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, 2022

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

262,886,113 Common Shares were outstanding on July 22, 2022

RANGE RESOURCES CORPORATION
FORM 10-Q
Quarter Ended June 30, 2022

Unless the context otherwise indicates, all references in this report to "Range Resources," "Range," "we," "us," or "our" are to Range Resources Corporation and its directly and indirectly owned subsidiaries. For certain industry specific terms used in this Form 10-Q, please see "Glossary of Certain Defined Terms" in our 2021 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, 2022 (Unaudited)	December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 356	$ 214,422
Accounts receivable, less allowance for doubtful accounts of $564 and $568	608,575	471,775
Contingent consideration receivable	—	29,500
Derivative assets	24,515	5,738
Other current assets	35,949	15,230
Total current assets	669,395	736,665
Derivative assets	14,337	38,601
Natural gas properties, successful efforts method	10,412,520	10,175,570
Accumulated depletion and depreciation	(4,588,675)	(4,420,914)
	5,823,845	5,754,656
Other property and equipment	75,059	74,678
Accumulated depreciation and amortization	(72,049)	(71,184)
	3,010	3,494
Operating lease right-of-use assets	30,358	40,832
Other assets	74,158	86,259
Total assets	$ 6,615,103	$ 6,660,507
Liabilities		
Current liabilities:		
Accounts payable	$ 229,120	$ 178,413
Asset retirement obligations	5,310	5,310
Accrued liabilities	475,727	420,898
Accrued interest	48,120	75,940
Derivative liabilities	647,153	162,767
Divestiture contract obligation	90,909	91,120
Current maturities of long-term debt	531,643	218,017
Total current liabilities	2,027,982	1,152,465
Bank debt	—	—
Senior notes	1,830,498	2,707,770
Deferred tax liabilities	91,155	117,642
Derivative liabilities	156,479	8,216
Deferred compensation liabilities	83,755	137,102
Operating lease liabilities	22,443	24,861
Asset retirement obligations and other liabilities	102,353	101,509
Divestiture contract obligation	323,253	325,279
Total liabilities	4,637,918	4,574,844
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, 262,886,113 issued at June 30, 2022 and 259,795,554 issued at December 31, 2021	2,628	2,598
Common stock held in treasury, 14,601,535 shares at June 30, 2022 and 10,002,646 shares at December 31, 2021	(162,854)	(30,007)
Additional paid-in capital	5,748,516	5,720,277
Accumulated other comprehensive loss	(19)	(150)
Retained deficit	(3,611,086)	(3,607,055)
Total stockholders' equity	1,977,185	2,085,663
Total liabilities and stockholders' equity	$ 6,615,103	$ 6,660,507

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, 2022	Three Months Ended June 30, 2021	Six Months Ended June 30, 2022	Six Months Ended June 30, 2021
Revenues and other income:				
Natural gas, NGLs and oil sales	$ 1,356,892	$ 621,855	$ 2,389,243	$ 1,225,202
Derivative fair value loss	(239,922)	(249,683)	(1,178,979)	(307,562)
Brokered natural gas, marketing and other	108,173	62,550	195,615	143,114
Total revenues and other income	1,225,143	434,722	1,405,879	1,060,754
Costs and expenses:				
Direct operating	20,050	19,758	40,338	37,408
Transportation, gathering, processing and compression	327,907	282,844	625,694	557,174
Production and ad valorem taxes	7,468	8,414	14,058	13,039
Brokered natural gas and marketing	110,109	69,004	203,232	141,339
Exploration	7,506	5,028	12,205	10,566
Abandonment and impairment of unproved properties	7,137	2,177	9,133	5,206
General and administrative	43,493	40,242	86,519	78,246
Exit and termination costs	36,069	(15,946)	47,184	(2,232)
Deferred compensation plan	(19,221)	35,462	54,122	55,273
Interest	42,001	57,287	89,176	114,165
Loss on early extinguishment of debt	22	63	69,232	98
Depletion, depreciation and amortization	86,498	90,629	172,102	179,012
Gain on the sale of assets	(82)	(2,506)	(413)	(646)
Total costs and expenses	668,957	592,456	1,422,582	1,188,648
Income (loss) before income taxes	556,186	(157,734)	(16,703)	(127,894)
Income tax expense (benefit):				
Current	9,000	2,569	13,751	2,737
Deferred	94,331	(3,831)	(26,501)	(1,310)
	103,331	(1,262)	(12,750)	1,427
Net income (loss)	$ 452,855	$ (156,472)	$ (3,953)	$ (129,321)
Net income (loss) per common share:				
Basic	$ 1.81	$ (0.65)	$ (0.02)	$ (0.53)
Diluted	$ 1.77	$ (0.65)	$ (0.02)	$ (0.53)
Weighted average common shares outstanding:				
Basic	243,492	242,592	244,416	242,377
Diluted	248,650	242,592	244,416	242,377

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,	
	2022	2021	2022	2021
Net income (loss)	$ 452,855	$ (156,472)	$ (3,953)	$ (129,321)
Other comprehensive income:				
Postretirement benefits:				
Amortization of prior service costs	73	92	146	184
Income tax expense	(17)	(22)	(15)	(44)
Total comprehensive income (loss)	$ 452,911	$ (156,402)	$ (3,822)	$ (129,181)

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, 2022	Six Months Ended June 30, 2021
Operating activities:		
Net loss	$ (3,953)	$ (129,321)
Adjustments to reconcile net loss to net cash provided from operating activities:		
Deferred income tax (benefit) expense	(26,501)	(1,310)
Depletion, depreciation and amortization and impairment of proved properties	172,102	179,012
Abandonment and impairment of unproved properties	9,133	5,206
Derivative fair value loss	1,178,979	307,562
Cash settlements on derivative financial instruments	(540,845)	(79,708)
Divestiture contract obligation, including accretion, net of gain	46,861	(3,135)
Amortization of deferred financing costs and other	5,120	4,259
Deferred and stock-based compensation	78,155	75,113
Gain on the sale of assets	(413)	(646)
Loss on early extinguishment of debt	69,232	98
Changes in working capital:		
Accounts receivable	(107,198)	(49,138)
Other current assets	(23,099)	(879)
Accounts payable	36,374	21,240
Accrued liabilities and other	(162,827)	(44,918)
Net cash provided from operating activities	731,120	283,435
Investing activities:		
Additions to natural gas properties	(211,232)	(205,923)
Additions to field service assets	(381)	(652)
Acreage purchases	(19,445)	(15,917)
Proceeds from disposal of assets	380	195
Purchases of marketable securities held by the deferred compensation plan	(37,499)	(21,868)
Proceeds from the sales of marketable securities held by the deferred compensation plan	39,823	25,640
Net cash used in investing activities	(228,354)	(218,525)
Financing activities:		
Borrowings on credit facilities	648,000	883,000
Repayments on credit facilities	(647,000)	(1,464,000)
Issuance of senior notes	500,000	600,000
Repayment of senior or senior subordinated notes	(1,068,117)	(63,324)
Treasury stock purchases	(132,894)	—
Debt issuance costs	(15,798)	(8,591)
Taxes paid for shares withheld	(25,491)	(9,249)
Change in cash overdrafts	3,815	(7,672)
Proceeds from the sales of common stock held by the deferred compensation plan	20,653	4,932
Net cash used in financing activities	(716,832)	(64,904)
(Decrease) increase in cash and cash equivalents	(214,066)	6
Cash and cash equivalents at beginning of period	214,422	458
Cash and cash equivalents at end of period	$ 356	$ 464

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

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

Fiscal Year 2022	**Common stock**		**Common stock held in treasury**	**Additional paid-in capital**	**Retained deficit**	**Accumulated other comprehensive loss**	**Total**
	Shares	**Par value**					
Balance as of December 31, 2021	**259,796**	**$ 2,598**	**$ (30,007)**	**$ 5,720,277**	**$ (3,607,055)**	**$ (150)**	**$ 2,085,663**
Issuance of common stock	2,980	29	—	(21,276)	—	—	**(21,247)**
Issuance of common stock upon vesting of PSUs	2	—	—	78	(78)	—	**—**
Stock-based compensation expense	—	—	—	8,619	—	—	**8,619**
Treasury stock	—	—	(16,152)	(46)	—	—	**(16,198)**
Other comprehensive income	—	—	—	—	—	75	**75**
Net loss	—	—	—	—	(456,808)	—	**(456,808)**
Balance as of March 31, 2022	**262,778**	**2,627**	**(46,159)**	**5,707,652**	**(4,063,941)**	**(75)**	**1,600,104**
Issuance of common stock	108	1	—	33,132	—	—	**33,133**
Stock-based compensation expense	—	—	—	7,733	—	—	**7,733**
Treasury stock	—	—	(116,695)	(1)	—	—	**(116,696)**
Other comprehensive income	—	—	—	—	—	56	**56**
Net income	—	—	—	—	452,855	—	**452,855**
Balance as of June 30, 2022	**262,886**	**$ 2,628**	**$ (162,854)**	**$ 5,748,516**	**$ (3,611,086)**	**$ (19)**	**$ 1,977,185**

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 2021	Common stock Shares	Common stock Par value	Common stock held in treasury	Additional paid-in capital	Retained deficit	Accumulated other comprehensive loss	Total
Balance as of December 31, 2020	**256,354**	**$ 2,563**	**$ (30,132)**	**$ 5,684,268**	**$ (4,018,685)**	**$ (479)**	**1,637,535**
Issuance of common stock	3,205	33	—	(7,654)	—	—	**(7,621)**
Issuance of common stock upon vesting of PSUs	13	—	—	148	(148)	—	**—**
Stock-based compensation expense	—	—	—	6,713	—	—	**6,713**
Treasury stock	—	—	47	(47)	—	—	**—**
Other comprehensive income	—	—	—	—	—	70	**70**
Net income	—	—	—	—	27,151	—	**27,151**
Balance as of March 31, 2021	**259,572**	**2,596**	**(30,085)**	**5,683,428**	**(3,991,682)**	**(409)**	**1,663,848**
Issuance of common stock	206	2	—	9,289	—	—	**9,291**
Issuance of common stock upon vesting of PSUs	—	—	—	—	—	—	**—**
Stock-based compensation expense	—	—	—	6,523	—	—	**6,523**
Treasury stock	—	—	—	—	—	—	**—**
Other comprehensive income	—	—	—	—	—	71	**71**
Net loss	—	—	—	—	(156,472)	—	**(156,472)**
Balance as of June 30, 2021	**259,778**	**$ 2,598**	**$ (30,085)**	**$ 5,699,240**	**$ (4,148,154)**	**$ (338)**	**$ 1,523,261**

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 engaged in the exploration, development and acquisition of natural gas properties in the Appalachian region of the United States. Our objective is to build stockholder value through returns-focused development of natural gas properties. Range is a Delaware corporation with our common stock listed and traded on the New York Stock Exchange under the symbol "RRC."

(2) BASIS OF PRESENTATION

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

These interim financial statements should be read in conjunction with the consolidated financial statements and notes thereto included in our 2021 Annual Report on Form 10-K filed with the SEC on February 22, 2022. The results of operations for the second quarter and six months ended June 30, 2022 are not necessarily indicative of the results to be expected for the full year.

(3) NEW ACCOUNTING STANDARDS

Not Yet Adopted

No accounting standards were adopted in second quarter or six months ended June 30, 2022 that had a material impact on our consolidated financial statements.

(4) REVENUES FROM CONTRACTS WITH CUSTOMERS

Disaggregation of Revenue

We have three material revenue streams in our business: natural gas sales, NGLs sales and condensate sales (referred to below as oil sales). Brokered revenue attributable to each product sales type is included here because the volume of product that we purchase is subsequently sold to separate counterparties in accordance with existing sales contracts under which we also sell our production. Accounts receivable attributable to our revenue contracts with customers was $601.7 million at June 30, 2022 and $460.2 million at December 31, 2021. Revenue attributable to each of our identified revenue streams is disaggregated below (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Natural gas sales	$ 909,754	$ 321,565	$ 1,539,677	$ 657,366
NGLs sales	374,699	255,533	713,068	485,941
Oil sales	72,439	44,757	136,498	81,895
Total natural gas, NGLs and oil sales	1,356,892	621,855	2,389,243	1,225,202
Sales of purchased natural gas	103,368	60,778	187,430	130,240
Sales of purchased NGLs	640	722	2,280	1,148
Other marketing revenue (1)	4,165	1,050	5,905	11,726
Total	$ 1,465,065	$ 684,405	$ 2,584,858	$ 1,368,316

(1) The six months ended June 30, 2021 includes $8.8 million received as part of a capacity release agreement.

