
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 10-Q

Quarterly report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the quarterly period ended June 30, 2021

OR

Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the transition period from _____ to _____

Commission file number 001-37697

CENTENNIAL RESOURCE DEVELOPMENT, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State of Incorporation)

47-5381253
(I.R.S. Employer Identification No.)

**1001 Seventeenth Street, Suite 1800
Denver, Colorado 80202**

(Registrant's telephone number, including area code): (720) 499-1400

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A Common Stock, par value \$0.0001 per share	CDEV	The NASDAQ Stock Market LLC

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

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

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

Large accelerated filer	Accelerated filer	Non-accelerated filer	Smaller reporting company	Emerging growth company
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

As of July 30, 2021, there were 279,391,327 shares of Class A Common Stock, par value \$0.0001 per share outstanding.

TABLE OF CONTENTS

	<u>Page</u>
Glossary of Units of Measurements and Industry Terms	3
Cautionary Statement Concerning Forward-Looking Statements	5
Part I—FINANCIAL INFORMATION	7
Item 1. Financial Statements (Unaudited)	7
Consolidated Balance Sheets as of June 30, 2021 and December 31, 2020	7
Consolidated Statements of Operations for the Three and Six Months Ended June 30, 2021 and 2020	8
Consolidated Statements of Cash Flows for the Six Months Ended June 30, 2021 and 2020	9
Consolidated Statements of Shareholders' Equity for the Three and Six Months Ended June 30, 2021 and 2020	11
Notes to Consolidated Financial Statements	13
Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations	33
Item 3. Quantitative and Qualitative Disclosures About Market Risk	48
Item 4. Controls and Procedures	51
Part II—OTHER INFORMATION	51
Item 1. Legal Proceedings	51
Item 1A. Risk Factors	51
Item 6. Exhibits	52
Signatures	53

GLOSSARY OF UNITS OF MEASUREMENTS AND INDUSTRY TERMS

The following are abbreviations and definitions of certain terms used in this Quarterly Report on Form 10-Q, which are commonly used in the oil and natural gas industry:

Bbl. One stock tank barrel of 42 U.S. gallons liquid volume used herein in reference to crude oil, condensate or NGLs.

Bbl/d. One Bbl per day.

Boe. One barrel of oil equivalent, calculated by converting natural gas to oil equivalent barrels at a ratio of six Mcf of natural gas to one Bbl of oil. This is an energy content correlation and does not reflect a value or price relationship between the commodities.

Boe/d. One Boe per day.

Btu. One British thermal unit, which is the quantity of heat required to raise the temperature of a one-pound mass of water by one-degree Fahrenheit.

Completion. The process of preparing an oil and gas wellbore for production through the installation of permanent production equipment, as well as perforation and fracture stimulation to initiate production.

Development well. A well drilled within the proved area of an oil or natural gas reservoir to the depth of a stratigraphic horizon known to be productive.

Differential. An adjustment to the price of oil or natural gas from an established spot market price to reflect differences in the quality and/or location of oil or natural gas.

Exploratory well. A well drilled to find a new field or to find a new reservoir in a field previously found to be productive of oil or natural gas in another reservoir.

Extension Well. A well drilled to extend the limits of a known reservoir.

Field. An area consisting of a single reservoir or multiple reservoirs all grouped on, or related to, the same individual geological structural feature or stratigraphic condition. The field name refers to the surface area, although it may refer to both the surface and the underground productive formations.

Formation. A layer of rock which has distinct characteristics that differs from nearby rock.

Horizontal drilling. A drilling technique used in certain formations where a well is drilled vertically to a certain depth and then drilled at a right angle within a specified interval.

ICE Brent. Brent crude oil traded on the Intercontinental Exchange, Inc. (ICE).

LIBOR. London Interbank Offered Rate.

MBbl. One thousand barrels of crude oil, condensate or NGLs.

MBoe. One thousand Boe.

Mcf. One thousand cubic feet of natural gas.

Mcf/d. One Mcf per day.

MMBtu. One million British thermal units.

MMcf. One million cubic feet of natural gas.

NEOs. Named executive officers, which term refers to the principal executive officer, the principal financial officer, and the next three most highly paid executive officers of a company as of the end of the most recently completed fiscal year, based on total compensation as determined under Rule 402 of Regulation S-K.

NGL. Natural gas liquids. These are naturally occurring substances found in natural gas, including ethane, butane, isobutane, propane and natural gasoline, that can be collectively removed from produced natural gas, separated into these substances and sold.

NYMEX. The New York Mercantile Exchange.

Operator. The individual or company responsible for the development and/or production of an oil or natural gas well or lease.

Proved developed reserves. Reserves that can be expected to be recovered through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared with the cost of a new well.

Proved reserves. The estimated quantities of oil, NGLs and natural gas that geological and engineering data demonstrate with reasonable certainty to be commercially recoverable in future years from known reservoirs under existing economic and operating conditions.

Proved undeveloped reserves or PUD. Proved reserves that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for completion.

Realized price. The cash market price less differentials.

Reserves. Estimated remaining quantities of oil and natural gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations. In addition, there must exist, or there must be a reasonable expectation that there will exist, the legal right to produce or a revenue interest in the production, installed means of delivering oil and natural gas or related substances to market and all permits and financing required to implement the project.

Reservoir. A porous and permeable underground formation containing a natural accumulation of producible oil and/or natural gas that is confined by impermeable rock or water barriers and is individual and separate from other reservoirs.

Royalty interest. An interest in an oil or gas property entitling the owner to shares of the production free of costs of exploration, development and production operations.

Spot market price. The cash market price without reduction for expected quality, location, transportation and demand adjustments.

Unproved reserves. Reserves attributable to unproved properties with no proved reserves.

Wellbore. The hole drilled by a drill bit that is equipped for oil and natural gas production once the well has been completed. Also called well or borehole.

Working interest. The interest in an oil and gas property (typically a leasehold interest) that gives the owner the right to drill, produce and conduct operations on the property and to a share of production, subject to all royalties and other burdens and to all costs of exploration, development and operations and all risks in connection therewith.

Workover. Operations on a producing well to restore or increase production.

WTI. West Texas Intermediate is a grade of crude oil used as a benchmark in oil pricing.

CAUTIONARY STATEMENT CONCERNING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q (“Quarterly Report”) includes “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”) and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). All statements, other than statements of historical fact included in this Quarterly Report, regarding our strategy, future operations, financial position, estimated revenues and losses, projected costs, prospects, plans and objectives of management are forward-looking statements. When used in this Quarterly Report, the words “could,” “may,” “believe,” “anticipate,” “intend,” “estimate,” “expect,” “project,” “goal,” “plan,” “target” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain such identifying words. These forward-looking statements are based on management’s current expectations and assumptions about future events and are based on currently available information as to the outcome and timing of future events. When considering forward-looking statements, you should keep in mind the risk factors and other cautionary statements described under “Item 1A. Risk Factors” in this Quarterly Report and in our Annual Report on Form 10-K for the year ended December 31, 2020 (the “2020 Annual Report”) and the risk factors and other cautionary statements contained in our other filings with the United States Securities and Exchange Commission (“SEC”).

