit		(5,822)		5,725		(19)		6,543	
Equity compensation		1,259		497		5,101		3,888	
Permanent differences and other		1,151		1,267		734		1,254	
Total (benefit) expense for income taxes	\$	(43,280)	\$	40,099	\$	6,938	\$	45,787	
Effective tax rate		22.8%		25.8%		NM		28.2%	

(7) INCOME (LOSS) PER COMMON SHARE

Basic income or loss per share attributable to common shareholders is computed as (1) income or loss attributable to common shareholders (2) less income allocable to participating securities (3) divided by weighted average basic shares outstanding. Diluted income or loss per share attributable to common shareholders is computed as (1) basic income or loss attributable to common shareholders (2) plus diluted adjustments to income allocable to participating securities (3) divided by weighted average diluted shares outstanding. The following sets forth a reconciliation of income or loss attributable to common shareholders to basic income or loss attributable to common shareholders to diluted income or loss attributable to common shareholders (in thousands, except per share amounts):

	Three Mon	ths Ended	Six Months Ended				
	June	30,	Jun				
	2020	2019	2020			2019	
Net (loss) income, as reported	\$ (146,569)	\$ 115,185	\$	(1,594)	\$	116,604	
Participating earnings (a)		(1,592)				(1,400)	
Basic net (loss) income attributed to common shareholders	(146,569)	113,593		(1,594)		115,204	
Reallocation of participating earnings (a)	_	4		_		6	
Diluted net (loss) income attributed to common shareholders	\$ (146,569)	\$ 113,597	\$	(1,594)	\$	115,210	
Net (loss) income per common share:	<u> </u>						
Basic	\$ (0.61)	\$ 0.46	\$	(0.01)	\$	0.46	
Diluted	\$ (0.61)	\$ 0.46	\$	(0.01)	\$	0.46	

⁽a) Restricted Stock Awards represent participating securities because they participate in nonforfeitable dividends or distributions with common equity owners. Income allocable to participating securities represents the distributed and undistributed earnings attributable to the participating securities. Participating securities, however, do not participate in undistributed net losses.

The following provides a reconciliation of basic weighted average common shares outstanding to diluted weighted average common shares outstanding (in thousands):

	Three Months	Ended	Six Months Ended		
	June 30,	•	June 30,		
	2020	2019	2020	2019	
Weighted average common shares outstanding – basic Effect of dilutive securities:	239,472	247,770	242,717	247,773	
Director and employee restricted stock and performance based equity awards	_	666	_	1,269	
Weighted average common shares outstanding – diluted	239,472	248,436	242,717	249,042	

Weighted average common shares outstanding-basic for second quarter 2020 excludes 6.4 million shares of restricted stock held in our deferred compensation plan compared to 3.5 million shares in second quarter 2019 (although all awards are issued and outstanding upon grant). Weighted average common shares outstanding-basic for first six months 2020 excludes 4.8 million shares of restricted stock compared to 3.0 million shares for first six months 2019. Due to our net loss for the second quarter and first six months 2020, we excluded all equity grants from the computation of diluted loss per share because

the effect would have been anti-dilutive to the computations. For second quarter 2019, equity grants of 1.7 million were outstanding but not included in the computation of diluted net income per share because the grant prices were greater than the average market price of our common shares and would be anti-dilutive to the computation. For first six months 2019, equity grants of 1.6 million were not included in the computation. Nonvested restricted stock and performance based equity awards are included in the computation using the treasury stock method with the deemed proceeds equal to the average unrecognized compensation during the period.

(8) CAPITALIZED COSTS AND ACCUMULATED DEPRECIATION, DEPLETION AND AMORTIZATION (a)

	June 30, 2020			December 31, 2019	
	(in thou				
Natural gas properties:					
Properties subject to depletion	\$	9,498,785	\$	9,345,557	
Unproved properties		864,634		868,180	
Total		10,363,419	-	10,213,737	
Accumulated depletion and depreciation		(4,369,793)		(4,172,702)	
Net capitalized costs	\$	5,993,626	\$	6,041,035	

⁽a) Includes capitalized asset retirement costs and the associated accumulated amortization.

(9) INDEBTEDNESS

We had the following debt outstanding as of the dates shown below (bank debt interest rate at June 30, 2020 is shown parenthetically). No interest was capitalized during the six months ended June 30, 2020 or the year ended December 31, 2019 (in thousands).

	June 30, 2020	 December 31, 2019
Bank debt (2.3%)	\$ 639,000	\$ 477,000
Senior notes:		
4.875% senior notes due 2025	750,000	750,000
5.00% senior notes due 2023	654,672	741,531
5.00% senior notes due 2022	461,625	511,886
5.75% senior notes due 2021	37,570	374,139
5.875% senior notes due 2022	113,649	297,617
9.25% senior notes due 2026	550,000	_
Other senior notes due 2022	490	590
Total senior notes	 2,568,006	2,675,763
Senior subordinated notes:		
5.00% senior subordinated notes due 2023	7,712	7,712
5.00% senior subordinated notes due 2022	19,054	19,054
5.75% senior subordinated notes due 2021	21,865	22,214
Total senior subordinated notes	48,631	48,980
Total debt	3,255,637	3,201,743
Unamortized premium	1,133	3,013
Unamortized debt issuance costs	(32,303)	(31,819)
Total debt net of debt issuance costs	3,224,467	3,172,937
Less current maturities of long-term debt (a)	(59,334)	_
Total long-term debt	\$ 3,165,133	\$ 3,172,937

⁽a) As of June 30, 2020, current maturities includes \$59.4 million principal amount of our 5.75% senior and senior subordinated notes due 2021.

Bank Debt

In April 2018, we entered into an amended and restated revolving bank facility, which we refer to as our bank debt or our bank credit facility, which is secured by substantially all of our assets and has a maturity date of April 13, 2023. The bank credit facility provides for a maximum facility amount of \$4.0 billion and an initial borrowing base of \$3.0 billion. The bank credit facility also provides for a borrowing base subject to periodic redeterminations and for event-driven unscheduled redeterminations. As of June 30, 2020, our bank group was composed of twenty-six financial institutions with no one bank

holding more than 7.0% of the total facility. The borrowing base may be increased or decreased based on our request and sufficient proved reserves, as determined by the bank group. The commitment amount may be increased to the borrowing base, subject to payment of a mutually acceptable commitment fee to those banks agreeing to participate in the facility increase. Borrowings under the bank credit facility can either be at the alternate base rate ("ABR," as defined in the bank credit facility agreement) plus a spread ranging from 0.25% to 1.25% or LIBOR borrowings at the LIBOR Rate (as defined in the bank credit facility agreement) plus a spread ranging from 1.25% to 2.25%. The applicable spread is dependent upon borrowings relative to the borrowing base. We may elect, from time to time, to convert all or any part of our LIBOR loans to base rate loans or to convert all or any of the base rate loans to LIBOR loans. The weighted average interest rate was 2.7% for second quarter 2020 compared to 4.0% for second quarter 2019. The weighted average interest rate was 2.9% for first six months 2020 compared to 4.0% for first six months 2019. A commitment fee is paid on the undrawn balance based on an annual rate of 0.30% to 0.375%. At June 30, 2020, the commitment fee was 0.30% and the interest rate margin was 2.00% on our LIBOR loans and 1.0% on our base rate loans.

As part of our redetermination completed in March 2020, our borrowing base was reaffirmed for \$3.0 billion and our bank commitment was also reaffirmed at \$2.4 billion. Effective on that date, we also agreed to return to a semi-annual borrowing base redetermination with the next scheduled redetermination to occur by November 2020, an increase in the applicable margin of 50 basis points on drawn facility balances and an increase to the letter of credit sublimit. On June 30, 2020, bank commitments totaled \$2.4 billion and the outstanding balance under our bank credit facility was \$639.0 million, before deducting debt issuance costs. Additionally, we had \$336.4 million of undrawn letters of credit leaving \$1.4 billion of committed borrowing capacity available under the facility.

New Senior Notes

In January 2020, we issued \$550.0 million aggregate principal amount of 9.25% senior notes due 2026 (the "9.25% Notes") for an estimated net proceeds of \$541.6 million after underwriting expenses and commissions of \$8.4 million. The notes were issued at par. The 9.25% Notes were offered to qualified institutional buyers and to non-U.S. persons outside the United States in compliance with Rule 144A and Regulation S of the Securities Act of 1933, as amended (the "Securities Act"). Interest due on the 9.25% Notes is payable semi-annually in February and August and is unconditionally guaranteed on a senior unsecured basis by all of our subsidiary guarantors. On or after February 1, 2025, we may redeem the 9.25% Notes, in whole or in part and from time to time, at 100% of the principal amounts plus accrued and unpaid interest. We may redeem the notes prior to their maturity at redemption prices based on a premium, plus accrued and unpaid interest as described in the indenture governing the 9.25% Notes. Upon occurrence of certain changes in control, we must offer to repurchase the 9.25% Notes. The 9.25% Notes are unsecured and are subordinated to all of our existing and future secured debt, rank equally with all of our existing and future unsecured debt and rank senior to all of our existing and future subordinated debt. On the closing of the issuance of the 9.25% Notes, we used the proceeds to redeem \$324.1 million of our 5.75% senior notes due 2021 and \$175.9 million of our 5.875% senior notes due 2022 with the remainder used to repay a portion of our borrowings under our bank credit facility.

Early Extinguishment of Debt

In January 2020, we purchased for cash \$500.0 million aggregate principal amount of our 5.75% senior notes due 2021 and our 5.875% senior notes due 2022. An early cash tender of \$15.1 million was paid to note holders who tendered their notes within the ten business day early offer period. We recorded a loss on early extinguishment of debt in first quarter 2020 of \$17.5 million, net of transaction call premium costs and the expenses of the remaining deferred financing costs on the repurchased debt. The cash tender offer and early cash tender premium were financed from the issuance of our new 9.25% Notes. See *New Senior Notes* above.

Also in first quarter 2020, we purchased in the open market \$48.5 million principal amount of our 5.00% senior notes due 2022, \$5.8 million principal amount of our 5.875% senior notes due 2022 and \$56.6 million principal amount of our 5.00% senior notes due 2023. We recognized a gain on early extinguishment of debt in first quarter 2020 of \$30.4 million, net of transaction costs and the expensing of the remaining deferred financing costs on the repurchased debt.

In second quarter 2020, we purchased in the open market \$349,000 principal amount of our 5.75% senior subordinated notes due 2021, \$12.5 million principal amount of our 5.75% senior notes due 2021, \$1.8 million principal amount of our 5.00% senior notes due 2022, \$2.2 million principal amount of our 5.87% senior notes due 2022 and \$30.2 million principal amount of our 5.00% senior notes due 2023. We recognized a gain on early extinguishment of debt in second quarter 2020 of \$9.0 million, net of transaction costs and the expensing of the remaining deferred financing costs on the repurchased debt.

Senior Notes and Senior Subordinated Notes

If we experience a change of control, noteholders may require us to repurchase all or a portion of our senior notes and senior subordinated notes at 101% of the aggregate principal amount plus accrued and unpaid interest, if any. All of the senior subordinated notes and the guarantees by our subsidiary guarantors are general, unsecured obligations and are subordinated to

our bank debt and to existing and future senior debt that we or our subsidiary guarantors are permitted to incur.

Guarantees

Range is a holding company which owns no operating assets and has no significant operations independent of its subsidiaries. The guarantees by our subsidiaries, which are directly or indirectly owned by Range, of our senior notes, senior subordinated notes and our bank credit facility are full and unconditional and joint and several, subject to certain customary release provisions. A subsidiary guarantor may be released from its obligations under the guarantee:

- in the event of a sale or other disposition of all or substantially all of the assets of the subsidiary guarantor or a sale or other disposition of all the capital stock of the subsidiary guarantor, to any corporation or other person (including an unrestricted subsidiary of Range) by way of merger, consolidation, or otherwise; or
- if Range designates any restricted subsidiary that is a guarantor to be an unrestricted subsidiary in accordance with the terms of the indenture.

Debt Covenants

Our bank credit facility contains negative covenants that limit our ability, among other things, to pay cash dividends, incur additional indebtedness, sell assets, enter into certain hedging contracts, change the nature of our business or operations, merge, consolidate or make certain investments. In addition, we are required to maintain a ratio of EBITDAX (as defined in the bank credit facility agreement) to cash interest expense of equal to or greater than 2.5 and a current ratio (as defined in the bank credit facility agreement) of no less than 1.0. In addition, the ratio of the present value of proved reserves (as defined in the bank credit facility agreement) to total debt must be equal to or greater than 1.5 until Range has two investment grade ratings. We were in compliance with applicable covenants under the bank credit facility at June 30, 2020.

(10) ASSET RETIREMENT OBLIGATIONS

Our asset retirement obligations primarily represent the estimated present value of the amounts we will incur to plug, abandon and remediate our producing properties at the end of their productive lives. Significant inputs used in determining such obligations include estimates of plugging and abandonment costs, estimated future inflation rates and well lives. The inputs are calculated based on historical data as well as current estimated costs. A reconciliation of our liability for plugging and abandonment costs for the six months ended June 30, 2020 and the year ended December 31, 2019 is as follows (in thousands):

	S	ix Months	Year			
		Ended		Ended		
		June 30,		December 31,		
		2020		2019		
Beginning of period	\$	251,076	\$	312,754		
Liabilities incurred		1,618		4,063		
Acquisitions		123		_		
Liabilities settled		(1,416)		(5,953)		
Disposition of wells (a)		(126,268)		(82,576)		
Accretion expense		4,729		15,658		
Change in estimate		2,507		7,130		
End of period		132,369		251,076		
Less current portion		(2,393)		(2,393)		
Long-term asset retirement obligations	\$	129,976	\$	248,683		

⁽a) The six months ended June 30, 2020 primarily represents the completion of the sale of our shallow legacy assets in Northwest Pennsylvania.

Accretion expense is recognized as a component of depreciation, depletion and amortization expense in the accompanying consolidated statements of operations.

(11) DERIVATIVE ACTIVITIES

We use commodity-based derivative contracts to manage exposure to commodity price fluctuations. We do not enter into these arrangements for speculative or trading purposes. We utilize commodity swaps, collars, three-way collars, calls or swaptions to (1) reduce the effect of price volatility of the commodities we produce and sell and (2) support our annual capital budget and expenditure plans. The fair value of our derivative contracts, represented by the estimated amount that would be realized upon termination, based on a comparison of the contract price and a reference price, generally the New York Mercantile Exchange ("NYMEX") for natural gas and crude oil or Mont Belvieu for NGLs, approximated a net gain of \$139.3 million at June 30, 2020. These contracts expire monthly through December 2021. The following table sets forth our commodity-based derivative volumes by year as of June 30, 2020, excluding our basis and freight swaps which are discussed separately below:

Period	Contract Type	Volume Hedged		Weighted A		ledge Price		
				Swap	Sold Put	Floor	Ceiling	
Natural Gas (1)			<u></u>					
2020	Swaps	1,146,848 Mmbtu/day	\$	2.59				
2021	Swaps	70,000 Mmbtu/day	\$	2.61				
2021	Collars	60,000 Mmbtu/day				\$ 2.60	\$ 3.00	
July – September 2020	Calls	60,000 Mmbtu/day					\$ 2.50	
July – October 2020	Three-way Collars	60,000 Mmbtu/day			\$ 1.75	\$ 2.00	\$ 2.53	
2021	Three-way Collars	240,000 Mmbtu/day			\$ 1.99	\$ 2.33	\$ 2.60	
Crude Oil (1)								
2020	Swaps	7,000 bbls/day	\$	58.12				
2021	Swaps	1,000 bbls/day	\$	55.00				
July – September 2020	Calls	500 bbls/day					\$ 59.00	
NGLs (C3-Propane)								
July – September 2020	Swaps	3,022 bbls/day	\$	0.47/gallon				
NGLs (NC4-Normal Butane)								
July – September 2020	Swaps	2,500 bbls/day	\$	0.57/gallon				
July – September 2020	Calls	2,500 bbls/day					\$ 0.57/gallon	
NGLs (C5-Natural Gasoline)								
July – September 2020	Swaps	1,674 bbls/day	\$	0.73/gallon				

⁽¹⁾We also sold natural gas call swaptions of 180,000 Mmbtu/day for 2021 at a weighted average price of \$2.82. In addition, we sold oil call swaptions of 1,000 bbls per day for 2021 at a weighted average price of \$55.00.