(5) 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. The effective income tax rate is influenced by a variety of factors including geographic sources and relative magnitude of these sources of income. Income taxes for discrete items are computed and recorded in the period that a specific transaction occurs. For the three months and six months ended June 30, 2022 and 2021, our overall effective tax rate was different than the federal statutory rate due primarily to state income taxes, equity compensation, valuation allowances and other tax items. Current income taxes reflect estimated state income taxes due for 2022 which is based on our estimated earnings, taking into account state tax rates and laws regarding NOL limitations. We continue to evaluate the realizability of federal and state deferred tax assets and based upon significant increases in commodity prices and other positive evidence, we released a portion of our federal and state valuation allowances in first six months 2022. On July 12, 2022, the commonwealth of Pennsylvania enacted legislation to reduce the corporate income tax rate over a series of years. We are currently evaluating the impact of this new corporate income tax rate.

(6) 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,	
	2022	2021	2022	2021
Net income (loss), as reported	$ 452,855	$ (156,472)	$ (3,953)	$ (129,321)
Participating earnings [(a)]	(12,056)	—	—	—
Basic net income (loss) attributed to common shareholders	440,799	(156,472)	(3,953)	(129,321)
Reallocation of participating earnings [(a)]	244	—	—	—
Diluted net income (loss) attributed to common shareholders	$ 441,043	$ (156,472)	$ (3,953)	$ (129,321)
Net income (loss) per common share:				
Basic	$ 1.81	$ (0.65)	$ (0.02)	$ (0.53)
Diluted	$ 1.77	$ (0.65)	$ (0.02)	$ (0.53)

(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 details weighted average common shares outstanding and diluted weighted average common shares outstanding (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Weighted average common shares outstanding – basic	243,492	242,592	244,416	242,377
Effect of dilutive securities:				
Director and employee restricted stock and performance based equity awards	5,158	—	—	—
Weighted average common shares outstanding – diluted	248,650	242,592	244,416	242,377

Weighted average common shares outstanding-basic for second quarter 2022 excludes 6.7 million shares of restricted stock held in our deferred compensation plan compared to 7.1 million shares in second quarter 2021 (although all awards are issued and outstanding upon grant). Weighted average common shares outstanding-basic for first six months 2022 excludes 6.4 million shares of restricted stock compared to 6.6 million for first six months 2021. For the three months ended June 30, 2022, equity grants of 2,000 shares were outstanding but not included in the computation of diluted net income because the grant prices were greater than the average market price of the common shares and would be anti-dilutive to the computations. Due to our net loss for second quarter 2021 and in both the first six months 2022 and 2021, we excluded all equity grants from the computation of net loss per share because the effect would have been anti-dilutive to the computations.

(7) CAPITALIZED COSTS AND ACCUMULATED DEPRECIATION, DEPLETION AND AMORTIZATION [(a)]

	June 30, 2022	December 31, 2021
	(in thousands)	
Natural gas properties:		
Properties subject to depletion	$ 9,569,378	$ 9,338,236
Unproved properties	843,142	837,334
Total	10,412,520	10,175,570
Accumulated depletion and depreciation	(4,588,675)	(4,420,914)
Net capitalized costs	$ 5,823,845	$ 5,754,656

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

(8) INDEBTEDNESS

We had the following debt outstanding as of the dates shown below. No interest was capitalized during the three or six months ended June 30, 2022 or the year ended December 31, 2021 (in thousands).

	June 30, 2022	December 31, 2021
Bank debt	$ 1,000	$ —
Senior notes:		
4.75% senior notes due 2030	500,000	—
4.875% senior notes due 2025	750,000	750,000
5.00% senior notes due 2022	—	169,589
5.00% senior notes due 2023	532,335	532,335
5.875% senior notes due 2022	—	48,528
8.25% senior notes due 2029	600,000	600,000
9.25% senior notes due 2026	—	850,000
Total senior notes	2,382,335	2,950,452
Unamortized premium	62	188
Unamortized debt issuance costs	(21,256)	(24,853)
Total debt net of debt issuance costs	2,362,141	2,925,787
Less current maturities of long-term debt	(531,643)	(218,017)
Total long-term debt	$ 1,830,498	$ 2,707,770

Bank Debt

In April 2022, 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 14, 2027. The bank credit facility provides for a maximum facility amount of $4.0 billion and an initial borrowing base of $3.0 billion. The bank credit facility also provides for a borrowing base subject to periodic redeterminations and for event-driven unscheduled redeterminations. As of June 30, 2022, our bank group was composed of seventeen financial institutions. The borrowing base may be increased or decreased based on our request and sufficient proved reserves, as determined by the bank group. The commitment amount may be increased to the borrowing base, subject to payment of a mutually acceptable commitment fee to those banks agreeing to participate in the facility increase. Borrowings under the bank credit facility can either be at the alternate base rate (ABR, as defined in the bank credit facility agreement) plus a spread ranging from 0.75% to 1.75% or at the secured overnight financing rate (SOFR, as defined in the bank credit facility agreement) plus a spread ranging from 1.75% to 2.75%. 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 SOFR loans to base rate loans or to convert all or any of the base rate loans to SOFR loans. The weighted average interest rate was 4.1% for second quarter 2022 compared to 2.0% for second quarter 2021. The weighted average interest rate was 3.4% for first six months 2022 compared to 2.1% for first six months 2021. A commitment fee is paid on the undrawn balance based on an annual rate of 0.30% to 0.375%. At June 30, 2022, the commitment fee was 0.37% and the interest rate margin was 1.75% on our SOFR loans and 0.75% on our ABR loans.

On June 30, 2022, bank commitments totaled $1.5 billion and we had $1.0 million outstanding on our bank credit facility. Additionally, we had $330.5 million of undrawn letters of credit, leaving $1.2 billion of committed borrowing capacity available under the facility.

New Senior Notes

In January 2022, we issued $500.0 million aggregate principal amount of 4.75% senior notes due 2030 (the "4.75% Notes") for net proceeds of $492.1 million after underwriting expenses and commissions of $7.9 million. The 4.75% Notes, issued at par, were offered to qualified institutional buyers and to non-U.S. persons outside the United States in compliance with Rule 144A (for life) and Regulation S of the Securities Act of 1933, as amended (the "Securities Act"). Interest due on the 4.75% Notes is payable semi-annually in February and August and is unconditionally guaranteed on a senior unsecured basis by all of our subsidiary guarantors. On or after February 1, 2027, we may redeem the 4.75% Notes, in whole or in part and from time to time, at 100% of the principal amounts plus accrued and unpaid interest. We may redeem the notes prior to their maturity at redemption prices based on a premium, plus accrued and unpaid interest as described in the indenture governing the 4.75% Notes. Upon occurrence of certain changes in control, we must offer to repurchase the 4.75% Notes. The 4.75% Notes are unsecured and are subordinated to all of our existing and future secured debt, rank equally with all of our existing and future unsecured debt and rank senior to all of our existing and future subordinated debt. On the closing of the issuance of the 4.75% Notes, we used the proceeds, along with cash on hand and our bank credit facility, to redeem $850.0 million of our 9.25% senior notes due 2026.

Early Redemption

In first quarter 2022, we announced a call for the redemption of $850.0 million of our outstanding 9.25% senior notes due 2026. The redemption price equaled 106.938% of par plus accrued and unpaid interest. The redemption date was February 1, 2022. We recognized a loss on early extinguishment of debt in first quarter 2022 of $69.2 million which represents expensing of the remaining deferred financing costs and the call premium costs.

Senior Notes

If we experience a change of control, noteholders may require us to repurchase all or a portion of our senior notes at 101% of the aggregate principal amount plus accrued and unpaid interest, if any. During second quarter 2022, we retired our 5.00% senior notes due 2022 and our 5.875% senior notes due 2022.

Guarantees

Range is a holding company that 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 and our bank credit facility are full and unconditional and joint and several, subject to certain customary release provisions. The assets, liabilities and results of operations of Range and our guarantor subsidiaries are not materially different than our consolidated financial statements. 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. We are required to maintain maximum consolidated debt to EBITDAX ratio (as defined in the bank credit facility agreement) of 3.75x and a minimum current ratio of 1.0x (as defined in the bank credit facility agreement). We were in compliance with applicable covenants under the bank credit facility at June 30, 2022.

(9) 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, 2022 and the year ended December 31, 2021 is as follows (in thousands):

	Six Months Ended June 30, 2022	Year Ended December 31, 2021
Beginning of period	$ 95,836	$ 79,822
Liabilities incurred	2,444	73
Liabilities settled	(4,027)	(8,197)
Accretion expense	3,047	5,511
Change in estimate	521	18,627
End of period	97,821	95,836
Less current portion	(5,310)	(5,310)
Long-term asset retirement obligations	$ 92,511	$ 90,526

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

(10) DERIVATIVE ACTIVITIES

We use commodity-based derivative contracts to manage exposure to commodity price fluctuations. We do not enter into these arrangements for speculative or trading purposes. We utilize commodity swaps, collars, three-way collars 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 investment 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 loss of $802.1 million at June 30, 2022. These contracts expire monthly through December 2024. The following table sets forth our commodity-based derivative volumes by year as of June 30, 2022, excluding our basis swaps and divestiture contingent consideration which are discussed separately below:

Period	Contract Type	Volume Hedged	Weighted Average Hedge Price			
			Swap	Sold Put	Floor	Ceiling
Natural Gas [(1)]						
2022	Swaps	495,000 Mmbtu/day	$ 3.09			
2022	Collars	242,500 Mmbtu/day			$ 3.29	$ 3.69
2022	Three-way Collars	258,207 Mmbtu/day		$ 2.83	$ 3.51	$ 4.50
2023	Swaps	320,000 Mmbtu/day	$ 3.41			
2023	Collars	240,795 Mmbtu/day			$ 3.30	$ 4.36
2023	Three-way Collars	149,863 Mmbtu/day		$ 2.28	$ 3.30	$ 4.28
2024	Collars	281,694 Mmbtu/day			$ 3.20	$ 5.26
Crude Oil						
2022	Swaps	6,750 bbls/day	$ 62.08			
2023	Swaps	5,123 bbls/day	$ 71.39			
January-September 2024	Collars	832 bbls/day			$ 80.00	$ 90.12
NGLs (C2-Ethane)						
July 2022	Swaps	1,000 bbls/day	$ 0.55/gallon			
NGLs (NC4-Butane)						
July-September 2022	Swaps	2,000 bbls/day	$ 1.42/gallon			
NGLs (C5-Natural Gasoline)						
2022	Swaps	2,003 bbls/day	$ 1.89/gallon			
2022	Collars	2,000 bbls/day			$ 1.83/gallon	$ 1.95/gallon

(1) We also sold natural gas call swaptions of 40,000 Mmbtu/day for 2023 at a weighted average price of $2.91 Mmbtu/day.

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, 2022, we had natural gas basis swap contracts which lock in the differential between NYMEX Henry Hub and certain of our physical pricing indices. These contracts settle monthly through December 2024 and include a total volume of 216,442,000 Mmbtu. The fair value of these contracts was a gain of $2.5 million at June 30, 2022.

Divestiture Contingent Consideration

In addition to the derivatives described above, our right to receive contingent consideration in conjunction with the sale of our North Louisiana assets was determined to be a derivative financial instrument that is not designated as a hedging instrument. The remaining contingent consideration of up to $45.5 million is based on future achievement of natural gas and oil prices based on published indexes and realized NGLs prices of the buyer for the years 2022 and 2023. All changes in the fair value are recognized as a gain or loss in earnings in the period they occur in derivative fair value income or loss in our consolidated statements of operations. For first six months 2022, this fair value has increased $8.1 million for a fair value of $34.8 million as of June 30, 2022.