Forward-looking statements may include statements about:

- volatility of oil, natural gas and NGL prices or a prolonged period of low oil, natural gas or NGL prices and the effects of actions by, or disputes among or between, members of the Organization of Petroleum Exporting Countries (“OPEC”), such as Saudi Arabia, and other oil and natural gas producing countries, such as Russia, with respect to production levels or other matters related to the price of oil;
- the effects of excess supply of oil and natural gas resulting from the reduced demand caused by the Coronavirus Disease 2019 (“COVID-19”) pandemic and the actions by certain oil and natural gas producing countries;
- our business strategy and future drilling plans;
- our reserves and our ability to replace the reserves we produce through drilling and property acquisitions;
- our drilling prospects, inventories, projects and programs;
- our financial strategy, liquidity and capital required for our development program;
- our realized oil, natural gas and NGL prices;
- the timing and amount of our future production of oil, natural gas and NGLs;
- our hedging strategy and results;
- our competition and government regulations;
- our ability to obtain permits and governmental approvals;
- our pending legal or environmental matters;
- the marketing and transportation of our oil, natural gas and NGLs;
- our leasehold or business acquisitions;
- cost of developing our properties;
- our anticipated rate of return;
- general economic conditions;
- weather conditions in the areas where we operate;
- credit markets;
- uncertainty regarding our future operating results; and
- our plans, objectives, expectations and intentions contained in this Quarterly Report that are not historical.

We caution you that these forward-looking statements are subject to all of the risks and uncertainties, most of which are difficult to predict and many of which are beyond our control, incident to the development, production, gathering and sale of oil and natural gas. These risks include, but are not limited to commodity price volatility, inflation, lack of availability of drilling and production equipment and services, environmental risks, drilling and other operating risks, regulatory changes, the uncertainty inherent in estimating reserves and in projecting future rates of production, cash flow and access to capital, the timing of development expenditures and the other risks described in “Item 1A. Risk Factors” in our 2020 Annual Report.

Reserve engineering is a process of estimating underground accumulations of oil and natural gas that cannot be measured in an exact way. The accuracy of any reserve estimate depends on the quality of available data, the interpretation of such data and price and cost assumptions made by reserve engineers. In addition, the results of drilling, testing and production activities may justify revisions of estimates that were made previously. If significant, such revisions would change the schedule of any further production and development drilling. Accordingly, reserve estimates may differ significantly from the quantities of oil and natural gas that are ultimately recovered.

Should one or more of the risks or uncertainties described in our 2020 Annual Report occur, or underlying assumptions prove incorrect, our actual results and plans could differ materially from those expressed in any forward-looking statements.

All forward-looking statements, expressed or implied, included in this Quarterly Report are expressly qualified in their entirety by this cautionary statement. This cautionary statement should also be considered in connection with any subsequent written or oral forward-looking statements that we or persons acting on our behalf may issue.

Except as otherwise required by applicable law, we disclaim any duty to update any forward-looking statements, all of which are expressly qualified by the statement in this section, to reflect events or circumstances after the date of this Quarterly Report.

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

**CENTENNIAL RESOURCE DEVELOPMENT, INC.
CONSOLIDATED BALANCE SHEETS (unaudited)
(in thousands, except share and per share amounts)**

	June 30, 2021	December 31, 2020
ASSETS		
Current assets		
Cash and cash equivalents	\$ 4,702	\$ 5,800
Accounts receivable, net	89,586	54,557
Prepaid and other current assets	6,054	5,229
Total current assets	100,342	65,586
Property and Equipment		
Oil and natural gas properties, successful efforts method		
Unproved properties	1,163,123	1,209,205
Proved properties	4,579,453	4,395,473
Accumulated depreciation, depletion and amortization	(2,013,024)	(1,877,832)
Total oil and natural gas properties, net	3,729,552	3,726,846
Other property and equipment, net	11,836	12,650
Total property and equipment, net	3,741,388	3,739,496
Noncurrent assets		
Operating lease right-of-use assets	15,217	3,176
Other noncurrent assets	17,402	19,167
TOTAL ASSETS	\$ 3,874,349	\$ 3,827,425
LIABILITIES AND EQUITY		
Current liabilities		
Accounts payable and accrued expenses	\$ 157,818	\$ 110,439
Operating lease liabilities	240	3,155
Other current liabilities	62,821	18,274
Total current liabilities	220,879	131,868
Noncurrent liabilities		
Long-term debt, net	1,054,317	1,068,624
Asset retirement obligations	17,516	17,009
Deferred income taxes	2,589	2,589
Operating lease liabilities	15,206	422
Other noncurrent liabilities	25,498	2,952
Total liabilities	1,336,005	1,223,464
Commitments and contingencies (Note 11)		
Shareholders' equity		
Common stock, \$0.0001 par value, 620,000,000 shares authorized:		
Class A: 290,800,955 shares issued and 279,219,513 shares outstanding at June 30, 2021 and 290,645,623 shares issued and 278,551,901 shares outstanding at December 31, 2020	29	29
Additional paid-in capital	2,998,516	3,004,433
Retained earnings (accumulated deficit)	(460,201)	(400,501)
Total shareholders' equity	2,538,344	2,603,961
Noncontrolling interest	—	—
Total equity	2,538,344	2,603,961
TOTAL LIABILITIES AND EQUITY	\$ 3,874,349	\$ 3,827,425

