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

FORM 10-Q

(Mark one)

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

For the quarterly period ended June 30, 2019

OR

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

For the transition period from______ to ______

Commission File Number: 001-12209

RANGE RESOURCES CORPORATION

(Exact Name of Registrant as Specified in Its Charter)

Delaware **(State or Other Jurisdiction of Incorporation or Organization)**	**34-1312571** **(IRS Employer Identification No.)**
100 Throckmorton Street, Suite 1200 **Fort Worth, Texas** **(Address of Principal Executive Offices)**	**76102** **(Zip Code)**

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, (Par Value $0.01)	RRC	New York Stock Exchange

Registrant's telephone number, including area code

(817) 870-2601

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes ☑ No ☐

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

Large Accelerated Filer	☑	Accelerated Filer	☐
Non-Accelerated Filer	☐	Smaller Reporting Company	☐
		Emerging Growth Company	☐

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ☐ No ☑

251,378,410 Common Shares were outstanding on July 23, 2019

RANGE RESOURCES CORPORATION
FORM 10-Q
Quarter Ended June 30, 2019

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 the Form 10-Q, please see "Glossary of Certain Defined Terms" in our 2018 Annual Report on Form 10-K.

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PART I – FINANCIAL INFORMATION
ITEM 1. Financial Statements

RANGE RESOURCES CORPORATION
CONSOLIDATED BALANCE SHEETS
(In thousands, except per share data)

	June 30, 2019 (Unaudited)	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 507	$ 545
Accounts receivable, less allowance for doubtful accounts of $6,121 and $6,118	289,295	490,723
Derivative assets	142,591	87,953
Inventory and other	26,706	22,964
Total current assets	459,099	602,185
Derivative assets	20,545	4,842
Natural gas and oil properties, successful efforts method	13,032,323	13,085,206
Accumulated depletion and depreciation	(3,911,646)	(4,062,021)
	9,120,677	9,023,185
Other property and equipment	111,963	111,908
Accumulated depreciation and amortization	(104,620)	(102,132)
	7,343	9,776
Operating lease right-of-use assets	48,893	—
Other assets	71,751	68,166
Total assets	$ 9,728,308	$ 9,708,154
Liabilities		
Current liabilities:		
Accounts payable	$ 193,190	$ 227,344
Asset retirement obligations	5,485	5,485
Accrued liabilities	371,795	475,848
Accrued interest	41,864	41,990
Derivative liabilities	1,297	4,144
Total current liabilities	613,631	754,811
Bank debt	885,286	932,018
Senior notes	2,858,445	2,856,166
Senior subordinated notes	48,724	48,677
Deferred tax liabilities	712,495	666,668
Derivative liabilities	1,478	3,462
Deferred compensation liabilities	62,431	67,542
Operating lease liabilities	39,897	—
Asset retirement obligations and other liabilities	323,668	319,379
Total liabilities	5,546,055	5,648,723
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, 251,353,635 issued at June 30, 2019 and 249,519,687 issued at December 31, 2018	2,514	2,495
Common stock held in treasury, 9,665 shares at June 30, 2019 and 9,665 shares at December 31, 2018	(391)	(391)
Additional paid-in capital	5,644,580	5,628,447
Accumulated other comprehensive loss	(538)	(658)
Retained deficit	(1,463,912)	(1,570,462)
Total stockholders' equity	4,182,253	4,059,431
Total liabilities and stockholders' equity	$ 9,728,308	$ 9,708,154

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	**2018**	**2019**	**2018**
Revenues and other income:				
Natural gas, NGLs and oil sales	$ 563,579	$ 661,390	$ 1,235,233	$ 1,358,019
Derivative fair value income (loss)	195,245	(103,290)	133,514	(117,299)
Brokered natural gas, marketing and other	92,605	98,084	230,819	158,063
Total revenues and other income	851,429	656,184	1,599,566	1,398,783
Costs and expenses:				
Direct operating	33,981	35,088	67,208	73,210
Transportation, gathering, processing and compression	301,219	269,910	603,874	514,538
Production and ad valorem taxes	9,889	10,140	21,199	20,066
Brokered natural gas and marketing	101,117	102,747	233,422	158,341
Exploration	8,109	7,499	16,320	15,218
Abandonment and impairment of unproved properties	12,770	54,922	25,429	66,695
General and administrative	50,631	47,583	97,269	116,000
Termination costs	2,206	—	2,206	(37)
Deferred compensation plan	(11,142)	6,615	(7,561)	(782)
Interest	51,727	53,862	103,264	106,247
Depletion, depreciation and amortization	141,505	161,026	280,223	323,292
Impairment of proved properties	—	15,302	—	22,614
Gain on the sale of assets	(5,867)	(156)	(5,678)	(179)
Total costs and expenses	696,145	764,538	1,437,175	1,415,223
Income (loss) before income taxes	155,284	(108,354)	162,391	(16,440)
Income tax expense (benefit):				
Current	—	—	—	—
Deferred	40,099	(28,518)	45,787	14,158
	40,099	(28,518)	45,787	14,158
Net income (loss)	$ 115,185	$ (79,836)	$ 116,604	$ (30,598)
Net income (loss) per common share:				
Basic	$ 0.46	$ (0.32)	$ 0.46	$ (0.13)
Diluted	$ 0.46	$ (0.32)	$ 0.46	$ (0.13)
Dividends paid per common share	$ 0.02	$ 0.02	$ 0.04	$ 0.04
Weighted average common shares outstanding:				
Basic	247,770	245,880	247,773	245,795
Diluted	248,436	245,880	249,042	245,795

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	**2018**	**2019**	**2018**
Net income (loss)	$ 115,185	$ (79,836)	$ 116,604	$ (30,598)
Other comprehensive income				
Postretirement benefits:				
Amortization of prior service cost	92	93	184	185
Amortization of actuarial gain	(12)	—	(24)	—
Income tax expense	(20)	(23)	(40)	(46)
Total comprehensive income (loss)	$ 115,245	$ (79,766)	$ 116,724	$ (30,459)

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

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

	Six Months Ended June 30,	
	2019	**2018**
Operating activities:		
Net income (loss)	$ 116,604	$ (30,598)
Adjustments to reconcile net income (loss) to net cash provided from operating activities:		
Deferred income tax expense	45,787	14,158
Depletion, depreciation and amortization and impairment	280,223	345,906
Exploration dry hole costs	—	2
Abandonment and impairment of unproved properties	25,429	66,695
Derivative fair value (income) loss	(133,514)	117,299
Cash settlements on derivative financial instruments	58,341	(5,350)
Allowance for doubtful accounts	—	(1,500)
Amortization of deferred financing costs and other	3,243	2,376
Deferred and stock-based compensation	13,727	34,167
Gain on the sale of assets	(5,678)	(179)
Changes in working capital:		
Accounts receivable	201,428	(14,425)
Inventory and other	(5,035)	796
Accounts payable	(29,132)	14,615
Accrued liabilities and other	(125,907)	1,553
Net cash provided from operating activities	445,516	545,515
Investing activities:		
Additions to natural gas and oil properties	(380,718)	(584,432)
Additions to field service assets	(697)	(1,863)
Acreage purchases	(31,920)	(37,900)
Proceeds from disposal of assets	34,366	366
Purchases of marketable securities held by the deferred compensation plan	(15,170)	(27,271)
Proceeds from the sales of marketable securities held by the deferred compensation plan	18,226	25,459
Net cash used in investing activities	(375,913)	(625,641)
Financing activities:		
Borrowings on credit facilities	1,151,000	1,114,000
Repayments on credit facilities	(1,199,000)	(1,011,000)
Dividends paid	(10,049)	(9,960)
Taxes paid for shares withheld	(3,343)	(3,021)
Debt issuance costs	—	(8,257)
Change in cash overdrafts	(8,762)	(7,318)
Proceeds from the sales of common stock held by the deferred compensation plan	513	5,649
Net cash (used in) provided from financing activities	(69,641)	80,093
Decrease in cash and cash equivalents	(38)	(33)
Cash and cash equivalents at beginning of period	545	448
Cash and cash equivalents at end of period	$ 507	$ 415

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

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

Fiscal Year 2019

	Common stock		Common stock held in treasury	Additional paid-in capital	Retained (deficit)/earnings	Accumulated other comprehensive (loss) income	Total
	Shares	Par value					
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)**	**$ (538)**	**$ 4,182,253**

Fiscal Year 2018

	Common stock		Common stock held in treasury	Additional paid-in capital	Retained (deficit)/earnings	Accumulated other comprehensive (loss) income	Total
	Shares	Par value					
Balance as of December 31, 2017	**248,144**	**$ 2,481**	**$ (599)**	**$ 5,577,732**	**$ 195,990**	**$ (1,332)**	**$ 5,774,272**
Issuance of common stock	1,092	11	—	(1,228)	—	—	**(1,217)**
Stock-based compensation expense	—	—	—	17,201	—	—	**17,201**
Cash dividends paid ($0.02 per share)	—	—	—	—	(4,971)	—	**(4,971)**
Treasury stock issuance	—	—	30	(30)	—	—	**—**
Other comprehensive income	—	—	—	—	—	69	**69**
Net income	—	—	—	—	49,238	—	**49,238**
Balance as of March 31, 2018	**249,236**	**2,492**	**(569)**	**5,593,675**	**240,257**	**(1,263)**	**5,834,592**
Issuance of common stock	201	2	—	6,543	—	—	**6,545**
Stock-based compensation expense	—	—	—	7,654	—	—	**7,654**
Cash dividends paid ($0.02 per share)	—	—	—	—	(4,989)	—	**(4,989)**
Treasury stock issuance	—	—	165	(165)	—	—	**—**
Other comprehensive income	—	—	—	—	—	69	**69**
Net loss	—	—	—	—	(79,836)	—	**(79,836)**
Balance as of June 30, 2018	**249,437**	**$ 2,494**	**$ (404)**	**$ 5,607,707**	**$ 155,432**	**$ (1,194)**	**$ 5,764,035**

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

(1) SUMMARY OF ORGANIZATION AND NATURE OF BUSINESS

Range Resources Corporation is a Fort Worth, Texas-based independent natural gas, natural gas liquids ("NGLs") and oil company primarily engaged in the exploration, development and acquisition of natural gas and oil properties in the Appalachian and the North Louisiana regions of the United States. Our objective is to build stockholder value through consistent returns focused development, on a per share debt-adjusted basis, of both reserves and production on a cost-efficient basis. 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 fair presentation of the results for the periods presented. 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 the Range Resources Corporation 2018 Annual Report on Form 10-K filed with the Securities and Exchange Commission (the "SEC") on February 25, 2019. The results of operations for the second quarter and the six months ended June 30, 2019 are not necessarily indicative of the results to be expected for the full year.

Inventory. As of June 30, 2019, we had $8.9 million of material and supplies inventory compared to $8.0 million at December 31, 2018. Material and supplies inventory consists of primarily tubular goods and equipment used in our operations and is stated at lower of specific cost of each inventory item or net realized value, on a first-in, first-out basis. At June 30, 2019, we also had commodity inventory of $1.4 million compared to $965,000 at December 31, 2018. Commodity inventory as of June 30, 2019 consists of NGLs held in storage or as line fill in pipelines.

(3) NEW ACCOUNTING STANDARDS

Not Yet 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 standards update is effective for us in first quarter 2020 and will be adopted on a modified retrospective basis through a cumulative-effect adjustment to retained earnings as of the beginning of the adoption period. Early adoption is permitted starting January 2019. We are evaluating the provisions of this accounting standards update and assessing the impact, if any, it may have on our consolidated results of operations, financial position and financial disclosures.

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 is effective for us in first quarter 2020 and will be adopted on a prospective or retrospective basis depending on the changes that apply. We are evaluating the provisions of this standards update and assessing the impact, if any, it may have on our financial disclosures.

Recently Adopted

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 requires 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. We are applying the following practical expedients as provided in the standards update which provide elections to:

- not apply the recognition requirements to short-term leases (a lease that at commencement date has a lease term of 12 months or less and does not contain a purchase option);
- not reassess whether a contract contains a lease, lease classification and initial direct costs; and
- not reassess certain land easements in existence prior to January 1, 2019.