Derivative Assets and Liabilities

The combined fair value of derivatives included in the accompanying consolidated balance sheets as of June 30, 2022 and December 31, 2021 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, 2022		
		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	–collars	$ 6,280	$ (6,280)	$ —
	–three-way collars	7,280	(7,280)	—
	–basis swaps	33,498	(29,426)	4,072
Crude oil	–collars	885	(735)	150
NGLs	–C2 ethane swaps	78	(78)	—
	–NC4 butane swaps	101	(101)	—
	–C5 natural gasoline swaps	453	(686)	(233)
	–C5 natural gasoline collars	289	(186)	103
Divestiture contingent consideration		34,760	—	34,760
		$ 83,624	$ (44,772)	$ 38,852

		June 30, 2022		
		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	$ (374,506)	$ —	$ (374,506)
	–swaptions	(26,003)	—	(26,003)
	–collars	(205,548)	6,280	(199,268)
	–three-way collars	(136,622)	7,280	(129,342)
	–basis swaps	(30,969)	29,426	(1,543)
Crude oil	–swaps	(71,720)	—	(71,720)
	–collars	—	735	735
NGLs	–C2 ethane swaps	—	78	78
	–NC4 butane swaps	—	101	101
	–C5 natural gasoline swaps	(1,693)	686	(1,007)
	–C5 natural gasoline collars	(1,343)	186	(1,157)
		$ (848,404)	$ 44,772	$ (803,632)

		December 31, 2021		
		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	$ 22,491	$ (18,111)	$ 4,380
	–collars	12,378	(8,600)	3,778
	–three-way collars	12,234	(8,449)	3,785
	–basis swaps	18,092	(10,487)	7,605
Crude oil	–swaps	368	(2,153)	(1,785)
NGLs	–C3 propane spread	4,153	(4,153)	—
	–C5 natural gasoline swaps	266	(363)	(97)
	–C5 natural gasoline collars	221	(221)	—
Freight	–swaps	114	(81)	33
Divestiture contingent consideration		26,640	—	26,640
		$ 96,957	$ (52,618)	$ 44,339

		December 31, 2021		
		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	$ (121,759)	$ 18,111	$ (103,648)
	–swaptions	(11,149)	—	(11,149)
	–collars	(16,579)	8,600	(7,979)
	–three-way collars	(37,166)	8,449	(28,717)
	–calls	(61)	—	(61)
	–basis swaps	(2,064)	10,487	8,423
Crude oil	–swaps	(27,252)	2,153	(25,099)
NGLs	–C3 propane spread	(4,030)	4,153	123
	–C5 natural gasoline swaps	(2,048)	363	(1,685)
	–C5 natural gasoline collars	(1,493)	221	(1,272)
Freight	–swaps	—	81	81
		$ (223,601)	$ 52,618	$ (170,983)

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

	Derivative Fair Value (Loss) Income			
	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Commodity swaps	$ (127,949)	$ (172,566)	$ (649,304)	$ (225,330)
Swaptions	19,868	(19,268)	(14,854)	(16,612)
Three-way collars	(27,506)	(53,705)	(207,432)	(52,832)
Collars	(83,252)	(38,934)	(315,545)	(52,222)
Calls	—	—	(1,363)	(775)
Basis swaps	(21,083)	17,368	1,432	19,523
Freight swaps	—	(38)	(33)	(704)
Divestiture contingent consideration	—	17,460	8,120	21,390
Total	$ (239,922)	$ (249,683)	$ (1,178,979)	$ (307,562)

(11) FAIR VALUE MEASUREMENTS

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

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

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

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

Significant uses of fair value measurements include:

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

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

Fair Values – Recurring

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 for assets and liabilities measured at fair value, on a recurring basis (in thousands):

		Fair Value Measurements at June 30, 2022 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, 2022
Trading securities held in the deferred compensation plans		$ 53,553	$ —	$ —	$ 53,553
Commodity price derivatives	–swaps	—	(447,287)	—	(447,287)
	–collars	—	(198,383)	(1,054)	(199,437)
	–three-way collars	—	(129,342)	—	(129,342)
	–basis swaps	—	2,529	—	2,529
	–swaptions	—	—	(26,003)	(26,003)
Divestiture contingent consideration		—	34,760	—	34,760

		Fair Value Measurements at December 31, 2021 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, 2021
Trading securities held in the deferred compensation plans		$ 69,606	$ —	$ —	$ 69,606
Commodity price derivatives	–swaps	—	(127,934)	—	(127,934)
	–calls	—	(61)	—	(61)
	–collars	—	(4,201)	(1,272)	(5,473)
	–three-way collars	—	(24,932)	—	(24,932)
	–basis swaps	—	16,151	—	16,151
	–swaptions	—	—	(11,149)	(11,149)
Derivatives	–freight swaps	—	114	—	114
Divesture contingent consideration		—	26,640	—	26,640

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, 2022, a portion of our natural gas and oil derivative instruments contain swaptions where the counterparty has the right, but not the obligation, to enter into a fixed price swap on a pre-determined date. If exercised, the swaption contract becomes a swap treated consistently with our fixed-price swaps. In addition to our swaptions in Level 3 at June 30, 2022, we have NGLs collars. Derivatives in Level 3 are also 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. However, the subjectivity in the volatility factors utilized can cause a significant change in the fair value measurement of our derivatives in Level 3 and is considered a significant unobservable input. At June 30, 2022, for our swaptions, we used a weighted average implied volatility of 44% for natural gas. We also utilized a range of implied volatilities from 48% to 55% for our NGLs collars with a weighted average implied volatility of 49%. 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, 2022
Balance at December 31, 2021	$	(12,420)
Total losses:		
Included in earnings		(18,262)
Additions		(1,054)
Settlements		1,272
Transfers out of Level 3		3,407
Balance at June 30, 2022	$	(27,057)

Divestiture Contingent Consideration. In August 2020, we completed the sale of our North Louisiana assets where we are entitled to receive contingent consideration based on future achievement of natural gas and oil prices based on published indexes along with NGLs prices based on the realized NGLs prices of the buyer. We used an option pricing model to estimate the fair value of the contingent consideration using significant Level 2 inputs that include quoted future commodity prices based on active markets.

Trading securities. 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 2022, interest and dividends were $175,000 and the mark-to-market adjustment was a loss of $9.6 million compared to interest and dividends of $118,000 and a mark-to-market gain of $2.3 million in second quarter 2021. For first six months 2022, interest and dividends were $291,000 and the mark-to-market adjustment was a loss of $14.0 million compared to interest and dividends of $227,000 and mark-to-market adjustment of a gain of $4.3 million in first six months 2021.

Fair Values – Reported

The following presents the carrying amounts and the fair values of our financial instruments as of June 30, 2022 and December 31, 2021 (in thousands):

	June 30, 2022		December 31, 2021	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Assets:				
Commodity swaps, collars and basis swaps	$ 4,092	$ 4,092	$ 17,699	$ 17,699
Divestiture contingent consideration	34,760	34,760	26,640	26,640
Marketable securities [(a)]	53,553	53,553	69,606	69,606
(Liabilities):				
Commodity swaps, collars and basis swaps	(803,632)	(803,632)	(170,983)	(170,983)
Bank credit facility [(b)]	(1,000)	(1,000)	—	—
5.00% senior notes due 2022 [(b)]	—	—	(169,589)	(171,488)
5.875% senior notes due 2022 [(b)]	—	—	(48,528)	(48,955)
5.00% senior notes due 2023 [(b)]	(532,335)	(528,369)	(532,335)	(543,471)
4.875% senior notes due 2025 [(b)]	(750,000)	(732,285)	(750,000)	(776,153)
9.25% senior notes due 2026 [(b)]	—	—	(850,000)	(916,929)
8.25% senior notes due 2029 [(b)]	(600,000)	(614,184)	(600,000)	(669,648)
4.75% senior notes due 2030 [(b)]	(500,000)	(449,310)	—	—
Deferred compensation plan [(c)]	(171,322)	(171,322)	(165,395)	(165,395)

(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 is based on end of period market quotes which are Level 2 inputs.

(c) The fair value of our deferred compensation plan is updated to 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, operating lease liabilities and the divestiture contract obligation that we incurred in conjunction with the sale of our North Louisiana assets.

Concentrations of Credit Risk

As of June 30, 2022, 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 assurances are obtained as deemed necessary to limit our risk of loss. Our allowance for uncollectable receivables was $564,000 at June 30, 2022 and $568,000 at December 31, 2021. 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, 2022, our derivative counterparties include fifteen financial institutions, of which all but five are secured lenders in our bank credit facility. At June 30, 2022, our net derivative liability includes a net receivable of $2.3 million from three of these counterparties that are not participants in our bank credit facility and an aggregate net payable of $4.9 million to two of these counterparties.

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

(12) 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 and our Amended and Restated 2019 Equity-Based Compensation Plan. 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,	
	2022	2021	2022	2021
Direct operating expense	$ 362	$ 340	$ 711	$ 667
Brokered natural gas and marketing expense	686	443	1,205	893
Exploration expense	318	362	770	748
General and administrative expense	10,270	9,382	21,843	18,787
Total stock-based compensation expense	$ 11,636	$ 10,527	$ 24,529	$ 21,095

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. In addition, 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 one year vesting for non-employee directors. In early 2021, vesting for new grants of restricted stock Liability Awards changed to a three-year cliff vesting from a ratable 30%-30%-40% vesting schedule. All restricted stock awards are issued at prevailing market prices at the time of the grant and the vesting is based upon an employee's continued employment with us. Prior to vesting, all restricted stock award recipients have the right to vote such stock and receive dividends thereon. Upon grant of these restricted shares, which we refer to as restricted stock Liability Awards, the majority of these shares are generally placed in our deferred compensation plan and, upon vesting, withdrawals are allowed in either cash or in stock. These Liability Awards are classified as a liability and are remeasured at fair value each reporting period. This mark-to-market amount is reported in deferred compensation plan expense in the accompanying consolidated statements of operations. Historically, we have used authorized but unissued shares of stock when restricted stock is granted. However, we can also utilize treasury shares.

Stock-Based Performance Units. We grant three types of performance share awards: two based on internal performance conditions which are measured against internal performance metrics and one based on market conditions measured based on Range's performance relative to a predetermined peer group (TSR Awards or TSR-PSUs). In first quarter 2021, our internal performance metrics were changed to focus on debt reduction and to include an environmental component. For shares granted in 2021, the performance conditions will be measured against internal metrics of Debt/EBITDAX (earnings before interest, taxes, depreciation, amortization and exploration expense) and emission intensity performance. For shares granted in first quarter 2022, the performance conditions will be measured against internal metrics of total net debt (total debt less cash on hand) and emission intensity performance.

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 range from zero to 200% based on performance achieved, which is determined by the Compensation Committee and (2) the value of our common stock on the vesting date. Dividend equivalents may accrue during the performance period and are paid in stock at the end of the performance period. The performance period is for three years. Prior to 2021, the performance period for the internal performance metrics was based on annual performance targets earned over a three-year period.

Restricted Stock – *Equity Awards*

In first six months 2022, we granted 1.4 million restricted stock Equity Awards to employees at an average grant date fair value of $18.50 which generally vest over a three-year period compared to 2.3 million at an average grant date fair value of $10.20 in first six months 2021. We recorded compensation expense for these outstanding awards of $10.9 million in first six months 2022 compared to $10.3 million in the same period of 2021. Restricted stock Equity Awards are not issued to employees until such time as they are vested. Employees do not have the option to receive cash.

Restricted Stock – *Liability Awards*

In first six months 2022, we granted 602,000 shares of restricted stock Liability Awards as compensation to employees at an average grant date fair value of $20.43 which generally vest at the end of a three-year period and 47,000 shares were granted to non-employee directors at an average price of $27.52 with vesting at the end of one year. In first six months 2021, we granted 1.2 million shares of restricted stock Liability Awards as compensation to employees at an average grant date fair value of $9.30 with vesting generally at the end of a three-year period and 97,000 shares were granted to non-employee directors at an average price of $11.99 with vesting at the end of one year. We recorded compensation expense for these Liability Awards of $6.9 million in first six months 2022 compared to $5.7 million in first six months 2021. 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, 2022:

	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, 2021	2,674,777	$ 7.39	796,629	$ 6.49
Granted	1,383,660	18.50	649,162	20.94
Vested	(1,178,541)	8.96	(557,134)	11.66
Forfeited	(52,813)	10.31	—	—
Outstanding at June 30, 2022	2,827,083	$ 12.12	888,657	$ 13.81

Stock-Based Performance Units

Internal Performance Metric Awards. These awards vest at the end of the three-year performance period. The performance metrics are set by the Compensation Committee. 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. See additional information above for shares granted in first six months 2021 and 2022. The following is a summary of our non-vested internal performance awards outstanding at June 30, 2022:

	Number of Units	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2021	1,095,355	$ 7.80
Units granted [(a)]	153,089	20.38
Vested and issued [(b)]	(243,482)	9.64
Forfeited	—	—
Outstanding at June 30, 2022	1,004,962	$ 9.27

(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. Units granted in first quarter 2022 were to our CEO, CFO and COO only.

(b) For the awards issued during 2019, the aggregate payout was approximately 116% of target with a positive performance adjustment of 158,793 shares.

We recorded compensation expense for these awards of $3.5 million in first six months 2022 compared to expense of $1.8 million in first six months 2021.