Every derivative instrument is required to be recorded on the balance sheet as either an asset or a liability measured at its fair value. We recognize all changes in fair value of these derivatives as earnings in derivative fair value income or loss in the periods in which they occur.

Basis Swap Contracts

In addition to the swaps, collars, calls and swaptions described above, at June 30, 2020, we had natural gas basis swap contracts which lock in the differential between NYMEX Henry Hub and certain of our physical pricing indices. These contracts settle monthly through December 2024 and include a total volume of 147,550,000 Mmbtu. The fair value of these contracts was a loss of \$4.5 million at June 30, 2020.

At June 30, 2020, we also had propane spread swap contracts which lock in the differential between Mont Belvieu and international propane indices. The contracts settle monthly in 2020 and include a total volume of 687,500 barrels. The fair value of these contracts was a gain of \$1.0 million at June 30, 2020.

Freight Swap Contracts

In connection with our international propane sales, we utilize propane swaps. To further hedge our propane price, at June 30, 2020, we had freight swap contracts on the Baltic Exchange which lock in the freight rate for a specific trade route. These contracts settle monthly through December 2021 with the fair value of these contracts equal to a loss of \$5.0 million at June 30, 2020.

Derivative Assets and Liabilities

The combined fair value of derivatives included in the accompanying consolidated balance sheets as of June 30, 2020 and December 31, 2019 is summarized below. The assets and liabilities are netted where derivatives with both gain and loss positions are held by a single counterparty and we have master netting arrangements. The tables below provide additional information relating to our master netting arrangements with our derivative counterparties (in thousands):

			June 30, 2020						
			Gross mounts of ecognized Assets	Of	Gross Amounts fset in the ance Sheet		Net Amounts of Assets Presented in the Balance Sheet		
Derivative assets:									
Natural gas	-swaps	\$	134,499	\$	(3,174)	\$	131,325		
_	–swaptions		_		(3,936)		(3,936)		
	–calls		_		(41)		(41)		
	–collars		2,557		(1,305)		1,252		
	–three-way collars		1,860		(12,272)		(10,412)		
	–basis swaps		2,046		(3,656)		(1,610)		
Crude oil	-swaps		30,045		(832)		29,213		
	–calls				(3)		(3)		
NGLs	–C3 propane spread swaps		12,959		(13,431)		(472)		
	–C3 propane swaps		319		(244)		75		
	–NC4 normal butane swaps		905				905		
	–NC4 normal butane calls				(62)		(62)		
	-C5 natural gasoline swaps	<u> </u>	109		(107)		2		
		\$	185,299	\$	(39,063)	\$	146,236		

				June 30, 2020		
			Gross Amounts of Recognized (Liabilities)	Gross Amounts Offset in the Balance Sheet	of (Li	Net Amounts labilities) Presented in the Balance Sheet
Derivative (liabilities):			(========			
Natural gas	–swaps	\$	(3,058)	\$ 3,174	\$	116
	-swaptions		(6,201)	3,936	,	(2,265)
	–calls		(41)	41		_
	–collars		_	1,305		1,305
	–three-way collars		(20,405)	12,272		(8,133)
	–basis swaps		(6,526)	3,656	1	(2,870)
Crude oil	–swaps		(832)	832		_
	–calls		(3)	3		_
NGLs	–C3 propane spread swaps		(11,935)	13,431		1,496
	–C3 propane swaps		(244)	244		_
	–NC4 normal butane calls		(62)	62		_
	–C5 natural gasoline swaps		(107)	107		_
Freight	-swaps	_	(4,956)			(4,956)
		\$	(54,370)	\$ 39,063	\$	(15,307)

		December 31, 2019							
		 Gross							
		Amounts of	Gross Amounts	Net Amounts of					
		Recognized	Offset in the Balance	Assets Presented in the					
		 Assets	Sheet	Balance Sheet					
Derivative assets:									
Natural gas	–swaps	\$ 134,364	\$ (2,913)	\$ 131,451					
	–swaptions	_	(1,325)	(1,325)					
	–basis swaps	10,766	(1,092)	9,674					
Crude oil	–swaps	3,893	(4,794)	(901)					
	–swaptions	_	(1,597)	(1,597)					
	–calls	_	(349)	(349)					
NGLs	–C3 propane spread swaps	1,913	(1,913)						
	–NC4 normal butane swaps	167	_	167					
	–C5 natural gasoline swaps	60	(127)	(67)					
Freight	–swaps	1,529	(1,028)	501					
		\$ 152,692	\$ (15,138)	\$ 137,554					

		December 31, 2019							
			Gross	Gr	oss Amounts		Net Amounts of		
		Am	ounts of	C	offset in the		(Liabilities) Presented in the		
		Recogniz	Recognized (Liabilities)		Balance Sheet		Balance Sheet		
Derivative (liabilities):		·	_		_	-	_		
Natural gas	–swaps	\$	(1,657)	\$	2,913	\$	1,256		
	-swaptions		(2,594)		1,325		(1,269)		
	–basis swaps		(1,371)		1,092		(279)		
Crude oil	-swaps		(4,814)		4,794		(20)		
	-swaptions		(2,254)		1,597		(657)		
	–calls		(349)		349				
NGLs	–C3 propane spread swaps		(16,040)		1,913		(14,127)		
	–C5 natural gasoline swaps		(127)		127		_		
Freight	–swaps		<u> </u>		1,028		1,028		
		\$	(29,206)	\$	15,138	\$	(14,068)		

The effects of our derivatives on our consolidated statements of operations are summarized below (in thousands):

		Derivative Fair Value (Loss) Income							
	 Three Mo	nths En	ıded		Six Mon	hs End	ed		
	Jun	e 30,			June 30,				
	 2020		2019		2020		2019		
Commodity swaps	\$ 5,484	\$	159,128	\$	233,838	\$	101,710		
Swaptions	(2,019)		32,383		(1,353)		29,092		
Three-way collars	(6,200)		_		(17,562)		_		
Collars	2,557		578		2,557		(3,946)		
Calls	(33)		_		242		_		
Basis swaps	(5,180)		938		16,163		4,353		
Freight swaps	(912)		2,218		(7,013)		2,305		
Total	\$ (6,303)	\$	195,245	\$	226,872	\$	133,514		

(12) FAIR VALUE MEASUREMENTS

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. There are three approaches for measuring the fair value of assets and liabilities: the market approach, the income approach and the cost approach, each of which includes multiple valuation techniques. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities. The income approach uses valuation techniques to measure fair value by converting future amounts, such as cash flows or earnings, into a single present value amount using current market expectations about those future amounts. The cost approach is based on the amount that would currently be required to replace the service capacity of an asset. This is often referred to as current replacement cost. The cost approach assumes that the fair value would not exceed what it would cost a market participant to acquire or construct a substitute asset of comparable utility, adjusted for obsolescence.

The fair value accounting standards do not prescribe which valuation technique should be used when measuring fair value and does not prioritize among the techniques. These standards establish a fair value hierarchy that prioritizes the inputs used in applying the various valuation techniques. Inputs broadly refer to the assumptions that market participants use to make pricing decisions, including assumptions about risk. Level 1 inputs are given the highest priority in the fair value hierarchy while Level 3 inputs are given the lowest priority. The three levels of the fair value hierarchy are as follows:

- Level 1 Observable inputs that reflect unadjusted quoted prices for identical assets or liabilities in active markets as of the reporting date. Active markets are those in which transactions for the asset or liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis.
- Level 2 Observable market-based inputs or unobservable inputs that are corroborated by market data. These are inputs other than quoted prices in active markets included in Level 1, which are either directly or indirectly observable as of the reporting date.
- Level 3 Unobservable inputs for which there is little, if any, market activity for the asset or liability being measured. These inputs
 reflect management's best estimates of the assumptions market participants would use in determining fair value. Our Level 3
 measurements consist of instruments using standard pricing models and other valuation methods that utilize unobservable pricing inputs
 that are significant to the overall fair value.

Valuation techniques that maximize the use of observable inputs are favored. Assets and liabilities are classified in their entirety based on the lowest priority level of input that is significant to the fair value measurement. The assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the placement of assets and liabilities within the levels of the fair value hierarchy.

Significant uses of fair value measurements include:

- impairment assessments of long-lived assets; and
- recorded value of derivative instruments and trading securities.

The need to test long-lived assets can be based on several indicators, including a significant reduction in prices of natural gas, oil and condensate, NGLs, unfavorable adjustments to reserves, significant changes in the expected timing of production, other changes to contracts or changes in the regulatory environment in which a property is located.

Fair Values - Recurring

Derivatives-freight swaps

-basis swaps

-swaptions

We use a market approach for our recurring fair value measurements and endeavor to use the best information available. The following tables present the fair value hierarchy table for assets and liabilities measured at fair value, on a recurring basis (in thousands):

				Fair	Value Measurements	at June 30, 2020	using:	
		Qu	oted Prices		Significant			Total
		i	n Active		Other	Significant	:	Carrying
		M	larkets for		Observable	Unobservab	le	Value as of
		Ider	ntical Assets		Inputs	Inputs		June 30,
		(Level 1)		(Level 2)	(Level 3)		2020
Trading securities held in the deferred compensation plans		\$	54,637	\$	_	\$	_ \$	54,637
Commodity price derivatives –swaps			_		161,636		_	161,636
	-collars				2,557			2,557
	-three-way collars				(18,545)		_	(18,545)
	–calls		_		(44)		(62)	(106)
	-basis swaps		_		(3,456)		_	(3,456)
	-swaptions		_		· —		5,201)	(6,201)
Derivatives–freight swaps			_		(4,956)		_	(4,956)
			Fair	· Valı	ıe Measurements at D	ecember 31, 201	9 using:	
		Quo	ted Prices		Significant			Total
		ir	n Active		Other	Significant		Carrying
		Ma	arkets for		Observable	Unobservable	<u> </u>	Value as of
		Iden	tical Assets		Inputs	Inputs		December 31,
		(I	Level 1)		(Level 2)	(Level 3)		2019
Trading securities held in the	e deferred compensation plans	\$	62,009	\$		\$	<u> </u>	62,009
Commodity price derivatives	s –swaps		_		131,886			131,886

Our trading securities in Level 1 are exchange-traded and measured at fair value with a market approach using end of period market values. Derivatives in Level 2 are measured at fair value with a market approach using third-party pricing services which have been corroborated with data from active markets or broker quotes. As of June 30, 2020, a portion of our natural gas derivative instruments contain swaptions where the counterparty has the right, but not the obligation, to enter into a fixed price swap on a pre-determined date. Derivatives in Level 3 are measured at fair value with a market approach using third-party pricing services which have been corroborated with data from active markets or broker quotes. Subjectivity in the volatility factors utilized can cause a significant change in the fair value measurement of our swaptions. The following is a reconciliation of the beginning and ending balances for derivative instruments classified as Level 3 in the fair value hierarchy (in thousands):

(349)

(4,848)

(4,732)

1,529

(349)

(4,732)

(4,848)

1,529

	As of une 30, 2020
Balance at December 31, 2019	\$ (4,848)
Total losses:	
Included in earnings	(1,600)
Settlements, net	185
Balance at June 30, 2020	\$ (6,263)

Our trading securities held in the deferred compensation plan are accounted for using the mark-to-market accounting method and are included in other assets in the accompanying consolidated balance sheets. We elected to adopt the fair value option to simplify our accounting for the investments in our deferred compensation plan. Interest, dividends, and mark-to-market gains or losses are included in deferred compensation plan expense in the accompanying consolidated statements of operations. For second quarter 2020, interest and dividends were \$124,000 and the mark-to-market adjustment was a gain of \$7.6 million compared to interest and dividends of \$184,000 and a mark-to-market gain of \$1.5 million in second quarter 2019. For first six months 2020 interest and dividends were \$272,000 and the mark-to-market adjustment was a loss of \$3.0 million compared to interest and dividends of \$363,000 and a mark-to-market adjustment of a gain of \$6.6 million in the same period of 2019.

Fair Values – Non-recurring

Certain assets are measured at fair value on a non-recurring basis. These assets are not measured at fair value on an ongoing basis but are subject to fair value adjustments in certain circumstances. Our proved natural gas and oil properties are reviewed for impairment periodically as events or changes in circumstances indicate the carrying amount may not be recoverable. As a result of such a proved property review in fourth quarter 2019, we recorded noncash impairment charges to reduce the carrying value of our North Louisiana assets. We calculated the fair value of these assets using a discounted cash flow model which uses Level 3 inputs. There were no proved property impairment charges in first six months 2019. The following table presents the value of these assets measured at fair value on a nonrecurring basis at the time impairment was recorded (in thousands):

	Year Ended December 31, 2019					
	Fair Value	Impairment				
North Louisiana	\$ 370,500	\$ 1,093,531				

In first quarter 2020, we recognized additional impairment charges of \$77.0 million that reduced the carrying value to the anticipated sales proceeds for these North Louisiana assets which is a market approach using Level 2 inputs. We have a gas processing agreement that extends for approximately ten more years in North Louisiana where we must pay a quarterly deficiency payment if the minimum volume commitment is not met. In the event these properties are sold in the future and any of these charges are retained by us, we will recognize and accrue these future divestiture-related charges upon closing of the transaction, which could be significant. In second quarter 2020, our deficiency charges were approximately \$18.2 million and are included in transportation, gathering and processing expense in the accompanying consolidated statements of operations. See also footnote 19.

Fair Values - Reported

The following presents the carrying amounts and the fair values of our financial instruments as of June 30, 2020 and December 31, 2019 (in thousands):

	June 30, 2020			December 31, 2019				
		Carrying Value		Fair Value		Carrying Value		Fair Value
Assets:								
Commodity swaps, options and basis swaps	\$	146,236	\$	146,236	\$	137,554	\$	137,554
Marketable securities (a)		54,637		54,637		62,009		62,009
(Liabilities):								
Commodity swaps, options and basis swaps		(15,307)		(15,307)		(14,068)		(14,068)
Bank credit facility (b)		(639,000)		(639,000)		(477,000)		(477,000)
5.75% senior notes due 2021 (b)		(37,570)		(36,307)		(374,139)		(375,909)
5.00% senior notes due 2022 (b)		(461,625)		(420,430)		(511,886)		(501,582)
5.875% senior notes due 2022 (b)		(113,649)		(105,084)		(297,617)		(294,757)
Other senior notes due 2022 (b)		(490)		(478)		(590)		(592)
5.00% senior notes due 2023 (b)		(654,672)		(558,383)		(741,531)		(683,291)
4.875% senior notes due 2025 (b)		(750,000)		(566,040)		(750,000)		(645,098)
9.25% senior notes due 2026 (b)		(550,000)		(495,143)				
5.75% senior subordinated notes due 2021 (b)		(21,865)		(19,687)		(22,214)		(21,539)
5.00% senior subordinated notes due 2022 (b)		(19,054)		(15,493)		(19,054)		(17,011)
5.00% senior subordinated notes due 2023 (b)		(7,712)		(6,327)		(7,712)		(7,654)
Deferred compensation plan (c)		(73,630)		(73,630)		(74,472)		(74,472)

⁽a) Marketable securities, which are held in our deferred compensation plans, are actively traded on major exchanges.

⁽b) The book value of our bank debt approximates fair value because of its floating rate structure. The fair value of our senior notes and our senior subordinated notes is based on end of period market quotes which are Level 2 inputs.

Our current assets and liabilities include financial instruments, the most significant of which are trade accounts receivable and payable. We believe the carrying values of our current assets and liabilities approximate fair value. Our fair value assessment incorporates a variety of considerations, including (1) the short-term duration of the instruments and (2) our historical and expected incurrence of bad debt expense. Non-financial liabilities initially measured at fair value include asset retirement obligations and operating lease liabilities.