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

CENTENNIAL RESOURCE DEVELOPMENT, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS (unaudited)
(in thousands, except per share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Operating revenues				
Oil and gas sales	\$ 232,577	\$ 90,509	\$ 424,968	\$ 283,278
Operating expenses				
Lease operating expenses	22,976	25,839	48,837	58,478
Severance and ad valorem taxes	15,784	5,696	28,367	22,269
Gathering, processing and transportation expenses	19,494	17,284	40,119	34,223
Depreciation, depletion and amortization	73,429	93,020	137,212	194,278
Impairment and abandonment expense	9,199	19,425	18,399	630,725
Exploration and other expenses	1,764	4,051	2,859	8,060
General and administrative expenses	28,807	17,994	54,063	36,864
Total operating expenses	<u>171,453</u>	<u>183,309</u>	<u>329,856</u>	<u>984,897</u>
Net gain (loss) on sale of long-lived assets	(8)	(2)	36	243
Proceeds from terminated sale of assets	5,983	—	5,983	—
Income (loss) from operations	<u>67,099</u>	<u>(92,802)</u>	<u>101,131</u>	<u>(701,376)</u>
Other income (expense)				
Interest expense	(15,182)	(17,371)	(32,667)	(33,792)
Gain (loss) on extinguishment of debt	(22,156)	143,443	(22,156)	143,443
Net gain (loss) on derivative instruments	(54,959)	(29,857)	(106,158)	(38,362)
Other income (expense)	143	1	150	(52)
Total other income (expense)	<u>(92,154)</u>	<u>96,216</u>	<u>(160,831)</u>	<u>71,237</u>
Income (loss) before income taxes	(25,055)	3,414	(59,700)	(630,139)
Income tax (expense) benefit	—	1,916	—	85,124
Net income (loss)	<u>(25,055)</u>	<u>5,330</u>	<u>(59,700)</u>	<u>(545,015)</u>
Less: Net (income) loss attributable to noncontrolling interest	—	—	—	2,362
Net income (loss) attributable to Class A Common Stock	<u>\$ (25,055)</u>	<u>\$ 5,330</u>	<u>\$ (59,700)</u>	<u>\$ (542,653)</u>
Income (loss) per share of Class A Common Stock:				
Basic	<u>\$ (0.09)</u>	<u>\$ 0.02</u>	<u>\$ (0.21)</u>	<u>\$ (1.96)</u>
Diluted	<u>\$ (0.09)</u>	<u>\$ 0.02</u>	<u>\$ (0.21)</u>	<u>\$ (1.96)</u>

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

CENTENNIAL RESOURCE DEVELOPMENT, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS (unaudited)
(in thousands)

	Six Months Ended June 30,	
	2021	2020
Cash flows from operating activities:		
Net income (loss)	\$ (59,700)	\$ (545,015)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation, depletion and amortization	137,212	194,278
Stock-based compensation expense - equity awards	9,066	11,136
Stock-based compensation expense - liability awards	25,074	—
Impairment and abandonment expense	18,399	630,725
Deferred tax expense (benefit)	—	(85,124)
Net (gain) loss on sale of long-lived assets	(36)	(243)
Non-cash portion of derivative (gain) loss	45,759	31,415
Amortization of debt issuance costs and debt discount	2,886	2,334
(Gain) loss on extinguishment of debt	22,156	(143,443)
Changes in operating assets and liabilities:		
(Increase) decrease in accounts receivable	(33,483)	36,065
(Increase) decrease in prepaid and other assets	(9)	41
Increase (decrease) in accounts payable and other liabilities	12,301	(47,666)
Net cash provided by operating activities	<u>179,625</u>	<u>84,503</u>
Cash flows from investing activities:		
Acquisition of oil and natural gas properties	(638)	(6,113)
Drilling and development capital expenditures	(126,665)	(271,389)
Purchases of other property and equipment	(471)	(811)
Proceeds from sales of oil and natural gas properties	698	1,263
Net cash used in investing activities	<u>(127,076)</u>	<u>(277,050)</u>
Cash flows from financing activities:		
Proceeds from borrowings under revolving credit facility	320,000	385,000
Repayment of borrowings under revolving credit facility	(395,000)	(190,000)
Proceeds from issuance of convertible senior notes	170,000	—
Debt issuance costs	(6,421)	(5,141)
Premiums paid on capped call transactions	(14,688)	—
Redemption of senior secured notes	(127,073)	—
Proceeds from exercise of stock options	15	—
Restricted stock used for tax withholdings	(477)	(301)
Net cash (used in) provided by financing activities	<u>(53,644)</u>	<u>189,558</u>
Net increase (decrease) in cash, cash equivalents and restricted cash	(1,095)	(2,989)
Cash, cash equivalents and restricted cash, beginning of period	8,339	15,543
Cash, cash equivalents and restricted cash, end of period	<u>\$ 7,244</u>	<u>\$ 12,554</u>

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

CENTENNIAL RESOURCE DEVELOPMENT, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS (unaudited) (continued)
(in thousands)

	Six Months Ended June 30,	
	2021	2020
Supplemental cash flow information		
Cash paid for interest	\$ 30,124	\$ 36,618
Supplemental non-cash activity		
Accrued capital expenditures included in accounts payable and accrued expenses	\$ 53,096	\$ 22,474
Asset retirement obligations incurred, including revisions to estimates	66	542
Change in Senior Notes from debt exchange		
Senior Secured Notes issued in the debt exchange, net of debt discount	—	106,030
2026 Senior Notes extinguished in the debt exchange, net of unamortized debt issue costs	—	(108,632)
2027 Senior Notes extinguished in the debt exchange, net of unamortized discount and debt issue costs	—	(140,840)

Reconciliation of cash, cash equivalents and restricted cash presented on the consolidated statements of cash flows for the periods presented:

	Six Months Ended June 30,	
	2021	2020
Cash and cash equivalents	\$ 4,702	\$ 7,214
Restricted cash ⁽¹⁾	2,542	5,340
Total cash, cash equivalents and restricted cash	\$ 7,244	\$ 12,554

⁽¹⁾ Included in *Prepaid and other current assets* and *Other noncurrent assets* line items in the consolidated balance sheets.

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

CENTENNIAL RESOURCE DEVELOPMENT, INC.
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY (unaudited)
(in thousands)

	Common Stock		Additional Paid-In Capital	Retained Earnings (Accumulated Deficit)	Total Shareholders' Equity	Non-controlling Interest	Total Equity
	Class A						
	Shares	Amount					
Balance at December 31, 2020	290,646	\$ 29	\$ 3,004,433	\$ (400,501)	\$ 2,603,961	\$ —	\$ 2,603,961
Restricted stock forfeited	(1)	—	—	—	—	—	—
Restricted stock used for tax withholding	(128)	—	(477)	—	(477)	—	(477)
Issuance of Class A common stock under Employee Stock Purchase Plan	276	—	167	—	167	—	167
Stock-based compensation - equity awards	—	—	4,585	—	4,585	—	4,585
Capped call premiums	—	—	(14,688)	—	(14,688)	—	(14,688)
Net income (loss)	—	—	—	(34,645)	(34,645)	—	(34,645)
Balance at March 31, 2021	290,793	29	2,994,020	(435,146)	2,558,903	—	2,558,903
Restricted stock forfeited	(7)	—	—	—	—	—	—
Stock option exercises	15	—	15	—	15	—	15
Stock-based compensation - equity awards	—	—	4,481	—	4,481	—	4,481
Net income (loss)	—	—	—	(25,055)	(25,055)	—	(25,055)
Balance at June 30, 2021	290,801	29	2,998,516	(460,201)	2,538,344	—	2,538,344