TSR Awards. TSR-PSUs granted are earned, or not earned, based on the comparative performance of Range's common stock measured against a predetermined group of companies in the peer group over a three-year performance period. The fair value of the TSR-PSUs is estimated on the date of grant using a Monte Carlo simulation model which utilizes multiple input variables that determine the probability of satisfying the market condition stipulated in the award grant and calculates the fair value of the award. The fair value is recognized as stock-based compensation expense over the three-year performance period. Expected volatilities utilized in the model were estimated using a combination of a historical period consistent with the remaining performance period of three years and option implied volatilities. The risk-free interest rate was based on the United States Treasury rate for a term commensurate with the life of the grant. The following assumptions were used to estimate the fair value of TSR-PSUs granted during first six months 2022 and 2021:

	Six Months Ended June 30, 2022	Six Months Ended June 30, 2021
Risk-free interest rate	1.4%	0.2%
Expected annual volatility	68%	75%
Grant date fair value per unit	$ 27.90	$ 12.58

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, 2021	1,147,994	$ 7.60
Units granted [(a)]	111,828	27.90
Vested and issued [(b)]	(314,152)	11.34
Forfeited	—	—
Outstanding at June 30, 2022	945,670	$ 8.76

(a) These amounts reflect the number of performance units granted. The actual payout of shares may be between zero and 200% of the performance units granted depending on the total shareholder return ranking compared to our peer companies at the vesting date.

(b) Includes TSR-PSUs awards granted in 2019 where the return on our common stock was 127% and therefore, the performance multiple and actual payout was 183%.

We recorded TSR-PSUs compensation expense of $1.5 million in first six months 2022 compared to $1.2 million in the same period of 2021. Fair value is amortized over the performance period with no adjustment to the expense recorded for actual targets achieved.

Other Post Retirement Benefits

Effective fourth quarter 2017, as part of our officer succession plan, we implemented a post retirement benefit plan to assist in providing health care to officers who are active employees (including their spouses) and have met certain age and service requirements. These benefits are not funded in advance and are provided up to age 65 or at the date they become eligible for Medicare, subject to various cost-sharing features. There was approximately $70,000 of estimated prior service costs amortized from accumulated other comprehensive income into general and administrative expense in second quarter 2022 compared to approximately $90,000 in second quarter 2021. There was approximately $145,000 of estimated prior service costs amortized from accumulated other comprehensive income into general and administrative expense in first six months 2022 compared to approximately $185,000 in the same period of 2021. Those employees that qualify for this retirement health care plan are required to provide reasonable notice of retirement and provide one year of service after an equity grant date to be fully vested in the grant.

Deferred Compensation Plan

Our deferred compensation plan gives non-employee directors and officers the ability to defer all or a portion of their salaries, bonuses or director fees and invest in Range common stock or make other investments at the individual's discretion. Range provides a partial matching contribution to officers which vests over three years. In early 2021, vesting for the matching contribution was changed to a three-year cliff vesting schedule. The assets of the plan are held in a grantor trust, which we refer to as the Rabbi Trust, and are therefore available to satisfy the claims of our general creditors in the event of bankruptcy or insolvency. Our stock held in the Rabbi Trust is treated as a liability award as employees are allowed to take withdrawals from the Rabbi Trust either in cash or in Range stock. The liability for the vested portion of the stock held in the Rabbi Trust is reflected as deferred compensation liability in the accompanying consolidated balance sheets and is adjusted to fair value each reporting period by a charge or credit to deferred compensation plan expense on our consolidated statements of operations. The assets of the Rabbi Trust, other than our common stock, are invested in marketable securities and reported at their market value as other assets in the accompanying consolidated balance sheets. The deferred compensation liability reflects the vested market value of the marketable securities and Range stock held in the Rabbi Trust. Changes in the market value of the marketable securities and changes in the fair value of the deferred compensation plan liability are charged or credited to deferred compensation plan expense each quarter. We recorded a mark-to-market gain of $19.2 million in second quarter 2022 compared to a mark-to-market loss of $35.5 million in second quarter 2021. We recorded mark-to-market loss of $54.1 million in first six months 2022 compared to mark-to-market loss of $55.3 million in first six months 2021. The Rabbi Trust held 5.7 million shares (4.8 million of which were vested) of Range stock at June 30, 2022 compared to 6.2 million shares (5.4 million of which were vested) at December 31, 2021.

(13) EXIT AND TERMINATION COSTS

Exit Costs

In August 2020, we sold our North Louisiana assets and retained certain gathering, transportation and processing obligations which extend into 2030. These are contracts where we will not realize any future benefit. The estimated obligations are included in current and long-term divestiture contract obligation in our consolidated balance sheets. In first six months 2022, we recorded accretion expense of $22.1 million compared to $25.0 million in the same period of the prior year. In second quarter 2022, we recorded a net adjustment of $24.8 million to increase this obligation for a change in our forecasted drilling plans of the buyer along with adjusting the difference between estimated and actual payments. In second quarter 2021, we recorded a net favorable adjustment of $28.2 million to reduce this obligation due to a reduction of certain contractual payments compared to those originally estimated along with a change in our forecasted drilling plans of the buyer. The estimated discounted divestiture contract obligation was $414.2 million at June 30, 2022.

In second quarter 2020, we negotiated capacity releases on certain transportation pipelines in Pennsylvania effective May 31, 2020 and extending through the remainder of the contract. The estimated remaining discounted obligation for these transportation capacity releases as of June 30, 2022 was $6.2 million.

Termination Costs

The following summarizes our exit and termination costs for the three and six months ended June 30, 2022 and 2021 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Severance costs	$ —	$ —	$ —	$ 509
Transportation contract capacity releases (including accretion of discount)	162	184	323	394
Divestiture contract obligation (including accretion of discount)	35,907	(16,130)	46,861	(3,135)
	$ 36,069	$ (15,946)	$ 47,184	$ (2,232)

The following details the accrued exit and termination cost liability activity for the six months ended June 30, 2022 (in thousands):

	Exit Costs [(1)]	Termination Costs
Balance at December 31, 2021	$ 423,742	$ 10
Accretion of discount	22,408	—
Changes in estimate	24,776	—
Payments	(50,525)	(10)
Balance at June 30, 2022	$ 420,401	$ —

(1) Includes the divestiture contract obligation and the transportation contract capacity release obligation.

(14) 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 2021:

	Six months Ended June 30, 2022	Year Ended December 31, 2021
Beginning balance	249,792,908	246,348,092
Restricted stock grants	670,151	1,293,892
Restricted stock units vested	1,827,625	1,493,341
Performance stock units issued	590,940	640,468
Performance stock dividends	1,843	13,966
Treasury shares	(4,598,889)	3,149
Ending balance	248,284,578	249,792,908

Stock Repurchase Program

In 2019, the board of directors approved a stock purchase program to acquire up to $100.0 million of our outstanding stock. In early 2022, our board authorized an additional repurchase of up to $430.0 million of our outstanding common stock for an aggregate available amount at that time of $500.0 million. Under this program, we may repurchase shares in open market transactions, from time to time, in accordance with applicable SEC rules and federal securities laws. In first six months 2022, we repurchased 5,100,000 shares at an aggregate cost of $146.0 million, including repurchases of $13.1 million (500,000 shares) that were purchased in June 2022 and settled in July 2022. The following is a schedule of the change in treasury shares for the three and six months ended June 30, 2022:

	Three Months Ended June 30, 2022	Six Months Ended June 30, 2022
Beginning balance	10,601,535	10,002,646
Rabbi trust shares distributed/sold	—	(1,111)
Shares repurchased	4,500,000	5,100,000
Ending balance	15,101,535	15,101,535

(15) SUPPLEMENTAL CASH FLOW INFORMATION

	Six Months Ended June 30, 2022	Six Months Ended June 30, 2021
	(in thousands)	
Net cash provided from operating activities included:		
Income taxes paid to taxing authorities	$ (12,467)	$ —
Interest paid	(111,733)	(87,337)
Non-cash investing and financing activities included:		
Increase in asset retirement costs capitalized	2,965	2,098
(Increase) decrease in accrued capital expenditures	(10,740)	3,185

(16) COMMITMENTS AND CONTINGENCIES

Litigation

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

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

We have incurred and will continue to incur capital, operating and remediation expenditures as a result of environmental laws and regulations. As of June 30, 2022, liabilities for remediation were not material. We are not aware of any environmental claims existing as of June 30, 2022 that have not been provided for or would otherwise have a material impact on our financial position or results of operations. Environmental liabilities normally involve estimates that are subject to revision until final resolution, settlement or remediation occurs.

On March 4, 2021 a putative class action lawsuit was filed in the Western District of Pennsylvania in Case No. 2:21-CV-301 (Jacobowitz v. Range Resources Corporation et al.) in which the plaintiff sought to represent a class of Range stockholders who purchased or acquired stock from April 29, 2016 to February 10, 2021. This lawsuit was transferred to the U.S. District Court for the Northern District of Texas (Fort Worth Division) and claimed that Range misclassified certain wells as inactive rather than having plugged the wells and that such alleged misclassification affected the determination of our asset retirement obligation accrual. On March 31, 2022, the court granted our motion to dismiss and each claim was dismissed with prejudice and no further appeal was filed. Additionally, on January 20, 2022, a derivative action styled as Lewis v. Ventura et al. was filed under seal in the Northern District of Texas (Case No. 4-22CV-051-0) asserting similar allegations as those alleged in the Jacobowitz matter. On May 13, 2022, a notice of voluntary dismissal of that lawsuit was filed with the court by the plaintiff.

Transportation, Gathering and Processing Contracts

During second quarter 2022, we entered into an extension of certain long-term gathering agreements that is contingent on the completion of certain construction by the gathering company which is expected to be completed in 2024. Our commitments would increase by a total of approximately $800.0 million upon completion of the construction.

(17) COSTS INCURRED FOR PROPERTY ACQUISITION, EXPLORATION AND DEVELOPMENT [(a)]

	Six Months Ended June 30, 2022	Year Ended December 31, 2021
	(in thousands)	
Acquisitions:		
Acreage purchases	$ 15,540	$ 21,942
Development	227,368	381,753
Exploration:		
Drilling	—	6,329
Expense	11,435	22,048
Stock-based compensation expense	770	1,507
Gas gathering facilities:		
Development	211	3,402
Subtotal	255,324	436,981
Asset retirement obligations	2,965	18,634
Total costs incurred	$ 258,289	$ 455,615

(a) Includes costs incurred whether capitalized or expensed.

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 primarily engaged in the exploration, development and acquisition of natural gas properties in the Appalachian region of the United States. We operate in one segment and have a single company-wide management team that administers all properties as a whole rather than by discrete operating segments. We 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 of natural gas properties. Our strategy to achieve our business objective is to generate consistent cash flows from reserves and production through internally generated drilling projects occasionally coupled with complementary acquisitions and divestitures of non-core or, at times, core assets. In addition, we target funding our capital spending to at or below operating cash flow. Our revenues, profitability and future growth depend substantially on prevailing prices for natural gas, NGLs and oil and on our ability to economically find, develop, acquire, produce and market these reserves. Commodity prices have been and are expected to remain volatile. Our primary near-term focus includes the following:

- operate safely and efficiently;
- target capital spending at or below operating cash flow;
- achieve competitive returns on investments;
- reduce emissions and target net-zero Scope 1 and Scope 2 greenhouse gas emissions by year-end 2025;
- manage liquidity and further improve financial strength;
- focus on organic opportunities through disciplined capital investments;
- improve operational efficiencies and economic returns;
- attract and retain quality employees; and
- align employee incentives with our stockholders' interests and key business objectives.

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

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

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

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

Market Conditions

Prices for natural gas, NGLs and oil that we produce significantly impact our revenues and cash flows. Natural gas, NGLs and oil benchmarks increased in second quarter 2022 when compared to the same period of 2021 and also increased in first six months 2022 when compared to the same period of 2021. As a result, we experienced a significant increase in price realizations. As we continue to monitor the impact of the actions of OPEC and other large producing nations, the Russia-Ukraine conflict, global inventories of oil and gas and the uncertainty associated with recovering oil demand, future monetary policy and governmental policies aimed at transitioning towards lower carbon energy, we expect prices for some or all of the commodities we produce to remain volatile. NYMEX natural gas futures have shown strong improvements based on market expectations that associated gas-related activity in oil basins and dry gas basin activity will show modest rates of growth compared with the past due to infrastructure constraints, capital discipline and core inventory exhaustion. In addition, the global energy crisis further highlighted the low cost and low emissions shale gas resource base in North America, supporting continued strong structural demand growth for U.S. LNG exports, domestic industrial gas demand and power generation. Other factors such as the pace and extent of tightening global monetary policy and the effectiveness of responses to combat the COVID-19 virus may impact the recovery of world economic growth and the demand for oil, natural gas and NGLs. In addition, in response to continued supply chain disruptions attributable to the virus, the Russia-Ukraine conflict and global monetary policies over the last few years, cost inflation is occurring. Specifically, our 2022 capital program is primarily being impacted by inflation in steel, diesel and labor.