Through our implementation process, we evaluated each of our lease arrangements and enhanced our systems to track and calculate additional information required upon adoption of this standards update. 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. The impact of adoption of this new standards update was as follows (in thousands):

	January 1, 2019		
	Adoption	Reclassification (1)	Total Adjustment
Balance Sheet:			
Operating lease right-of-use assets	$ 59,300	$ (7,925)	$ 51,375
Accrued liabilities – current	$ (14,811)	$ —	$ (14,811)
Operating lease liabilities – long-term	$ (44,489)	$ —	$ (44,489)
Asset retirement obligations and other liabilities	$ —	$ 7,925	$ 7,925

(1) As of December 31, 2018, we had $7.9 million of operating lease liabilities recorded as part of purchase price accounting for building leases acquired because we did not expect to occupy the space or receive payments from our subleases. Lease incentives related to other buildings were also included. Upon adoption of the new standards update, these leases were included as part of our adoption. The ROU asset is reduced because we do not expect to use the asset.

Adoption of the new standard did not impact our consolidated statements of operations, cash flows or stockholders' equity. Leases acquired to explore for or use minerals, oil or natural gas resources, including the right to explore for those natural resources and rights to use the land in which those natural resources are contained, are not within the scope of the standards update.

Revenue Recognition Standard

In May 2014, an accounting standards update was issued that superseded the existing revenue recognition requirements. This standard included a five-step revenue recognition model to depict the transfer of goods or services to customers in an amount that reflects the consideration to which we expect to be entitled in exchange for those goods or services. Among other things, the standard also eliminated industry-specific revenue guidance, required enhanced disclosures about revenue, provided guidance for transactions that were not previously addressed comprehensively and improved guidance for multiple-element arrangements. This standard was effective for us in first quarter 2018 and we adopted the new standards update using the modified retrospective method to all open contracts as of January 1, 2018. Our implementation of this standard did not result in a cumulative-effect adjustment on date of adoption; however, our financial statement presentation related to revenue received from certain gas processing contracts changed. Based on previous accounting guidance, certain of our gas processing contracts were reported in revenue at the net price (net of processing costs) we receive. Upon adoption of this accounting standards update, these contracts are now reported as a gross price received at a delivery point and separate transportation, marketing and processing expense.

Pension Accounting Standard

In March 2017, an accounting standards update was issued which provides additional guidance on the presentation of net benefit cost in the statement of operations. Employers will present the service cost component of net periodic benefit cost in the same consolidated results of operations line item as other employee compensation costs arising from services rendered during the period. This new standards update was effective for annual reporting periods in first quarter 2018 and must be applied retrospectively. We adopted this standards update in first quarter 2018. The adoption did not impact our consolidated results of operations, financial position, cash flows or disclosures. In 2018 and 2019, our service cost is recorded in general and administrative expense.

Modification of Share – Based Awards

In May 2017, an accounting standards update was issued which clarifies what constitutes a modification of a share-based award. This standards update is intended to provide clarity and reduce both diversity in practice and cost and complexity to a change to the terms or conditions of a share-based payment award. We adopted this standards update in first quarter 2018. The adoption of this standard did not have a material impact on our consolidated financial position or results of operations.

(4) DISPOSITIONS

We recognized a pretax net gain of $5.9 million on the sale of assets in second quarter 2019 compared to a pretax net gain of $156,000 in second quarter 2018 and a pretax gain of $5.7 million in first six months 2019 compared to a pretax gain of $179,000 in first six months 2018. Also refer to Note 21 for information on asset disposition subsequent events.

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.

2018 Dispositions

Other. In second quarter 2018, we sold miscellaneous inventory and other assets for proceeds of $326,000 resulting in a pretax gain of $156,000. In first quarter 2018, we sold miscellaneous inventory and other assets for proceeds of $40,000, resulting in a pretax loss of $23,000.

(5) REVENUES FROM CONTRACTS WITH CUSTOMERS

Revenue Recognition

Natural gas, NGLs and oil sales revenues are generally recognized when control of the product is transferred to the customer and collectability is reasonably assured.

Disaggregation of Revenue

We have three material revenue streams in our business: natural gas sales, NGLs sales and oil sales. Revenues on sales of natural gas, NGLs, oil and purchased natural gas and NGLs are recognized when control of the product is transferred to the purchaser and payment can be reasonably assured. Sales prices are negotiated based on factors normally considered in the industry, such as index or spot price, distance from the well to the pipeline or market, commodity quality and prevailing supply and demand conditions. We enter into purchase transactions with third parties and separate sale transactions to satisfy unused gas pipeline capacity commitments. Revenues and expenses from these transactions are presented on a gross basis as we act as a principal in the transaction by assuming control of the commodities purchased and the responsibility to deliver the commodities sold. The majority of our product sale commitments are short-term in nature with a contract term of one year or less. Our product sales that have a contractual term greater than one year have no long-term fixed consideration. Accounts receivable attributable to our revenue contracts with customers was $241.0 million at June 30, 2019 and $438.3 million at December 31, 2018. Revenue attributable to each of our identified revenue streams is disaggregated below (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Natural gas sales	$ 343,623	$ 360,351	$ 778,343	$ 791,924
NGLs sales	167,027	224,703	364,840	427,230
Oil sales	52,929	76,336	92,050	138,865
Total natural gas, NGLs and oil sales	563,579	661,390	1,235,233	1,358,019
Sales of purchased natural gas	88,004	93,433	222,805	149,294
Sales of purchased NGLs	1,184	729	1,608	1,033
Other marketing revenue	3,417	3,922	6,406	7,736
Total	$ 656,184	$ 759,474	$ 1,466,052	$ 1,516,082

(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. Income tax expense (benefit) was as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Income tax expense (benefit)	$ 40,099	$ (28,518)	$ 45,787	$ 14,158
Effective tax rate	25.8%	26.3%	28.2%	(86.1%)

Income taxes for discrete items are computed and recorded in the period that the specific transaction occurs. For three months and six months ended June 30, 2019 and 2018, our overall effective tax rate was different than the federal statutory rate due primarily to state income taxes (including adjustments to state income tax valuation allowances), equity compensation and other tax items which are detailed below (in thousands).

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Total income (loss) before income taxes	$ 155,284	$ (108,354)	$ 162,391	$ (16,440)
U.S. federal statutory rate	21%	21%	21%	21%
Total tax expense (benefit) at statutory rate	32,610	(22,754)	34,102	(3,452)
State and local income taxes, net of federal benefit	5,725	(3,745)	6,543	749
Equity compensation	497	1,476	3,888	2,140
Change in valuation allowances:				
Federal net operating loss carryforwards	(916)	—	(916)	—
State net operating loss carryforwards and other	264	(2,042)	616	13,636
Other	(532)	18	(301)	1,399
Permanent differences and other	2,451	(1,471)	1,855	(314)
Total expense (benefit) for income taxes	$ 40,099	$ (28,518)	$ 45,787	$ 14,158
Effective tax rate	25.8%	26.3%	28.2%	(86.1%)

(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 Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Net income (loss), as reported	$ 115,185	$ (79,836)	$ 116,604	$ (30,598)
Participating earnings (a)	(1,592)	(69)	(1,400)	(126)
Basic net income (loss) attributed to common shareholders	113,593	(79,905)	115,204	(30,724)
Reallocation of participating earnings (a)	4	—	6	—
Diluted net income (loss) attributed to common shareholders	$ 113,597	$ (79,905)	$ 115,210	$ (30,724)
Net loss per common share:				
Basic	$ 0.46	$ (0.32)	$ 0.46	$ (0.13)
Diluted	$ 0.46	$ (0.32)	$ 0.46	$ (0.13)

(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 June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Weighted average common shares outstanding – basic	247,770	245,880	247,773	245,795
Effect of dilutive securities:				
Director and employee restricted stock and performance based equity awards	666	—	1,269	—
Weighted average common shares outstanding – diluted	248,436	245,880	249,042	245,795

Weighted average common shares outstanding-basic for second quarter 2019 excludes 3.5 million shares of restricted stock held in our deferred compensation plan compared to 3.4 million shares in second quarter 2018 (although all awards are issued and outstanding upon grant). Weighted average common shares outstanding-basic for first six months 2019 excludes 3.0 million shares of restricted stock compared to 3.2 million for first six months 2018. 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 computations. For first six months 2019, equity grants of 1.6 million were outstanding but not included in the computations. Due to our net loss in the second quarter and first six months of 2018, all outstanding equity grants have been excluded from the computation of diluted net loss per share because the effect would have been anti-dilutive to the computations.

(8) LEASES

We determine if an arrangement is a lease at inception of the arrangement. To the extent that we determine an arrangement represents a lease, we classify that lease as an operating lease or a finance lease. We currently do not have any finance leases. We capitalize our operating leases on our consolidated balance sheet through a ROU asset and a corresponding lease liability. ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Short-term leases that have an initial term of one year or less are not capitalized but are disclosed below. Short-term lease costs exclude expenses related to leases with a lease term of one month or less.

Our operating leases are reflected as operating lease ROU assets, accrued liabilities-current and operating lease liabilities on our consolidated balance sheet. Operating lease ROU assets and liabilities are recognized at the commencement date of an arrangement based on the present value of lease payments over the lease term. In addition to the present value of lease payments, the operating lease ROU asset also includes any lease payments made to the lessor prior to lease commencement less any lease incentives and initial direct costs incurred. Lease expense for operating lease payments is recognized on a straight-line basis over the lease term.

Nature of Leases

We lease certain office space, field equipment, vehicles and other equipment under cancelable and non-cancelable leases to support our operations. A more detailed description of our significant lease types is included below.

Office Agreements and Subleases

We rent office space from third parties for our corporate and field locations. Our office agreements are typically structured with non-cancelable terms of one to fifteen years. We have concluded our office agreements represent operating leases with a lease term that equals the primary non-cancelable contract term. Upon completion of the primary term, both parties have substantive rights to terminate the lease. As a result, enforceable rights and obligations do not exist under the rental agreements subsequent to the primary term.

We also sublease some of our office space to third parties. All of our subleases have terms that end in 2020 or 2022. The sublease agreements are non-cancelable through the end of the term and both parties have substantive rights to terminate the lease when the term is complete. Our sublease agreements are not capitalized and are recorded as sublease income (as a component of lease costs) in the period the rent is received.

Field Equipment

We rent compressors and coolers from third parties in order to facilitate the downstream movement of our production to market. Our compressor and cooler arrangements are typically structured with a non-cancelable primary term of one to two years and continue thereafter on a month-to-month basis subject to termination by either party with thirty days notice. We have concluded that our compressor and cooler rental agreements represent operating leases with a lease term that equals the primary non-cancelable contract term. Upon completion of the primary term, both parties have substantive rights to terminate the lease. As a result, enforceable rights and obligations do not exist under the rental agreement subsequent to the primary term.

We enter into daywork contracts for drilling rigs with third parties to support our drilling activities. Our drilling rig arrangements are typically structured with a term that is in effect until drilling operations are completed on a contractually specified well or well pad. Upon mutual agreement with the contractor, we typically have the option to extend the contract term for additional wells or well pads by providing thirty days notice prior to the end of the original contract term. We have concluded that our drilling rig arrangements represent short-term operating leases. The accounting guidance requires us to make an assessment at contract commencement if we are reasonably certain that we will exercise the option to extend the term. Due to the continuously evolving nature of our drilling schedules and the potential volatility in commodity prices in an annual period, our strategy to enter into shorter term drilling rig arrangements allows us the flexibility to respond to changes in our

operating and economic environment. We exercise our discretion in choosing to extend or not extend contracts on a rig by rig basis depending on the conditions present at the time the contract expires. At the time of contract commencement, we have determined we cannot conclude with reasonable certainty if we will choose to extend the contract beyond its original term. Pursuant to the successful efforts method of accounting, these costs are capitalized as part of natural gas and oil properties on our balance sheet when paid. See also short-term lease costs below.