CENTENNIAL RESOURCE DEVELOPMENT, INC.
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY (unaudited) (continued)
(in thousands)

	Common Stock				Additional Paid-In Capital	Retained Earnings (Accumulated Deficit)	Total Shareholders' Equity	Non- controlling Interest	Total Equity
	Class A		Class C						
	Shares	Amount	Shares	Amount					
Balance at December 31, 2019	280,650	\$ 28	1,034	\$ —	\$ 2,975,756	\$ 282,336	\$ 3,258,120	\$ 12,581	\$ 3,270,701
Restricted stock issued	1,305	—	—	—	—	—	—	—	—
Restricted stock forfeited	(406)	—	—	—	—	—	—	—	—
Restricted stock used for tax withholding	(78)	—	—	—	(208)	—	(208)	—	(208)
Issuance of Class A common stock under Employee Stock Purchase Plan	59	—	—	—	230	—	230	—	230
Stock-based compensation - equity awards	—	—	—	—	6,409	—	6,409	—	6,409
Net income (loss)	—	—	—	—	—	(547,983)	(547,983)	(2,362)	(550,345)
Balance at March 31, 2020	281,530	28	1,034	—	2,982,187	(265,647)	2,716,568	10,219	2,726,787
Restricted stock issued	80	—	—	—	—	—	—	—	—
Restricted stock forfeited	(352)	—	—	—	—	—	—	—	—
Restricted stock used for tax withholding	(83)	—	—	—	(93)	—	(93)	—	(93)
Stock-based compensation - equity awards	—	—	—	—	4,727	—	4,727	—	4,727
Conversion of common stock from Class C to Class A, net of tax	1,034	—	(1,034)	—	8,011	—	8,011	(10,219)	(2,208)
Net income (loss)	—	—	—	—	—	5,330	5,330	—	5,330
Balance at June 30, 2020	<u>282,209</u>	<u>28</u>	<u>—</u>	<u>—</u>	<u>2,994,832</u>	<u>(260,317)</u>	<u>2,734,543</u>	<u>—</u>	<u>2,734,543</u>

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

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 1—Basis of Presentation and Summary of Significant Accounting Policies

Description of Business

Centennial Resource Development, Inc. is an independent oil and natural gas company focused on the development of unconventional oil and associated liquids-rich natural gas reserves in the Permian Basin. The Company's assets are concentrated in the Delaware Basin, a sub-basin of the Permian Basin, and its properties consist of large, contiguous acreage blocks located in West Texas and New Mexico. Unless otherwise specified or the context otherwise requires, all references in these notes to "Centennial" or the "Company" are to Centennial Resource Development, Inc. and its consolidated subsidiary, Centennial Resource Production, LLC ("CRP").

Principles of Consolidation and Basis of Presentation

The accompanying unaudited consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America ("GAAP") and the rules and regulations of the United States Securities and Exchange Commission ("SEC") for interim financial reporting. Accordingly, certain disclosures normally included in an Annual Report on Form 10-K have been omitted. The consolidated financial statements and related notes included in this Quarterly Report should be read in conjunction with the Company's consolidated financial statements and related notes included in the Company's Annual Report on Form 10-K for the period ended December 31, 2020 (the "2020 Annual Report"). Except as disclosed herein, there have been no material changes to the information disclosed in the notes to the consolidated financial statements included in the Company's 2020 Annual Report.

In the opinion of management, all normal, recurring adjustments and accruals considered necessary to present fairly, in all material respects, the Company's interim financial results have been included. Operating results for the periods presented are not necessarily indicative of expected results for the full year.

The consolidated financial statements include the accounts of the Company and its subsidiary CRP, and CRP's wholly-owned subsidiaries. Noncontrolling interest represents third-party ownership in CRP and is presented as a component of equity. As of March 31, 2020 the noncontrolling interest ownership of CRP was 0.4% but was subsequently reduced to zero as all remaining CRP Common Units (and corresponding shares of the Company's Class C common stock) were converted into shares of the Company's Class A common stock (the "Common Stock") and CRP has since been a wholly-owned subsidiary of Centennial.

Use of Estimates

The preparation of the Company's consolidated financial statements requires the Company's management to make various assumptions, judgments and estimates to determine the reported amounts of assets, liabilities, revenues and expenses, and the disclosures of commitments and contingencies. Changes in these assumptions, judgments and estimates will occur as a result of the passage of time and the occurrence of future events, and accordingly, actual results could differ from amounts previously established. Additionally, the prices received for oil, natural gas and NGL production can heavily influence the Company's assumptions, judgments and estimates and continued volatility of oil and gas prices could have a significant impact on the Company's estimates.

The more significant areas requiring the use of assumptions, judgments and estimates include: (i) oil and natural gas reserves; (ii) cash flow estimates used in impairment tests for long-lived assets; (iii) impairment expense of unproved properties; (iv) depreciation, depletion and amortization; (v) asset retirement obligations; (vi) determining fair value and allocating purchase price in connection with business combinations and asset acquisitions; (vii) accrued revenues and related receivables; (viii) accrued liabilities; (ix) derivative valuations; and (x) deferred income taxes.

Income Taxes

Income tax expense recognized during interim periods is based on applying an estimated annual effective income tax rate to the Company's year-to-date income, plus any significant unusual or infrequently occurring items which are recorded in the interim period. The computation of the annual estimated effective tax rate at each interim period requires certain estimates and significant judgment including, but not limited to, the expected operating income for the year, projections of the proportion of income earned and taxed in various state jurisdictions, permanent and temporary differences and the likelihood of recovering deferred tax assets generated. The accounting estimates used to compute the provision for income taxes may change as new events occur, additional information becomes known or as the tax environment changes.

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

The Company has determined that it is more-likely-than-not that a portion of its deferred tax assets will not be realized. Accordingly, a valuation allowance against its deferred tax assets was recognized, which caused the Company's provision for income taxes for each of the three and six months periods ended June 30, 2021 and 2020 to differ from the amounts that would be provided by applying the statutory U.S. federal income tax rate of 21% to pre-tax book loss.