Concentrations of Credit Risk

As of June 30, 2020, our primary concentrations of credit risk are the risks of not collecting accounts receivable and the risk of a counterparty's failure to perform under derivative obligations. Most of our receivables are from a diverse group of companies, including major energy companies, pipeline companies, local distribution companies, financial institutions, end-users in various industries and joint interest owners on properties we operate. Letters of credit or other appropriate securities are obtained as deemed necessary to limit our risk of loss. Our allowance for uncollectable receivables was \$5.9 million at June 30, 2020 and \$8.8 million at December 31, 2019. Our derivative exposure to credit risk is diversified primarily among major investment grade financial institutions, where we have master netting agreements which provide for offsetting payables against receivables from separate derivative contracts. To manage counterparty risk associated with our derivatives, we select and monitor our counterparties based on our assessment of their financial strength and/or credit ratings. We may also limit the level of exposure with any single counterparty. At June 30, 2020, our derivative counterparties include twenty-one financial institutions, of which all but six are secured lenders in our bank credit facility. At June 30, 2020, our net derivative asset includes a net payable of \$5.1 million to five of these counterparties that are not participants in our bank credit facility and a net receivable of \$473,000 from one of these counterparties.

Allowance for Expected Credit Losses. Each reporting period, we assess the recoverability of material receivables using historical data, current market conditions and reasonable and supported forecasts of future economic conditions to determine their expected collectability. The loss given default method is used when, based on management's judgment, an allowance for expected credit losses should be accrued on a material receivable to reflect the net amount to be collected. See Note 3 for a discussion on adoption of the new accounting standards update on financial instruments-credit losses.

(13) STOCK-BASED COMPENSATION PLANS

Stock-Based Awards

We have two active equity-based stock plans; our Amended and Restated 2005 Equity-Based Incentive Compensation Plan, which we refer to as the 2005 Plan and the Amended and Restated 2019 Equity-Based Compensation Plan, which was approved by our stockholders in May 2019 and amended in May 2020. Under these plans, various awards may be issued to non-employee directors and employees pursuant to decisions of the Compensation Committee, which is composed of only non-employee, independent directors.

Total Stock-Based Compensation Expense

Stock-based compensation represents amortization of restricted stock and performance units. Unlike the other forms of stock-based compensation, the mark-to-market adjustment of the liability related to the vested restricted stock held in our deferred compensation plan is directly tied to the change in our stock price and not directly related to the functional expenses and therefore, is not allocated to the functional categories. The following details the allocation of stock-based compensation to functional expense categories (in thousands):

	Tiffee Mondis Ended				Six Monuis Ended				
	June 30,				June 30,				
	2020		2019		2020		2019		
Direct operating expense	\$ 434	\$	549	\$	884	\$	1,140		
Brokered natural gas and marketing expense	168		553		581		1,001		
Exploration expense	372		388		702		876		
General and administrative expense	9,179		9,500		17,208		19,138		
Termination costs			26				26		
Total stock-based compensation	\$ 10,153	\$	11,016	\$	19,375	\$	22,181		

Stock-Based Awards

Restricted Stock Awards. We grant restricted stock units under our equity-based stock compensation plans. These restricted stock units, which we refer to as restricted stock Equity Awards, generally vest over a three-year period, contingent on the recipient's continued employment. The grant date fair value of the Equity Awards is based on the fair market value of our common stock on the date of grant.

The Compensation Committee also grants restricted stock to certain employees and non-employee directors of the board of directors as part of their compensation. We also grant restricted stock to certain employees for retention purposes. Compensation expense is recognized over the balance of the vesting period, which is typically three years for employee grants and immediate vesting for non-employee directors. In May 2020, vesting for non-employee directors was changed to one year after grant date. All restricted stock awards are issued at prevailing market prices at the time of the grant and the vesting is based upon an employee's continued employment with us. Prior to vesting, all restricted stock award recipients have the right to vote such stock and receive dividends thereon. Upon grant of these restricted shares, which we refer to as restricted stock Liability Awards, the majority of these shares are generally placed in our deferred compensation plan and, upon vesting, withdrawals are allowed in either cash or in stock. These Liability Awards are classified as a liability and are remeasured at fair value each reporting period. This mark-to-market amount is reported in deferred compensation plan expense in the accompanying consolidated statements of operations. Historically, we have used authorized but unissued shares of stock when restricted stock is granted. However, we can also utilize treasury shares when available.

Stock-Based Performance Units. We grant three types of performance share awards: two based on performance conditions measured against internal debt-adjusted performance metrics (Production Per Share Awards or "PS-PSUs" and Reserve Per Share Awards or "RS-PSUs") and one based on market conditions measured based on Range's performance relative to a predetermined peer group (TSR Awards or "TSR-PSUs").

Each unit granted represents one share of our common stock. These units are settled in stock and the amount of the payout is based on (1) the vesting percentage, which can be from zero to 200% based on performance achieved and (2) the value of our common stock on the vesting date which is determined by the Compensation Committee. Dividend equivalents may accrue during the performance period and are paid in stock at the end of the performance period. The performance period for the TSR-PSUs is three years. The performance period for the PS/RS-PSUs is based on annual performance targets earned over a three-year period.

Restricted Stock - Equity Awards

In first six months 2020, we granted 4.5 million restricted stock Equity Awards to employees at an average grant date fair value of \$3.42 which generally vest over a three-year period compared to 2.8 million at an average grant date fair value of \$10.59 in first six months 2019. We recorded compensation expense for these outstanding awards of \$10.0 million in first six months 2020 compared to \$13.6 million in the same period of 2019. Restricted stock Equity Awards are not issued to employees until such time as they are vested and the employees do not have the option to receive cash.

Restricted Stock - Liability Awards

In first six months 2020, we granted 3.3 million shares of restricted stock Liability Awards as compensation to employees at an average grant date fair value of \$3.03 which generally vest over a three-year period and 217,000 shares were granted to non-employee directors at an average price of \$5.38 with vesting over one year. In first six months 2019, we granted 1.0 million shares of restricted stock Liability Awards as compensation to employees at an average grant date fair value of \$10.45 with vesting generally over a three-year period and 157,000 shares were granted to non-employee directors at an average price of \$9.50 with immediate vesting. We recorded compensation expense for these Liability Awards of \$5.4 million in first six months 2020 compared to \$4.6 million in first six months 2019. The majority of these awards are held in our deferred compensation plan, are classified as a liability and are remeasured at fair value each reporting period. This mark-to-market amount is reported as deferred compensation expense in our consolidated statements of operations (see additional discussion below). The following is a summary of the status of our non-vested restricted stock outstanding at June 30, 2020:

	Restricted Stock			Restricted Stock					
	Equit	Equity Awards			Liability Awards				
		W	eighted	' <u>'</u>	W	eighted			
		Aver	age Grant		Average Grant				
	Shares	Date Fair Value		Date Fair Value Shares		Shares	Date	Fair Value	
Outstanding at December 31, 2019	2,002,239	\$	12.32	411,126	\$	10.94			
Granted	4,462,711		3.42	3,524,186		3.17			
Vested	(809,560)		8.90	(1,428,127)		4.33			
Forfeited	(158,961)		9.62	_		_			
Outstanding at June 30, 2020	5,496,429	\$	5.68	2,507,185	\$	3.78			

Doctricted Steel

Stock-Based Performance Units

Production Per Share and Reserve Per Share Awards (debt-adjusted). The PS-PSUs and RS-PSUs vest at the end of the three-year performance period. The performance metrics for each year are set by the Compensation Committee no later than March 31 of such year. If the performance metric for the applicable period is not met, that portion is considered forfeited and there is an adjustment to the expense recorded. The following is a summary of our non-vested PS/RS-PSUs awards outstanding at June 30, 2020:

	Number of	Weighted Average Grant Da		
	Units		Fair Value	
Outstanding at December 31, 2019	881,573	\$	11.70	
Units granted (a)	777,847		2.33	
Vested (b)	(101,150)		15.32	
Outstanding at June 30, 2020	1,558,270	\$	4.86	

- (a) Amounts granted reflect the number of performance units granted; however, the actual payout of shares will be between zero and 200% depending on achievement of specifically identified performance targets.
- (b) For the PS-PSUs and RS-PSUs awards issued during 2017 the aggregate payout was approximately 150% of target for the March 2017 and May 2017 grants with a positive performance adjustment of 58,591 shares.

We recorded PS/RS-PSUs compensation income of \$1.8 million in first six months 2020 compared to expense of \$1.7 million in first six months 2019.

TSR Awards. TSR-PSUs granted are earned, or not earned, based on the comparative performance of Range's common stock measured against a predetermined group of companies in the peer group over a three-year performance period. The fair value of the TSR-PSUs is estimated on the date of grant using a Monte Carlo simulation model which utilizes multiple input variables that determine the probability of satisfying the market condition stipulated in the award grant and calculates the fair value of the award. The fair value is recognized as stock-based compensation expense over the three-year performance period. Expected volatilities utilized in the model were estimated using a combination of a historical period consistent with the remaining performance period of three years and option implied volatilities. The risk-free interest rate was based on the United States Treasury rate for a term commensurate with the life of the grant. The following assumptions were used to estimate the fair value of TSR-PSUs granted during first six months 2020 and 2019:

	Six Months					
	Ended					
	June 30,					
	 2020		2019			
Risk-free interest rate	 1.4%		2.4%			
Expected annual volatility	65%		46%			
Grant date fair value per unit	\$ 3.85	\$	11.34			

The following is a summary of our non-vested TSR – PSUs award activities:

			Weighted	
		Average		
	Number of		Grant Date	
	Units		Fair Value	
Outstanding at December 31, 2019	993,452	\$	19.00	
Units granted (a)	610,155		3.85	
Vested (b)	(278,184)		26.14	
Forfeited	(75,899)		26.33	
Outstanding at June 30, 2020	1,249,524	\$	9.55	

- (a) These amounts reflect the number of performance units granted. The actual payout of shares may be between zero and 200% of the performance units granted depending on the total shareholder return ranking compared to our peer companies at the vesting date.
- (b) Includes TSR-PSUs awards issued related to the 2017 performance period where the return on our common stock was in the 60th percentile for the March 2017 grant and the 80th percentile for the May 2017 grant. The remaining 2017 awards are considered to be forfeited.

We recorded TSR-PSUs compensation expense of \$1.5 million in first six months 2020 compared to \$1.3 million in the same period of 2019. Fair value is amortized over the performance period with no adjustment to the expense recorded for actual targets achieved.

Other Post Retirement Benefits

Effective fourth quarter 2017, as part of our officer succession plan, we implemented a post retirement benefit plan to assist in providing health care to officers who are active employees (including their spouses) and have met certain age and service requirements. These benefits are not funded in advance and are provided up to age 65 or at the date they become eligible for Medicare, subject to various cost-sharing features. There was approximately \$90,000 of estimated prior service costs amortized from accumulated other comprehensive income into general and administrative expense in both the three months ended June 30, 2020 and 2019 and approximately \$185,000 amortized in both the six months ended June 30, 2020 and 2019. Those employees that qualified for this new retirement health care plan were also fully vested in all equity grants. Effective October 2018, officers who qualify for the plan are required to provide reasonable notice of retirement and beginning in 2019 must provide one year of service after the grant date to be fully vested in an equity grant.

Deferred Compensation Plan

Our deferred compensation plan gives non-employee directors and officers the ability to defer all or a portion of their salaries, bonuses or director fees and invest in Range common stock or make other investments at the individual's discretion. Range provides a partial matching contribution to officers which vests over three years. The assets of the plan are held in a grantor trust, which we refer to as the Rabbi Trust, and are therefore available to satisfy the claims of our general creditors in the event of bankruptcy or insolvency. Our stock held in the Rabbi Trust is treated as a liability award as employees are allowed to take withdrawals from the Rabbi Trust either in cash or in Range stock. The liability for the vested portion of the stock held in the Rabbi Trust is reflected as deferred compensation liability in the accompanying consolidated balance sheets and is adjusted to fair value each reporting period by a charge or credit to deferred compensation plan expense on our consolidated statements of operations. The assets of the Rabbi Trust, other than our common stock, are invested in marketable securities and reported at their market value as other assets in the accompanying consolidated balance sheets. The deferred compensation liability reflects the vested market value of the marketable securities and Range stock held in the Rabbi Trust. Changes in the market value of the marketable securities and changes in the fair value of the deferred compensation plan liability are charged or credited to deferred compensation plan expense each quarter. We recorded a mark-to-market loss of \$12.6 million in second quarter 2020 compared to a mark-to-market gain of \$11.1 million in first six months 2019. The Rabbi Trust held 6.2 million shares (3.8 million of which were vested) of Range stock at June 30, 2020 compared to 3.2 million shares (2.7 million of which were vested) at December 31, 2019.

(14) EXIT AND TERMINATION COSTS

Exit Costs

In second quarter 2020, we negotiated capacity releases on certain transportation pipelines in Pennsylvania effective May 31, 2020 and extending through the remainder of the contract. As a result of these releases, we recorded termination costs of \$10.4 million which represents the discounted present value of our remaining obligations to the third-party.

Termination Costs

In first quarter 2020, we completed the sale of our shallow legacy assets in Northwest Pennsylvania. We recorded \$1.6 million of severance costs in first quarter 2020 which is primarily related to the sale of these assets. In second quarter 2019, we announced a reduction in our work force and recorded \$2.2 million of severance costs related to this work force reduction. The following summarizes our termination costs for the three and six months ended June 30, 2020 and 2019 (in thousands):

	inree Months Ended				Six Months Ended			
		June 30,			June 30,			
	20	2020 2019		2020		0 201		
Severance costs	\$	(148)	\$	2,180	\$	1,447	\$	2,180
Transportation contract releases		10,445		_		10,445		_
Stock-based compensation		_		26		_		26
	\$	10,297	\$	2,206	\$	11,892	\$	2,206
	\$	10,297	\$	2,206	\$	11,892	\$	2,206

The following details the accrued liability activity for the quarter ended June 30, 2020 (in thousands):

	As of June 30, 2020			
Balance at December 31, 2019	\$	4,692		
Accrued severance costs		1,447		
Accrued transportation contracts		10,445		
Payments		(4,199)		
Balance at June 30, 2020	\$	12,385		

(15) CAPITAL STOCK

We have authorized capital stock of 485.0 million shares which includes 475.0 million shares of common stock and 10.0 million shares of preferred stock. We currently have no preferred stock issued or outstanding. The following is a schedule of changes in the number of common shares outstanding since the beginning of 2019:

	Six Months Ended	Year Ended
	June 30,	December 31,
	2020	2019
Beginning balance	249,630,803	249,510,022
Restricted stock grants	3,390,358	1,186,290
Restricted stock units vested	952,719	720,212
Performance stock units issued	279,420	12,747
Performance stock dividends	18,700	
Treasury shares acquired	(8,199,194)	(1,798,468)
Ending balance	246,072,806	249,630,803

Stock Repurchase Program

In October 2019, our board of directors authorized a \$100.0 million common stock repurchase program. Under this program, we may repurchase shares in open market transactions, from time to time, in accordance with applicable SEC rules and federal securities laws. The stock repurchase program has no time limit, may be modified or suspended based on our financial condition or changes in market conditions or terminated at any time by our board of directors. The following is a schedule of the change in treasury shares for the three and six months ended June 30, 2020:

	Three Months	Six Months
	Ended	Ended
	June 30,	June 30,
	2020	2020
Beginning balance	9,807,327	1,808,133
Rabbi trust shares distributed/sold	_	(806)
Shares repurchased	200,000	8,200,000
Ending balance	10,007,327	10,007,327

	Six Months Ended June 30,				
	2020			2019	
	(in thousands)				
Net cash provided from operating activities included:					
Income taxes refunded from taxing authorities	\$	2,154	\$	_	
Interest paid		(78, 265)		(99,675)	
Non-cash investing and financing activities included:					
Increase in asset retirement costs capitalized		4,247		2,326	
(Decrease) increase in accrued capital expenditures		(31,307)		6,346	

(17) COMMITMENTS AND CONTINGENCIES

Litigation

We are the subject of, or party to, a number of pending or threatened legal actions, administrative proceedings arising in the ordinary course of our business including, but not limited to, royalty claims, contract claims and environmental claims. While many of these matters involve inherent uncertainty, we believe that the amount of the liability, if any, ultimately incurred with respect to these actions, proceedings or claims will not have a material adverse effect on our consolidated financial position as a whole or on our liquidity, capital resources or future annual results of operations.