Vehicles

We rent our vehicle fleet from a third party for our drilling and operations personnel. Our vehicle agreements are non-cancelable for a minimum of one year and a maximum term of four to eight years depending on the type of vehicle. However, we have assumed a term of three years based on the period covered by options to terminate that we are reasonably certain to exercise. We have concluded our vehicle commitments are operating leases.

Significant Judgments

Transportation, Gathering and Processing Arrangements

We engage in various types of transactions in which midstream entities transport, gather and/or process our product leveraging integrated systems and facilities wholly owned and operated by the midstream counterparty. Under most of these arrangements, we do not utilize substantially all of the underlying pipeline, gathering system or processing facilities, and thus, we have concluded that those underlying assets do not meet the definition of an identified asset. However, in limited circumstances, we do utilize substantially all of the capacity of a portion of the midstream system under our transportation gathering and/or processing service contract. These arrangements require judgment to determine whether our capacity of the underlying midstream asset represents a lease. Under all of these arrangements, we have concluded that (i) the midstream entity maintains control of and has the ability to optimize and/or expand the underlying system throughout the duration of the contract term and (ii) the portion of the system or facility we utilize is highly integrated and interconnected to a broader system servicing a diverse set of customers. Consequently, the transportation, gathering and/or processing contract does not represent a lease of the underlying portion of the midstream system or facilities. We currently have not identified any of these commitments as leases.

Discount Rate

Our leases typically do not provide an implicit rate. Accordingly, we are required to use our incremental borrowing rate in determining the present value of lease payments based on the information available at commencement date. Our incremental borrowing rate reflects the estimated rate of interest that we would pay to borrow on a collateralized basis over a similar term in an amount equal to the lease payments in a similar economic environment. We use the implicit rate in the limited circumstances in which that rate is readily determinable.

Practical Expedients and Accounting Policy Elections

Certain of our lease agreements include lease and non-lease components. For all existing asset classes with multiple component types, we have utilized the practical expedient that exempts us from separating lease components from non-lease components. Accordingly, we account for the lease and non-lease components in an arrangement as a single lease component.

In addition, for all of our existing asset classes, we have made an accounting policy election not to apply the lease recognition requirements to our short-term leases (that is, a lease that, at commencement, has a lease term of 12 months or less and does not include an option to purchase the underlying asset that we are reasonably certain to exercise). Accordingly, we recognize lease payments related to our short-term leases in our statement of operations on a straight-line basis over the lease term which has not changed from our prior recognition. To the extent that there are variable lease payments, we recognize those payments in our statement of operations in the period in which the obligation for those payments is incurred. Refer to *"Nature of Leases"* above for further information regarding those asset classes that include material short-term leases.

The components of our total lease expense for the three and six months ended June 30, 2019, the majority of which is included in general and administrative expense, are as follows (in thousands):

	Three Months Ended June 30, 2019	Six Months Ended June 30, 2019
Operating lease cost	$ 3,208	$ 6,288
Variable lease expense (1)	1,203	2,354
Short-term lease expense (2)	687	1,170
Sublease income	(873)	(1,748)
Total lease expense	$ 4,225	$ 8,064
Short-term lease costs (3)	$ 8,319	$ 17,093

(1) Variable lease payments that are not dependent on an index or rate are not included in the lease liability or ROU assets.
(2) Short-term lease expense represents expense related to leases with a contract term of one year or less.
(3) These short-term lease costs are related to leases with a contract term of one year or less and the majority of which are related to drilling rigs and are capitalized as part of natural gas and oil properties on our balance sheets.

Supplemental cash flow information related to our operating leases is included in the table below (in thousands):

	Six Months Ended June 30, 2019
Cash paid for amounts included in the measurement of lease liabilities	$ 7,533
ROU assets added in exchange for lease obligations (since adoption)	$ 2,096

Supplemental balance sheet information related to our operating leases is included in the table below (in thousands):

	June 30, 2019
Operating lease ROU assets	$ 48,893
Accrued liabilities – current	$ (15,671)
Operating lease liabilities – long-term	$ (39,897)

Our weighted average remaining lease term and weighted average discount rate for our operating leases are as follows:

	June 30, 2019
Weighted average remaining lease term	6.2 years
Weighted average discount rate	6.2%

Our lease liabilities with enforceable contract terms that are greater than one year mature as follows (in thousands):

	Operating Leases
Remainder of 2019	$ 7,831
2020	14,397
2021	10,906
2022	6,991
2023	6,500
Thereafter	21,730
Total lease payments	68,355
Less effects of discounting	(12,787)
Total lease liability	$ 55,568

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

	June 30, 2019	December 31, 2018
	(in thousands)	
Natural gas and oil properties:		
Properties subject to depletion	$ 10,962,361	$ 10,974,929
Unproved properties	2,069,962	2,110,277
Total	13,032,323	13,085,206
Accumulated depreciation, depletion and amortization	(3,911,646)	(4,062,021)
Net capitalized costs	$ 9,120,677	$ 9,023,185

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

(10) INDEBTEDNESS

We had the following debt outstanding as of the dates shown below (bank debt interest rate at June 30, 2019 is shown parenthetically). No interest was capitalized during the three and six months ended June 30, 2019 or the year ended December 31, 2018 (in thousands).

	June 30, 2019	December 31, 2018
Bank debt (3.9%)	$ 895,000	$ 943,000
Senior notes:		
4.875% senior notes due 2025	750,000	750,000
5.00% senior notes due 2023	741,531	741,531
5.00% senior notes due 2022	580,032	580,032
5.75% senior notes due 2021	475,952	475,952
5.875% senior notes due 2022	329,244	329,244
Other senior notes due 2022	590	590
Total senior notes	2,877,349	2,877,349
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	22,214	22,214
Total senior subordinated notes	48,980	48,980
Total debt	3,821,329	3,869,329
Unamortized premium	4,070	4,741
Unamortized debt issuance costs	(32,944)	(37,209)
Total debt net of debt issuance costs	$ 3,792,455	$ 3,836,861

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 redeterminations annually by May and for event-driven unscheduled redeterminations. As part of our annual redetermination completed on March 27, 2019, our borrowing base was reaffirmed for $3.0 billion and our bank commitment was also reaffirmed at $2.0 billion. As of June 30, 2019, our bank group was composed of twenty-seven financial institutions with no one bank holding more than 5.8% 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. On June 30, 2019, bank commitments totaled $2.0 billion and the outstanding balance under our bank credit facility was $895.0 million, before deducting debt issuance costs. Additionally, we had $282.7 million of undrawn letters of credit leaving $822.3 million of committed borrowing capacity available under the facility. During a non-investment grade period, 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 4.0% for second quarter 2019 compared to 3.7% for second quarter 2018. The weighted average interest rate was 4.0% for first six months 2019 compared to 3.5% for first six months 2018. A commitment fee is paid on the undrawn balance based on an annual rate of 0.30% to 0.375%. At June 30, 2019, the commitment fee was 0.30% and the interest rate margin was 1.50% on our LIBOR loans and 0.50% on our base rate loans.

At any time during which we have an investment grade debt rating from Moody’s Investors Service, Inc. or Standard & Poor’s Ratings Services and we have elected, at our discretion, to effect the investment grade rating period, certain collateral security requirements, including the borrowing base requirement and restrictive covenants, will cease to apply and an additional financial covenant (as defined in the bank credit facility) will be imposed. During the investment grade period, borrowings under the credit facility can either be at the ABR plus a spread ranging from 0.125% to 0.75% or at the LIBOR Rate plus a spread ranging from 1.125% to 1.75% depending on our debt rating. The commitment fee paid on the undrawn balance would range from 0.15% to 0.30%. We currently do not have an investment grade debt rating.

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 credit 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, 2019.

(11) 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, 2019 and the year ended December 31, 2018 is as follows (in thousands):

	Six Months Ended June 30, 2019	Year Ended December 31, 2018
Beginning of period	$ 312,754	$ 276,855
Liabilities incurred	2,529	3,376
Acquisitions	—	13,438
Liabilities settled	(2,582)	(5,052)
Disposition of wells	—	(13,332)
Accretion expense	8,487	25,456
Change in estimate	(203)	12,013
End of period	320,985	312,754
Less current portion	(5,485)	(5,485)
Long-term asset retirement obligations	$ 315,500	$ 307,269

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

(12) 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, 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 $162.7 million at June 30, 2019. These contracts expire monthly through December 2020. The following table sets forth our commodity-based derivative volumes by year as of June 30, 2019, excluding our basis and freight swaps which are discussed separately below:

Period	Contract Type	Volume Hedged	Weighted Average Hedge Price
Natural Gas			
2019	Swaps	1,262,473 Mmbtu/day	$ 2.81
2020	Swaps	305,000 Mmbtu/day	$ 2.76
2019	Swaptions	150,000 Mmbtu/day	$ 2.81 (1)
2020	Swaptions	177,568 Mmbtu/day	$ 2.78 (1)
November – December 2019	Swaptions	20,000 Mmbtu/day	$ 3.20 (1)
January – March 2020	Swaptions	20,000 Mmbtu/day	$ 3.20 (1)
Crude Oil			
2019	Swaps	8,750 bbls/day	$ 55.89
2020	Swaps	4,617 bbls/day	$ 60.48
2019	Collars	1,000 bbls/day	$ 63.00 − $ 73.00
NGLs (C5-Natural Gasoline)			
2019	Swaps	4,500 bbls/day	$ 1.36/gallon

(1) Contains a combined derivative instrument consisting of a fixed price swap and a sold option to extend or double the volumes. We have swaps in place for 2019 for 150,000 Mmbtu/day on which the counterparty can elect to extend the contract through December 2020 at a weighted average price of $2.81. In addition, we have swaps in place for November and December 2019 where, if the counterparty elects to double the volume, we would have additional swaps in place for 20,000 Mmbtu/day at a weighted average price of $3.20. In 2020, if the counterparty elects to double the volume, we would have additional swaps in place for 140,000 Mmbtu/day at a weighted average price of $2.78. We also have swaps in place for 2020 for 50,000 Mmbtu/day on which the counterparty can elect to extend the contract through December 2021 at a weighted average price of $2.75. In addition, for January through March 2020, we have additional swaps in place where if the counterparty elects to double the volume, we would have an additional 20,000 Mmbtu/day at a weighted average price of $3.20.

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 and swaptions described above, at June 30, 2019, 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 October 2021 and include a total volume of 107,960,000 Mmbtu. The fair value of these contracts was a loss of $2.0 million at June 30, 2019.

At June 30, 2019, we also had propane spread swap contracts which lock in the differential between Mont Belvieu and international propane indices. The contracts settle monthly in October through December of 2019 and monthly in 2020 and include a total volume of 1,875,000 barrels. The fair value of these contracts was a loss of $1.8 million at June 30, 2019.

Freight Swap Contracts

In connection with our international propane sales, we utilize propane swaps. To further hedge our propane price, at June 30, 2019, 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 2019 and cover 10,000 metric tons per month with a fair value gain of $1.5 million at June 30, 2019.