Recently Issued or Adopted Accounting Standards

In August 2020, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2020-06, *Debt—Debt with Conversion and Other Options and Derivatives and Hedging—Contracts in Entity's Own Equity* ("ASU 2020-06"), which updates the accounting requirements for convertible debt instruments and contracts in an entity's own equity under FASB's Accounting Standard Codification ("ASC") Topic 470, *Debt*, ASC Topic 815, *Derivatives and Hedging*, and applicable earnings-per-share guidance. The amendments in ASU 2020-06 are intended to simplify the accounting for convertible instruments by removing certain separation models in the existing debt guidance allowing convertible debt to be recorded as a single liability measured at its amortized cost. Additionally, the amendments remove certain conditions and clarify the scope of and certain requirements pertaining to derivative scope exception evaluations over such contracts and instruments. ASU 2020-06 requires retrospective application and is effective for public entities for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years, with early adoption permitted after December 15, 2020. The Company has adopted this guidance as of January 1, 2021, and there was no impact on previously reported amounts as a result of the adoption. Refer to *Note 4—Long-Term Debt* for additional information regarding its convertible debt instruments.

Note 2—Property Divestiture

On February 24, 2020, the Company entered into a purchase and sale agreement (the "Agreement") to sell certain of its water disposal assets. On May 15, 2020, the Agreement was terminated after the transaction failed to close by the outside date set forth in the Agreement.

The purchaser deposited \$10.0 million of cash in an escrow account (the "Deposit") which, in the event of termination, was to be distributed to the Company or the purchaser in accordance with the remedy provisions of the Agreement. In May 2021, a settlement between the Company and the purchaser was reached resulting in a partial distribution of the deposit to Centennial, which was included net of associated legal fees in the consolidated statements of operations.

Note 3—Accounts Receivable, Accounts Payable and Accrued Expenses

Accounts receivable are comprised of the following:

(in thousands)	June 30, 2021	December 31, 2020
Accrued oil and gas sales receivable, net	\$ 67,814	\$ 41,670
Joint interest billings, net	20,503	12,770
Other	1,269	117
Accounts receivable, net	<u>\$ 89,586</u>	<u>\$ 54,557</u>

Accounts payable and accrued expenses are comprised of the following:

(in thousands)	June 30, 2021	December 31, 2020
Accounts payable	\$ 19,514	\$ 5,052
Accrued capital expenditures	39,704	21,471
Revenues payable	39,831	42,115
Accrued interest	15,594	15,138
Accrued derivative settlements payable	15,873	3,488
Accrued employee compensation and benefits	13,099	11,516
Accrued expenses and other	14,203	11,659
Accounts payable and accrued expenses	<u>\$ 157,818</u>	<u>\$ 110,439</u>

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 4—Long-Term Debt

The following table provides information about the Company’s long-term debt as of the dates indicated:

(in thousands)	June 30, 2021	December 31, 2020
Credit Facility due 2023	\$ 255,000	\$ 330,000
8.00% Senior Secured Notes due 2025	—	127,073
5.375% Senior Notes due 2026	289,448	289,448
6.875% Senior Notes due 2027	356,351	356,351
3.25% Convertible Senior Notes due 2028	170,000	—
Unamortized debt issuance costs on Senior Notes	(14,376)	(12,790)
Unamortized debt discount	(2,106)	(21,458)
Senior Notes, net	799,317	738,624
Total long-term debt, net	<u>\$ 1,054,317</u>	<u>\$ 1,068,624</u>

Credit Agreement

CRP, the Company’s consolidated subsidiary, has a credit agreement with a syndicate of banks that provides for a five-year secured revolving credit facility, maturing on May 4, 2023 (the “Credit Agreement”). As of June 30, 2021, the Company had \$255.0 million in borrowings outstanding and \$441.0 million in available borrowing capacity, which was net of \$4.0 million in letters of credit outstanding. Since May of 2020, the borrowing base had been reduced by an availability blocker of \$31.8 million tied to the Senior Secured Notes. However, this availability blocker was eliminated as a result of the Senior Secured Notes redemption defined and discussed below.

The amount available to be borrowed under CRP’s Credit Agreement is equal to the lesser of (i) the borrowing base, (ii) aggregate elected commitments, which are currently set at \$700.0 million, or (iii) \$1.5 billion. The borrowing base is redetermined semi-annually in the spring and fall by the lenders in their sole discretion. It also allows for two optional borrowing base redeterminations on January 1 and July 1. The borrowing base depends on, among other things, the quantities of CRP’s proved oil and natural gas reserves, estimated cash flows from these reserves, and the Company’s commodity hedge positions. Upon a redetermination of the borrowing base, if actual borrowings exceed the revised borrowing capacity, CRP could be required to immediately repay a portion of its debt outstanding. Borrowings under the Credit Agreement are guaranteed by certain of CRP’s subsidiaries and the Company. In connection with the Credit Agreement’s spring 2021 semi-annual borrowing base redetermination, the borrowing base and amount of elected commitments were reaffirmed at \$700.0 million.

Borrowings under the Credit Agreement may be base rate loans or LIBOR loans. Interest is payable quarterly for base rate loans and at the end of the applicable interest period for LIBOR loans. LIBOR loans bear interest at LIBOR (adjusted for statutory reserve requirements and subject to 1% floor) plus an applicable margin, which ranged from 200 to 300 basis points as of June 30, 2021, depending on the percentage of the borrowing base utilized. Base rate loans bear interest at a rate per annum equal to the greatest of: (i) the agent bank’s prime rate; (ii) the federal funds effective rate plus 50 basis points; or (iii) the adjusted LIBOR rate for a one-month interest period plus 100 basis points, plus an applicable margin, which ranged from 100 to 200 basis points as of June 30, 2021, depending on the percentage of the borrowing base utilized. CRP also pays a commitment fee of 37.5 to 50 basis points on unused amounts under its facility.

CRP’s Credit Agreement contains restrictive covenants that limit its ability to, among other things: (i) incur additional indebtedness; (ii) make investments and loans; (iii) enter into mergers; (iv) make or declare dividends; (v) enter into commodity hedges exceeding a specified percentage of the Company’s expected production; (vi) enter into interest rate hedges exceeding a specified percentage of its outstanding indebtedness; (vii) incur liens; (viii) sell assets; and (ix) engage in transactions with affiliates.

CRP’s Credit Agreement also requires it to maintain compliance with the following financial ratios:

(i) a current ratio, which is the ratio of CRP’s consolidated current assets (including unused commitments under its revolving credit facility and excluding non-cash derivative assets and certain restricted cash) to its consolidated current liabilities (excluding any current portion of long-term debt due under the Credit Agreement and non-cash derivative liabilities), of not less than 1.0 to 1.0;

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

(ii) a first lien leverage ratio, as defined within the Credit Agreement as the ratio of first lien debt to EBITDAX for the rolling four fiscal quarter period, which may not exceed 2.75 to 1.00 beginning with the quarter ending June 30, 2020 and extending through the quarter ending December 31, 2021, after which the maximum ratio shall decrease to 2.50 to 1.00 for each of the quarters ending in 2022; and

(iii) a leverage ratio, as also defined in the Credit Agreement as the ratio of total funded debt to consolidated EBITDAX for the rolling four fiscal quarter period. Pursuant to amendments to the Credit Facility, the leverage ratio was suspended until March 31, 2022, at which time, the ratio may not exceed 5.0 to 1.0, with such maximum ratio declining at a rate of 0.25 for each succeeding quarter until March 31, 2023 when the ratio is set at not greater than 4.0 to 1.0.