The following table lists related benchmarks for natural gas, oil and NGLs composite prices for the three and six months ended June 30, 2022 and 2021:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Benchmarks:				
Average NYMEX prices [(a)]				
Natural gas (per mcf)	$ 7.18	$ 2.84	$ 6.04	$ 2.76
Oil (per bbl)	108.40	65.96	101.60	62.06
Mont Belvieu NGLs composite (per gallon) [(b)]	1.04	0.63	1.01	0.62

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

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

Consolidated Results of Operations

Overview of Second Quarter 2022 Results

During second quarter 2022, we recognized net income of $452.9 million, or $1.77 per diluted common share compared to a loss of $156.5 million, or $0.65 per diluted common share during second quarter 2021. The higher net income in second quarter 2022 compared to second quarter 2021 reflects the impact of significantly higher commodity prices on both natural gas, NGLs and oil sales and our reported derivative fair value loss. See page 31 for more information on our derivative fair value loss.

For second quarter 2022, we experienced a significant increase in revenue from the sale of natural gas, NGLs and oil due to a 111% increase in net realized prices (average prices including all derivative settlements and third-party transportation costs paid by us) partially offset by slightly lower production volumes when compared to the same quarter of 2021. Daily production averaged 2.1 Bcfe in both the second quarter 2022 and 2021.

Our second quarter 2022 financial and operating performance included the following results:

- reduced total debt by $217.1 million utilizing cash on hand and operating cash flows;
- cash flow from operating activities increased $150.5 million from second quarter 2021;
- revenue from the sale of natural gas, NGLs and oil increased 118% from the same period of 2021 with a 121% increase in average realized prices (before cash settlements on our derivatives) partially offset by slightly lower production volumes;
- revenue from the sale of natural gas, NGLs and oil (including cash settlements on our derivatives) increased 63% from the same period of 2021;
- direct operating expense per mcfe was $0.11 in second quarter 2022 compared to $0.10 in the same period of 2021 due to higher contract labor and service costs partially offset by lower workover costs;
- general and administrative expense per mcfe increased 10% from same quarter 2021 primarily due to higher salaries and benefits, higher stock-based compensation and higher general office expenses including technology costs; and
- reduced depletion, depreciation and amortization ("DD&A") rate per mcfe by 2% from the same period of 2021.

Our cash flow from operating activities in second quarter 2022 was $324.7 million, an increase of $150.5 million from second quarter 2021 with significantly higher realized prices when compared to second quarter 2021 partially offset by slightly lower production volumes and the impact of negative working capital due to higher commodity prices.

Overview of First Six Months 2022 Results

During first six months 2022, we recognized a net loss of $4.0 million, or $0.02 per diluted common share compared to a net loss of $129.3 million, or $0.53 per diluted common share during first six months 2021. The improvement in our net loss for first six months 2022 compared to 2021 reflects the impact of significantly higher commodity prices on both natural gas, NGLs and oil sales and our reported derivative fair value loss. Given the significant increase in commodity prices, our derivative fair value loss, which includes the non-cash fair value adjustment related to our derivatives, was $1.2 billion in the first six months 2022 compared to $307.6 million in the first six months of the prior year. For additional information on our derivative fair value loss, see page 31.

For first six months 2022, we experienced an increase in revenue from the sale of natural gas, NGLs and oil due to a 110% increase in net realized prices (average prices including all derivative settlements and third-party transportation costs paid by us) somewhat offset by slightly lower production volumes, a loss on extinguishment of debt and higher exit costs when compared to the same period of 2021. Daily production averaged 2.1 Bcfe in both the first six months 2022 and 2021.

Our first six months 2022 financial and operating performance included the following results:

- reduced total debt by $567.1 million with cash on hand and operating cash flows;
- realized a significant improvement in our debt metrics from year-end 2021;
- reduced future interest expense through debt reduction combined with refinancing a portion of 9.25% senior notes due 2026 with 4.75% senior notes due 2030;
- cash flow from operating activities increased $447.7 million from first six months 2021;
- revenue from the sale of natural gas, NGLs and oil increased 95% from the same period of 2021 with a 97% increase in average realized prices (before cash settlements on our derivatives) partially offset by slightly lower production volumes;
- revenue from the sale of natural gas, NGLs and oil (including cash settlements on our derivatives) increased 61% from the same period of 2021;
- direct operating expense per mcfe was $0.11 in first six months 2022 compared to $0.10 in the same period of 2021 due to higher contract labor and higher service and water handling hauling costs partially offset by lower workover costs;
- general and administrative expense per mcfe for the first six months 2022 increased 10% from same period of 2021 primarily due to higher stock-based compensation, higher salaries and benefits and higher general office expenses including technology cost; and
- reduced DD&A rate per mcfe by 2% from the same period of 2021.

Our cash flow from operating activities in first six months 2022 was $731.1 million, an increase of $447.7 million from same period of 2021 with significantly higher realized prices when compared to same period of 2021 partially offset by slightly lower production volumes and higher negative working capital.

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 2022, natural gas, NGLs and oil sales increased 118% compared to second quarter 2021 with a 121% increase in average realized prices (before cash settlements on our derivatives) partially offset by a 1% reduction in production volumes. In first six months 2022, natural gas, NGLs and oil sales increased 95% compared to first six months 2021 with a 97% increase in average realized prices partially offset by a 1% reduction in production volumes. The following table illustrates the primary components of natural gas, NGLs and oil sales for the three and six months ended June 30, 2022 and 2021 (in thousands):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2022	2021	Change	%	2022	2021	Change	%
Natural gas, NGLs and oil sales								
Natural gas	$ 909,754	$ 321,565	$ 588,189	183 %	$ 1,539,677	$ 657,366	$ 882,311	134 %
NGLs	374,699	255,533	119,166	47 %	713,068	485,941	227,127	47 %
Oil	72,439	44,757	27,682	62 %	136,498	81,895	54,603	67 %
Total natural gas, NGLs and oil sales	$ 1,356,892	$ 621,855	$ 735,037	118 %	$ 2,389,243	$ 1,225,202	$ 1,164,041	95 %

Our production is determined by drilling success which offsets the natural decline of our natural gas and oil reserves through production. Our production for the three and six months ended June 30, 2022 and 2021 is set forth in the following table:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2022	2021	Change	%	2022	2021	Change	%
Production [(a)]								
Natural gas (mcf)	131,721,014	131,886,931	(165,917)	—%	262,971,351	262,215,672	755,679	—%
NGLs (bbls)	8,784,851	9,153,411	(368,560)	(4)%	17,238,296	17,896,355	(658,059)	(4)%
Crude oil (bbls)	716,168	777,067	(60,899)	(8)%	1,446,630	1,535,058	(88,428)	(6)%
Total (mcfe) [(b)]	188,727,128	191,469,799	(2,742,671)	(1)%	375,080,907	378,804,150	(3,723,243)	(1)%
Average daily production [(a)]								
Natural gas (mcf)	1,447,484	1,449,307	(1,823)	—%	1,452,880	1,448,705	4,175	—%
NGLs (bbls)	96,537	100,587	(4,050)	(4)%	95,239	98,875	(3,636)	(4)%
Crude oil (bbls)	7,870	8,539	(669)	(8)%	7,992	8,481	(489)	(6)%
Total (mcfe) [(b)]	2,073,924	2,104,064	(30,140)	(1)%	2,072,270	2,092,841	(20,571)	(1)%

(a) Represents volumes sold regardless of when produced.

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

Our average realized price received (including all derivative settlements and third-party transportation costs) during second quarter 2022 was $3.29 per mcfe compared to $1.56 per mcfe in second quarter 2021. Our average realized price received (including all derivative settlements and third party transportation costs) during first six months 2022 was $3.26 per mcfe compared to $1.55 per mcfe in first six months 2021. We believe computed final realized prices should include the total impact of transportation, gathering, processing and compression expense. Our average realized price (including all derivative settlements and third-party transportation costs) calculation also includes all cash settlements for derivatives. Average realized prices (excluding derivative settlements) do not include derivative settlements or third-party transportation costs which are reported in transportation, gathering, processing and compression expense in the accompanying consolidated statements of operations. Average realized prices (excluding derivative settlements) do include transportation costs where we receive net revenue proceeds from purchasers. Average realized price calculations for three and six months ended June 30, 2022 and 2021 are shown below:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2022	2021	Change	%	2022	2021	Change	%
Average Prices								
Average realized prices (excluding derivative settlements):								
Natural gas (per mcf)	$ 6.91	$ 2.44	$ 4.47	183%	$ 5.85	$ 2.51	$ 3.34	133%
NGLs (per bbl)	42.65	27.92	14.73	53%	41.37	27.15	14.22	52%
Crude oil and condensate (per bbl)	101.15	57.60	43.55	76%	94.36	53.35	41.01	77%
Total (per mcfe) [(a)]	7.19	3.25	3.94	121%	6.37	3.23	3.14	97%
Average realized prices (including all derivative settlements):								
Natural gas (per mcf)	$ 4.12	$ 2.38	$ 1.74	73%	$ 4.08	$ 2.47	$ 1.61	65%
NGLs (per bbl)	41.46	25.64	15.82	62%	40.04	24.26	15.78	65%
Crude oil and condensate (per bbl)	59.46	42.20	17.26	41%	58.95	40.91	18.04	44%
Total (per mcfe) [(a)]	5.03	3.04	1.99	65%	4.93	3.02	1.91	63%
Average realized prices (including all derivative settlements and third-party transportation costs paid by Range):								
Natural gas (per mcf)	$ 2.78	$ 1.18	$ 1.60	136%	$ 2.80	$ 1.25	$ 1.55	124%
NGLs (per bbl)	24.25	12.12	12.13	100%	23.31	11.05	12.26	111%
Crude oil and condensate (per bbl)	59.46	41.63	17.83	43%	58.94	40.62	18.32	45%
Total (per mcfe) [(a)]	3.29	1.56	1.73	111%	3.26	1.55	1.71	110%

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Average natural gas differentials below NYMEX	$ (0.27)	$ (0.39)	$ (0.19)	$ (0.25)
Realized (losses) gains on basis hedging	$ (0.01)	$ 0.01	$ 0.06	$ (0.01)

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,			
	2021	Price Variance	Volume Variance	2022	2021	Price Variance	Volume Variance	2022
Natural gas								
Price (per mcf)	$ 2.44	$ 4.47	$ —	$ 6.91	$ 2.51	$ 3.34	$ —	$ 5.85
Production (Mmcf)	131,887	—	(166)	131,721	262,216	—	755	262,971
Natural gas sales	$ 321,565	$ 588,593	$ (404)	$ 909,754	$ 657,366	$ 880,417	$ 1,894	$ 1,539,677

	Three Months Ended June 30,				Six Months Ended June 30,			
	2021	Price Variance	Volume Variance	2022	2021	Price Variance	Volume Variance	2022
NGLs								
Price (per bbl)	$ 27.92	$ 14.73	$ —	$ 42.65	$ 27.15	$ 14.22	$ —	$ 41.37
Production (Mbbls)	9,153	—	(368)	8,785	17,896	—	(658)	17,238
NGLs sales	$ 255,533	$ 129,455	$ (10,289)	$ 374,699	$ 485,941	$ 244,995	$ (17,868)	$ 713,068

	Three Months Ended June 30,				Six Months Ended June 30,			
	2021	Price Variance	Volume Variance	2022	2021	Price Variance	Volume Variance	2022
Crude oil								
Price (per bbl)	$ 57.60	$ 43.55	$ —	$ 101.15	$ 53.35	$ 41.01	$ —	$ 94.36
Production (Mbbls)	777	—	(61)	716	1,535	—	(88)	1,447
Crude oil sales	$ 44,757	$ 31,190	$ (3,508)	$ 72,439	$ 81,895	$ 59,321	$ (4,718)	$ 136,498

	Three Months Ended June 30,				Six Months Ended June 30,			
	2021	Price Variance	Volume Variance	2022	2021	Price Variance	Volume Variance	2022
Consolidated								
Price (per mcfe)	$ 3.25	$ 3.94	$ —	$ 7.19	$ 3.23	$ 3.14	$ —	$ 6.37
Production (Mmcfe)	191,470	—	(2,743)	188,727	378,804	—	(3,723)	375,081
Total natural gas, NGLs and oil sales	$ 621,855	$ 743,945	$ (8,908)	$ 1,356,892	$ 1,225,202	$ 1,176,084	$ (12,042)	$ 2,389,243

Transportation, gathering, processing and compression expense was $327.9 million in second quarter 2022 compared to $282.8 million in second quarter 2021. These third-party costs are higher in second quarter 2022 when compared to second quarter 2021 due to the impact of higher NGLs prices which results in higher processing costs, higher electricity and fuel costs. In addition, second quarter 2022 includes a one-time adjustment of $7.5 million that reflects a one-time settlement regarding transportation, gathering and processing charges.