Derivative Assets and Liabilities

The combined fair value of derivatives included in the accompanying consolidated balance sheets as of June 30, 2019 and December 31, 2018 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, 2019		
		Gross Amounts of Recognized Assets	Gross Amounts Offset in the Balance Sheet	Net Amounts of Assets Presented in the Balance Sheet
Derivative assets:				
Natural gas	–swaps	$ 128,392	$ (2,132)	$ 126,260
	–swaptions	29,982	(6,070)	23,912
	–basis swaps	1,220	(1,305)	(85)
Crude oil	–swaps	8,459	(4,932)	3,527
	–collars	1,116	—	1,116
NGLs	–C3 propane spread swaps	6,815	(7,767)	(952)
	–C5 natural gasoline swaps	7,857	—	7,857
Freight	–swaps	1,501	—	1,501
		$ 185,342	$ (22,206)	$ 163,136

		June 30, 2019		
		Gross Amounts of Recognized (Liabilities)	Gross Amounts Offset in the Balance Sheet	Net Amounts of (Liabilities) Presented in the Balance Sheet
Derivative (liabilities):				
Natural gas	–swaps	$ (2,132)	$ 2,132	$ —
	–swaptions	(6,070)	6,070	—
	–basis swaps	(3,255)	1,305	(1,950)
Crude oil	–swaps	(4,932)	4,932	—
NGLs	–C3 propane spread swaps	(8,592)	7,767	(825)
		$ (24,981)	$ 22,206	$ (2,775)

		December 31, 2018		
		Gross Amounts of Recognized Assets	Gross Amounts Offset in the Balance Sheet	Net Amounts of Assets Presented in the Balance Sheet
Derivative assets:				
Natural gas	–swaps	$ 20,834	$ (11,748)	$ 9,086
	–swaptions	5,200	(3,883)	1,317
	–basis swaps	6,468	(2,822)	3,646
Crude oil	–swaps	26,481	(651)	25,830
	–collars	5,945	(707)	5,238
NGLs	–C3 propane swaps	18,719	(589)	18,130
	–C3 propane collars	8,538	—	8,538
	–C3 propane spread swaps	8,984	(8,868)	116
	–NC4 butane swaps	4,084	—	4,084
	–C5 natural gasoline swaps	17,371	—	17,371
Freight	–swaps	—	(561)	(561)
		$ 122,624	$ (29,829)	$ 92,795

		December 31, 2018		
		Gross Amounts of Recognized (Liabilities)	Gross Amounts Offset in the Balance Sheet	Net Amounts of (Liabilities) Presented in the Balance Sheet
Derivative (liabilities):				
Natural gas	–swaps	$ (18,332)	$ 11,748	$ (6,584)
	–swaptions	(7,972)	3,883	(4,089)
	–basis swaps	(1,702)	2,822	1,120
Crude oil	–swaps	—	651	651
	–collars	—	707	707
NGLs	–C3 propane swaps	—	589	589
	–C3 propane spread swaps	(8,868)	8,868	—
Freight	–swaps	(561)	561	—
		$ (37,435)	$ 29,829	$ (7,606)

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

	Derivative Fair Value Income (Loss)			
	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Commodity swaps	$ 159,128	$ (91,195)	$ 101,710	$ (107,730)
Swaptions	32,383	(6,592)	29,092	(2,993)
Collars	578	11	(3,946)	(66)
Calls	—	152	—	329
Basis swaps	938	(5,828)	4,353	(6,693)
Freight swaps	2,218	162	2,305	(146)
Total	$ 195,245	$ (103,290)	$ 133,514	$ (117,299)

(13) 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 do 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

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, 2019 using:			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Carrying Value as of June 30, 2019
Trading securities held in the deferred compensation plans	$ 60,697	$ —	$ —	$ 60,697
Derivatives –swaps	—	137,644	—	137,644
–collars	—	1,116	—	1,116
–basis swaps	—	(3,812)	—	(3,812)
–freight swaps	—	1,501	—	1,501
–swaptions	—	—	23,912	23,912

	Fair Value Measurements at December 31, 2018 using:			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Carrying Value as of December 31, 2018
Trading securities held in the deferred compensation plans	$ 57,293	$ —	$ —	$ 57,293
Derivatives –swaps	—	69,156	—	69,156
–collars	—	5,945	8,538	14,483
–basis swaps	—	4,883	—	4,883
–freight swaps	—	(561)	—	(561)
–swaptions	—	—	(2,772)	(2,772)

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, 2019, a portion of our natural gas derivative instruments contains 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):

	As of June 30, 2019
Balance at December 31, 2018	$ 5,766
Total gains:	
Included in earnings	28,338
Settlements, net	(10,192)
Balance at June 30, 2019	$ 23,912

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 2019, interest and dividends were $184,000 and the mark-to-market adjustment was a gain of $1.5 million compared to interest and dividends of $213,000 and a mark-to-market gain of $324,000 in second quarter 2018. For first six months 2019, interest and dividends were $363,000 and the mark-to-market adjustment was a gain of $6.6 million compared to interest and dividends of $381,000 and a mark-to-market loss of $798,000 in the same period of the prior year.

Fair Values – Non-recurring

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. In first quarter 2018, there were indicators that the carrying value of certain of our oil and natural gas properties in Oklahoma may be impaired and undiscounted future cash flows attributed to these assets indicated their carrying amounts were not expected to be recovered. Their remaining fair value was measured using a market approach based upon the potential sale of these Oklahoma properties, which is a Level 3 input. We recorded non-cash charges in first quarter 2018 of $7.3 million related to these properties of which the fair value was determined to be $32.5 million. In second quarter 2018, we recorded impairment of $15.3 million related to certain shallow legacy oil and natural gas assets in Northwest Pennsylvania where we had increased our working interest during the quarter. The fair value of these assets had previously been determined to be zero. There were no impairment charges in first or second quarter 2019.

Fair Values – Reported

The following presents the carrying amounts and the fair values of our financial instruments as of June 30, 2019 and December 31, 2018 (in thousands):

	June 30, 2019		December 31, 2018	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Assets:				
Commodity swaps, options and basis swaps	$ 163,136	$ 163,136	$ 92,795	$ 92,795
Marketable securities [a]	60,697	60,697	57,293	57,293
(Liabilities):				
Commodity swaps, options and basis swaps	(2,775)	(2,775)	(7,606)	(7,606)
Bank credit facility [b]	(895,000)	(895,000)	(943,000)	(943,000)
5.75% senior notes due 2021 [b]	(475,952)	(480,336)	(475,952)	(455,972)
5.00% senior notes due 2022 [b]	(580,032)	(553,948)	(580,032)	(519,343)
5.875% senior notes due 2022 [b]	(329,244)	(328,819)	(329,244)	(305,989)
Other senior notes due 2022 [b]	(590)	(590)	(590)	(581)
5.00% senior notes due 2023 [b]	(741,531)	(698,826)	(741,531)	(654,683)
4.875% senior notes due 2025 [b]	(750,000)	(658,020)	(750,000)	(616,313)
5.75% senior subordinated notes due 2021 [b]	(22,214)	(22,381)	(22,214)	(21,638)
5.00% senior subordinated notes due 2022 [b]	(19,054)	(18,379)	(19,054)	(17,072)
5.00% senior subordinated notes due 2023 [b]	(7,712)	(7,158)	(7,712)	(6,690)
Deferred compensation plan [c]	(76,238)	(76,238)	(80,092)	(80,092)

(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.

(c) The fair value of our deferred compensation plan is updated at the closing price on the balance sheet date which is a Level 1 input.

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. For additional information, see Note 11.

Concentrations of Credit Risk

As of June 30, 2019, 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 and end-users in various industries. Letters of credit or other appropriate securities are obtained as deemed necessary to limit our risk of loss. Our allowance for uncollectable receivables was $6.1 million at both June 30, 2019 and December 31, 2018. 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, 2019, our derivative counterparties include nineteen financial institutions, of which all but three are secured lenders in our bank credit facility. At June 30, 2019, our net derivative liability includes a net payable of $2.2 million to these three counterparties that are not participants in our bank credit facility.

(14) 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 new 2019 Equity-Based Compensation Plan, which was approved by our stockholders in May, 2019. 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):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Direct operating expense	$ 549	$ 539	$ 1,140	$ 1,130
Brokered natural gas and marketing expense	553	313	1,001	598
Exploration expense	388	371	876	1,122
General and administrative expense	9,500	8,814	19,138	32,725
Termination costs	26	—	26	—
Total stock-based compensation	$ 11,016	$ 10,037	$ 22,181	$ 35,575

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. 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 awards 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 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 performance metrics (Production Growth Awards or "PG-PSUs" and Reserve Growth Awards or "RG-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 PG/RG-PSUs is based on annual performance targets earned over a three-year period.

SARs. At June 30, 2019, there were no SARs outstanding.

Restricted Stock – ***Equity Awards***

In first six months 2019, we granted 2.8 million restricted stock Equity Awards to employees at an average price of $10.59 which generally vest over a three-year period compared to 1.8 million at an average price of $17.00 in first six months 2018. We recorded compensation expense for these awards of $13.6 million in first six months 2019 compared to $12.4 million in the same period of 2018. 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 2019, we granted 1.0 million shares of restricted stock Liability Awards as compensation to employees at an average price of $10.45 which vests 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. In first six months 2018, we granted 675,000 shares of restricted stock Liability Awards as compensation to employees at an average price of $15.22 with vesting generally over a three-year period and 131,000 shares were granted to non-employee directors at an average price of $15.46 with immediate vesting. We recorded compensation expense for these Liability Awards of $4.6 million in first six months 2019 compared to $10.5 million in first six months 2018. 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, 2019:

	Restricted Stock Equity Awards		Restricted Stock Liability Awards	
	Shares	Weighted Average Grant Date Fair Value	Shares	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2018	1,386,088	$ 20.04	184,579	$ 15.65
Granted	2,792,438	10.59	1,171,513	10.32
Vested	(869,674)	15.77	(499,913)	10.82
Forfeited	(275,991)	13.39	—	—
Outstanding at June 30, 2019	3,032,861	$ 13.17	856,179	$ 11.17

Stock-Based Performance Units

Production Growth and Reserve Growth Awards. The PG-PSUs and RG-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 PG/RG-PSUs awards outstanding at June 30, 2019:

	Number of Units		Weighted Average Grant Date Fair Value
Outstanding at December 31, 2018	536,798	$	15.61
Units granted (a)	345,202		10.32
Forfeited	(427)		15.65
Outstanding at June 30, 2019	881,573	$	11.70

(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.

We recorded PG/RG-PSUs compensation expense of $1.7 million in first six months 2019 compared to $5.6 million in first six months 2018.

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 PSUs granted during first six months 2019 and 2018:

	Six Months Ended June 30,			
		2019		2018
Risk-free interest rate		2.4%		2.4%
Expected annual volatility		46%		47%
Grant date fair value per unit	$	11.34	$	18.51

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

	Number of Units		Weighted Average Grant Date Fair Value
Outstanding at December 31, 2018	1,067,886	$	27.81
Units granted (a)	314,152		11.34
Vested and issued (b)	(12,283)		30.47
Forfeited	(376,303)		37.25
Outstanding at June 30, 2019	993,452	$	19.00

(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 12,283 TSR-PSUs awards issued related to the 2016 performance period where the return on our common stock was in the 20th percentile for the February 2016 grant. The remaining February 2016 awards are considered to be forfeited.

We recorded TSR-PSUs compensation expense of $1.3 million in first six months 2019 compared to $5.7 million in the same period of 2018. Fair value is amortized over the performance period with no adjustment to the expense recorded for actual targets achieved.

SARs

Information with respect to our SARs activity is summarized below.

	Shares	Weighted Average Exercise Price
Outstanding at December 31, 2018	1,104	$ 81.74
Expired	(1,104)	81.74
Outstanding at June 30, 2019	—	$ —

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 $92,000 of estimated prior service costs amortized from accumulated other comprehensive income into general and administrative expense in both the three months ended June 30, 2019 and 2018 and approximately $185,000 amortized in both the six months ended June 30, 2019 and 2018. Those employees that qualified for the new post retirement health care plan were also fully vested in all equity grants. Effective October 2018, officers who qualified for the plan are required to provide reasonable notice of retirement and beginning in 2019 are fully vested after providing one year of service after the grant date.

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 mark-to-market gain of $11.1 million in second quarter 2019 compared to mark-to-market loss of $6.6 million in second quarter 2018. We recorded mark-to-market gain of $7.6 million in first six months 2019 compared to a mark-to-market gain of $782,000 in first six months 2018. The Rabbi Trust held 3.3 million shares (2.5 million of which were vested) of Range stock at June 30, 2019 compared to 2.6 million shares (2.4 million of which were vested) at December 31, 2018.

(15) TERMINATION COSTS

In second quarter 2019, we announced a reduction in our work force. For the three months and the six months ended June 30, 2019, we recorded $2.2 million of severance costs and $26,000 of stock-based compensation related to this work force reduction.