CRP was in compliance with the covenants and the applicable financial ratios described above as of June 30, 2021 and through the filing of this Quarterly Report.

Convertible Senior Notes

On March 19, 2021, CRP issued \$150.0 million in aggregate principal amount of 3.25% senior unsecured convertible notes due 2028 (the “Convertible Senior Notes”). On March 26, 2021, CRP issued an additional \$20.0 million of Convertible Senior Notes pursuant to the exercise of the underwriters’ over-allotment option to purchase additional Convertible Senior Notes. These issuances resulted in aggregate net proceeds to CRP of \$163.6 million, after deducting debt issuance costs of \$6.4 million. Interest is payable on the Convertible Senior Notes semi-annually in arrears on each April 1 and October 1, commencing on October 1, 2021.

The Convertible Senior Notes are fully and unconditionally guaranteed on a senior unsecured basis by the Company and each of CRP’s current subsidiaries.

The Convertible Senior Notes will mature on April 1, 2028 unless earlier repurchased, redeemed or converted. Before January 3, 2028, noteholders have the right to convert their Convertible Senior Notes (i) upon the occurrence of certain events, (ii) if the Company’s share price exceeds 130% of the conversion price for any 20 trading days during the last 30 consecutive trading days of a calendar quarter, after June 30, 2021, or (iii) if the trading price per \$1,000 principal amount of the notes is less than 98% of the Company’s share price multiplied by the conversion rate, for a 10 consecutive trading day period. In addition, after January 2, 2028, noteholders may convert their Convertible Senior Notes at any time at their election through the second scheduled trading day immediately before the April 1, 2028 maturity date.

CRP can settle conversions by paying or delivering, as applicable, cash, shares of Common Stock, or a combination of cash and shares of Common Stock, at CRP’s election. The initial conversion rate is 159.2610 shares of Common Stock per \$1,000 principal amount of Convertible Senior Notes, which represents an initial conversion price of approximately \$6.28 per share of Common Stock. The conversion rate and conversion price are subject to customary adjustments upon the occurrence of certain events (as defined in the indenture) which, in certain circumstances, will increase the conversion rate for a specified period of time. In the context of this issuance, we refer to the notes as convertible in accordance with ASC 470 - *Debt*. However, per the terms of the Convertible Senior Notes’ indenture, the Convertible Senior Notes were issued by CRP and are exchangeable into shares of Centennial Resource Development, Inc’s Common Stock.

CRP has the option to redeem, in whole or in part, all of the Convertible Senior Notes at any time on or after April 7, 2025, at a redemption price equal to 100% of the principal amount, plus accrued and unpaid interest to the date of redemption, but only if the last reported sale price per share of Common Stock exceeds 130% of the conversion price (i) for any 20 trading days during the 30 consecutive trading days ending on the day immediately before the date CRP sends the related redemption notice; and (ii) also on the trading day immediately before the date CRP sends such notice.

If certain corporate events occur, including certain business combination transactions involving the Company or CRP or a stock de-listing with respect to the Common Stock, noteholders may require CRP to repurchase their Convertible Senior Notes at a cash repurchase price equal to the principal amount of the Convertible Senior Notes to be repurchased, plus accrued and unpaid interest to the repurchase date.

Upon an Event of Default (as defined in the indenture governing the Convertible Senior Notes), the trustee or the holders of at least 25% of the aggregate principal amount of then outstanding Convertible Senior Notes may declare the Convertible Senior Notes immediately due and payable. In addition, a default resulting from certain events of bankruptcy or insolvency with respect to the Company, CRP or any of the subsidiary guarantors will automatically cause all outstanding Convertible Senior Notes to become due and payable.

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

At issuance, the Company recorded a liability equal to the face value the Convertible Senior Notes, net of unamortized debt issuance costs in the line items *Long-term debt, net* in the consolidated balance sheets. As of June 30, 2021, the net liability recorded related to the Convertible Senior Notes was \$163.8 million.

Capped Called Transactions

In connection with the issuance of the Convertible Senior Notes in March 2021, CRP entered into privately negotiated capped call spread transactions with option counterparties (the “Capped Call Transactions”). The Capped Call Transactions cover the aggregate number of shares of Common Stock that initially underlie the Convertible Senior Notes and are expected to (i) generally reduce potential dilution to the Common Stock upon a conversion of the Convertible Senior Notes, and/or (ii) offset any cash payments CRP is required to make in excess of the principal amount of the Convertible Senior Notes, subject to a cap. The Capped Call Transactions have an initial strike price of \$6.28 per share of Common Stock and an initial capped price of \$8.4525 per share of Common Stock, each of which are subject to certain customary adjustments upon the occurrence of certain corporate events, as defined in the capped call agreements.

The cost of the Capped Call Transactions was \$14.7 million, which was funded from proceeds from the Convertible Senior Note issuance. The cost to purchase the Capped Call Transactions was recorded to additional paid-in capital in the consolidated balances sheets and will not be subject to remeasurement each reporting period.

Senior Unsecured Notes Debt Exchange

On May 22, 2020, CRP completed its private exchange of debt pursuant to which a \$254.2 million aggregate principal amount of Senior Unsecured Notes (defined below) was validly tendered and exchanged by certain eligible bondholders for consideration consisting of \$127.1 million aggregate principal amount (the “Debt Exchange”) of newly issued 8.00% second lien senior secured notes due 2025 (the “Senior Secured Notes”). The Company’s Debt Exchange was accounted for as an extinguishment of debt in accordance with ASC Topic 470-50, *Modifications and Extinguishments*. As a result, a gain on the exchange of debt of \$143.4 million was recognized in the consolidated statement of operations during the second quarter of 2020, which consisted of the carrying values of the Senior Unsecured Notes exchanged less the aggregate principal amount of the new Senior Secured Notes issued, net of their associated debt discount of \$21.0 million, which was based on the Senior Secured Notes’ estimated fair value on the exchange date.

Senior Secured Notes

In connection with the Debt Exchange, on May 22, 2020, the Company issued \$127.1 million aggregate principal amount of Senior Secured Notes. The Senior Secured Notes were recorded at their fair value on the date of issuance equal to 83.44% of par (a debt discount of \$21.0 million) and net of their associated debt issuance costs of \$4.2 million.