Transportation, gathering, processing and compression expense was $625.7 million in first six months 2022 compared to $557.2 million in the same period of the prior year. These third-party costs are higher in first six months 2022 when compared to the same period of 2021 due to the impact of higher NGLs prices which results in higher processing costs and higher electricity and fuel costs. We have included these costs in the calculation of average realized prices (including all derivative settlements and third-party transportation expenses paid by Range). The following table summarizes transportation, gathering, processing and compression expense for the three and six months ended June 30, 2022 and 2021 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,			
	2022	2021	Change	%	2022	2021	Change	%
Transportation, gathering, processing and compression								
Natural gas	$ 176,788	$ 158,637	$ 18,151	11 %	$ 337,224	$ 320,297	$ 16,927	5 %
NGLs	151,119	123,758	27,361	22 %	288,459	236,428	52,031	22 %
Oil	—	449	(449)	(100)%	11	449	(438)	(98)%
Total	$ 327,907	$ 282,844	$ 45,063	16 %	$ 625,694	$ 557,174	$ 68,520	12 %
Natural gas (per mcf)	$ 1.34	$ 1.20	$ 0.14	12 %	$ 1.28	$ 1.22	$ 0.06	5 %
NGLs (per bbl)	$ 17.20	$ 13.52	$ 3.68	27 %	$ 16.73	$ 13.21	$ 3.52	27 %
Oil (per bbl)	$ —	$ 0.58	$ (0.58)	(100)%	$ 0.01	$ 0.29	$ (0.28)	(97)%

Derivative fair value loss was $239.9 million in second quarter 2022 compared to a loss of $249.7 million in second quarter 2021. Derivative fair value loss was $1.2 billion in first six months 2022 compared to a loss of $307.6 million in the same period of the prior year. 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 three and six months ended June 30, 2022 and 2021 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Derivative fair value loss per consolidated statements of operations	$ (239,922)	$ (249,683)	$ (1,178,979)	$ (307,562)
Non-cash fair value gain (loss): [(1)]				
Natural gas derivatives	$ 139,249	$ (199,825)	$ (603,004)	$ (211,945)
Oil derivatives	9,434	(21,494)	(43,951)	(29,563)
NGLs derivatives	19,105	(5,422)	815	(6,669)
Freight derivatives	—	(89)	(114)	(1,067)
Divestiture contingent consideration	—	17,460	8,120	21,390
Total non-cash fair value gain (loss) [(1)]	$ 167,788	$ (209,370)	$ (638,134)	$ (227,854)
Net cash payment on derivative settlements:				
Natural gas derivatives	$ (367,347)	$ (7,514)	$ (466,805)	$ (8,862)
Oil derivatives	(29,858)	(11,961)	(51,217)	(19,089)
NGLs derivatives	(10,505)	(20,838)	(22,823)	(51,757)
Total net cash payment	$ (407,710)	$ (40,313)	$ (540,845)	$ (79,708)

(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. This also includes the change in fair value of our divestiture contingent consideration.

Brokered natural gas, marketing and other revenue in second quarter 2022 was $108.2 million compared to $62.6 million in second quarter 2021 which is the result of significantly higher broker sales prices somewhat offset by lower broker sales volumes (volumes not related to our production). Brokered natural gas, marketing and other revenue was $195.6 million in first six months 2022 compared to $143.1 million in first six months 2021 which is the result of significantly higher broker sales prices somewhat offset by lower broker sales volumes. First six months 2021 also includes $8.8 million received as part of a capacity release agreement. We continue to optimize our transportation portfolio using these volumes. See also *Brokered natural gas and marketing* expense below for more information on our net brokered margin.

Operating Costs per Mcfe

We believe some of our expense fluctuations are best analyzed on a unit-of-production or per mcfe basis. The following table presents information about certain of our expenses on a per mcfe basis for the three and six months ended June 30, 2022 and 2021:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2022	2021	Change	%	2022	2021	Change	%
Direct operating expense	$ 0.11	$ 0.10	$ 0.01	10 %	$ 0.11	$ 0.10	$ 0.01	10 %
Production and ad valorem tax expense	0.04	0.04	—	— %	0.04	0.03	0.01	33 %
General and administrative expense	0.23	0.21	0.02	10 %	0.23	0.21	0.02	10 %
Interest expense	0.22	0.30	(0.08)	(27)%	0.24	0.30	(0.06)	(20)%
Depletion, depreciation and amortization expense	0.46	0.47	(0.01)	(2)%	0.46	0.47	(0.01)	(2)%

Direct operating expense was $20.1 million in second quarter 2022 compared to $19.8 million in second quarter 2021. 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 increased in second quarter 2022 primarily due to higher contract labor and services partially offset by lower workover costs. Our costs for services, labor and supplies have recently increased due to increased demand for those items, supply chain disruptions and inflation. Our production volumes decreased 1% in second quarter 2022 compared to the same period of the prior year. We incurred $203,000 of workover costs in second quarter 2022 compared to $1.7 million in second quarter 2021. On a per mcfe basis, direct operating expense was $0.11 in second quarter 2022 compared to $0.10 in the same quarter of the prior year due to higher contract labor and services somewhat offset by lower workover costs.

Direct operating expense was $40.3 million in first six months 2022 compared to $37.4 million in the same period of the prior year due to higher contract labor and higher services and water handling/hauling costs somewhat offset by lower workover costs. Our production volumes decreased 1% in first six months 2022 compared to the same period of the prior year. We incurred $1.1 million of workover costs in first six months 2022 compared to $2.4 million in first six months 2021. On a per mcfe basis, direct operating costs increased 10%, from $0.10 to $0.11 with the increase due to higher water handling/handling costs and higher contract labor and services somewhat offset by lower workover costs. The following table summarizes direct operating expense per mcfe for the three and six months ended June 30, 2022 and 2021:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2022	2021	Change	%	2022	2021	Change	%
Direct operating								
Lease operating expense	$ 0.11	$ 0.09	$ 0.02	22 %	$ 0.11	$ 0.09	$ 0.02	22 %
Workovers	—	0.01	(0.01)	(100)%	—	0.01	(0.01)	(100)%
Stock-based compensation	—	—	—	— %	—	—	—	— %
Total direct operating expense	$ 0.11	$ 0.10	$ 0.01	10 %	$ 0.11	$ 0.10	$ 0.01	10 %

Production and ad valorem taxes are paid based on market prices rather than hedged prices. This expense category is predominately comprised of the Pennsylvania impact fee. In February 2012, the Commonwealth of Pennsylvania enacted an “impact fee” which functions as a tax on unconventional natural gas and oil production from the Marcellus Shale in Pennsylvania. This impact fee was $7.5 million in second quarter 2022 compared to $8.4 million in second quarter 2021. The impact fee is based on drilling activities and is adjusted based on prevailing natural gas prices. Production and ad valorem taxes includes an impact fee of $14.1 million in first six months 2022 compared to $13.0 million in the first six months 2021 due to higher natural gas prices. The following table summarizes production and ad valorem taxes per mcfe for the three and six months ended June 30, 2022 and 2021:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2022	2021	Change	%	2022	2021	Change	%
Production and ad valorem taxes								
Impact fee	$ 0.04	$ 0.04	$ —	—%	$ 0.04	$ 0.03	$ 0.01	33%
Production and ad valorem taxes	—	—	—	—%	—	—	—	—%
Total production and ad valorem taxes	$ 0.04	$ 0.04	$ —	—%	$ 0.04	$ 0.03	$ 0.01	33%

General and administrative (G&A) expense was $43.5 million in second quarter 2022 compared to $40.2 million in second quarter 2021. The second quarter 2022 increase of $3.3 million when compared to the same period of 2021 is primarily due to higher stock-based compensation expense of $888,000, higher general office expenses including technology costs and higher salaries and benefits somewhat offset by lower legal expenses. On a per mcfe basis, second quarter 2022 G&A expense was 10% higher than second quarter 2021 primarily due to higher general office expenses and higher salaries and benefits.

G&A expense for first six months 2022 increased $8.3 million when compared to the same period 2021 due to higher stock-based compensation of $3.1 million, higher salaries and benefits of $2.0 million and higher general office expenses including technology costs partially offset by lower legal expenses. On a per mcfe basis, first six months 2022 G&A expense increased 10% from first six months 2021 due to higher stock-based compensation, higher salaries and benefits and higher general office expenses. The following table summarizes G&A expenses on a per mcfe basis for the three and six months ended June 30, 2022 and 2021:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2022	2021	Change	%	2022	2021	Change	%
General and administrative								
General and administrative	$ 0.18	$ 0.16	$ 0.02	12%	$ 0.17	$ 0.16	$ 0.01	6%
Stock-based compensation	0.05	0.05	—	—%	0.06	0.05	0.01	20%
Total general and administrative expense	$ 0.23	$ 0.21	$ 0.02	10%	$ 0.23	$ 0.21	$ 0.02	10%

Interest expense was $42.0 million in second quarter 2022 compared to $57.3 million in second quarter 2021. Interest expense was $89.2 million for first six months 2022 compared to $114.2 million for first six months 2021. The following table presents information about interest expense per mcfe for the three and six months ended June 30, 2022 and 2021:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2022	2021	Change	%	2022	2021	Change	%
Bank credit facility	$ 0.02	$ 0.02	$ —	—%	$ 0.02	$ 0.02	$ —	—%
Senior notes	0.19	0.27	(0.08)	(30)%	0.21	0.27	(0.06)	(22)%
Amortization of deferred financing costs and other	0.01	0.01	—	—%	0.01	0.01	—	—%
Total interest expense	$ 0.22	$ 0.30	$ (0.08)	(27)%	$ 0.24	$ 0.30	$ (0.06)	(20)%
Average debt outstanding ($000's)	$ 2,556,185	$ 3,146,680	$ (590,495)	(19)%	$ 2,669,295	$ 3,167,858	$ (498,603)	(16)%
Average interest rate [(a)]	6.1%	7.0%	(0.9)%	(13)%	6.3%	6.9%	(0.6)%	(9)%

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

On an absolute basis, the decrease in interest expense for second quarter 2022 from the same period of 2021 was primarily due to lower overall average interest rates and lower overall average outstanding debt balances. Average debt outstanding on the bank credit facility for second quarter 2022 was $90.0 million compared to $195.5 million in second quarter 2021 and the weighted average interest rate on the bank credit facility was 4.1% in second quarter 2022 compared to 2.0% in second quarter 2021.

On an absolute basis, the decrease in interest expense for first six months 2022 from the same period 2021 was primarily due to lower overall average interest rates and lower outstanding debt balances. Average debt outstanding on the bank credit facility was $77.6 million for first six months 2022 compared to $208.0 million for first six months 2021 and the weighted average interest rates on the bank credit facility was 3.4% in first six months 2022 compared to 2.1% in first six months 2021.

Depletion, depreciation and amortization expense was $86.5 million in second quarter 2022 compared to $90.6 million in second quarter 2021. This decrease is due to a 2% decrease in depletion rates and a 1% decrease in production volumes. Depletion expense, the largest component of DD&A expense, was $0.45 per mcfe in second quarter 2022 compared to $0.46 per mcfe in second quarter 2021. 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.