The following details the accrued liability as of June 30, 2019:

	June 30, 2019
Beginning balance	$ —
Accrued severance costs	2,181
Payments	(97)
Ending balance	$ 2,084

(16) 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 2018:

	Six Months Ended June 30, 2019	Year Ended December 31, 2018
Beginning balance	249,510,022	248,129,430
Restricted stock grants	1,143,765	865,095
Restricted stock units vested	677,436	434,046
Performance stock units issued	12,283	73,985
Performance stock dividends	464	2,164
Treasury shares issued	—	5,302
Ending balance	251,343,970	249,510,022

(17) SUPPLEMENTAL CASH FLOW INFORMATION

	Six Months Ended June 30,	
	2019	2018
	(in thousands)	
Net cash provided from operating activities included:		
Income taxes refunded from taxing authorities	$ —	$ 7,521
Interest paid	(99,675)	(103,439)
Non-cash investing and financing activities included:		
Increase in asset retirement costs capitalized	2,326	19,561
Increase (decrease) in accrued capital expenditures	6,346	(102,809)

(18) COMMITMENTS AND CONTINGENCIES

Litigation

We are the subject of, or party to, a number of pending or threatened legal actions, administrative proceedings and claims arising in the ordinary course of our business. 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. We estimate and provide for potential losses that may arise out of litigation and regulatory proceedings to the extent that such losses are probable and can be reasonably estimated. We will continue to evaluate our litigation and regulatory proceedings quarterly and will establish and adjust any estimated liability as appropriate to reflect our assessment of the then current status of litigation and regulatory proceedings. Significant judgment is required in making these estimates and our final liabilities may ultimately be materially different.

(19) SUSPENDED EXPLORATORY WELL COSTS

We capitalize exploratory well costs until a determination is made that the well has either found proved reserves or that it is impaired. Capitalized exploratory well costs are included in natural gas and oil properties in the accompanying consolidated balance sheets. If an exploratory well is determined to be impaired, the well costs are charged to exploration expense in the accompanying consolidated statements of operations. We do not have any suspended exploratory well costs as of June 30, 2019.

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

	Six Months Ended June 30, 2019	Year Ended December 31, 2018
	(in thousands)	
Acquisitions:		
Acreage purchases	$ 22,577	$ 62,390
Oil and gas properties	—	1,683
Development	392,972	834,552
Exploration:		
Drilling	—	1,380
Expense	15,444	32,196
Stock-based compensation expense	876	1,921
Gas gathering facilities:		
Development	2,085	10,218
Subtotal	433,954	944,340
Asset retirement obligations	2,326	28,826
Total costs incurred	$ 436,280	$ 973,166

(a) Includes costs incurred whether capitalized or expensed.

(21) SUBSEQUENT EVENTS

In mid July, we closed on two agreements to sell a proportionately reduced 2% overriding royalty in certain Pennsylvania leases for gross proceeds of $600.0 million. The properties encompass approximately 350,000 net surface acreage. We do not expect a gain or loss will be recorded on these two transactions.

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, natural gas liquids ("NGLs") and oil company engaged in the exploration, development and acquisition of natural gas and crude oil properties primarily in the Appalachian and North Louisiana regions 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, for both reserves and production. Our strategy to achieve our business objective is to increase reserves and production through internally generated drilling projects coupled with occasional acquisitions and divestitures of non-core assets. Our revenues, profitability and future growth depend substantially on prevailing prices for natural gas, NGLs, crude oil and condensate and on our ability to economically find, develop, acquire, produce and market natural gas, NGLs and crude oil reserves. Looking to the future, our goal is to target annual production growth within operating cash flows. The price risk on a portion of our production is mitigated using commodity derivative contracts. However, these derivative contracts are limited in duration. 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.

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, NGLs and oil reserves. We use the successful efforts method of accounting for our natural gas, NGLs and oil activities.

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.

Market Conditions

Prices for various quantities of natural gas, NGLs and oil that we produce significantly impact our revenue, net income and cash flow. Natural gas, NGLs and oil are commodities and prices for such commodities are inherently volatile. The following table lists related benchmarks for natural gas, oil and NGLs for the three and six months ended June 30, 2019 and 2018:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Benchmarks:				
Average NYMEX prices [(a)]				
Natural gas (per mcf)	$ 2.64	$ 2.80	$ 2.89	$ 2.89
Oil (per bbl)	60.25	67.89	57.82	65.54
Mont Belvieu NGLs composite (per gallon) [(b)]	0.45	0.66	0.50	0.64

(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 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 2019 Results

Our financial results are significantly impacted by commodity prices. For second quarter 2019, we experienced a decrease in revenue from the sale of natural gas, NGLs and oil due to a 24% decrease in net realized prices (average prices including all derivative settlements and third party transportation costs paid by us) partially offset by 4% higher production volumes when compared to the same quarter of 2018. Daily production in second quarter 2019 averaged 2.3 Bcfe compared to 2.2 Bcfe in the same period of the prior year with the increase due to our successful Marcellus horizontal drilling program. Average natural gas differentials per mcf were below NYMEX while operating costs were lower when compared to the same period of 2018.

During second quarter 2019, we recognized net income of $115.2 million, or $0.46 per diluted common share compared to a net loss of $79.8 million, or $0.32 per diluted common share, during second quarter 2018. The improvement in net income for second quarter 2019 from second quarter 2018 is primarily due to a favorable derivative fair value income (or the non-cash fair value adjustments related to our derivatives), lower impairment charges and higher production volumes partially offset by lower net realized prices.

Our second quarter 2019 financial and operating performance included the following results:

- realized $184.8 million of cash flow from operating activities;
- 4% production growth over the same period of 2018 (despite our 2018 asset sales);
- revenue from the sale of natural gas, NGLs and oil decreased 15% from the same period of 2018 with an 18% decrease in average realized prices (before cash settlements on our derivatives) and an increase in production volumes;
- revenue from the sale of natural gas, NGLs and oil (including cash settlements on our derivatives) decreased 8% from the same period of 2018;
- reduced direct operating expenses per mcfe 11% from the same period of 2018 (see discussion on page 37);
- general and administrative expense per mcfe did not change when compared to the same period of 2018 (see discussion on page 37);
- reduced interest expense per mcfe 7% from the same period of 2018;
- reduced our depletion, depreciation and amortization ("DD&A") rate per mcfe by 15% from the same period of 2018;
- received asset sale proceeds of $34.0 million;
- entered into additional derivative contracts for 2019, 2020 and 2021; and
- borrowings on our bank credit facility remained unchanged from March 2019.

We generated $184.8 million of cash flow from operating activities in second quarter 2019, an increase of $9.9 million from second quarter 2018, which reflects higher comparative working capital inflows ($41.8 million inflow during second quarter 2019 compared to $52.0 million outflow in second quarter 2018) and higher production volumes partially offset by lower net realized prices and the impact of our 2018 asset sales.

Subsequent to June 30, 2019, we closed on two asset sale agreements for gross proceeds of a total of $600.0 million for a proportionately reduced 2% overriding royalty in certain Pennsylvania leases. We do not expect to recognize a gain or loss on these transactions.

Overview of First Six Months 2019 Results

For first six months 2019, we experienced a decrease in revenue from the sale of natural gas, NGLs and oil due to a 20% decrease in net realized prices (average prices including all derivative settlements and third party transportation costs paid by us) partially offset by 4% higher production volumes when compared to first six months 2018. Daily production in first six months 2019 averaged 2.3 Bcfe compared to 2.2 Bcfe in the same period of the prior year with the increase due to our successful Marcellus horizontal drilling program. Average natural gas differentials per mcf were below NYMEX while operating costs were lower when compared to the same period of 2018.

During first six months 2019, we recognized net income of $116.6 million, or $0.46 per diluted common share compared to net loss of $30.6 million, or $0.13 per diluted common share, during first six months 2018. The improvement in net income for first six months 2019 from first six months 2018 is primarily due to a favorable derivative fair value income (or the non-cash fair value adjustments related to our derivatives), lower impairment charges, lower operating costs and higher production

volumes partially offset by lower net realized prices.

Our first six months 2019 financial and operating performance included the following results:

- realized $445.5 million of cash flow from operating activities;
- 4% production growth over the same period of 2018 (despite our 2018 asset sales);
- revenue from the sale of natural gas, NGLs and oil decreased 9% from the same period of 2018 with a 12% decrease in average realized prices (before cash settlements on our derivatives) and an increase in production volumes;
- revenue from the sale of natural gas, NGLs and oil (including cash settlements on our derivatives) decreased 4% from the same period of 2018;
- reduced direct operating expenses per mcfe 11% from the same period of 2018 (see discussion on page 37);
- reduced general and administrative expense per mcfe 17% from the same period of 2018 (see discussion on page 37);
- reduced interest expense per mcfe 7% from the same period of 2018;
- reduced our DD&A rate per mcfe by 16% from the same period of 2018;
- entered into additional derivative contracts for 2019, 2020 and 2021; and
- reduced borrowings on our bank credit facility $48.0 million from December 2018.

We generated $445.5 million of cash flow from operating activities in first six months 2019, a decrease of $100.0 million from first six months 2018, which reflects lower net realized prices, the impact of our 2018 asset sales partially offset by higher comparative working capital inflows ($41.4 million inflow during first six months 2019 compared to $2.5 million inflow in first six months 2018) and 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 2019, natural gas, NGLs and oil sales decreased 15% compared to second quarter 2018 with an 18% decrease in average realized prices (before cash settlements on our derivatives) partially offset by a 4% increase in average daily production. In first six months 2019, natural gas, NGLs and oil sales decreased 9% compared to the same period of 2018 with a 12% decrease in average realized prices (before cash settlements on our derivatives) partially offset by a 4% increase in average daily 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, 2019 and 2018 (in thousands):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	Change	%	2019	2018	Change	%
Natural gas, NGLs and oil sales								
Natural gas	$ 343,623	$ 360,351	$ (16,728)	(5%)	$ 778,343	$ 791,924	$ (13,581)	(2%)
NGLs	167,027	224,703	(57,676)	(26%)	364,840	427,230	(62,390)	(15%)
Oil	52,929	76,336	(23,407)	(31%)	92,050	138,865	(46,815)	(34%)
Total natural gas, NGLs and oil sales	$ 563,579	$ 661,390	$ (97,811)	(15%)	$ 1,235,233	$ 1,358,019	$ (122,786)	(9%)

Our production continues to grow through drilling success and additional NGLs extraction, which is partially offset by the natural production decline of our wells and asset sales. Second quarter 2019 production volumes from the Marcellus Shale were 2.0 Bcfe per day, an increase of 10% when compared to the same period of 2018. Second quarter 2019 production volumes from our North Louisiana properties were approximately 224.9 Mmcfe per day, a decline of 28% when compared to the same period of 2018. Production volumes for first six months 2019 for the Marcellus Shale properties were 2.0 Bcfe per day, an increase of 11% when compared to the same period of 2018. Production volumes for first six months 2019 for our North Louisiana properties were approximately 226.8 Mmcfe per day, a decline of 33% when compared to the same period of 2018. Our production for the three and six months ended June 30, 2019 and 2018 is set forth in the following table:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	Change	%	2019	2018	Change	%
Production [a]								
Natural gas (mcf)	143,163,003	136,057,805	7,105,198	5%	283,684,666	271,011,900	12,672,766	5%
NGLs (bbls)	9,847,268	9,483,910	363,358	4%	19,459,815	18,753,941	705,874	4%
Crude oil (bbls)	982,324	1,210,379	(228,055)	(19%)	1,787,874	2,273,813	(485,939)	(21%)
Total (mcfe) [b]	208,140,555	200,223,539	7,917,016	4%	411,170,800	397,178,424	13,992,376	4%
Average daily production [a]								
Natural gas (mcf)	1,573,220	1,495,141	78,079	5%	1,567,319	1,497,303	70,016	5%
NGLs (bbls)	108,212	104,219	3,993	4%	107,513	103,613	3,900	4%
Crude oil (bbls)	10,795	13,301	(2,506)	(19%)	9,878	12,563	(2,685)	(21%)
Total (mcfe) [b]	2,287,259	2,200,259	87,000	4%	2,271,662	2,194,356	77,306	4%

(a) Represents volumes sold regardless of when produced.