When deemed necessary, we establish reserves for certain legal proceedings. The establishment of a reserve is based on an estimation process that includes the advice of legal counsel and subjective judgment of management. While management believes these reserves to be adequate, it is reasonably possible we could incur additional losses with respect to those matters in which reserves have been established. We will continue to evaluate our litigation on a quarterly basis and will establish and adjust any litigation reserves as appropriate to reflect our assessment of the then current status of litigation.

We have incurred and will continue to incur capital, operating and remediation expenditures as a result of environmental laws and regulations. As of June 30, 2020, liabilities for remediation were not material. We are not aware of any environmental claims existing as of June 30, 2020 that have not been provided for or would otherwise have a material impact on our financial position or results of operations. Environmental liabilities normally involve estimates that are subject to revision until final resolution, settlement or remediation occurs.

Pennsylvania Office of Attorney General Matter

In April 2020, the Office of Attorney General informed our subsidiary Range Resources – Appalachia, LLC that it will pursue certain misdemeanor charges against the subsidiary related to alleged violations of the Pennsylvania Solid Waste Management Act and the Pennsylvania Clean Streams Law arising from an unintentional release of produced and reuse water at one location and unintentional discharges from a drilling reserve pit containing drill cuttings and a water impoundment at another. In second quarter 2020, we agreed to a fine of \$50,000 and also a payment of \$100,000 to a mutually agreeable local conservation organization to resolve these matters.

(18) COSTS INCURRED FOR PROPERTY ACQUISITION, EXPLORATION AND DEVELOPMENT (a)

	Six I	Months		
	Eı	nded		Year
	Jur	ne 30,		Ended
	2	020	Dece	mber 31, 2019
		(in thou	ısands)	
Acquisitions:				
Acreage purchases	\$	8,736	\$	57,324
Development		223,401		666,984
Exploration:				
Expense		14,402		35,117
Stock-based compensation expense		702		1,566
Gas gathering facilities:				
Development		2,386		3,583
Subtotal		249,627		764,574
Asset retirement obligations		4,247		11,193
Total costs incurred	\$	253,874	\$	775,767

⁽a) Includes costs incurred whether capitalized or expensed.

(19) SUBSEQUENT EVENT

On July 18, 2020, we signed a purchase and sale agreement to sell our North Louisiana assets for cash proceeds of \$245.0 million, subject to certain closing adjustments. Closing of this transaction is expected in early August. The sales price consists of \$245.0 million paid at closing and contingent proceeds of up to \$90.0 million should certain commodity price conditions be met. The contingent proceeds will be valued based on a probability-weighted estimate of proceeds that will be received over the earn-out period using forecasted prices. The contingent proceeds will be determined annually through 2023 and these proceeds, if any, will be received between 2021 and 2024. We retained a portion of several long-term financial commitments to pay future gathering and processing deficiency fees on unused minimum volume commitments that continue through 2029 which will be accrued at fair value upon closing as a liability associated with the sale. We are currently determining our accruals related to the sale of these assets.

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

Overview of Our Business

We are a Fort Worth, Texas-based independent natural gas and natural gas liquids ("NGLs") company engaged in the exploration, development and acquisition of natural gas properties primarily in the Appalachian region of the United States. We operate in one segment and have a single company-wide management team that administers all properties as a whole rather than by discrete operating segments. We track only basic operational data by area. We do not maintain complete separate financial statement information by area. We measure financial performance as a single enterprise and not on a geographical or an area-by-area basis.

Our overarching business objective is to build stockholder value through returns-focused development, measured on a per share debt adjusted basis. Our strategy to achieve our business objective is to generate consistent cash flows from reserves and production through internally generated drilling projects occasionally coupled with complementary acquisitions and divestitures of non-core or, at times, core assets. Our revenues, profitability and future growth depend substantially on prevailing prices for natural gas and NGLs and on our ability to economically find, develop, acquire, produce and market natural gas and NGLs reserves. Commodity prices have been and are expected to remain volatile. We believe that we are well-positioned to manage the challenges presented in a volatile pricing environment by:

- exercising discipline in our capital program as we target capital spending within operating cash flows and, if required, with borrowing under our bank credit facility;
- continuing to optimize drilling, completion and operational efficiencies;
- continuing to focus on improving our cost structure;
- continuing to pursue asset sales to reduce debt;
- continuing to manage price risk by hedging our production; and
- continuing to manage our balance sheet.

We prepare our financial statements in conformity with U.S. GAAP which requires us to make estimates and assumptions that affect our reported results of operations and the amount of our reported assets, liabilities and proved natural gas and NGLs reserves. We use the successful efforts method of accounting for our natural gas and NGLs activities.

Prices for natural gas, NGLs and oil fluctuate widely and affect:

- revenues, profitability and cash flow;
- the quantity of natural gas, NGLs and oil we can economically produce;
- the quantity of natural gas, NGLs and oil shown as proved reserves;
- the amount of cash flows available for capital expenditures; and
- our ability to borrow and raise additional capital.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the preceding consolidated financial statements and notes in Item 1.

Recent Events

In March 2020, the World Health Organization designated the novel coronavirus known as COVID-19 a global pandemic. In the U.S., many state and local governments have, based on local conditions, either recommended or mandated actions to slow the transmission of COVID-19. These measures range from limitations on crowd size, together with closures of bars and dine-in restaurants, to mandatory orders for employees of any non-essential business to shelter-in-place until further direction and, more recently, phased regulations and guidelines for reopening economies. States adopting these measures include Pennsylvania, Texas and Louisiana, where our offices and operations are located. Uncertainty with respect to the economic effects of the COVID-19 pandemic has introduced significant volatility in the financial and commodity markets.

We have three priorities while navigating through this continuing period of volatility and uncertainty:

- · First, to ensure the health and safety of our employees and the contractors which provide services to us;
- Second, to continue to monitor the impact this pandemic has on demand for our products and related commodity prices impacts; and
- Third, to ensure Range adapts and emerges from this event in as strong of a position as possible. Our objective and focus when it comes to an end, is to emerge as a better company as we continue to drive our long-term strategies.

This pandemic could affect our operations, major facilities or employees' health; however, as of the date of this filing, we have not experienced a significant disruption to our operations and we have implemented pre-existing contingency planning, with most employees working remotely where possible in compliance with governmental orders and CDC recommendations. We have crisis teams in place monitoring the rapidly evolving situation and recommending risk mitigation actions; we have implemented travel restrictions as well as visitor protocols; and we are following social distancing practices in our offices and other work sites. We have assessed and are implementing continuity plans to provide customers with continued supply of our products. There has been no material impact on supply for most of our sourced materials and to the extent such an impact has been realized or anticipated, continuity plans have been activated. We are also working closely with our processing and pipeline transportation partners to anticipate possible impacts on our continued operations.

To the extent that the COVID-19 pandemic continues or worsens, governments may impose additional restrictions. The result of COVID-19 and those restrictions could result in a number of adverse impacts to our business, including, but not limited to, additional disruption to the economy, a prolonged decline in demand for our products, additional work restrictions, supply chains being interrupted, slowed, or rendered inoperable, and individuals could become ill, quarantined, or otherwise unable to work and/or travel due to health reasons or governmental restrictions. Also, governments may impose other laws, regulations or taxes which could adversely impact our business, financial condition or results of operations. Further, if our customers' businesses are similarly affected, they might delay or reduce purchases from us. The potential effects of COVID-19 also could impact us in a number of other ways including, but not limited to, reductions to our profitability, changes in laws and regulations affecting our business, decreased availability of future borrowings, increased cost of borrowings, valuation of our obligations, credit risks of our customers and counterparties and potential impairment of the carrying value of our properties.

As previously described, the impact of COVID-19 is highly uncertain and could be far reaching. In light of the evolving health, social, economic, and business environment, governmental regulation or mandates and business disruptions that could occur, the potential impact that COVID-19 could have on our financial condition and operating results presently remains highly uncertain. We are closely monitoring potential impacts this could have on all aspects of our business.

Market Conditions

Prices for various quantities of natural gas, NGLs and oil that we produce significantly impact our revenues and cash flows. Prices for commodities, such as hydrocarbons, are inherently volatile. Natural gas, oil and NGLs benchmarks decreased in second quarter 2020 when compared to the same period in 2019 and, as a result, we experienced decreased price realizations. In March 2020, Saudi Arabia and Russia engaged in a dispute over production levels that caused global oil prices to decline at a historic rate. On April 9, 2020, OPEC and Russia reached an agreement to reduce crude oil production by 9.7 MMbbl per day. As we continue to monitor the impact of the actions of OPEC and other large producing nations, the dispute over production levels between Russia and Saudi Arabia and the level of demand impacted by COVID-19, we expect prices for some or all commodities could remain volatile and could decline further from current levels. In particular, the price of crude oil and condensate has declined significantly due to the impacts of COVID-19 governmental orders on demand and the resulting oversupply of these liquids. More recently, oil prices have increased but still remain below \$50.00 per barrel. In addition, price declines have led to up to as much as a 10% decline in U.S. production which somewhat offsets the impact of reduced demand for commodities. The following table lists related benchmarks for natural gas, oil and NGLs composite prices for the three and six months ended June 30, 2020 and 2019:

	Three M	Ionth ine 3		Six Mon	ths End e 30,	ded
	2020		2019	 2020		2019
Benchmarks: Average NYMEX prices (a)	 			 		
Natural gas (per mcf)	\$ 1.72	\$	2.64	\$ 1.83	\$	2.89
Oil (per bbl) Mont Belvieu NGLs composite (per gallon) (b)	27.09 0.30		60.25 0.45	38.03 0.32		57.82 0.50

- (a) Based on weighted average of bid week prompt month prices on the New York Mercantile Exchange ("NYMEX").
- (b) Based on our estimated NGLs product composition per barrel.

Our price realizations (not including the impact of our derivatives) may differ from the benchmarks for many reasons, including quality, location or production being sold at different indices.

Consolidated Results of Operations

Overview of Second Quarter 2020 Results

Our financial results are significantly impacted by commodity prices. For second quarter 2020, we experienced a decrease in revenue from the sale of natural gas, NGLs and oil due to a 37% decrease in net realized prices (average prices including all derivative settlements and third-party transportation costs paid by us) partially offset by slightly higher production volumes when compared to the same quarter of 2019. Daily production averaged 2.3 Bcfe in both the second quarter 2020 and in the same period of the prior year. Reduced operating costs offset a portion of these price declines when compared to the same period of 2019.

During second quarter 2020, we recognized a net loss of \$146.6 million, or \$0.61 per diluted common share compared to net income of \$115.2 million, or \$0.46 per diluted common share, during second quarter 2019. The decrease in net income for second quarter 2020 from second quarter 2019 is primarily due to an unfavorable derivative fair value income (or the non-cash fair value adjustment related to our derivatives) and lower net realized prices partially offset by lower operating costs and slightly higher production volumes.

Our second quarter 2020 financial and operating performance included the following results:

- repurchased in the open market \$47.1 million face value of certain of our senior and senior subordinated notes at a discount and recorded a
 gain on early extinguishment of debt;
- reduced general and administrative expense on a per mcfe basis 25%, and on absolute basis 24%, when compared to the same period of 2019 (see discussion on page 37);
- reduced interest expense per mcfe 8% from the same period of 2019;
- direct operating expense per mcfe was 31% lower from the same period of 2019 (see discussion on page 37);
- reduced our depletion, depreciation and amortization ("DD&A") rate per mcfe by 28% from the same period of 2019;
- realized \$78.8 million of cash flow from operating activities, a decrease of \$106.1 million from the same period of 2019;
- revenue from the sale of natural gas, NGLs and oil decreased 38% from the same period of 2019 with a 40% decrease in average realized prices (before cash settlements on our derivatives);
- revenue from the sale of natural gas, NGLs and oil (including cash settlements on our derivatives) decreased 21% from the same period of 2019; and
- entered into additional derivative contracts for 2020 through 2024.

We generated \$78.8 million of cash flow from operating activities in second quarter 2020, a decrease of \$106.1 million from second quarter 2019, which reflects lower net realized prices and lower comparative working capital inflows (\$16.8 million inflow during second quarter 2020 compared to \$41.8 million inflow in second quarter 2019) partially offset by lower operating expenses. We continue to repurchase in the open market our senior and senior subordinated notes at a discount. Since August 2019, we have repurchased \$114.3 million principal amount of our 5.75% senior notes due 2021, \$349,000 principal amount of our 5.75% senior subordinated notes due 2021, \$39.7 million principal amount of our 5.875% senior notes due 2022, \$118.4 million principal amount of our 5.00% senior notes due 2023 for a total repurchase amount of \$359.7 million at a discount of \$47.2 million.

Overview of First Six Months 2020 Results

For first six months 2020, we experienced a decrease in revenue from the sale of natural gas, NGLs and oil due to a 39% decrease in net realized prices (average prices including all derivative settlements and third-party transportation costs paid by us) partially offset by 3% higher production volumes when compared to first six months 2019. Daily production averaged 2.3 Bcfe in both the first six month periods of 2020 and 2019. Operating costs were lower when compared to the same period of the prior year which partially offset the significant declines in realized prices.

During first six months 2020, we recognized a net loss of \$1.6 million, or \$0.01 per diluted common share compared to net income of \$116.6 million, or \$0.46 per diluted common share, during first six months 2019. The decline in net income for first six months 2020 from first six months 2019 is primarily due to an unfavorable derivative fair value income (or the non-cash fair value adjustments related to our derivatives), higher impairment charges and lower net realized prices partially offset by lower operating costs, slightly higher production volumes and a gain on sale of assets.

Our first six months 2020 financial and operating performance included the following results:

- issued \$550.0 million of new senior notes and used those proceeds to redeem \$500.0 million of 5.75% senior notes due 2021 and our 5.875% senior notes due 2022;
- repurchased in the open market \$158.1 million face value of certain of our senior and senior subordinated notes at a discount and recorded a gain on early extinguishment of debt;
- maintained liquidity under the bank credit facility with the reaffirmation of a \$3.0 billion borrowing base and \$2.4 billion in lender commitments;
- realized \$203.3 million of cash flow from operating activities;
- revenue from the sale of natural gas, NGLs and oil decreased 37% from the same period of 2019 with a 38% decrease in average realized prices (before cash settlements on our derivatives) partially offset by an increase in production volumes;
- revenue from the sale of natural gas, NGLs and oil (including cash settlements on our derivatives) decreased 23% from the same period of 2019;
- reduced direct operating expenses per mcfe 19% from the same period of 2019 (see discussion on page 37);
- reduced general and administrative expense per mcfe 21% from the same period of 2019 (see discussion on page 37);
- reduced interest expense per mcfe 8% from the same period of 2019;
- reduced our DD&A rate per mcfe by 28% from the same period of 2019; and
- entered into additional derivative contracts for 2020 through 2024.

We generated \$203.3 million of cash flow from operating activities in first six months 2020, a decrease of \$242.2 million from first six months 2019, which reflects significantly lower net realized prices partially offset by lower operating expenses and slightly higher production volumes.