In April 2021, the Company redeemed at par all of its \$127.1 million aggregate principal amount of Senior Secured Notes, which was the intended use of proceeds from the Convertible Senior Notes offering. The Company paid accrued interest of \$3.8 million and recorded a loss on debt extinguishment of \$22.2 million related to the write-off of all unamortized debt issuance costs and discount amounts associated with the Senior Secured Notes.

Senior Unsecured Notes

On March 15, 2019, CRP issued \$500.0 million of 6.875% senior notes due 2027 (the “2027 Senior Notes”) in a 144A private placement at a price equal to 99.235% of par that resulted in net proceeds to CRP of \$489.0 million, after deducting the original issuance discount of \$3.8 million and debt issuance costs of \$7.2 million. Interest is payable on the 2027 Senior Notes semi-annually in arrears on each April 1 and October 1, which commenced on October 1, 2019. In May 2020 in connection with the Debt Exchange, \$143.7 million aggregate principal amount of the 2027 Senior Notes was exchanged for Senior Secured Notes. As of June 30, 2021, the remaining aggregate principal amount of 2027 Senior Notes outstanding was \$356.4 million.

On November 30, 2017, CRP issued at par \$400.0 million of 5.375% senior notes due 2026 (the “2026 Senior Notes” and collectively with the 2027 Senior Notes, the “Senior Unsecured Notes”) in a 144A private placement that resulted in net proceeds to CRP of \$391.0 million, after deducting \$9.0 million in debt issuance costs. Interest is payable on the 2026 Senior Notes semi-annually in arrears on each January 15 and July 15, which commenced on July 15, 2018. In May 2020 in connection with the Debt Exchange, \$110.6 million aggregate principal amount of the 2026 Senior Notes was exchanged for Senior Secured Notes. As of June 30, 2021, the remaining aggregate principal amount of 2026 Senior Notes outstanding was \$289.4 million.

The Senior Unsecured Notes are fully and unconditionally guaranteed on a senior unsecured basis by the Company and each of CRP’s current subsidiaries that guarantee CRP’s revolving credit facility.

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

At any time prior to January 15, 2021 (for the 2026 Senior Notes) and April 1, 2022 (for the 2027 Senior Notes), the “Optional Redemption Dates,” CRP may, on any one or more occasions, redeem up to 35% of the aggregate principal amount of either series of Senior Unsecured Notes with an amount of cash not greater than the net cash proceeds of certain equity offerings at a redemption price equal to 105.375% (for the 2026 Senior Notes) and 106.875% (for the 2027 Senior Notes) of the principal amount of the Senior Unsecured Notes of the applicable series redeemed, plus any accrued and unpaid interest to the date of redemption; provided that at least 65% of the aggregate principal amount of each such series of Senior Unsecured Notes remains outstanding immediately after such redemption, and the redemption occurs within 180 days of the closing date of such equity offering.

At any time prior to the Optional Redemption Dates, CRP may, on any one or more occasions, redeem all or a part of the Senior Unsecured Notes at a redemption price equal to 100% of the principal amount of the Senior Unsecured Notes redeemed, plus a “make-whole” premium, and any accrued and unpaid interest as of the date of redemption. On and after the Optional Redemption Dates, CRP may redeem the Senior Unsecured Notes, in whole or in part, at redemption prices expressed as percentages of principal amount plus accrued and unpaid interest to the redemption date.

If CRP experiences certain defined changes of control (and, in some cases, followed by a ratings decline), each holder of the Senior Unsecured Notes may require CRP to repurchase all or a portion of its Senior Unsecured Notes for cash at a price equal to 101% of the aggregate principal amount of such Senior Unsecured Notes, plus any accrued but unpaid interest to the date of repurchase.

The indentures governing the Senior Unsecured Notes contain covenants that, among other things and subject to certain exceptions and qualifications, limit CRP’s ability and the ability of CRP’s restricted subsidiaries to: (i) incur or guarantee additional indebtedness or issue certain types of preferred stock; (ii) pay dividends on capital stock or redeem, repurchase or retire capital stock or subordinated indebtedness; (iii) transfer or sell assets; (iv) make investments; (v) create certain liens; (vi) enter into agreements that restrict dividends or other payments from their subsidiaries to them; (vii) consolidate, merge or transfer all or substantially all of their assets; (viii) engage in transactions with affiliates; and (ix) create unrestricted subsidiaries. CRP was in compliance with these covenants as of June 30, 2021 and through the filing of this Quarterly Report.

Upon an Event of Default (as defined in the indentures governing the Senior Unsecured Notes), the trustee or the holders of at least 25% of the aggregate principal amount of then outstanding Senior Unsecured Notes may declare the Senior Unsecured Notes immediately due and payable. In addition, a default resulting from certain events of bankruptcy or insolvency with respect to CRP, any restricted subsidiary of CRP that is a significant subsidiary, or any group of restricted subsidiaries that, taken together, would constitute a significant subsidiary, will automatically cause all outstanding Senior Unsecured Notes to become due and payable.

Note 5—Asset Retirement Obligations

The following table summarizes changes in the Company’s asset retirement obligations (“ARO”) associated with its working interests in oil and gas properties for the six months ended June 30, 2021:

(in thousands)		
Asset retirement obligations, beginning of period	\$	17,009
Liabilities incurred		87
Liabilities divested and settled		(215)
Accretion expense		656
Revisions to estimated cash flows		(21)
Asset retirement obligations, end of period	<u>\$</u>	<u>17,516</u>

ARO reflect the present value of the estimated future costs associated with the plugging and abandonment of oil and gas wells, removal of equipment and facilities from leased acreage and land restoration in accordance with applicable local, state and federal laws. Inherent in the fair value calculation of ARO are numerous estimates and assumptions, including plug and abandonment settlement amounts, inflation factors, credit adjusted discount rates and timing of settlement. To the extent future revisions to these assumptions impact the value of the existing ARO liabilities, a corresponding offsetting adjustment is made to the oil and gas property balance. Changes in the liability due to the passage of time are recognized as an increase in the carrying amount of the liability with an offsetting charge to accretion expense, which is included within depreciation, depletion and amortization.

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 6—Stock-Based Compensation

On October 7, 2016, the stockholders of the Company approved the Centennial Resource Development, Inc. 2016 Long Term Incentive Plan (the “LTIP”), which authorized an aggregate of 16,500,000 shares of Common Stock for issuance to employees and directors. On April 29, 2020, the stockholders of the Company approved the amended and restated LTIP, which, among other things, increased the number of shares of Common Stock authorized for issuance by 8,250,000 shares. As of June 30, 2021, the Company had 6,645,120 shares of Common Stock available for future grants. The LTIP provides for grants of restricted stock, stock options (including incentive stock options and nonqualified stock options), restricted stock units, stock appreciation rights and other stock or cash-based awards.