(b) Oil and NGLs 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 2019 was $1.42 per mcfe compared to $1.88 per mcfe in second quarter 2018. Our average realized price during first six months 2019 was $1.68 per mcfe compared to $2.11 per mcfe in the same period of 2018. 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 on the accompanying consolidated statements of operations. Average realized prices (excluding derivative settlements) do include transportation costs where we receive net revenue proceeds from purchasers.

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	Change	%	2019	2018	Change	%
Average Prices								
Average realized prices (excluding derivative settlements):								
Natural gas (per mcf)	$ 2.40	$ 2.65	$ (0.25)	(9%)	$ 2.74	$ 2.92	$ (0.18)	(6%)
NGLs (per bbl)	16.96	23.69	(6.73)	(28%)	18.75	22.78	(4.03)	(18%)
Crude oil and condensate (per bbl)	53.88	63.07	(9.19)	(15%)	51.49	61.07	(9.58)	(16%)
Total (per mcfe) (a)	2.71	3.30	(0.59)	(18%)	3.00	3.42	(0.42)	(12%)
Average realized prices (including all derivative settlements):								
Natural gas (per mcf)	$ 2.54	$ 2.78	$ (0.24)	(9%)	$ 2.81	$ 3.11	$ (0.30)	(10%)
NGLs (per bbl)	18.58	21.57	(2.99)	(14%)	20.84	20.89	(0.05)	—%
Crude oil and condensate (per bbl)	51.02	52.95	(1.93)	(4%)	50.39	52.03	(1.64)	(3%)
Total (per mcfe) (a)	2.87	3.23	(0.36)	(11%)	3.15	3.41	(0.26)	(8%)
Average realized prices (including all derivative settlements and third-party transportation costs paid by Range):								
Natural gas (per mcf)	$ 1.25	$ 1.58	$ (0.33)	(21%)	$ 1.49	$ 1.92	$ (0.43)	(22%)
NGLs (per bbl)	6.81	10.41	(3.60)	(35%)	9.05	10.59	(1.54)	(15%)
Crude oil and condensate (per bbl)	51.02	52.95	(1.93)	(4%)	50.39	52.03	(1.64)	(3%)
Total (per mcfe) (a)	1.42	1.88	(0.46)	(24%)	1.68	2.11	(0.43)	(20%)

(a) Oil and NGLs 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 Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Average natural gas differentials (below) or above NYMEX	$ (0.24)	$ (0.15)	$ (0.15)	$ 0.03
Realized gains (losses) on basis hedging	$ —	$ —	$ 0.05	$ (0.04)

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 Months Ended June 30,				Six Months Ended June 30,			
	2018	Price Variance	Volume Variance	2019	2018	Price Variance	Volume Variance	2019
Natural gas								
Price (per mcf)	$ 2.65	$ (0.25)	$ —	$ 2.40	$ 2.92	$ (0.18)	$ —	$ 2.74
Production (Mmcf)	136,058	—	7,105	143,163	271,012	—	12,673	283,685
Natural gas sales	$ 360,351	$ (35,545)	$ 18,817	$ 343,623	$ 791,924	$ (50,612)	$ 37,031	$ 778,343

	Three Months Ended June 30,				Six Months Ended June 30,			
	2018	Price Variance	Volume Variance	2019	2018	Price Variance	Volume Variance	2019
NGLs								
Price (per bbl)	$ 23.69	$ (6.73)	$ —	$ 16.96	$ 22.78	$ (4.03)	$ —	$ 18.75
Production (Mbbls)	9,484	—	363	9,847	18,754	—	706	19,460
NGLs sales	$ 224,703	$ (66,285)	$ 8,609	$ 167,027	$ 427,230	$ (78,470)	$ 16,080	$ 364,840

	Three Months Ended June 30,				Six Months Ended June 30,			
	2018	Price Variance	Volume Variance	2019	2018	Price Variance	Volume Variance	2019
Crude oil								
Price (per bbl)	$ 63.07	$ (9.19)	$ —	$ 53.88	$ 61.07	$ (9.58)	$ —	$ 51.49
Production (Mbbls)	1,210	—	(228)	982	2,274	—	(486)	1,788
Crude oil sales	$ 76,336	$ (9,024)	$ (14,383)	$ 52,929	$ 138,865	$ (17,138)	$ (29,677)	$ 92,050

	Three Months Ended June 30,				Six Months Ended June 30,			
	2018	Price Variance	Volume Variance	2019	2018	Price Variance	Volume Variance	2019
Consolidated								
Price (per mcfe)	$ 3.30	$ (0.59)	$ —	$ 2.71	$ 3.42	$ (0.42)	$ —	$ 3.00
Production (Mmcfe)	200,224	—	7,917	208,141	397,178	—	13,993	411,171
Total natural gas, NGLs and oil sales	$ 661,390	$ (123,962)	$ 26,151	$ 563,579	$ 1,358,019	$ (170,628)	$ 47,842	$ 1,235,233

Transportation, gathering, processing and compression expense was $301.2 million in second quarter 2019 compared to $269.9 million in second quarter 2018. These third-party costs are higher in second quarter 2019 when compared to second quarter 2018 due to our production growth in the Marcellus Shale where we have third-party transportation, gathering, processing and compression agreements. We also have new in-service pipelines, higher NGLs costs due to higher production and higher NGLs expense in North Louisiana due to fully utilizing amounts that were previously accrued for as capacity commitments. We have included these costs in the calculation of average realized prices (including all derivative settlements and third-party transportation expenses paid by Range).

Transportation, gathering, processing and compression expense was $603.9 million in first six months 2019 compared to $514.5 million in first six months 2018. These third-party costs are higher in first six months 2019 when compared to first six months 2018 due to our production growth in the Marcellus Shale and new in-service pipelines. NGLs transportation is higher due to higher production and higher expense in North Louisiana due to fully utilizing amounts that were previously accrued for as capacity commitments. The following table summarizes transportation, gathering, processing and compression expense for the three and six months ended June 30, 2019 and 2018 on a per mcf and per barrel basis (in thousands, except for costs per unit):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	Change	%	2019	2018	Change	%
Transportation, gathering, processing and compression								
Natural gas	$ 185,353	$ 164,064	$ 21,289	13%	$ 374,435	$ 321,298	$ 53,137	17%
NGLs	115,866	105,846	10,020	9%	229,439	193,240	36,199	19%
Total	$ 301,219	$ 269,910	$ 31,309	12%	$ 603,874	$ 514,538	$ 89,336	17%
Natural gas (per mcf)	$ 1.29	$ 1.21	$ 0.08	7%	$ 1.32	$ 1.19	$ 0.13	11%
NGLs (per bbl)	$ 11.77	$ 11.16	$ 0.61	5%	$ 11.79	$ 10.30	$ 1.49	14%

Derivative fair value income (loss) was a gain of $195.2 million in second quarter 2019 compared to a loss of $103.3 million in second quarter 2018. Derivative fair value income was a gain of $133.5 million in first six months 2019 compared to a loss of $117.3 million in first six months 2018. 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, 2019 and 2018 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Derivative fair value income (loss) per consolidated statements of operations	$ 195,245	$ (103,290)	$ 133,514	$ (117,299)
Non-cash fair value gain (loss): [(1)]				
Natural gas derivatives	$ 154,787	$ (51,785)	$ 143,641	$ (92,882)
Oil derivatives	11,717	(18,415)	(27,782)	(27,757)
NGLs derivatives	(6,371)	(19,015)	(42,750)	8,800
Freight derivatives	1,605	200	2,064	(110)
Total non-cash fair value gain (loss) [(1)]	$ 161,738	$ (89,015)	$ 75,173	$ (111,949)
Net cash receipt (payment) on derivative settlements:				
Natural gas derivatives	$ 20,396	$ 18,113	$ 19,524	$ 50,621
Oil derivatives	(2,807)	(12,244)	(1,965)	(20,559)
NGLs derivatives	15,918	(20,144)	40,782	(35,412)
Total net cash receipt (payment)	$ 33,507	$ (14,275)	$ 58,341	$ (5,350)

(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 2019 was $92.6 million compared to $98.1 million in second quarter 2018 with the decrease caused by lower sales prices for brokered volumes (volumes not related to our production). Brokered natural gas, marketing and other revenue was $230.8 million in first six months 2019 compared to $158.1 million in first six months 2018 with the increase caused by significantly higher broker sales volumes and prices in first quarter 2019 somewhat offset by lower prices in second quarter 2019. We continue to optimize our transportation portfolio. 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, 2019 and 2018:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	Change	%	2019	2018	Change	%
Direct operating expense	$ 0.16	$ 0.18	$ (0.02)	(11%)	$ 0.16	$ 0.18	$ (0.02)	(11%)
Production and ad valorem tax expense	0.05	0.05	—	—%	0.05	0.05	—	—%
General and administrative expense	0.24	0.24	—	—%	0.24	0.29	(0.05)	(17%)
Interest expense	0.25	0.27	(0.02)	(7%)	0.25	0.27	(0.02)	(7%)
Depletion, depreciation and amortization expense	0.68	0.80	(0.12)	(15%)	0.68	0.81	(0.13)	(16%)

Direct operating expense was $34.0 million in second quarter 2019 compared to $35.1 million in second quarter 2018. 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 2019 primarily due to lower water handling costs and the impact of the sale of our Northern Oklahoma properties in the prior year partially offset by higher workover costs. Our production volumes increased 4% in second quarter 2019. We incurred $3.9 million of workover costs in second quarter 2019 compared to $1.5 million in second quarter 2018. On a per mcfe basis, direct operating expense in second quarter 2019 decreased 11% to $0.16 from $0.18 in the same period of 2018 with the decrease resulting from lower water handling costs and the sale of our Northern Oklahoma properties, which occurred in third quarter 2018, somewhat offset by higher workover costs.

Direct operating expense was $67.2 million in first six months 2019 compared to $73.2 million in the same period of 2018. Our direct operating costs decreased in first six months 2019 compared to the same period of 2018 due to lower water handling costs and the impact of the sale of our Northern Oklahoma properties in the prior year partially offset by higher workover costs. Our production volumes increased 4% in first six months 2019. We incurred $8.4 million of workover costs in first six months 2019 compared to $4.9 million of workover costs in the same period of 2018. On a per mcfe basis, direct operating expense in first six months 2019 decreased 11% to $0.16 from $0.18 in the same period of 2018 with the decrease resulting from lower water handling costs and the sale of our Northern Oklahoma properties in the prior year partially offset by higher workover costs. The following table summarizes direct operating expense per mcfe for the three and six months ended June 30, 2019 and 2018:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	Change	%	2019	2018	Change	%
Direct operating								
Lease operating expense	$ 0.14	$ 0.17	$ (0.03)	(18%)	$ 0.14	$ 0.17	$ (0.03)	(18%)
Workovers	0.02	0.01	0.01	100%	0.02	0.01	0.01	100%
Stock-based compensation	—	—	—		—	—	—	—
Total direct operating expense	$ 0.16	$ 0.18	$ (0.02)	(11%)	$ 0.16	$ 0.18	$ (0.02)	(11%)

Production and ad valorem taxes are paid based on market prices rather than hedged prices. This expense category is predominately the Pennsylvania impact fee. Production and ad valorem taxes (excluding the impact fee) were $3.1 million in second quarter 2019 compared to $3.7 million in second quarter 2018 due to lower prices and an increase in volumes not subject to production taxes. 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. Included in second quarter 2019 is a $6.8 million impact fee compared to $6.4 million in second quarter 2018.