Natural Gas, NGLs and Oil Sales, Production and Realized Price Calculations

Our revenues vary primarily as a result of changes in realized commodity prices and production volumes. Our revenues are generally recognized when control of the product is transferred to the customer and collectability is reasonably assured. In second quarter 2020, natural gas, NGLs and oil sales decreased 38% compared to second quarter 2019 with a 40% decrease in average realized prices (before cash settlements on our derivatives) partially offset by slightly higher production volumes. In first six months 2020, natural gas, NGLs and oil sales decreased 37% compared to the same period of 2019 with a 38% decrease in average realized prices (before cash settlements on derivatives) partially offset by a slight increase in production. The following table illustrates the primary components of natural gas, NGLs, oil and condensate sales for the three and six months ended June 30, 2020 and 2019 (in thousands):

			Th	ree Months	Ende	d			Si	x Months Ende	ed	
				June 30,						June 30,		
		2020		2019		Change	%	2020		2019	Change	%
Natural gas, NGLs and oil sales												,
Natural gas	\$	214,207	\$	343,623	\$	(129,416)	(38%)	\$ 467,456	\$	778,343 \$	(310,887)	(40%)
NGLs		124,383		167,027		(42,644)	(26%)	267,622		364,840	(97,218)	(27%)
Oil		10,668		52,929		(42,261)	(80%)	46,276		92,050	(45,774)	(50%)
Total natural gas, NGLs and		,		<u> </u>								
oil sales	\$	349,258	\$	563,579	\$	(214,321)	(38%)	\$ 781,354	\$	1,235,233 \$	(453,879)	(37%)
	-											
					_							

Our production has grown through drilling success which is partially offset by the natural decline of our natural gas and oil reserves through production and asset sales. Second quarter 2020 production volumes from the Marcellus Shale were 2.2 Bcfe per day, an increase of 6% when compared to the same period of 2019. Second quarter 2020 production volumes from our North Louisiana properties were approximately 179.2 Mmcfe per day, a decrease of 20% when compared to the same period of 2019. Production volumes for first six months 2020 for the Marcellus shale properties were 2.1 Bcfe per day, an increase of 6% compared to the same period of 2019. Production volumes for our North Louisiana properties were approximately 172.6 Mmcfe per day, a decline of 24% when compared to the same period of 2019. Our production for the three and six months ended June 30, 2020 and 2019 is set forth in the following table:

		Three Months End	ed			Six Months End	ed	
		June 30,				June 30,		
	2020	2019	Change	%	2020	2019	Change	%
Production (a)								
Natural gas (mcf)	151,127,582	143,163,003	7,964,579	6%	296,888,174	283,684,666	13,203,508	5%
NGLs (bbls)	9,716,261	9,847,268	(131,007)	(1%)	19,349,296	19,459,815	(110,519)	(1%)
Crude oil (bbls)	720,125	982,324	(262,199)	(27%)	1,588,422	1,787,874	(199,452)	(11%)
Total (mcfe) (b)	213,745,898	208,140,555	5,605,343	3%	422,514,482	411,170,800	11,343,602	3%
Average daily production (a)								
Natural gas (mcf)	1,660,743	1,573,220	87,523	6%	1,631,254	1,567,319	63,935	4%
NGLs (bbls)	106,772	108,212	(1,440)	(1%)	106,315	107,513	(1,198)	(1%)
Crude oil (bbls)	7,913	10,795	(2,882)	(27%)	8,728	9,878	(1,150)	(12%)
Total (mcfe) (b)	2,348,856	2,287,259	61,597	3%	2,321,508	2,271,662	49,846	2%

 $^{{\ }^{(}a)}$ Represents volumes sold regardless of when produced.

⁽b) Oil and NGLs volumes are converted to mcfe at the rate of one barrel equals six mcf based upon the approximate relative energy content of oil to natural gas, which is not indicative of the relationship between oil and natural gas prices.

Our average realized price received (including all derivative settlements and third-party transportation costs) during second quarter 2020 was \$0.89 per mcfe compared to \$1.42 per mcfe in second quarter 2019. Our average realized price during first six months 2020 was \$1.03 per mcfe compared to \$1.68 per mcfe in the same period of 2019. We believe computed final realized prices should include the total impact of transportation, gathering, processing and compression expense. Our average realized price (including all derivative settlements and third-party transportation costs) calculation also includes all cash settlements for derivatives. Average realized prices (excluding derivative settlements) do not include derivative settlements or third-party transportation costs which are reported in transportation, gathering, processing and compression expense in the accompanying consolidated statements of operations. Average realized prices (excluding derivative settlements) do include transportation costs where we receive net revenue proceeds from purchasers. Average realized price calculations for three and six months ended June 30, 2020 and 2019 are shown below:

%
(43%)
(26%)
(43%)
(38%)
(23%)
(29%)
(3%)
(25%)
(32%)
(66%)
(4%)
(39%)

⁽a) Oil and NGLs volumes are converted to mcfe at the rate of one barrel equals six mcf based upon the approximate relative energy content of oil to natural gas, which is not indicative of the relationship between oil and natural gas prices.

Realized prices include the impact of basis differentials and gains or losses realized from our basis hedging. The prices we receive for our natural gas can be more or less than the NYMEX price because of adjustments for delivery location, relative quality and other factors. The following table provides this impact on a per mcf basis:

	Three Mont	hs E	nded	Six Mor	iths	Ended
	June 3	30,		Jur	ie 30),
	 2020		2019	2020		2019
Average natural gas differentials below NYMEX	\$ (0.30)	\$	(0.24)	\$ (0.26)	\$	(0.15)
Realized (losses) gains on basis hedging	\$ (0.01)	\$	_	\$ 0.04	\$	0.05

The following tables reflect our production and average realized commodity prices (excluding derivative settlements and third-party transportation costs paid by Range) (in thousands, except prices):

		Three Mon	ths 1	Ended			Six Mont	hs E	nded		
		June	30,				Jun	e 30,			
		Price		Volume			Price		Volume		
	2019	Variance		Variance	2020	2019	Variance		Variance		2020
Natural gas					<u>.</u>					-	
Price (per mcf)	\$ 2.40	\$ (0.98)	\$	_	\$ 1.42	\$ 2.74	\$ (1.17)	\$	_	\$	1.57
Production (Mmcf)	143,163			7,964	151,127	283,685	_		13,203		296,888
Natural gas sales	\$ 343,623	\$ (148,533)	\$	19,117	\$ 214,207	\$ 778,343	\$ (347,113)	\$	36,226	\$	467,456

			Three Month June 3	ded			Six Mont June	hs Ene 30,	ded		
		2019	Price Variance	Volume Variance	2020	 2019	Price Variance		Volume Variance		2020
NGLs	-		 	 	 -	 	 		-		
Price (per bbl)	\$	16.96	\$ (4.16)	\$ _	\$ 12.80	\$ 18.75	\$ (4.92)	\$	_	\$	13.83
Production (Mbbls)		9,847	_	(131)	9,716	19,460	_		(111)		19,349
NGLs sales	\$	167,027	\$ (40,422)	\$ (2,222)	\$ 124,383	\$ 364,840	\$ (95,146)	\$	(2,072)	\$	267,622
			 			 	 			-	

		Three Mont	ns Er	iaea												
		June 3	30,							June	e 30,					
		Price		Volume						Price		Volume				
2019		Variance		Variance		2020		2019		Variance		Variance		2020		
					_			_								
\$ 53.88	\$	(39.07)	\$	_	\$	14.81	\$	51.49	\$	(22.36)	\$	_	\$	29.13		
982		_		(262)		720		1,788		_		(200)		1,588		
\$ 52,929	\$	(28,133)	\$	(14,128)	\$	10,668	\$	92,050	\$	(35,505)	\$	(10,269)	\$	46,276		
										=======================================	-					
\$	\$ 53.88 982	\$ 53.88 \$ 982	June 3 Price Variance \$ 53.88 \$ (39.07) 982 —	June 30, Price 2019 Variance \$ 53.88 \$ (39.07) \$ 982	Price Volume Variance Volume Variance \$ 53.88 \$ (39.07) \$ — 982 — (262)	June 30, Price Volume Variance Variance \$ 53.88 \$ (39.07) \$ — \$ 982 \$ (262)	June 30, Price Volume 2019 Variance Variance 2020 \$ 53.88 \$ (39.07) \$ — \$ 14.81 982 — (262) 720	June 30, Price Volume 2019 Variance Variance 2020 \$ 53.88 \$ (39.07) \$ — \$ 14.81 \$ 982 — (262) 720	June 30, Price Volume 2019 Variance Variance 2020 2019 \$ 53.88 \$ (39.07) \$ — \$ 14.81 \$ 51.49 982 — (262) 720 1,788	June 30, Price 2019 Volume Variance Volume Variance 2020 2019 \$ 53.88 \$ (39.07) \$ — \$ 14.81 \$ 51.49 \$ 982 — (262) 720 1,788	June 30, June 30, Price Volume Volume Price Variance Variance \$ 53.88 \$ (39.07) \$ — \$ 14.81 \$ 51.49 \$ (22.36) 982 — (262) 720 1,788 —	June 30, Price Volume Variance Volume Variance 2020 2019 Price Variance \$ 53.88 \$ (39.07) \$ — \$ 14.81 \$ 51.49 \$ (22.36) \$ 982 — (262) 720 1,788 —	June 30, June 30, Price Volume Volume Price Volume Voriance Variance \$ 53.88 \$ (39.07) \$ — \$ 14.81 \$ 51.49 \$ (22.36) \$ — 982 — (262) 720 1,788 — (200)	June 30, June 30, Price Volume Volume Variance 2020 2019 Price Volume Variance Volume Variance \$ 53.88 \$ (39.07) \$ — \$ 14.81 \$ 51.49 \$ (22.36) \$ — \$ 982 982 — (262) 720 1,788 — (200)		

				Three Mont	hs E	nded			Six Months Ended								
				June	30,							June	e 30,				
				Price		Volume						Price		Volume			
		2019		Variance		Variance		2020		2019		Variance		Variance	2020		
Consolidated							-								<u>.</u>		
Price (per mcfe)	\$	2.71	\$	(1.08)	\$	_	\$	1.63	\$	3.00	\$	(1.15)	\$	— \$	1.85		
Production (Mmcfe)		208,141		_		5,605		213,746		411,171		_		11,343	422,514		
			-												<u>.</u>		
Total natural gas, NGLs																	
and oil sales	\$	563,579	\$	(229,499)	\$	15,178	\$	349,258	\$	1,235,233	\$	(487,957)	\$	34,078 \$	781,354		
	Ť	0.00,0.0	<u> </u>	(===,:==)	Ě	,	Ť	0 10,000	Ť	-,,	<u> </u>	(101,001)	<u> </u>				

Transportation, gathering, processing and compression expense was \$278.9 million in second quarter 2020 compared to \$301.2 million in second quarter 2019. These third-party costs are lower in second quarter 2020 when compared to second quarter 2019 due to certain mid stream contract provisions in North Louisiana being met late last year and transportation capacity releases in Pennsylvania.

Transportation, gathering, processing and compression expense was \$563.6 million in first six months 2020 compared to \$603.9 million in first six months 2019. These third-party costs are lower when compared to the same period of the prior year due to certain mid stream contract provisions in North Louisiana being met late last year and transportation capacity releases in Pennsylvania. We have included these costs in the calculation of average realized prices (including all derivative settlements and third-party transportation expenses paid by Range). The following table summarizes transportation, gathering, processing and compression expense for the three and six months ended June 30, 2020 and 2019 on a per mcf and per barrel basis (in thousands, except for costs per unit):

		Thi	ree Months E June 30,	nded	[5	Six Months Er June 30,	ıded	I	
	2020		2019		Change	%	2020		2019		Change	%
Transportation, gathering, processing and compression												
Natural gas	\$ 167,367	\$	185,353	\$	(17,986)	(10%)	\$ 337,208	\$	374,435	\$	(37,227)	(10%)
NGLs	110,718		115,866		(5,148)	(4%)	225,642		229,439		(3,797)	(2%)
Oil	790		_		790	100%	790		_		790	100%
Total	\$ 278,875	\$	301,219	\$	(22,344)	(7%)	\$ 563,640	\$	603,874	\$	(40,234)	(7%)
Natural gas (per mcf)	\$ 1.11	\$	1.29	\$	(0.18)	(14%)	\$ 1.14	\$	1.32	\$	(0.18)	(14%)
NGLs (per bbl)	\$ 11.40	\$	11.77	\$	(0.37)	(3%)	\$ 11.66	\$	11.79	\$	(0.13)	(1%)
Oil (per bbl)	\$ 1.10	\$	_	\$	1.10	100%	\$ 0.50	\$	_	\$	0.50	100%

Derivative fair value (loss) income was a loss of \$6.3 million in second quarter 2020 compared to income of \$195.2 million in second quarter 2019. Derivative fair value income was \$226.9 million in first six months 2020 compared to \$133.5 million in first six months 2019. All of our derivatives are accounted for using the mark-to-market accounting method. Mark-to-market accounting treatment can result in more volatility of our revenues as the change in the fair value of our commodity derivative positions is included in total revenue. As commodity prices increase or decrease, such changes will have an opposite effect on the mark-to-market value of our derivatives. Gains on our derivatives generally indicate potentially lower wellhead revenues in the future while losses indicate potentially higher future wellhead revenues. The following table summarizes the impact of our commodity derivatives for the three and six months ended June 30, 2020 and 2019 (in thousands):

			onths Ende ie 30,	ed	Six Months Ended June 30,						
	<u> </u>	2020		2019		2020		2019			
Derivative fair value (loss) income per consolidated											
statements of operations	\$	(6,303)	\$	195,245	\$	226,872	\$	133,514			
Non-cash fair value (loss) gain: (1)											
Natural gas derivatives	\$	(76,330)	\$	154,787	\$	(34,777)	\$	143,641			
Oil derivatives		(34,515)		11,717		32,734		(27,782)			
NGLs derivatives		(14,722)		(6,371)		15,971		(42,750)			
Freight derivatives		(236)		1,605		(6,485)		2,064			
Total non-cash fair value (loss) gain (1)	\$	(125,803)	\$	161,738	\$	7,443	\$	75,173			
Net cash receipt (payment) on derivative settlements:											
Natural gas derivatives	\$	90,837	\$	20,396	\$	171,009	\$	19,524			
Oil derivatives		21,758		(2,807)		31,472		(1,965)			
NGLs derivatives		6,905		15,918		16,948		40,782			
Total net cash receipt (payment)	\$	119,500	\$	33,507	\$	219,429	\$	58,341			

⁽¹⁾ Non-cash fair value adjustments on commodity derivatives is a non-U.S. GAAP measure. Non-cash fair value adjustments on commodity derivatives only represent the net change between periods of the fair market values of commodity derivative positions and exclude the impact of settlements on commodity derivatives during the period. We believe that non-cash fair value adjustments on commodity derivatives is a useful supplemental disclosure to differentiate non-cash fair market value adjustments from settlements on commodity derivatives during the period. Non-cash fair value adjustments on commodity derivatives is not a measure of financial or operating performance under U.S. GAAP, nor should it be considered a substitute for derivative fair value income or loss as reported in our consolidated statements of operations.

Brokered natural gas, marketing and other revenue in second quarter 2020 was \$33.6 million compared to \$92.6 million in second quarter 2019 which is the result of lower broker sales volumes (volumes not related to our production) and significantly lower broker sales prices. Brokered natural gas, marketing and other revenue was \$62.2 million in first six months 2020 compared to \$230.8 million in first six months 2019. We continue to optimize our transportation portfolio using these volumes. See also *Brokered natural gas and marketing* expense below for more information on our net brokered margin.

Operating Costs per Mcfe

We believe some of our expense fluctuations are best analyzed on a unit-of-production or per mcfe basis. The following presents information about certain of our expenses on a per mcfe basis for the three and six months ended June 30, 2020 and 2019:

			7	Γhree Months June 30		led		Six Months Ended June 30,					
		020	2019		Change		%	2020	2019	Change	%		
Direct operating expense	\$	0.11	\$	0.16	\$	(0.05)	(31%) \$	0.13 \$	0.16 \$	(0.03)	(19%)		
Production and ad valorem tax expense		0.03		0.05		(0.02)	(40%)	0.03	0.05	(0.02)	(40%)		
General and administrative expense		0.18		0.24		(0.06)	(25%)	0.19	0.24	(0.05)	(21%)		
Interest expense		0.23		0.25		(0.02)	(8%)	0.23	0.25	(0.02)	(8%)		
Depletion, depreciation and amortization expense		0.49		0.68		(0.19)	(28%)	0.49	0.68	(0.19)	(28%)		

Direct operating expense was \$24.4 million in second quarter 2020 compared to \$34.0 million in second quarter 2019. Direct operating expenses include normally recurring expenses to operate and produce our wells, non-recurring well workovers and repair-related expenses. Our direct operating costs decreased in second quarter 2020 primarily due to the impact of the sale of various higher operating cost legacy properties in Pennsylvania in the current year and late in the prior year and lower workover costs. Our production volumes increased 3% in second quarter 2020. We incurred \$1.1 million of workover costs in second quarter 2020 compared to \$3.9 million in second quarter 2019. On a per mcfe basis, direct operating expense in second quarter 2020 decreased 31% to \$0.11 from \$0.16 in the same period of 2019, with the decrease primarily due to the impact of the sale of various higher operating cost legacy properties in Pennsylvania and lower workover costs.