DD&A expense was $172.1 million in first six months 2022 compared to $179.0 million in the same period 2021. This is due to a 2% decrease in depletion rates and a 1% decrease in production volumes. Depletion expense per mcfe was $0.45 in first six months 2022 compared to $0.46 in the same period of 2021. The following table summarizes DD&A expense per mcfe for the three and six months ended June 30, 2022 and 2021:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2022	2021	Change	%	2022	2021	Change	%
DD&A								
Depletion and amortization	$ 0.45	$ 0.46	$ (0.01)	(2)%	$ 0.45	$ 0.46	$ (0.01)	(2)%
Depreciation	—	—	—	—%	—	—	—	—%
Accretion and other	0.01	0.01	—	—%	0.01	0.01	—	—%
Total DD&A expense	$ 0.46	$ 0.47	$ (0.01)	(2)%	$ 0.46	$ 0.47	$ (0.01)	(2)%

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, exit and termination costs, deferred compensation plan expenses, loss or gain on early extinguishment of debt and gain or loss on sale of assets. Stock-based compensation includes the amortization of restricted stock grants and PSUs. The following table details the allocation of stock-based compensation to functional expense categories for the three and six months ended June 30, 2022 and 2021 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Direct operating expense	$ 362	$ 340	$ 711	$ 667
Brokered natural gas and marketing expense	686	443	1,205	893
Exploration expense	318	362	770	748
General and administrative expense	10,270	9,382	21,843	18,787
Total stock-based compensation	$ 11,636	$ 10,527	$ 24,529	$ 21,095

Brokered natural gas and marketing expense was $110.1 million in second quarter 2022 compared to $69.0 million in second quarter 2021 due to significantly higher commodity prices somewhat offset by lower broker purchase volumes (volumes not related to our production). Brokered natural gas marketing expense was $203.2 million in first six months 2022 compared to $141.3 million in first six months 2021 due to significantly higher commodity prices somewhat offset by lower broker purchased volumes. The following table details our brokered natural gas, marketing and other net margin for the three and six months ended June 30, 2022 and 2021 (in thousands):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2022	2021	Change	%	2022	2021	Change	%
Brokered natural gas and marketing								
Brokered natural gas sales	$ 103,368	$ 60,778	$ 42,590	70%	$ 187,430	$ 130,240	$ 57,190	44%
Brokered NGLs sales	640	722	(82)	(11)%	2,280	1,148	1,132	99%
Other marketing revenue [(1)]	4,165	1,050	3,115	297%	5,905	11,726	(5,821)	(50)%
Brokered natural gas purchases [(2)]	(106,229)	(65,668)	(40,561)	(62)%	(195,424)	(135,631)	(59,793)	(44)%
Brokered NGLs purchases	(682)	(660)	(22)	(3)%	(2,329)	(1,057)	(1,272)	(120)%
Other marketing expense	(3,198)	(2,676)	(522)	(20)%	(5,479)	(4,651)	(828)	(18)%
Net brokered natural gas and marketing margin	$ (1,936)	$ (6,454)	$ 4,518	70%	$ (7,617)	$ 1,775	$ (9,392)	(529)%

(1) The six months ended June 30, 2021 includes $8.8 million received as part of a capacity release agreement.
(2) Includes transportation costs.

Exploration expense was $7.5 million in second quarter 2022 compared to $5.0 million in second quarter 2021 due to higher delay rentals and other expense. Exploration expense was $12.2 million in first six months 2022 compared to $10.6 million in first six months 2021 due to higher delay rentals and other expense. The following table details our exploration expense for the three and six months ended June 30, 2022 and 2021 (in thousands):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2022	2021	Change	%	2022	2021	Change	%
Exploration								
Delay rentals and other	$ 5,899	$ 3,516	$ 2,383	68 %	$ 8,842	$ 7,501	$ 1,341	18 %
Personnel expense	1,209	1,120	89	8 %	2,514	2,399	115	5 %
Stock-based compensation expense	318	362	(44)	(12)%	770	749	21	3 %
Seismic	80	30	50	167 %	79	(83)	162	195 %
Total exploration expense	$ 7,506	$ 5,028	$ 2,478	49 %	$ 12,205	$ 10,566	$ 1,639	16 %

Abandonment and impairment of unproved properties was $7.1 million in second quarter 2022 compared to $2.2 million in second quarter 2021. Abandonment and impairment of unproved properties was $9.1 million in first six months 2022 compared to $5.2 million in the same period of 2021. Abandonment and impairment of unproved properties for second quarter and first six months 2022 increased when compared to the same periods of 2021 due to higher estimated lease expirations in Pennsylvania.

Exit and termination costs was $36.1 million in second quarter 2022 compared to a gain of $15.9 million in second quarter 2021. In second quarter 2022, we recorded $11.3 million accretion expense primarily related to retained liabilities for certain gathering, transportation and processing obligations extending until 2030 compared to accretion expense of $12.2 million in the same quarter of the prior year. The second quarter 2022 also includes an unfavorable adjustment of $24.8 million to increase this obligation for a change in our forecasted drilling plans of the buyer and other adjustments. The second quarter 2021 also includes a gain of $28.2 million to reduce our original estimate of these obligations due to payments being lower than our forecast and a change in the forecasted drilling plans of the buyer.

Exit and termination costs was $47.2 million in first six months 2022 compared to a gain of $2.2 million in first six months 2021. We recorded accretion expense of $22.4 million in first six months 2022 compared to accretion expense of $25.4 million in the same period of 2021. The first six months 2022 includes an unfavorable adjustment of $24.8 million to increase this obligation for a change in our forecasted drilling plans of the buyer and other adjustments compared to a favorable adjustment of $28.2 million in the same period of 2021 to reduce our original estimate of the obligations.

Deferred compensation plan was income of $19.2 million in second quarter 2022 compared to a loss of $35.5 million in second quarter 2021. 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 $30.38 at March 31, 2022 to $24.75 at June 30, 2022. In the same period of the prior year, our stock price increased from $10.33 at March 31, 2021 to $16.76 at June 30, 2021. During first six months 2022, deferred compensation was a loss of $54.1 million compared to a loss of $55.3 million in the same period of 2021. Our stock price increased from $17.83 at December 31, 2021 to $24.75 at June 30, 2022. In the same period of the prior year, our stock price increased from $6.70 at December 31, 2020 to $16.76 at June 30, 2021.

Loss on early extinguishment of debt was a loss of $22,000 in second quarter 2022 compared to a loss of $63,000 in the same period of the prior year. Loss on extinguishment of debt was $69.2 million in first six months 2022 compared to $98,000 in the same period of the prior year. In first quarter 2022, we announced a call for the redemption of $850.0 million of our outstanding 9.25% senior notes due 2026. The redemption price equaled 106.938% of par plus accrued and unpaid interest. We recognized a loss on early extinguishment of debt in first quarter 2022 of $69.2 million, net of transaction costs and the expensing of the remaining deferred financing costs on the repurchased debt.

Income tax expense (benefit) was an expense of $103.3 million in second quarter 2022 compared to benefit of $1.3 million in second quarter 2021. Income tax benefit was $12.8 million in first six months 2022 compared to an expense of $1.4 million in the same period of 2021. The 2022 and 2021 effective tax rates were different than the statutory tax rate due to state income taxes, equity compensation, valuation allowances and other discrete tax items.

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. Short-term liquidity needs are satisfied by borrowings under our bank credit facility and/or cash on hand. 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 and capital requirements. 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, 2022, we have entered into derivative agreements covering 196.4 Bcfe for the remainder of 2022, 270.6 Bcfe for 2023 and 104.5 Bcfe for 2024, not including our basis swaps.

The following table presents sources and uses of cash and cash equivalents for the six months ended June 30, 2022 and 2021 (in thousands):

	Six Months Ended June 30, 2022	Six Months Ended June 30, 2021
Sources of cash and cash equivalents		
Operating activities	$ 731,120	$ 283,435
Disposal of assets	380	195
Issuance of senior notes	500,000	600,000
Borrowing on credit facility	648,000	883,000
Other	64,291	30,572
Total sources of cash and cash equivalents	$ 1,943,791	$ 1,797,202
Uses of cash and cash equivalents		
Additions to natural gas and oil properties	$ (211,232)	$ (205,923)
Repayment on credit facility	(647,000)	(1,464,000)
Acreage purchases	(19,445)	(15,917)
Additions to field service assets	(381)	(652)
Repayment of senior and senior subordinated notes	(1,068,117)	(63,324)
Treasury stock purchases	(132,894)	—
Debt issuance costs	(15,798)	(8,591)
Other	(62,990)	(38,789)
Total uses of cash and cash equivalents	$ (2,157,857)	$ (1,797,196)

Sources of Cash and Cash Equivalents

Cash flows provided from operating activities in first six months 2022 was $731.1 million compared to $283.4 million in first six months 2021. 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 increase in cash provided from operating activities from first six months 2021 to first six months 2022 reflects significantly higher realized prices partially offset by lower production volumes. As of June 30, 2022, we have hedged more than 55% of our projected total production for the remainder of 2022, with more than 60% of our projected natural gas production hedged. Net cash provided from operating activities was affected by a 1% decrease in production and working capital changes or the timing of cash receipts and disbursements. Changes in working capital (as reflected in our consolidated statements of cash flows) for first six months 2022 were negative $256.8 million compared to a negative $73.7 million for first six months 2021.

Issuance of senior notes in first six months 2022 includes the issuance of $500.0 million new 4.75% senior notes due 2030.

Uses of Cash and Cash Equivalents

Additions to natural gas and oil properties for first six months 2022 were consistent with expectations relative to our announced 2022 capital budget. We currently believe our 2022 capital program will approach the high-end of our announced range of $460.0 million to $480.0 million due to the impact of cost inflation.

Repayment of senior notes for first six months 2022 includes the redemption of our $850.0 million aggregate principal amount 9.25% senior notes due 2026 along with the retirement of our 5.00% senior notes due 2022 and our 5.87% notes due 2022. From time to time, we may continue to repurchase our senior notes based upon prevailing market or other conditions at the time.

Treasury stock purchases for first six months 2022 include the repurchase of 4.6 million shares as part of our previously announced stock repurchase program.

Liquidity and Capital Resources

Based on the current commodity price environment, we believe we have sufficient liquidity and capital resources to execute our business plan for the foreseeable future. We continue to manage the duration and level of our drilling and completion commitments in order to maintain flexibility with regard to our activity level and capital expenditures. As of June 30, 2022, we had cash on hand in the amount of $356,000 and availability under our credit facility of $1.2 billion.

Sources of Cash

We expect our 2022 capital program to be funded by cash flows from operations. During the six months ended June 30, 2022, we generated $731.1 million of cash flows from operating activities. As of June 30, 2022, we had approximately $1.5 billion of liquidity, consisting of $1.2 billion available under our bank credit facility and $356,000 of cash on hand. Our borrowing base can be adjusted as a result of changes in commodity prices, acquisitions or divestitures of proved properties or financing activities. We may draw on our bank credit facility to meet short-term cash requirements. In early January 2022, we issued $500.0 million aggregate principal amount of new 4.75% senior notes due 2030 and used the proceeds, cash on hand and our credit facility to fully redeem our 9.25% senior notes due 2026 in February 2022.

Although we expect cash flows and capacity under the existing credit facility to be sufficient to fund our expected 2022 capital program, we may also elect to raise funds through new debt or equity offerings or from other sources of financing. All of our sources of liquidity can be affected by the general conditions of the broader economy, the global pandemic, force majeure events and fluctuations in commodity prices, operating costs and volumes produced, all of which affect us and our industry. We have no control over market prices for natural gas, NGLs or oil, although we may be able to influence the amount of realized revenues through the use of derivative contracts as part of our commodity price risk management.

Bank Credit Facility

Our bank credit facility is secured by substantially all of our assets. As of June 30, 2022, we had $1.0 million of outstanding borrowings under our bank credit facility and we maintained a borrowing base of $3.0 billion and aggregate lender commitments of $1.5 billion. We also have undrawn letters of credit of $330.5 million as of June 30, 2022. We were in compliance with the applicable covenants under the bank credit facility as of June 30, 2022.

The borrowing base is subject to regular, semi-annual redeterminations and is dependent on a number of factors but primarily the lender's assessment of future cash flows. Our scheduled borrowing base redetermination was completed in the spring of 2022. On April 14, 2022 we entered into an amended and restated revolving bank credit facility. The new facility has a maximum facility amount of $4.0 billion, a borrowing base of $3.0 billion and aggregate lender commitments of $1.5 billion. The maturity of the new bank credit facility is April 14, 2027. See Note 8 for additional information.

Our daily weighted-average bank credit facility debt balance was $77.6 million for first six months ended June 30, 2022 compared to $208.0 million for the same period of the prior year. As of April 14, 2022, borrowings under the amended and restated revolving 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 0.75% to 1.75% or at the secured overnight financing rate (SOFR, as defined in the bank credit facility agreement) plus a spread ranging from 1.75% to 2.75%. 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 SOFR loans to base rate loans or to convert all or any of the base rate loans to SOFR loans.

Uses of Cash

We use cash for the development, exploration and acquisition of natural gas and oil properties and for the payment of gathering, transportation and processing costs, operating, general and administrative costs, taxes and debt obligations, including interest. Expenditures for the development, exploration and acquisition of natural gas and oil properties are the primary use of our capital resources. During first six months 2022, we funded $231.1 million of capital expenditures as reported in our consolidated statement of cash flows. The amount of our future capital expenditures will depend upon a number of factors including our cash flows from operating, investing and financing activities, infrastructure availability, supply and demand fundamentals and our ability to execute our development program. In addition, the impact of commodity prices on investment opportunities, the availability of capital and the timing and results of our development activities may lead to changes in funding requirements for future development. We periodically review our budget to assess changes in current and projected cash flows, debt requirements and other factors.