Production and ad valorem taxes (excluding the impact fee) were $5.9 million in first six months 2019 compared to $7.1 million in the same period of 2018 due to lower prices and an increase in volumes not subject to production taxes. Included in first six months 2019 is a $15.3 million impact fee compared to $13.0 million in the same period of 2018. The following table summarizes production and ad valorem taxes per mcfe for the three and six months ended June 30, 2019 and 2018:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	Change	%	2019	2018	Change	%
Production and ad valorem taxes								
Production taxes	$ 0.01	$ 0.01	$ —	—%	$ 0.01	$ 0.01	$ —	—%
Ad valorem taxes	0.01	0.01	—	—%	—	0.01	(0.01)	(100%)
Impact fee	0.03	0.03	—	—%	0.04	0.03	0.01	33%
Total production and ad valorem taxes	$ 0.05	$ 0.05	$ —	—%	$ 0.05	$ 0.05	$ —	—%

General and administrative ("G&A") expense was $50.6 million in second quarter 2019 compared to $47.6 million in second quarter 2018. The second quarter 2019 increase of $3.0 million when compared to the same period of 2018 is primarily due to higher stock-based compensation of $686,000, higher rig release penalties of $1.4 million and higher technology costs partially offset by lower salaries and wages. In addition, the second quarter 2018 included a bad debt credit of $1.5 million compared to no bad debt expense in second quarter 2019. G&A expense for first six months 2019 decreased $18.7 million when compared to the same period of 2018 due to lower stock-based compensation of $13.6 million, lower legal costs, lower technology costs and lower salaries and wages partially offset by higher bad debt expense and higher rig release penalties. At

June 30, 2019, the number of G&A employees decreased 12% when compared to June 30, 2018. On a per mcfe basis, second quarter 2019 G&A expense was unchanged from the same period 2018. On a per mcfe basis, first six months 2019 G&A expense decreased 17% from first six months 2018 due to lower stock-based compensation costs, lower legal costs, lower consulting fees, lower technology costs and the impact of higher production volumes. The following table summarizes G&A expenses per mcfe for the three and six months ended June 30, 2019 and 2018:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	Change	%	2019	2018	Change	%
General and administrative								
General and administrative	$ 0.19	$ 0.20	$ (0.01)	(5%)	$ 0.19	$ 0.21	$ (0.02)	(10%)
Stock-based compensation (non-cash)	0.05	0.04	0.01	25%	0.05	0.08	(0.03)	(38%)
Total general and administrative expense	$ 0.24	$ 0.24	$ —	—%	$ 0.24	$ 0.29	$ (0.05)	(17%)

Interest expense was $51.7 million in second quarter 2019 compared to $53.9 million in second quarter 2018. Interest expense was $103.3 million for first six months 2019 compared to $106.2 million in the same period of 2018. The following table presents information about interest expense per mcfe for the three and six months ended June 30, 2019 and 2018:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	Change	%	2019	2018	Change	%
Bank credit facility	$ 0.06	$ 0.07	$ (0.01)	(14%)	$ 0.05	$ 0.07	$ (0.02)	(29%)
Senior notes	0.19	0.19	—	—%	0.19	0.19	—	—%
Subordinated notes	—	—	—	—%	—	—	—	—%
Amortization of deferred financing costs and other	—	0.01	(0.01)	(100%)	0.01	0.01	—	—%
Total interest expense	$ 0.25	$ 0.27	$ (0.02)	(7%)	$ 0.25	$ 0.27	$ (0.02)	(7%)
Average debt outstanding (in thousands)	$ 3,626,172	$ 4,247,317	$ (621,145)	(15%)	$ 3,771,079	$ 4,234,177	$ (463,098)	(11%)
Average interest rate (a)	5.5%	4.9%	0.6%	12%	5.3%	4.8%	0.5%	10%

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

On an absolute basis, the decrease in interest expense for second quarter 2019 from the same period of 2018 was primarily due to lower average outstanding debt balances partially offset by slightly higher average interest rates. Average debt outstanding on the bank credit facility for second quarter 2019 was $998.9 million compared to $1.3 billion in second quarter 2018 and the weighted average interest rate on the bank credit facility was 4.0% in second quarter 2019 compared to 3.7% in second quarter 2018.

On an absolute basis, the decrease in interest expense for first six months 2019 from the same period of 2018 was primarily due to lower average outstanding debt balances partially offset by slightly higher average interest rates. Average debt outstanding on the bank credit facility was $995.1 million for first six months 2019 compared to $1.3 billion in the same period of 2018 and the weighted average interest rates on the bank credit facility were 4.0% in first six months 2019 compared to 3.5% in the first six months 2018.

Depletion, depreciation and amortization expense was $141.5 million in second quarter 2019 compared to $161.0 million in second quarter 2018. This decrease is due to a 17% decrease in depletion rates somewhat offset by a 4% increase in production volumes. Depletion expense, the largest component of DD&A expense, was $0.65 per mcfe in second quarter 2019 compared to $0.78 per mcfe in second quarter 2018. 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 and asset sales.

DD&A expense was $280.2 million in first six months 2019 compared to $323.3 million in the same period of 2018. This is due to a 17% decrease in depletion rates somewhat offset by a 4% increase in production volumes. Depletion expense was $0.65 per mcfe in first six months 2019 compared to $0.78 in the same period of 2018. The following table summarizes DD&A expense per mcfe for the three and six months ended June 30, 2019 and 2018:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	Change	%	2019	2018	Change	%
DD&A								
Depletion and amortization	$ 0.65	$ 0.78	$ (0.13)	(17%)	$ 0.65	$ 0.78	$ (0.13)	(17%)
Depreciation	0.01	0.01	—	—%	0.01	0.01	—	—%
Accretion and other	0.02	0.01	0.01	100%	0.02	0.02	—	—%
Total DD&A expense	$ 0.68	$ 0.80	$ (0.12)	(15%)	$ 0.68	$ 0.81	$ (0.13)	(16%)

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, 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 months ended June 30, 2019 and 2018 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Direct operating expense	$ 549	$ 539	$ 1,140	$ 1,130
Brokered natural gas and marketing expense	553	313	1,001	598
Exploration expense	388	371	876	1,122
General and administrative expense	9,500	8,814	19,138	32,725
Termination costs	26	—	26	—
Total stock-based compensation	$ 11,016	$ 10,037	$ 22,181	$ 35,575

Brokered natural gas and marketing expense was $101.1 million in second quarter 2019 compared to $102.7 million in second quarter 2018. Brokered natural gas and marketing expense was $233.4 million in the first six months 2019 compared to $158.3 million in the same period of 2018 due to higher broker purchase volumes, purchase prices and transportation costs resulting from the optimization of our transportation portfolio compared to the prior year. The following table details our brokered natural gas, marketing net margin for the three and six months ended June 30, 2019 and 2018 (in thousands):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	Change	%	2019	2018	Change	%
Brokered natural gas and marketing								
Brokered natural gas sales	$ 88,004	$ 93,433	$ (5,429)	(6%)	$ 222,805	$ 149,294	$ 73,511	49%
Brokered NGLs sales	1,184	729	455	62%	1,608	1,033	575	56%
Other marketing revenue	3,417	3,922	(505)	(13%)	6,406	7,736	(1,330)	(17%)
Brokered natural gas purchases (1)	(97,042)	(99,144)	2,102	2%	(226,552)	(151,931)	(74,621)	(49%)
Brokered NGLs purchases	(1,397)	(638)	(759)	(119%)	(1,530)	(942)	(588)	(62%)
Other marketing expense	(2,678)	(2,965)	287	10%	(5,340)	(5,468)	128	2%
Net brokered natural gas and marketing margin	$ (8,512)	$ (4,663)	$ (3,849)	(83%)	$ (2,603)	$ (278)	$ (2,325)	(836%)

(1) Includes transportation costs.

Exploration expense was $8.1 million in second quarter 2019 compared to $7.5 million in second quarter 2018 due to higher delay rental expenses partially offset by lower personnel costs. Exploration expense was $16.3 million in first six months 2019 compared to $15.2 million in the same period of 2018 due to higher delay rental expenses partially offset by lower personnel costs. The following table details our exploration expense for the three and six months ended June 30, 2019 and 2018 (in thousands):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	Change	%	2019	2018	Change	%
Exploration								
Seismic	$ (487)	$ (522)	$ 35	7%	$ (487)	$ (60)	$ (427)	(712%)
Delay rentals and other	5,808	3,996	1,812	45%	11,867	8,109	3,758	46%
Personnel expense	2,400	3,654	(1,254)	(34%)	4,064	6,047	(1,983)	(33%)
Stock-based compensation expense	388	371	17	5%	876	1,122	(246)	(22%)
Total exploration expense	$ 8,109	$ 7,499	$ 610	8%	$ 16,320	$ 15,218	$ 1,102	7%

Abandonment and impairment of unproved properties was $12.8 million in second quarter 2019 compared to $54.9 million in second quarter 2018. Abandonment and impairment of unproved properties was $25.4 million in first six months 2019 compared to $66.7 million in the same period of 2018. 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 based on the current price environment, additional leasehold impairments and abandonments may be recorded. The reduction in abandonment and impairment of unproved properties reflects lower lease expirations in North Louisiana.

Termination costs were a charge of $2.2 million in second quarter 2019 compared to no charge in second quarter 2018. In second quarter 2019, we announced a reduction in our workforce due, in part, to the low commodity price environment and we recorded $2.2 million of related severance costs.

Deferred compensation plan expense was a gain of $11.1 million in second quarter 2019 compared to a loss of $6.6 million in second quarter 2018. 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 decreased from $11.24 at March 31, 2019 to $6.98 at June 30, 2019. In the same period of the prior year, our stock price increased from $14.54 at March 31, 2018 to $16.73 at June 30, 2018. During first six months 2019, deferred compensation was a gain of $7.6 million compared to a gain of $782,000 in the same period of 2018. Our stock price decreased from $9.57 at December 31, 2018 to $6.98 at June 30, 2019. In the same period of 2018, our stock price decreased from $17.06 at December 31, 2017 to $16.73 at June 30, 2018.

Impairment of proved properties was $15.3 million in second quarter 2018 and $7.3 million in first quarter 2018. In second quarter 2018, we recorded impairment expense related to certain of our oil and gas properties in Northwest Pennsylvania and in first quarter 2018, we recorded impairment expense related to certain of our oil and gas properties in Oklahoma. During second quarter 2018, we increased our interest in certain non-core properties in Northwest Pennsylvania for a minimal dollar amount for which the fair value had previously been determined to be zero which resulted in an impairment charge of $15.3 million. The Oklahoma assets were evaluated for impairment in first quarter 2018 due to the possibility of sale. There were no proved property impairments in second quarter or first six months of 2019.

Gain on the sale of assets was $5.9 million in second quarter 2019 compared to $156,000 in second quarter 2018. Second quarter 2019 included the sale of unproved properties in Pennsylvania for proceeds of $34.0 million and we recognized a gain of $5.9 million. Gain on the sale of assets for first six months 2019 was $5.7 million compared to $179,000 in first six months 2018.

Income tax expense was $40.1 million in second quarter 2019 compared to a benefit of $28.5 million in second quarter 2018. Income tax expense was $45.8 million in first six months 2019 compared to $14.2 million in first six months 2018. For second quarter 2019, the effective tax rate was 25.8% compared to 26.3% in the same period of 2018. For first six months 2019, the effective tax rate was 28.2% compared to (86.1%) in the same period of 2018. The 2019 and 2018 effective tax rates were different than the statutory tax rate due to state income taxes (including adjustments to state income tax valuation allowances), equity compensation and other discrete tax items which are detailed below. We expect our effective tax rate to be

approximately 25% for the remainder of 2019, before any discrete tax items (dollars in thousands).

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Total income (loss) before income taxes	$ 155,284	$ (108,354)	$ 162,391	$ (16,440)
U.S. federal statutory rate	21%	21%	21%	21%
Total tax expense (benefit) at statutory rate	32,610	(22,754)	34,102	(3,452)
State and local income taxes, net of federal benefit	5,725	(3,745)	6,543	749
Equity compensation	497	1,476	3,888	2,140
Change in valuation allowances:				
Federal net operating loss carryforwards	(916)	—	(916)	—
State net operating loss carryforwards and other	264	(2,042)	616	13,636
Other	(532)	18	(301)	1,399
Permanent differences and other	2,451	(1,471)	1,855	(314)
Total expense (benefit) for income taxes	$ 40,099	$ (28,518)	$ 45,787	$ 14,158
Effective tax rate	25.8%	26.3%	28.2%	(86.1%)

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, 2018, as filed with the SEC on February 25, 2019.