Direct operating expense was \$56.4 million in first six months 2020 compared to \$67.2 million in the same period of 2019. Our direct operating costs decreased in first six months 2020 compared to the same period due to the sale of higher operating cost properties in Pennsylvania late in the prior year and in first quarter 2020 and lower workover costs. We incurred \$5.6 million of workover costs in first six months 2020 compared to \$8.4 million in first six months 2019. On a per mcfe basis, direct operating costs decreased 19% from \$0.16 to \$0.13 in the same period of 2019 with the decrease resulting from the impact of the sale of various higher operating cost legacy properties in Pennsylvania and lower workover costs. The following table summarizes direct operating expense per mcfe for the three and six months ended June 30, 2020 and 2019:

			Thre	ee Months	Ende	d		Six Months Ended							
			June 30,			June 30,									
	20	2020		2019		hange	%	2020		2019		Change		%	
Direct operating															
Lease operating expense	\$	0.10	\$	0.14	\$	(0.04)	(29%)	\$	0.12	\$	0.14	\$	(0.02)	(14%)	
Workovers		0.01		0.02		(0.01)	(50%)		0.01		0.02		(0.01)	(50%)	
Stock-based compensation		_		_		_	%		_		_		_	%	
Total direct operating expense	\$	0.11	\$	0.16	\$	(0.05)	(31%)	\$	0.13	\$	0.16	\$	(0.03)	(19%)	

Production and ad valorem taxes are paid based on market prices rather than hedged prices. This expense category is predominately comprised of the Pennsylvania impact fee. Production and ad valorem taxes (excluding the impact fee) were \$2.8 million in second quarter 2020 compared to \$3.1 million in second quarter 2019. In February 2012, the Commonwealth of Pennsylvania enacted an "impact fee" which functions as a tax on unconventional natural gas and oil production from the Marcellus Shale in Pennsylvania. This impact fee was \$2.7 million in second quarter 2020 compared to \$6.8 million in second quarter 2019 with the decrease due to lower natural gas prices.

Production and ad valorem taxes (excluding the impact fee) were \$5.8 million in first six months 2020 compared to \$5.9 million in the same period of 2019. Included in first six months 2020 is an \$8.8 million impact fee compared to \$15.3 million in the same period of 2019 with the decrease due to lower prices. The following table summarizes production and ad valorem taxes per mcfe for the three and six months ended June 30, 2020 and 2019:

				Months I June 30,	Ended			Six Months Ended June 30.						
	2020		2019		Change		%	2020	2019	,	hange	%		
Production and ad valorem taxes														
Production taxes	\$	0.01	\$	0.01	\$	_	% \$	0.01	\$ 0.01	\$	_	%		
Ad valorem taxes		_		0.01		(0.01)	(100%)	_	_		_	%		
Impact fee		0.02		0.03		(0.01)	(33%)	0.02	0.04		(0.02)	(50%)		
Total production and ad valorem taxes	\$	0.03	\$	0.05	\$	(0.02)	(40%) \$	0.03	\$ 0.05	\$	(0.02)	(40%)		

General and administrative ("G&A") expense was \$38.3 million in second quarter 2020 compared to \$50.6 million in second quarter 2019. The second quarter 2020 decrease of \$12.3 million when compared to the same period of 2019 is primarily due to lower salaries and benefits of \$4.5 million, lower stock based compensation of \$321,000, lower rig release penalties of \$1.4 million, lower franchise taxes and lower office expenses, including technology costs. At June 30, 2020, the number of G&A employees decreased 15% when compared to June 30, 2019. On a per mcfe basis, second quarter 2020 G&A expense decreased 25% due to lower salaries and benefits and lower stock-based compensation.

G&A expense for first six months 2020 decreased \$16.7 million when compared to the same period of 2019 due to lower salaries and benefits of \$8.3 million, lower stock-based compensation of \$1.9 million, lower franchise and other taxes of \$1.7 million, lower rig release penalties of \$1.4 million and lower general office expenses, including technology costs. On a per mcfe basis, first six months, 2020 G&A expense decreased 21% from first six months 2019 due to lower salaries and benefits, lower stock-based compensation and lower rig release penalties. The following table summarizes G&A expenses on a per mcfe basis for the three and six months ended June 30, 2020 and 2019:

	Three Months Ended								Six Months Ended						
		June 30,						June 30,							
	2	020	2	019	C	hange	%	2	2020	2	019	Change	%		
General and administrative							<u>.</u>		<u>.</u>						
General and administrative	\$	0.14	\$	0.19	\$	(0.05)	(26%)	\$	0.15	\$	0.19 \$	(0.04)	(21%)		
Stock-based compensation (non-cash)		0.04		0.05		(0.01)	(20%)		0.04		0.05	(0.01)	(20%)		
Total general and administrative expense	\$	0.18	\$	0.24	\$	(0.06)	(25%)	\$	0.19	\$	0.24 \$	(0.05)	(21%)		

Interest expense was \$48.6 million in second quarter 2020 compared to \$51.7 million in second quarter 2019. Interest expense was \$96.1 million for the first six months 2020 compared to \$103.3 million in the same period of 2019. The following table presents information about interest expense per mcfe for the three and six months ended June 30, 2020 and 2019:

	Three Months Ended							Six Months Ended							
			June 30,							June 30,					
	2020		2019		Change	%		2020		2019		Change	%		
Bank credit facility	\$ 0.04	\$	0.06	\$	(0.02)	(33%)	\$	0.04	\$	0.05	\$	(0.01)	(20%)		
Senior notes	0.18		0.19		(0.01)	(5%)		0.18		0.19		(0.01)	(5%)		
Subordinated notes	_		_		_	%		_		_		_	%		
Amortization of deferred financing costs and other	 0.01				0.01	100%		0.01		0.01			%		
Total interest expense	\$ 0.23	\$	0.25	\$	(0.02)	(8%)	\$	0.23	\$	0.25	\$	(0.02)	(8%)		
Average debt outstanding (\$000's)	\$ 3,306,517	\$	3,626,172	\$	(319,655)	(9%)	\$	3,286,611	\$	3,771,079	\$	(484,468)	(13%)		
Average interest rate (a)	5.6%		5.5%		0.1%	2%		5.6%	·	5.3%	<u> </u>	0.3%	6%		

⁽a) Includes commitment fees but excludes debt issue costs and amortization of discounts and premiums.

On an absolute basis, the decrease in interest expense for second quarter 2020 from the same period of 2019 was primarily due to lower average outstanding debt balances. Average debt outstanding on the bank credit facility for second quarter 2020 was \$681.3 million compared to \$998.9 million in second quarter 2019 and the weighted average interest rate on the bank credit facility was 2.7% in second quarter 2020 compared to 4.0% in second quarter 2019.

On an absolute basis, the decrease in interest expense for first six months 2020 from the same period of 2019 was primarily due to lower average outstanding debt balances partially offset by higher overall average interest rates. Average debt outstanding on the bank credit facility was \$600.6 million for first six months 2020 compared to \$995.1 million in the same period of 2019 and the weighted average interest rates were 2.9% in first six months 2020 compared to 4.0% in first six months 2019.

Depletion, depreciation and amortization expense was \$104.6 million in second quarter 2020 compared to \$141.5 million in second quarter 2019. This decrease is due to a 26% decrease in depletion rates partially offset by a 3% increase in production volumes. Depletion expense, the largest component of DD&A expense, was \$0.48 per mcfe in second quarter 2020 compared to \$0.65 per mcfe in second quarter 2019. We have historically adjusted our depletion rates in the fourth quarter of each year based on the year-end reserve report and at other times during the year when circumstances indicate there has been a significant change in reserves or costs. Our depletion rate per mcfe continues to decline due to the mix of production from our properties with lower depletion rates, asset sales and the impairment of our North Louisiana properties at the end of 2019.

DD&A expense was \$207.6 million in first six months 2020 compared to \$280.2 million in the same period of 2019. This is due to a 26% decrease in depletion rates partially offset by a 3% increase in production volumes. Depletion expense per mcfe was \$0.48 in first six months 2020 compared to \$0.65 per mcfe in the same period of 2019. The following table summarizes DD&A expense per mcfe for the three and six months ended June 30, 2020 and 2019:

		1 111	ree Monus E	naea			3	oix ivioliuls Elic	iea	
			June 30,					June 30,		
	 2020		2019	(Change	%	2020	2019	Change	%
DD&A										
Depletion and amortization	\$ 0.48	\$	0.65	\$	(0.17)	(26%)	\$ 0.48 \$	0.65	(0.17)	(26%)
Depreciation	_		0.01		(0.01)	(100%)	_	0.01	(0.01)	(100%)
Accretion and other	0.01		0.02		(0.01)	(50%)	0.01	0.02	(0.01)	(50%)
Total DD&A expense	\$ 0.49	\$	0.68	\$	(0.19)	(28%)	\$ 0.49 \$	0.68	\$ (0.19)	(28%)

Circ Months Ended

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Other Operating Expenses

Our total operating expenses also include other expenses that generally do not trend with production. These expenses include stock-based compensation, brokered natural gas and marketing expense, exploration expense, abandonment and impairment of unproved properties, termination costs, deferred compensation plan expenses, gain on early extinguishment of debt, impairment of proved properties and gain or loss on sale of assets. Stock-based compensation includes the amortization of restricted stock grants and PSUs. The following table details the allocation of stock-based compensation to functional expense categories for the three and six months ended June 30, 2020 and 2019 (in thousands):

	Three Months Ended					Six Months Ended					
		Jun	ie 30,		Jun						
	<u>-</u>	2020		2019		2020	2019				
Direct operating expense	\$	434	\$	549	\$	884	\$	1,140			
Brokered natural gas and marketing expense		168		553		581		1,001			
Exploration expense		372		388		702		876			
General and administrative expense		9,179		9,500		17,208		19,138			
Termination costs		_		26		_		26			
Total stock-based compensation	\$	10,153	\$	11,016	\$	19,375	\$	22,181			

Brokered natural gas and marketing expense was \$38.2 million in second quarter 2020 compared to \$101.1 million in second quarter 2019 due to lower broker purchase volumes (volumes not related to our production) and significantly lower prices. Brokered natural gas and marketing expense was \$70.8 million in first six months 2020 compared to \$233.4 million in first six months 2019 due to lower broker purchase volumes and significantly lower prices. The following table details our brokered natural gas, marketing and other net margin for the three and six months ended June 30, 2020 and 2019 (in thousands):

		Th	ree Months I	Ended	ì		Six Months Ended							
			June 30,						June 30,					
	2020		2019	(Change	%		2020	2019	Change	%			
Brokered natural gas and marketing						<u></u>								
Brokered natural gas sales \$	30,309	\$	88,004	\$	(57,695)	(66%)	\$	55,184 \$	222,805 \$	(167,621)	(75%)			
Brokered NGLs sales	1,006		1,184		(178)	(15%)		2,146	1,608	538	33%			
Other marketing revenue	2,276		3,417		(1,141)	(33%)		4,910	6,406	(1,496)	(23%)			
Brokered natural gas purchases (1)	(34,485)		(97,042)		62,557	64%		(63,372)	(226,552)	163,180	72%			
Brokered NGLs purchases	(1,721)		(1,397)		(324)	(23%)		(2,812)	(1,530)	(1,282)	(84%)			
Other marketing expense	(1,955)		(2,678)		723	27%		(4,601)	(5,340)	739	14%			
Net brokered natural gas and marketing margin \$	(4,570)	\$	(8,512)	\$	3,942	46%	\$	(8,545) \$	(2,603) \$	(5,942)	(228%)			

⁽¹⁾ Includes transportation costs.

Exploration expense was \$8.0 million in second quarter 2020 compared to \$8.1 million in second quarter 2019 with lower personnel costs partially offset by higher seismic expense. Exploration expense was \$15.1 million in first six months 2020 compared to \$16.3 million in first six months 2019 due to lower delay rental costs and lower personnel costs. The following table details our exploration expense for the three and six months ended June 30, 2020 and 2019 (in thousands):

Three Months Ended								Six Months Ended							
June 30,								June 30,							
 2020	2	019	Cl	nange	%		2020		2019	C)	hange	%			
\$ 5,762	\$	5,808	\$	(46)	(1%)	\$	10,974	\$	11,867	\$	(893)	(8%)			
1,893		2,400		(507)	(21%)		3,428		4,064		(636)	(16%)			
372		388		(16)	(4%)		702		876		(174)	(20%)			
_		(487)		487	100%		_		(487)		487	100%			
\$ 8,027	\$	8,109	\$	(82)	(1%)	\$	15,104	\$	16,320	\$	(1,216)	(7%)			
\$	1,893 372 —	2020 2 \$ 5,762 \$ 1,893 372 —	June 30, 2020 2019 \$ 5,762 \$ 5,808 1,893 2,400 372 388 — (487)	June 30, 2020 2019 Cl \$ 5,762 \$ 5,808 \$ 1,893 2,400 372 388 — (487)	June 30, 2020 2019 Change \$ 5,762 \$ 5,808 \$ (46) 1,893 2,400 (507) 372 388 (16) — (487) 487	June 30, 2020 2019 Change % \$ 5,762 \$ 5,808 \$ (46) (1%) 1,893 2,400 (507) (21%) 372 388 (16) (4%) — (487) 487 100%	June 30, 2020 2019 Change % \$ 5,762 \$ 5,808 \$ (46) (1%) \$ (1,893) 1,893 2,400 (507) (21%) 372 388 (16) (4%) — (487) 487 100%	June 30, 2020 2019 Change % 2020 \$ 5,762 \$ 5,808 \$ (46) (1%) \$ 10,974 1,893 2,400 (507) (21%) 3,428 372 388 (16) (4%) 702 — (487) 487 100% —	June 30, 2020 2019 Change % 2020 \$ 5,762 \$ 5,808 \$ (46) (1%) \$ 10,974 \$ 1,893 1,893 2,400 (507) (21%) 3,428 372 388 (16) (4%) 702 — (487) 487 100% —	June 30, June 30 2020 2019 Change % 2020 2019 \$ 5,762 \$ 5,808 \$ (46) (1%) \$ 10,974 \$ 11,867 1,893 2,400 (507) (21%) 3,428 4,064 372 388 (16) (4%) 702 876 — (487) 487 100% — (487)	June 30, June 30, 2020 2019 Change % 2020 2019 Change \$ 5,762 \$ 5,808 \$ (46) (1%) \$ 10,974 \$ 11,867 \$ 11,893 \$ 2,400 (507) (21%) 3,428 4,064 372 388 (16) (4%) 702 876 — (487) 487 100% — (487)	June 30, June 30, 2020 2019 Change % 2020 2019 Change \$ 5,762 \$ 5,808 \$ (46) (1%) \$ 10,974 \$ 11,867 \$ (893) 1,893 2,400 (507) (21%) 3,428 4,064 (636) 372 388 (16) (4%) 702 876 (174) — (487) 487 100% — (487) 487			

Abandonment and impairment of unproved properties was \$5.5 million in second quarter 2020 compared to \$12.8 million in second quarter 2019. Abandonment and impairment of unproved properties was \$10.9 million in first six months 2020 compared to \$25.4 million in the same period of 2019. We assess individually significant unproved properties for impairment on a quarterly basis and recognize a loss where circumstances indicate impairment in value. In determining whether a significant unproved property is impaired, we consider numerous factors including, but not limited to, current exploration plans, favorable or unfavorable activity on the property being evaluated and/or adjacent properties, our geologists' evaluation of the property and the remaining months in the lease term for the property. Impairment of individually insignificant unproved properties is assessed and amortized on an aggregate basis based on our average holding period, expected forfeiture rate and anticipated drilling success. In certain circumstances, our future plans to develop acreage may accelerate our impairment. As we continue to review our acreage positions and high grade our drilling inventory, additional leasehold impairments and abandonments may be recorded. The unproved property value in North Louisiana was fully impaired in fourth quarter 2019. As a result, abandonment and impairment of unproved properties for second quarter and first six months 2020 declined when compared to the same periods of 2019.