We may from time to time repurchase or redeem all or portions of our outstanding debt securities for cash, through exchanges for other securities or a combination of both. Such repurchases or redemptions may be made in open market transactions and will depend on prevailing market conditions, our liquidity requirements, contractual restrictions and other factors. The amounts involved may be material. Our next significant long-term debt maturity is in the amount of $532.2 million due 2023 which is callable in December 2022. As part of our strategy for 2022, we will continue to focus on improving our debt metrics.

We expect our quarterly cash dividend to be reinstated in the second half of 2022 at a quarterly dividend rate of $0.08 per share or an $0.32 per share annual distribution. Details regarding the record and payment dates will be announced at such time the dividend is declared by our Board of Directors. In early 2022, the Board approved an increase to our share repurchase program, where we are now authorized to repurchase an additional $430.0 million of our outstanding shares of common stock for an aggregate available at the time of $500.0 million. During the first six months 2022, we repurchased 5.1 million shares of our common stock at an aggregate cost of $146.0 million (including 500,000 shares purchased in June and settled in July). The total remaining share repurchase authorization was approximately $354.0 million at June 30, 2022.

Shelf Registration

We have a universal shelf registration statement filed with the SEC under which we, as a "well-known seasoned issuer" for purposes of SEC rules, have the ability to sell an indeterminate amount of various types of debt and equity securities.

Cash Dividend Payments

In January 2020, we announced that the Board of Directors suspended the dividend on our common stock. The determination of the amount of future dividends, if any, to be declared and paid is at the sole discretion of the Board of Directors and primarily depends on cash flow, capital expenditures, debt covenants and various other factors. We expect our quarterly cash dividend to be reinstated in the second half of 2022.

Cash Contractual Obligations

Our contractual obligations include long-term debt, operating leases, derivative obligations, asset retirement obligations and transportation, processing and gathering commitments including the divestiture contractual commitment. As of June 30, 2022, 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, 2022, we had a total of $330.5 million of undrawn letters of credit under our bank credit facility.

Since December 31, 2021, there have been no material changes to our contractual obligations other than the changes to our indebtedness as discussed further in Note 8 and changes to our commitments as discussed in Note 16.

Interest Rates

At June 30, 2022, we had approximately $2.4 billion of debt outstanding which bore interest at fixed rates averaging 5.7%. Bank debt totaling $1.0 million bears interest at a floating rate, which was 1.5% at June 30, 2022. The 30-day SOFR rate at June 30, 2022 was approximately 1.7%. A 1% increase in short-term interest rates on the floating-rate debt outstanding on June 30, 2022, would result in approximately $10,000 in additional 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. Certain of our costs and expenses are affected by general inflation and we expect costs for the remainder of 2022 to continue to be a function of supply and demand.

Forward-Looking Statements

Certain sections of Management's Discussion and Analysis of Financial Condition and Results of Operations include forward-looking statements concerning trends or events potentially affecting our business. These statements typically contain words such as "anticipates," "believes," "expects," "targets," "plans," "estimates," "predicts," "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, 2021, as filed with the SEC on February 22, 2022.

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 can 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 regional index prices for North American natural gas production. However, natural gas and NGLs prices are becoming global commodities similar to oil. 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 64% of our December 31, 2021 proved reserves are natural gas and 2% of proved reserves are oil and condensate. In addition, a portion of our NGLs, which are 34% of proved reserves, are also impacted by changes in oil prices. We are also exposed to market risks related to changes in interest rates. These risks did not change materially from December 31, 2021 to June 30, 2022.

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 (which we refer to as a swaption). Our program may also include a three-way collar which is a combination of three options. At June 30, 2022, our derivative program includes swaps, collars, three-way collars and swaptions. The fair value of these contracts, represented by the estimated amount that would be realized upon immediate liquidation based on a comparison of the contract price and a reference price, generally NYMEX for natural gas and crude oil or Mont Belvieu for NGLs, as of June 30, 2022, approximated a net unrealized pretax loss of $802.1 million. These contracts expire monthly through December 2024. At June 30, 2022, 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
			Swap	Sold Put	Floor	Ceiling	(in thousands)
Natural Gas [(1)]							
2022	Swaps	495,000 Mmbtu/day	$ 3.09				$ (231,446)
2022	Collars	242,500 Mmbtu/day			$ 3.29	$ 3.69	$ (90,980)
2022	Three-way Collars	258,207 Mmbtu/day		$ 2.83	$ 3.51	$ 4.50	$ (81,876)
2023	Swaps	320,000 Mmbtu/day	$ 3.41				$ (143,060)
2023	Collars	240,795 Mmbtu/day			$ 3.30	$ 4.36	$ (67,790)
2023	Three-way Collars	149,863 Mmbtu/day		$ 2.28	$ 3.30	$ 4.28	$ (47,466)
2024	Collars	281,694 Mmbtu/day			$ 3.20	$ 5.26	$ (40,498)
Crude Oil							
2022	Swaps	6,750 bbls/day	$ 62.08				$ (44,859)
2023	Swaps	5,123 bbls/day	$ 71.39				$ (26,861)
January-September 2024	Collars	832 bbls/day			$ 80.00	$ 90.12	$ 885
NLGs (C2-Ethane)							
July 2022	Swaps	1,000 bbls/day	$0.55/gallon				$ 78
NGLs (NC4-Butane)							
July-September 2022	Swaps	2,000 bbls/day	$1.42/gallon				$ 101
NGLs (C5-Natural Gasoline)							
2022	Swaps	2,003 bbls/day	$1.89/gallon				$ (1,240)
2022	Collars	2,000 bbls/day			$1.83/gallon	$1.95/gallon	$ (1,054)

(1) We also sold natural gas call swaptions of 40,000 Mmbtu/day for 2023 at a weighted average price of $2.91. The fair market value of these swaptions at June 30, 2022 was a net derivative liability of $26.0 million.

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

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

Other Commodity Risk

We are impacted by basis risk, caused by factors that affect the relationship between commodity futures prices reflected in derivative commodity instruments and the cash market price of the underlying commodity. Natural gas transaction prices are frequently based on industry reference prices that may vary from prices experienced in local markets. If commodity price changes in one region are not reflected in other regions, derivative commodity instruments may no longer provide the expected hedge, resulting in increased basis risk. Therefore, in addition to the swaps, collars, three-way collars and swaptions 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 gain of $2.5 million June 30, 2022 and they settle monthly through December 2024.

At June 30, 2022, we are entitled to receive contingent consideration associated with the sale of our North Louisiana assets, annually through 2023, of up to $45.5 million based on future achievement of certain natural gas and oil prices based on published indexes along with the realized NGLs prices of the buyer. The fair value at June 30, 2022 was a gain of $34.8 million.

The following table shows the fair value of our derivatives and the hypothetical changes in fair value that would result from a 10% and a 25% change in commodity prices at June 30, 2022. 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		Hypothetical Change in Fair Value	
		Increase in Commodity Price of		Decrease in Commodity Price of	
	Fair Value	10%	25%	10%	25%
Swaps	$ (447,287)	$ (31,541)	$ (78,854)	$ 31,541	$ 78,854
Collars	(199,437)	(88,847)	(227,071)	86,215	213,266
Three-way collars	(129,342)	(43,408)	(110,814)	40,748	97,470
Swaptions	(26,003)	(6,834)	(17,096)	6,803	16,598
Basis swaps	2,529	7,110	17,775	(7,110)	(17,775)
Divestiture contingent consideration	34,760	1,030	2,220	(1,290)	(3,680)

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, 2022, our derivative counterparties include fifteen financial institutions, of which all but five 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.

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 variable rate bank debt. At June 30, 2022, we had $2.4 billion of debt outstanding which bears interest at fixed rates averaging 5.7%. Bank debt totaling $1.0 million bears interest at a floating rate, which was 1.5% at June 30, 2022. The 30-day SOFR rate an June 30, 2022 was approximately 1.7%. A 1% increase in short-term interest rates on the floating-rate debt outstanding on June 30, 2022, would result in approximately $10,000 in additional 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, 2022 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 Rule 13a-15(f) under the Exchange Act) during the three months ended June 30, 2022 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 16 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 Department of Environmental Protection (DEP) 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 and ordered us to conduct certain remedial work and monitoring to prevent methane and other substances from allegedly escaping the gas well into the surrounding environment including into soil, groundwater, streams and other surrounding water sources. DEP initially issued an order specifying its demands to the subsidiary on May 11, 2015. We appealed the order and the appeal was subsequently settled and discontinued whereupon we agreed to conduct certain, limited remedial work at the one well and continue monitoring water sources in the area and DEP did not assess any fines at that time. Thereafter, on January 13, 2020, DEP issued a new order regarding the same one well in Lycoming County which set forth similar allegations and demands as set forth above. This new order was issued despite considerable data and evidence presented to DEP over the course of the investigation that this one well has not been nor is currently the source of methane in the environment nor any water supplies, but rather the methane existed in the environment before the commencement of our operations. We appealed the January 2020 order and ultimately resolved the appeal by settlement on April 29, 2022 with DEP that includes a one-time payment to DEP of $1.0 million and separate funds totaling $850,000 to be used for water treatment system costs. Range will also plug the well at issue, which never produced. While Range ultimately resolved this matter with DEP, the evidence and expert testimony fully supports that this one well in Lycoming County was not the cause of methane in the groundwater.

From time to time, we receive notices of violation from governmental and regulatory authorities in areas in which we operate relating to alleged violations of environmental statutes or the rules and regulations promulgated thereunder. While we cannot predict with certainty of whether these notices of violation will result in fines and/or penalties, if fines and/or penalties are imposed, they may result in monetary sanctions, individually or in the aggregate, in excess of $250,000.

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, 2021.

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

Purchases of our common stock during the quarter is as follows:

	Three Months Ended June 30, 2022						
Period	Total Number of Shares Purchased		Average Price Paid Per Share (a)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (b) (c)		Approximate Dollar Amount of Shares that May Yet Be Purchased Under Plans or Programs
April 2022	1,320,000	$	30.53	1,320,000	$	443,596,860
May 2022	1,645,000	$	28.48	1,645,000	$	396,744,472
June 2022 (c)	1,535,000	$	27.79	1,535,000	$	354,081,338
	4,500,000			4,500,000		

(a) Includes any fees, commissions or other expenses associated with the share repurchases.

(b) In October 2019, our board of directors authorized a $100 million common stock repurchase program. In February 2022, our board of directors subsequently increased the authorization for repurchases under the program for a cumulative approval of $530.0 million which includes fees, commissions and expenses. The share repurchase authority does not obligate us to acquire any specific number of shares. The program may be changed based upon our financial condition and is subject to termination by the board of directors prior to completion. Shares repurchased as of June 30, 2022 were held as treasury stock.

(c) Includes 500,000 shares that were purchased in June 2022 and settled in July 2022.

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 First 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	Seventh Amended and Restated Credit Agreement, dated April 14, 2022, among Range Resources Corporation, as borrower, JPMorgan Chase Bank, N.A., as Administrative Agent and Letter of Credit Issuer, and each other Letter of Credit Issuer or Lender from time to time party thereto (incorporated by reference to Exhibit 10.1 to our Form 8-K (File No. 001-12209) as field with the SEC on April 18, 2022)
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*	Inline 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*	Inline XBRL Taxonomy Extension Schema
101. CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101. DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101. LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101. PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104 *	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

* 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, 2022

RANGE RESOURCES CORPORATION

By: /s/ MARK S. SCUCCHI

Mark S. Scucchi
Senior Vice President and
Chief Financial Officer

Date: July 25, 2022

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, Jeffrey 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 , 2022

/s/ Jeffrey L. Ventura

Jeffrey L. Ventura

Chief Executive Officer and President

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, 2022

/s/ Mark S. Scucchi

Mark S. Scucchi
Senior Vice President and Chief Financial Officer

Exhibit 32.1

**CERTIFICATION OF
CHIEF EXECUTIVE OFFICER AND PRESIDENT
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, 2022 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, Jeffrey L. Ventura, Chief Executive Officer and President 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/ JEFFREY L. VENTURA

Jeffrey L. Ventura

July 25, 2022

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, 2022 and filed with the Securities and Exchange Commission on the date hereof (the “Report”) and pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Mark S. Scucchi, Senior Vice President - Chief Financial Officer of Range Resources Corporation (the “Company”), hereby certify that, to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

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

By: /s/ MARK S. SCUCCHI

Mark S. Scucchi

July 25, 2022