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, 2019, we have entered into derivative agreements covering 276.8 Bcfe for the remainder of 2019 and 188.6 Bcfe for 2020, not including our basis swaps.

The following table presents sources and uses of cash and cash equivalents for the six months ended June 30, 2019 and 2018 (in thousands):

	Six Months Ended June 30,	
	2019	2018
Sources of cash and cash equivalents		
Operating activities	$ 445,516	$ 545,515
Disposal of assets	34,366	366
Borrowing on credit facility	1,151,000	1,114,000
Other	18,739	31,108
Total sources of cash and cash equivalents	$ 1,649,621	$ 1,690,989
Uses of cash and cash equivalents		
Additions to natural gas and oil properties	$ (380,718)	$ (584,432)
Repayment on credit facility	(1,199,000)	(1,011,000)
Acreage purchases	(31,920)	(37,900)
Additions to field service assets	(697)	(1,863)
Dividends paid	(10,049)	(9,960)
Debt issuance costs	—	(8,257)
Other	(27,275)	(37,610)
Total uses of cash and cash equivalents	$ (1,649,659)	$ (1,691,022)

Net cash provided from operating activities in first six months 2019 was $445.5 million compared to $545.5 million in first six months 2018. 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 2018 to 2019 reflects lower net realized prices (a decrease of 20%) and the impact of our 2018 asset sales somewhat offset by higher working capital cash inflow and higher production volumes. As of June 30, 2019, we have hedged more than 65% of our projected total production for the remainder of 2019, with more than 80% of our projected natural gas production hedged. Net cash provided from operating activities is affected by a 4% 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 six months 2019 were positive $41.4 million compared to positive $2.5 million for first six months 2018.

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 2019, we entered into additional commodity derivative contracts for 2019, 2020 and 2021 to protect future cash flows.

During first six months 2019, our net cash provided from operating activities of $445.5 million was used to fund approximately $413.3 million of capital expenditures (including acreage acquisitions). At June 30, 2019, we had $507,000 in cash and total assets of $9.7 billion.

Long-term debt at June 30, 2019 totaled $3.8 billion, including $895.0 million outstanding on our bank credit facility, $2.9 billion of senior notes and $49.0 million of senior subordinated notes. Our available committed borrowing capacity at June 30, 2019 was $822.3 million, with an additional $1.0 billion 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 2019 capital budget is currently $756.0 million.

Commodity prices have remained volatile and have declined during second quarter 2019 compared to both fourth quarter 2018 and first 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; and
- continuing to manage price risk by hedging our production volumes.

Credit Arrangements

As of June 30, 2019, we maintained a revolving credit facility with a borrowing base of $3.0 billion and aggregate lender commitments of $2.0 billion, which we refer to as our bank credit facility. The bank credit facility, during a non-investment grade period, is secured by substantially all of our assets and has a maturity date of April 13, 2023. See Note 10 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 annually with an option to set more often in certain circumstances. Availability under the bank credit facility, during an investment grade period, is limited to aggregate lender commitments. As of June 30, 2019, the outstanding balance under our credit facility was $895.0 million. Additionally, we had $282.7 million of undrawn letters of credit leaving $822.3 million of committed borrowing capacity available under the facility at the end of second quarter 2019, with an additional $1.0 billion 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, 2019. See Note 10 to our unaudited consolidated financial statements for additional information regarding our bank debt.

Cash Dividend Payments

On May 31, 2019, our Board of Directors declared a dividend of two cents per share ($5.0 million) on our outstanding common stock, which was paid on June 28, 2019 to stockholders of record at the close of business on June 14, 2019. The amount of future dividends is subject to discretionary declaration by 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, 2019, 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, 2019, we had a total of $282.7 million of undrawn letters of credit under our bank credit facility.

Since December 31, 2018, there have been no material changes to our contractual obligations other than a $48.0 million decrease in our outstanding bank credit facility balance.

Interest Rates

At June 30, 2019, we had approximately $3.8 billion of debt outstanding. Of this amount, $2.9 billion bore interest at fixed rates averaging 5.2%. Bank debt totaling $895.0 million bears interest at floating rates, which was 3.9% at June 30, 2019. The 30-day LIBOR Rate on June 30, 2019 was approximately 2.4%. A 1% increase in short-term interest rates on the floating-rate debt outstanding on June 30, 2019 would cost us approximately $9.0 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 2019 to continue to be a function of supply.

Certain New Accounting Standards Not Yet Adopted

The effects of certain new accounting standards that have not been adopted yet are discussed in Note 3 to the consolidated financial statements.

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, 2018 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, 2018 to June 30, 2019.

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, 2019, our derivative program includes swaps, collars and swaptions. The fair value of these contracts, represented by the estimated amount that would be realized upon immediate liquidation as of June 30, 2019, approximated a net unrealized pretax gain of $162.7 million. These contracts expire monthly through December 2020. At June 30, 2019, the following commodity derivative contracts were outstanding, excluding our basis swaps which are discussed below:

Period	Contract Type	Volume Hedged	Weighted Average Hedge Price	Fair Market Value
Natural Gas				(in thousands)
2019	Swaps	1,262,473 Mmbtu/day	$ 2.81	$ 101,927
2020	Swaps	305,000 Mmbtu/day	$ 2.76	$ 24,333
2019	Swaptions	150,000 Mmbtu/day	$ 2.81 (1)	$ 8,399
2020	Swaptions	177,568 Mmbtu/day	$ 2.78 (1)	$ 13,704
November – December 2019	Swaptions	20,000 Mmbtu/day	$ 3.20 (1)	$ 843
January – March 2020	Swaptions	20,000 Mmbtu/day	$ 3.20 (1)	$ 966
Crude Oil				
2019	Swaps	8,750 bbls/day	$ 55.89	$ (3,620)
2020	Swaps	4,617 bbls/day	$ 60.48	$ 7,147
2019	Collars	1,000 bbls/day	$ 63.00 − $ 73.00	$ 1,116
NGLs (C5-Natural Gasoline)				
2019	Swaps	4,500 bbls/day	$ 1.36/gallon	$ 7,857

(1) Contains a combined derivative instrument consisting of a fixed price swap and a sold option to extend or double the volumes. We have swaps in place for 2019 for 150,000 Mmbtu/day on which the counterparty can elect to extend the contract through December 2020 at a weighted average price of $2.81. In addition, we have swaps in place for November and December 2019, where, if the counterparty elects to double the volume, we would have an additional 20,000 Mmbtu/day at a weighted average price of $3.20. In 2020, if the counterparty elects to double the volume, we would have additional swaps in place for 140,000 Mmbtu/day at a weighted average price of $2.78. We also have swapts in place for 2020 for 50,000 Mmbtu day on which the counterparty can elect to extend the contract through December 2021 at a weighted average price of $2.75. In addition, for January through March 2020, we have additional swaps in place where, if the counterparty elects to double the volume, we would have an additional 20,000 Mmbtu/day at a weighted average price of $3.20.

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 assure you 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 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 $2.0 million at June 30, 2019 and they settle monthly through October 2021.

At June 30, 2019, we also had propane basis contracts which lock in the differential between Mont Belvieu and international propane indices. These contracts settle monthly in October through December of 2019 and monthly in 2020 and include a total volume of 1,875,000 barrels. The fair value of these contracts was a loss of $1.8 million at June 30, 2019.

The following table shows the fair value of our swaps and basis swaps and the hypothetical changes in fair value that would result from a 10% and a 25% change in commodity prices at June 30, 2019. 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 Change in Fair Value Increase of		Hypothetical Change in Fair Value Decrease of	
	Fair Value	10%	25%	10%	25%
Swaps	$ 137,644	$ (104,898)	$ (260,465)	$ 104,905	$ 262,252
Collars	1,116	(669)	(1,616)	892	2,502
Swaptions	23,912	(34,103)	(103,055)	27,446	64,143
Basis swaps	(3,812)	(3,778)	(9,411)	3,839	9,633
Freight swaps	1,501	397	992	(382)	(985)

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, 2019, our derivative counterparties include nineteen financial institutions, of which all but three 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 bearing a credit rating similar to Range.

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, 2019, we had $3.8 billion of debt outstanding. Of this amount, $2.9 billion bears interest at fixed rates averaging 5.2%. Bank debt totaling $895.0 million bears interest at floating rates, which was 3.9% on June 30, 2019. On June 30, 2019, the 30-day LIBOR Rate was approximately 2.4%. A 1% increase in short-term interest rates on the floating-rate debt outstanding on June 30, 2019, would cost us approximately $9.0 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, 2019 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, 2019 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 18 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 notified by the Pennsylvania Department of Environmental Protection ("DEP"), in second quarter 2015, that it intends to assess a civil penalty under the Clean Streams Law and the 2012 Oil and Gas Act in connection with one well in Lycoming County. The DEP has directed us to prevent methane and other substances from escaping from this gas well into groundwater and a stream. We have considerable evidence that this well is not leaking and pre-drill testing of surrounding water wells showed the presence of methane in the water before commencement of our operations. While we intend to vigorously assert this position with the DEP, resolution of this matter may nonetheless result in monetary sanctions of more than $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, 2018. There have been no material changes from the risk factors previously disclosed in that Form 10-K.

ITEM 6. EXHIBITS

Exhibit index

Exhibit Number	Exhibit Description
3.1	Restated Certificate of Incorporation of Range Resources Corporation (incorporated by reference to Exhibit 3.1.1 to our Form 10-Q (File No. 001-12209) 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 28, 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)
3.2	Amended and Restated By-laws of Range Resources Corporation (incorporated by reference to Exhibit 3.1 to our Form 8-K (File No. 001-12209) as filed with the SEC on May 19, 2016)
10.1	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 (File No. 001-12209) as filed with the SEC on April 16, 2018)
10.2	Voting Support and Nomination Agreement, dated as of July 9, 2018, by and among Range Resources Corporation, SailingStone Capital Partners LLC and SailingStone Holdings LLC (incorporated by reference to Exhibit 10.1 to Form 8-K (File No. 001-12209) as filed with the SEC on July 10, 2018)
10.3	Range Resources Corporation 2019 Equity-Based Compensation Plan (incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K (File No. 001-12209) as filed with the SEC on May 16, 2019)
31.1*	Certification by the President and Chief Executive Officer of Range Resources Corporation Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification by the Chief Financial Officer of Range Resources Corporation Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
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 Section 906 of the Sarbanes-Oxley Act of 2002
101. INS*	XBRL Instance Document – the XBRL Instance Document does not appear in the Interactive Data file because its XBRL tags are embedded within the Inline XBRL document
101. SCH*	XBRL Taxonomy Extension Schema
101. CAL*	XBRL Taxonomy Extension Calculation Linkbase Document
101. DEF*	XBRL Taxonomy Extension Definition Linkbase Document
101. LAB*	XBRL Taxonomy Extension Label Linkbase Document
101. PRE*	XBRL Taxonomy Extension Presentation Linkbase Document

* filed herewith
** furnished herewith

SIGNATURES

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

Date: July 25, 2019

RANGE RESOURCES CORPORATION

By: /s/ MARK S. SCUCCHI

Mark S. Scucchi
Senior Vice President and
Chief Financial Officer

Date: July 25, 2019

RANGE RESOURCES CORPORATION

By: /s/ DORI A. GINN

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

Exhibit 31.1

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: July 25, 2019

/S/ JEFF L. VENTURA

Jeff L. Ventura

President and Chief Executive Officer

Exhibit 31.2

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: July 25, 2019

/s/ Mark S. Scucchi

Mark S. Scucchi

Senior Vice President and Chief Financial Officer

Exhibit 32.1

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, 2019 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

July 25, 2019

Exhibit 32.2

**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, 2019 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, 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

July 25, 2019