Termination costs were \$10.3 million in second quarter 2020 compared to \$2.2 million in second quarter 2019. In second quarter 2020, we negotiated capacity releases on certain transportation pipelines in Pennsylvania and recorded termination costs of \$10.4 million which represents the discounted present value of our remaining obligation to the third party. We completed the sale of our legacy assets in Northwest Pennsylvania during first quarter 2020 and recorded additional severance expense in the first quarter primarily related to the sale of this asset. In second quarter 2019, we announced a reduction in our work force and recorded \$2.2 million of severance costs related to this work force reduction.

Deferred compensation plan expense was a loss of \$12.6 million in second quarter 2020 compared to a gain of \$11.1 million in second quarter 2019. This non-cash item relates to the increase or decrease in value of the liability associated with our common stock that is vested and held in our deferred compensation plan. The deferred compensation liability is adjusted to fair value by a charge or a credit to deferred compensation plan expense. Our stock price increased from \$2.28 March 31, 2020 to \$5.63 at June 30, 2020. In the same period of the prior year, our stock price decreased from \$11.24 at March 31, 2019 to \$6.98 at June 30, 2019. During first six months 2020, deferred compensation was a loss of \$4.0 million compared to a gain of \$7.6 million in the same period of 2019. Our stock price increased from \$4.85 at December 31, 2019 to \$5.63 at June 30, 2020. In the same period of 2019, our stock price decreased from \$9.57 at December 31, 2018 to \$6.98 at June 20, 2019.

Gain on early extinguishment of debt was \$9.0 million in second quarter 2020 and \$21.9 million in the first six months 2020. We continue to repurchase in the open market certain of our senior and senior subordinated notes at a discount. For the first six months 2020, we have repurchased \$158.1 million in aggregate face value of such notes at a discount and recorded a gain on early extinguishment.

Impairment of proved properties was \$77.0 million in first quarter 2020. There were no proved property impairments in second quarter 2020, second quarter 2019 or first six months 2019. In fourth quarter 2019, we recorded impairment expense related to our oil and gas properties in North Louisiana due to a shift in business strategy and the possibility of a divestiture of those assets. In first quarter 2020, additional impairment was recorded based on market indications of value for these assets.

Gain on the sale of assets was \$121.7 million in first six months 2020 compared to \$5.7 million in the same period of 2019. In first quarter 2020, we received approval from state governmental authorities for a change in operatorship for our shallow Northwest Pennsylvania properties and we recorded a gain on the sale of these legacy assets of \$122.5 million. We did retain the deeper Utica rights on this acreage as part of this transaction.

Income tax (benefit) expense was a benefit of \$43.3 million in second quarter 2020 compared to expense of \$40.1 million in second quarter 2019. Income tax expense was \$6.9 million in first six months 2020 compared to \$45.8 million in first six months 2019. For second quarter 2020, the effective tax rate was 22.8% compared to 25.8% in the same period of 2019. For first six months 2020, the effective tax rate was 129.8% compared to 28.2% in the same period of 2019. The 2020 and 2019 effective tax rates were different than the statutory tax rate due to state income taxes, equity compensation and other discrete tax items which are detailed below (dollars in thousands).

	June	ieu	June 30,				
	 2020	2019	2	2020		2019	
Total (loss) income before income taxes	\$ (189,849)	\$ 155,284	\$	5,344	\$	162,391	
U.S. federal statutory rate	 21%	21%		21%		21%	
Total tax (benefit) expense at statutory rate	(39,868)	32,610		1,122		34,102	
State and local income taxes, net of federal benefit	(5,822)	5,725		(19)		6,543	
Equity compensation	1,259	497		5,101		3,888	
Permanent differences and other	1,151	1,267		734		1,254	
Total (benefit) expense for income taxes	\$ (43,280)	\$ 40,099	\$	6,938	\$	45,787	
Effective tax rate	 22.8%	 25.8%		129.8%		28.2%	

Three Months Ended

Six Months Ended

Management's Discussion and Analysis of Financial Condition, Capital Resources and Liquidity

Cash Flow

Cash flows from operations are primarily affected by production volumes and commodity prices, net of the effects of settlements of our derivatives. Our cash flows from operations are also impacted by changes in working capital. We generally maintain low cash and cash equivalent balances because we use available funds to reduce our bank debt. Short-term liquidity needs are satisfied by borrowings under our bank credit facility. Because of this, and because our principal source of operating cash flows (proved reserves to be produced in future years) cannot be reported as working capital, we often have low or negative working capital. From time to time, we enter into various derivative contracts to provide an economic hedge of our exposure to commodity price risk associated with anticipated future natural gas, NGLs and oil production. The production we hedge has varied and will continue to vary from year to year depending on, among other things, our expectation of future commodity prices. Any payments due to counterparties under our derivative contracts should ultimately be funded by prices received from the sale of our production. Production receipts, however, often lag payments to the counterparties. As of June 30, 2020, we have entered into derivative agreements covering 237.3 Bcfe for the remainder of 2020 and 128.2 Bcfe for 2021, not including our basis swaps.

The following table presents sources and uses of cash and cash equivalents for the six months ended June 30, 2020 and 2019 (in thousands):

	Six Months Ended									
	June 30,									
		2020		2019						
Sources of cash and cash equivalents										
Operating activities	\$	203,268	\$	445,516						
Disposal of assets		1,071		34,366						
Issuance of senior notes		550,000		_						
Borrowing on credit facility		1,045,000		1,151,000						
Other		17,288		18,739						
Total sources of cash and cash equivalents	\$	1,816,627	\$	1,649,621						
Uses of cash and cash equivalents										
Additions to natural gas and oil properties	\$	(254,073)	\$	(380,718)						
Repayment on credit facility		(883,000)		(1,199,000)						
Acreage purchases		(14,486)		(31,920)						
Additions to field service assets		(1,851)		(697)						
Repayment of senior notes		(617,982)		_						
Treasury stock purchases		(22,992)		_						
Dividends paid		_		(10,049)						
Debt issuance costs		(8,360)		_						
Other		(13,861)		(27,275)						
Total uses of cash and cash equivalents	\$	(1,816,605)	\$	(1,649,659)						

Sources of Cash and Cash Equivalents

Cash flows generated from operating activities in first six months 2020 was \$203.3 million compared to \$445.5 million in first six months 2019. Cash provided from operating activities is largely dependent upon commodity prices and production volumes, net of the effects of settlement of our derivative contracts. The decrease in cash provided from operating activities from first six months 2019 to first six months 2020 reflects significantly lower net realized prices (a decrease of 39%), the impact of our asset sales and lower working capital cash inflow partially offset by slightly higher production volumes and lower operating expenses. As of June 30, 2020, we have hedged more than 60% of our projected total production for the remainder of 2020, with more than 70% of our projected natural gas production hedged. Net cash provided from operating activities was affected by a 3% increase in production and working capital changes or the timing of cash receipts and disbursements. Changes in working capital (as reflected in our consolidated statements of cash flows) for first six months 2020 were positive \$26.1 million compared to a positive \$41.4 million for first six months 2019.

Uses of Cash and Cash Equivalents

Additions to natural gas and oil properties for first six months 2020 were consistent with expectations relative to our \$430.0 million 2020 capital budget.

Repayment of senior and senior subordinated notes for first six months 2020 includes purchases in the open market of \$349,000 principal amount of our 5.75% senior subordinated notes due 2021, \$12.5 million principal amount of our 5.75% senior notes due 2021, \$50.3 million principal amount of our 5.00% senior notes due 2022, \$8.0 million principal amount of our 5.875% senior notes due 2022 and \$86.9 million principal amount of our 5.00% senior notes due 2023. In addition, in conjunction with the issuance of our new \$550.0 million aggregate principal amount 9.25% senior notes due 2026, we used the proceeds from this issuance to redeem \$324.1 million of our 5.75% senior notes due 2021 and \$175.9 million of our 5.875% senior notes due 2022. From time to time, we may continue to repurchase our senior notes based upon prevailing market or other conditions at the time.

Liquidity and Capital Resources

Our main sources of liquidity and capital resources are internally generated cash flow from operating activities, a bank credit facility with uncommitted and committed availability, access to the debt and equity capital markets and asset sales. We must find new reserves and develop existing reserves to maintain and grow our production and cash flows. We accomplish this primarily through successful drilling programs which require substantial capital expenditures. We continue to take steps to ensure we have adequate capital resources and liquidity to fund our capital expenditure program. In first six months 2020, we

entered into additional commodity derivative contracts for 2020 through 2024 to protect future cash flows. Additionally, we suspended the payment of our dividend in January 2020.

During first six months 2020, our net cash provided from operating activities of \$203.3 million, proceeds from asset sales and borrowings under our bank credit facility was used to fund approximately \$270.4 million of capital expenditures (including acreage acquisitions). At June 30, 2020, we had \$568,000 in cash and total assets of \$6.5 billion.

Long-term debt at June 30, 2020 totaled \$3.2 billion, including \$639.0 million outstanding on our bank credit facility and \$2.6 billion of senior and senior subordinated notes. Our available committed borrowing capacity at June 30, 2020 was \$1.4 billion, with an additional \$600.0 million in borrowing base capacity available for increased liquidity potential. Cash is required to fund capital expenditures necessary to offset inherent declines in production and reserves that are typical in the oil and natural gas industry. Future success in growing reserves and production will be highly dependent on capital resources available and the success of finding or acquiring additional reserves. We currently believe that net cash generated from operating activities, unused committed borrowing capacity under the bank credit facility and proceeds from asset sales combined with our natural gas, NGLs and oil derivatives contracts currently in place will be adequate to satisfy near-term financial obligations and liquidity needs. While our expectation is to operate within our internally generated cash flow, to the extent our capital requirements exceed our internally generated cash flow and proceeds from asset sales, debt or equity securities may be issued to fund these requirements. Long-term cash flows are subject to a number of variables including the level of production and prices as well as various economic conditions that have historically affected the oil and natural gas business. A material decline in natural gas, NGLs and oil prices or a reduction in production and reserves would reduce our ability to fund capital expenditures, meet financial obligations and operate profitably. We establish a capital budget at the beginning of each calendar year and review it during the course of the year, taking into account various factors including the commodity price environment. Our initial 2020 capital budget was announced in early January at \$520.0 million which was subsequently reduced \$90.0 million to \$430.0 million based on th

Commodity prices have remained highly volatile and have declined during first six months 2020 compared to fourth quarter 2019. We have adjusted and must continue to adjust our business through efficiencies and cost reductions to compete in the current price environment which also requires reductions in overall debt levels over time. We plan to continue to work towards profitable growth within cash flows. We would expect to monitor the market and look for opportunities to refinance or reduce debt based on market conditions. We believe we are well-positioned to manage the challenges presented in a low commodity price environment and that we can endure continued volatility in current and future commodity prices by:

- exercising discipline in our capital program with the expectation of funding our capital expenditures with operating cash flow and, if required, with borrowings under our bank credit facility;
- · continuing to optimize our drilling, completion and operational efficiencies;
- continuing to focus on improving our cost structure;
- · continuing to pursue asset sales to reduce debt;
- · continuing to manage price risk by hedging our production volumes; and
- continuing to manage our balance sheet.

Credit Arrangements

As of June 30, 2020, we maintained a revolving credit facility with a borrowing base of \$3.0 billion and aggregate lender commitments of \$2.4 billion, which we refer to as our bank credit facility or bank debt. The bank credit facility is secured by substantially all of our assets and has a maturity date of April 13, 2023. See Note 9 to our unaudited consolidated financial statements for additional information regarding our bank debt. Availability under the bank credit facility is subject to a borrowing base set by the lenders. As of June 30, 2020, the outstanding balance under our bank credit facility was \$639.0 million. Additionally, we had \$336.4 million of undrawn letters of credit leaving \$1.4 billion of committed borrowing capacity available under the bank credit facility at the end of second quarter 2020, with an additional \$600.0 million in borrowing base capacity for potential increases in lender commitments.

Our bank credit facility imposes limitations on the payment of dividends and other restricted payments (as defined under our bank credit facility). The bank credit facility also contains customary covenants relating to debt incurrence, liens, investments and financial ratios. We were in compliance with all covenants at June 30, 2020. See Note 9 to our unaudited consolidated financial statements for additional information regarding our bank debt.

Cash Dividend Payments

In January 2020, we announced that the Board of Directors suspended the dividend. The determination of the amount of future dividends, if any, to be declared and paid is at the sole discretion of the Board of Directors and primarily depends on earnings, capital expenditures, debt covenants and various other factors.

Cash Contractual Obligations

Our contractual obligations include long-term debt, operating leases, derivative obligations, asset retirement obligations and transportation, processing and gathering commitments. As of June 30, 2020, we do not have any significant off-balance sheet debt or other such unrecorded obligations and we have not guaranteed any debt of any unrelated party. As of June 30, 2020, we had a total of \$336.4 million of undrawn letters of credit under our bank credit facility.

Since December 31, 2019, there have been no material changes to our contractual obligations other than the changes to our indebtedness as further discussed in Note 9.

Interest Rates

At June 30, 2020, we had approximately \$3.2 billion of debt outstanding. Of this amount, \$2.6 billion bore interest at fixed rates averaging 5.9%. Bank debt totaling \$639.0 million bears interest at a floating rate, which was 2.3% at June 30, 2020. The 30-day LIBOR Rate on June 30, 2020 was approximately 0.2%. A 1% increase in short-term interest rates on the floating-rate debt outstanding on June 30, 2020 would cost us approximately \$6.4 million in additional annual interest expense.

Off-Balance Sheet Arrangements

We do not currently utilize any significant off-balance sheet arrangements with unconsolidated entities to enhance our liquidity or capital resource position, or for any other purpose. However, as is customary in the oil and gas industry, we have various contractual work commitments, some of which are described above under *Cash Contractual Obligations*.

Inflation and Changes in Prices

Our revenues, the value of our assets and our ability to obtain bank loans or additional capital on attractive terms have been and will continue to be affected by changes in natural gas, NGLs and oil prices and the costs to produce our reserves. Natural gas, NGLs and oil prices are subject to significant fluctuations that are beyond our ability to control or predict. Although certain of our costs and expenses are affected by general inflation, inflation does not normally have a significant effect on our business. We expect costs for the remainder of 2020 to continue to be a function of supply and demand.

Forward-Looking Statements

Certain sections of Management's Discussion and Analysis of Financial Condition and Results of Operations include forward-looking statements concerning trends or events potentially affecting our business. These statements contain words such as "anticipates," "believes," "expects," "targets," "plans," "projects," "could," "may," "should," "would" or similar words indicating that future outcomes are uncertain. In accordance with "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995, these statements are accompanied by cautionary language identifying important factors, though not necessarily all such factors, which could cause future outcomes to differ materially from those set forth in the forward-looking statements. These forward-looking statements are based on our current expectations and beliefs concerning future developments and their potential effect on us. While management believes that these forward-looking statements are reasonable when made, there can be no assurance that future developments affecting us will be those that we anticipate. All comments concerning our expectations for future revenues and operating results are based on our current forecasts for our existing operations and do not include the potential impact of any future events. We undertake no obligation to publicly update or revise any forward-looking statements after the date they are made, whether as a result of new information, future events or otherwise. For additional risk factors affecting our business, see Item 1A. Risk Factors as set forth in our Annual Report on Form 10-K for the year ended December 31, 2019, as filed with the SEC on February 27, 2020.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The primary objective of the following information is to provide forward-looking quantitative and qualitative information about our potential exposure to market risks. The term "market risk" refers to the risk of loss arising from adverse changes in natural gas, NGLs and oil prices and interest rates. The disclosures are not meant to be precise indicators of expected future losses, but rather indicators of reasonably possible losses. This forward-looking information provides indicators of how we view and manage our ongoing market-risk exposure. All of our market-risk sensitive instruments were entered into for purposes other than trading. All accounts are U.S. dollar denominated.

Market Risk

We are exposed to market risks related to the volatility of natural gas, NGLs and oil prices. We employ various strategies, including the use of commodity derivative instruments, to manage the risks related to these price fluctuations. These derivative instruments apply to a varying portion of our production and provide only partial price protection. These arrangements limit the benefit to us of increases in prices but offer protection in the event of price declines. Further, if our counterparties defaulted, this protection might be limited as we might not receive the benefits of the derivatives. Realized prices are primarily driven by worldwide prices for oil and spot market prices for North American natural gas production. Natural gas and oil prices have been volatile and unpredictable for many years. Changes in natural gas prices affect us more than changes in oil prices because approximately 67% of our December 31, 2019 proved reserves are natural gas. We are also exposed to market risks related to changes in interest rates. These risks did not change materially from December 31, 2019 to June 30, 2020.

Commodity Price Risk

We use commodity-based derivative contracts to manage exposures to commodity price fluctuations. We do not enter into these arrangements for speculative or trading purposes. At times, certain of our derivatives are swaps where we receive a fixed price for our production and pay market prices to the counterparty. Our derivatives program can also include collars, which establish a minimum floor price and a predetermined ceiling price. We have also entered into natural gas derivative instruments containing a fixed price swap and a sold option (referred to as a swaption in the table below). At June 30, 2020, our derivative program includes swaps, collars, three-way collars, calls and swaptions. The fair value of these contracts, represented by the estimated amount that would be realized upon immediate liquidation as of June 30, 2020, approximated a net unrealized pretax gain of \$139.3 million. These contracts expire monthly through December 2021. At June 30, 2020, the following commodity derivative contracts were outstanding, excluding our basis swaps which are discussed below:

Period	Contract Type	Volume Hedged		We	ighted Average	Hedge Price	<u>.</u>	Fair Market	Value
				Swap	Sold Put	Floor	Ceiling	(in the second	
Natural Gas (1)								(in thousar	ias)
2020	Swaps	1,146,848 Mmbtu/day	\$	2.59				\$	131,353
2021 2021	Swaps Collars	70,000 Mmbtu/day 60,000 Mmbtu/day	\$	2.61		\$ 2.60	\$ 3.00	\$	88 2,557
July – September 2020	Calls	60,000 Mmbtu/day				\$ 2.00	\$ 2.50	\$	(41)
July – October 2020	Three-way Collars	60,000 Mmbtu/day			\$ 1.75	\$ 2.00	\$ 2.53	\$	1,142
2021	Three-way Collars	240,000 Mmbtu/day			\$ 1.99	\$ 2.33	\$ 2.60	\$	(19,687)
Crude Oil (1)									
2020	Swaps	7,000 bbls/day	\$	58.12				\$	23,911
2021	Swaps	1,000 bbls/day	\$	55.00			A =0.00	\$	5,302
July – September 2020	Calls	500 bbls/day					\$ 59.00	\$	(3)
NGLs (C3-Propane)									
July – September 2020	Swaps	3,022 bbls/day	\$	0.47/gallon				\$	75
NGLs (NC4-Normal Butane)									
July – September 2020	Swaps	2,500 bbls/day	\$	0.57/gallon				\$	905
July – September 2020	Calls	2,500 bbls/day	*				\$ 0.57/gallon	\$	(62)
NOT (OF N . 10 P)									
NGLs (C5-Natural Gasoline) July – September 2020	Swaps	1,674 bbls/day	\$	0.73/gallon				\$	2
July September 2020	5 waps	1,07 4 0013/ddy	Ψ	0.7 5, 5anon				Ψ	-

⁽¹⁾ We also sold natural gas call swaptions of 180,000 Mmbtu/day for 2021 at a weighted average price of \$2.82. In addition, we sold oil call swaptions of 1,000 bbls per day for 2021 at a weighted average price of \$55.00. The fair market value of these swaptions at June 30, 2020 was a net derivative liability of \$6.2 million.

In the future, we expect our NGLs production to continue to increase. We believe NGLs prices are somewhat seasonal, particularly for propane. Therefore, the relationship of NGLs prices to NYMEX WTI (or West Texas Intermediate) will vary due to product components, seasonality and geographic supply and demand. We sell NGLs in several regional and international markets. If we are not able to sell or store NGLs, we may be required to curtail production or shift our drilling activities to dry gas areas.

Currently, the Appalachian region has limited local demand and infrastructure to accommodate ethane. We have agreements where we have contracted to either sell or transport ethane from our Marcellus Shale area. We cannot ensure that these facilities will remain available. If we are not able to sell ethane under at least one of these agreements, we may be required to curtail production or, as we have done in the past, purchase or divert natural gas to blend with our rich residue gas.

Other Commodity Risk

We are impacted by basis risk, caused by factors that affect the relationship between commodity futures prices reflected in derivative commodity instruments and the cash market price of the underlying commodity. Natural gas transaction prices are frequently based on industry reference prices that may vary from prices experienced in local markets. If commodity price changes in one region are not reflected in other regions, derivative commodity instruments may no longer provide the expected hedge, resulting in increased basis risk. Therefore, in addition to the swaps, collars and calls discussed above, we have entered into natural gas basis swap agreements. The price we receive for our gas production can be more or less than the NYMEX Henry Hub price because of basis adjustments, relative quality and other factors. Basis swap agreements effectively fix the basis adjustments. The fair value of the natural gas basis swaps was a loss of \$4.5 million at June 30, 2020 and they settle monthly through December 2024.

At June 30, 2020, we also had propane basis contracts which lock in the differential between Mont Belvieu and international propane indices. These contracts settle monthly in 2020 and include a total volume of 687,500 barrels. The fair value of these contracts was a gain of \$1.0 million at June 30, 2020.

The following table shows the fair value of our derivatives and the hypothetical changes in fair value that would result from a 10% and a 25% change in commodity prices at June 30, 2020. We remain at risk for possible changes in the market value of commodity derivative instruments; however, such risks should be mitigated by price changes in the underlying physical commodity (in thousands):

				Hypothetical Char	ige in	Fair Value	Hypothetical Change in Fair Value			
				Increase in Comr	nodity	Price of		Decrease in Co	mmodi	ity Price of
	F	air Value		10%		25%		10%	25%	
Swaps	\$	161,636	\$	(56,152)	\$	(140,381)	\$	56,152	\$	140,377
Collars		2,557		(2,586)		(6,388)		2,675		6,985
Three-way collars		(18,545)		(17,209)		(46,376)		15,345		32,732
Calls		(106)		(171)		(766)		71		102
Swaptions		(6,201)		(7,745)		(26,048)		4,098		5,949
Basis swaps		(3,456)	3,65		9,136		(3,655)			(9,136)
Freight swaps		(4,956)		765		1,914		(765)		(1,914)

Our commodity-based derivative contracts expose us to the credit risk of non-performance by the counterparty to the contracts. Our exposure is diversified primarily among major investment grade financial institutions and we have master netting agreements with our counterparties that provide for offsetting payables against receivables from separate derivative contracts. Our derivative contracts are with multiple counterparties to minimize our exposure to any individual counterparty. At June 30, 2020, our derivative counterparties include twenty-one financial institutions, of which all but six are secured lenders in our bank credit facility. Counterparty credit risk is considered when determining the fair value of our derivative contracts. While our counterparties are primarily major investment grade financial institutions, the fair value of our derivative contracts has been adjusted to account for the risk of non-performance by certain of our counterparties, which was immaterial. Our propane sales from the Marcus Hook facility near Philadelphia are short-term and are to a single purchaser. Our ethane sales from Marcus Hook are to a single international customer.

Interest Rate Risk

We are exposed to interest rate risk on our bank debt. We attempt to balance variable rate debt, fixed rate debt and debt maturities to manage interest costs, interest rate volatility and financing risk. This is accomplished through a mix of fixed rate senior and senior subordinated debt and variable rate bank debt. At June 30, 2020, we had \$3.2 billion of debt outstanding. Of this amount, \$2.6 billion bears interest at fixed rates averaging 5.9%. Bank debt totaling \$639.0 million bears interest at floating rates, which was 2.3% on June 30, 2020. On June 30, 2020, the 30-day LIBOR Rate was approximately 0.2%. A 1% increase in short-term interest rates on the floating-rate debt outstanding on June 30, 2020, would cost us approximately \$6.4 million in additional annual interest expense.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As required by Rule 13a-15(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), we have evaluated, under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this Quarterly Report on Form 10-Q. Our disclosure controls and procedures are designed to provide reasonable assurance that the information required to be disclosed by us in reports that we file under the Exchange Act is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure and is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. Based upon the evaluation, our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures were effective as of June 30, 2020 at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There was no change in our system of internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter ended June 30, 2020 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

See Note 17 to our unaudited consolidated financial statements entitled "Commitments and Contingencies" included in Part I Item 1 above for a summary of our legal proceedings, such information being incorporated herein by reference.

Environmental Proceedings

Our subsidiary, Range Resources – Appalachia, LLC, was ordered in January 2020 by the Pennsylvania Department of Environmental Protection ("DEP"), to take remedial actions pursuant to the Pennsylvania Clean Streams Law and Oil and Gas Act with respect to one well in Lycoming County. While Range has undertaken remedial efforts in the past at the direction of the DEP regarding this well, Range has and continues to vigorously dispute the allegations that this will is the source of methane in surrounding groundwater and water wells as contended by DEP. Range has considerable evidence to the contrary, including that methane had existed in the groundwater before commencement of our operations. Range appealed the January 2020 order to the Environmental Hearing Board. While we intend to vigorously defend against allegations in the Order, nonetheless, resolution of this matter may result in penalties of more than \$100.000.

From time to time, we receive notices of violation from governmental and regulatory authorities in areas in which we operate relating to alleged violations of environmental statutes or the rules and regulations promulgated thereunder. While we cannot predict with certainty whether these notices of violation will result in fines and/or penalties, if fines and/or penalties are imposed, they may result in monetary sanctions, individually or in the aggregate, in excess of \$100,000.

ITEM 1A. RISK FACTORS

We are subject to various risks and uncertainties in the course of our business. In addition to the factors discussed elsewhere in this report, you should carefully consider the risks and uncertainties described under Item 1A. Risk Factors filed in our Annual Report on Form 10-K for the year ended December 31, 2019 and disclosed in our first quarter 10-Q for the quarter ended March 31, 2020.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

The following table provides information about purchases by Range during the quarter ended June 30, 2020 of equity securities that are registered pursuant to Section 12 of the Securities Exchange Act of 1934:

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (a)
4/1/20 - 4/30/20	200,000	\$ 2.20	200,000	\$ 70,099,593
5/1/20 - 5/31/20	_	_	_	\$ 70,099,593
6/1/20 - 6/30/20	_	_	_	\$ 70,099,593
Total	200,000	\$ 2.20	200,000	

⁽a) In October 2019, we announced a \$100.0 million share repurchase program. As of June 30,2020, we have repurchased 10.0 million shares of common stock at a cost of approximately \$29.7 million, excluding fees and commissions. Shares repurchased as of June 30, 2020 are held as treasury stock.

ITEM 6. **EXHIBITS Exhibit index** Exhibit **Exhibit Description** Number Restated Certificate of Incorporation of Range Resources Corporation (incorporated by reference to Exhibit 3.1.1 to our Form 10-Q (File No. 0t 12209) as filed with the SEC on May 5, 2004, as amended by the Certificate of Second Amendment to Restated Certificate of Incorporation of Range Resources Corporation (incorporated by reference to Exhibit 3.1 to our Form 10-Q (File No. 001-12209) as filed with the SEC on July 24 2005) and the Certificate of Second Amendment to Restated Certificate of Incorporation of Range Resources Corporation (incorporated by reference to Exhibit 3.1 to our Form 10-Q (File No. 001-12209) as filed with the SEC on July 24, 2008) Amended and Restated By-laws of Range Resources Corporation (incorporated by reference to Exhibit 3.1 to our Form 8-K (File No. 001-1220) as filed with the SEC on May 19, 2016) Sixth Amended and Restated Credit Agreement, dated April 13, 2018 among Range Resources Corporation (as borrower) and JPMorgan Chase Bank, N.A. as administrative agent and the other lenders and agents party thereto (incorporated by reference to Exhibit 10.1 to our Form 8-K (F No. 001-12209) as filed with the SEC on April 16, 2018) First Amendment to the Sixth Amended and Restated Credit Agreement, dated as of October 18, 2019 among Range Resources Corporation (as borrower) and JPMorgan Chase Bank, N.A. as administrative agent and the other lenders and agents party thereto (incorporated by reference to Exhibit 10.2 to our Form 10-Q (File No. 001-12209) as filed with the SEC on October 23, 2019) Second Amendment to the Sixth Amended and Restated Credit Agreement, dated as of March 27, 2020 among Range Resources Corporation (& borrower) and JPMorgan Chase Bank N.A. as administrative agent and the other lenders and agents party thereto (incorporated by reference to Exhibit 10.1 to our Form 8-K (File No. 001-12209) as filed with the SEC on April 1, 2020) Range Resources Corporation 2019 Equity-Based Compensation Plan (incorporated by reference to Exhibit 10.1 to our Current Report on Form K (File No. 001-12209) as filed with the SEC on May 16, 2019) 10.5 Range Resources Corporation Amended and Restated 2019 Equity & Based Compensation Plan (incorporated by reference to Exhibit A to our Definitive Proxy Statement for the 2020 Annual Meeting of Stockholders. (File No. 001-12209 as filed with the SEC on April 3, 2020) Certification by the President and Chief Executive Officer of Range Resources Corporation Pursuant to Section 302 of the Sarbanes-Oxley Act 31.1* Certification by the Chief Financial Officer of Range Resources Corporation Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 31.2* 32.1** Certification by the President and Chief Executive Officer of Range Resources Corporation Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 32.2** Certification by the Chief Financial Officer of Range Resources Corporation Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Sectic 906 of the Sarbanes-Oxley Act of 2002 101. INS* Inline XBRL Instance Document – the XBRL Instance Document does not appear in the Interactive Data file because its XBRL tags are embed

within the Inline XBRL document

Inline XBRL Taxonomy Extension Schema

Inline XBRL Taxonomy Extension Calculation Linkbase Document

Inline XBRL Taxonomy Extension Definition Linkbase Document

Inline XBRL Taxonomy Extension Label Linkbase Document

101. SCH*

101. CAL*

101. DEF*

101. LAB*

Exhibit Number	Exhibit Description
101. PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104 *	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)
* filed herew	th
** furnished by	provith

** 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.

Date: August 3, 2020

RANGE RESOURCES CORPORATION

By: /s/ MARK S. SCUCCHI

Mark S. Scucchi Senior Vice President and Chief Financial Officer

Date: August 3, 2020

RANGE RESOURCES CORPORATION

By: /s/ DORI A. GINN

Dori A. Ginn Senior Vice President – Controller and Principal Accounting Officer

CERTIFICATION OF CHIEF EXECUTIVE OFFICER

I, Jeff L. Ventura, certify that:

- 1. I have reviewed this quarterly report on Form 10-Q of Range Resources Corporation (the "registrant");
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer 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 3, 2020 /s/ JEFF L. VENTURA

Jeff L. Ventura
President and Chief Executive Officer

CERTIFICATION OF CHIEF FINANCIAL OFFICER

I, Mark S. Scucchi, certify that:

- 1. I have reviewed this quarterly report on Form 10-Q of Range Resources Corporation (the "registrant");
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer 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 3, 2020 /s/ Mark S. Scucchi

Mark S. Scucchi Senior Vice President and Chief Financial Officer

CERTIFICATION OF PRESIDENT AND CHIEF EXECUTIVE OFFICER OF RANGE RESOURCES CORPORATION 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 on Form 10-Q for the period ending June 30, 2020 and filed with the Securities and Exchange Commission on the date hereof (the "Report") and pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Jeff L. Ventura, President and Chief Executive Officer of Range Resources Corporation (the "Company"), hereby certify that, to my knowledge:

- 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.

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.

By: /s/ JEFF L. VENTURA

Jeff L. Ventura

August 3, 2020

CERTIFICATION OF CHIEF FINANCIAL OFFICER OF RANGE RESOURCES CORPORATION 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 on Form 10-Q for the period ending June 30, 2020 and filed with the Securities and Exchange Commission on the date hereof (the "Report") and pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Mark S. Scucchi, Senior Vice President - Chief Financial Officer of Range Resources Corporation (the "Company"), hereby certify that, to my knowledge:

- 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.

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.

By: /s/ MARK S. SCUCCHI

Mark S. Scucchi

August 3, 2020