Stock-based compensation expense is recognized within both *General and administrative expenses* and *Exploration and other expenses* in the consolidated statements of operations. The Company accounts for forfeitures of awards granted under the LTIP as they occur in determining compensation expense.

The following table summarizes stock-based compensation expense recognized for the periods presented:

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Equity Awards				
Restricted stock awards	\$ 3,536	\$ 3,387	\$ 7,142	\$ 7,741
Stock option awards	234	291	505	1,275
Performance stock units	646	1,003	1,285	2,006
Other stock-based compensation expense ⁽¹⁾	65	46	134	114
Total stock-based compensation - equity awards	4,481	4,727	9,066	11,136
Liability Awards				
Restricted stock units	4,647	—	7,955	—
Performance stock units	10,013	—	17,119	—
Total stock-based compensation - liability awards	14,660	—	25,074	—
Total stock-based compensation expense	\$ 19,141	\$ 4,727	\$ 34,140	\$ 11,136

⁽¹⁾ Includes expenses related to the Company’s Employee Stock Purchase Plan (the “ESPP”). In May 2019, an aggregate of 2,000,000 shares were authorized by stockholders for issuance under the ESPP, which became effective on July 1, 2019. As of June 30, 2021, the Company had 1,561,164 shares of Common Stock available for future issuance.

Equity Awards

The Company has restricted stock awards, stock options and performance stock units (“PSUs”) outstanding that were granted under the LTIP as discussed below. Each award has service-based and, in the case of the PSUs, market-based vesting requirements, and are expected to be settled in shares of Common Stock upon vesting. As a result, these awards are classified as equity-based awards in accordance with ASC Topic 718, *Compensation-Stock Compensation* (“ASC 718”).

Restricted Stock

The following table provides information about restricted stock activity during the six months ended June 30, 2021:

	Awards	Weighted Average Grant-Date Fair Value
Unvested balance as of December 31, 2020	12,093,723	\$ 2.33
Granted	—	—
Vested	(504,052)	5.39
Forfeited	(8,228)	8.57
Unvested balance as of June 30, 2021	11,581,443	2.19

The Company grants service-based restricted stock awards to executive officers and employees, which vest ratably over a three-year service period, and to directors, which vest over a one-year service period. Compensation cost for these service-based restricted stock awards is based on the closing market price of the Company’s Common Stock on the grant date, and such costs are recognized ratably over the applicable vesting period. There were no restricted stock awards granted during the six months ended June 30, 2021. The total fair value of restricted stock awards that vested during the six months ended June 30, 2021 and

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

2020 was \$2.7 million and \$4.6 million, respectively. Unrecognized compensation cost related to restricted shares that were unvested as of June 30, 2021 was \$13.8 million, which the Company expects to recognize over a weighted average period of 1.5 years.

Stock Options

Stock options that have been granted under the LTIP expire ten years from the grant date and vest ratably over a three-year service period. The exercise price for an option granted under the LTIP is the closing market price of the Company's Common Stock on the grant date.

Compensation cost for stock options is based on the grant-date fair value of the award, which is then recognized ratably over the vesting period of three years. The Company estimates the fair value using the Black-Scholes option-pricing model. Expected volatilities are based on the weighted average historical volatilities of the Company and an identified set of comparable companies. Expected term is based on the simplified method and is estimated as the mid-point between the weighted average vesting term and the time to expiration as of the grant date. The Company uses U.S. Treasury bond rates in effect at the grant date for its risk-free interest rates.

The following table summarizes the assumptions and related information used to determine the grant-date fair value of stock option awards for the six months ended June 30, 2020. No stock options were granted during the six months ended June 30, 2021.

	Six Months Ended June 30,	
	2021	2020
Weighted average grant-date fair value per share	\$ —	\$ 1.16
Expected term (in years)	0	6
Expected stock volatility	— %	86 %
Dividend yield	— %	— %
Risk-free interest rate	— %	1.0 %

The following table provides information about stock option awards outstanding during the six months ended June 30, 2021:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding as of December 31, 2020	2,363,334	\$ 15.07		
Granted	—	—		
Exercised	(14,999)	0.99		\$ 71
Forfeited	(5,334)	5.77		
Expired	(52,333)	16.98		
Outstanding as of June 30, 2021	2,290,668	15.14	6.03	\$ 473
Exercisable as of June 30, 2021	2,057,977	15.73	5.82	\$ 103

The total fair value of stock options that vested during the six months ended June 30, 2021 and 2020 was \$0.5 million and \$4.2 million, respectively. The intrinsic value of the stock options exercised was \$0.1 million for the six months ended June 30, 2021 and there were no stock options exercised during the six months ended June 30, 2020. As of June 30, 2021, there was \$0.4 million of unrecognized compensation cost related to unvested stock options, which the Company expects to recognize on a pro-rata basis over a weighted-average period of 0.8 years.

Performance Stock Units

The Company grants performance stock units to certain executive officers that are subject to market-based vesting criteria as well as a three-year service period. Vesting at the end of the three-year service period is subject to the condition that the Company's stock price increases by a greater percentage, or decreases by a lesser percentage, than the average percentage increase or decrease, respectively, of the stock prices of a peer group of companies. The market-based conditions must be met in order for the stock awards to vest, and it is, therefore, possible that no shares could ultimately vest. However, the Company recognizes compensation expense for the performance stock units subject to market conditions regardless of whether it becomes probable that these conditions will be met or not, and compensation expense is not reversed if vesting does not actually occur.

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

During the six months ended June 30, 2021 and 2020, there was no performance stock units activity. As of June 30, 2021, there was \$1.1 million of unrecognized compensation cost related to performance stock units that were unvested, which the Company expects to recognize on a pro-rata basis over a weighted average period of 1.0 year.

Liability Awards

The Company has restricted stock units and performance stock units that were granted under the LTIP, which will be settled in cash and are classified as liability awards in accordance with ASC 718. Compensation cost for the liability awards is based on the fair value of the units as of the balance sheet date as further discussed below, and such costs are recognized ratably over the service periods of the awards. As the fair value of liability awards is required to be re-measured each period end, stock compensation expense amounts recognized in future periods for these awards will vary. The estimated future cash payments of these awards are presented as liabilities within *Other current liabilities* and *Other long-term liabilities* in the consolidated balances sheets.

Restricted Stock Units

The Company granted 5.5 million restricted stock units during the third quarter of 2020 to certain officers (non-NEOs) and employees that are settleable in cash upon vesting. The restricted stock units vest annually in one-third increments over a three-year service period, with the first portion vesting on September 1, 2021. After one year from the grant date, however, the remaining two-thirds of unvested restricted stock units granted to non-NEOs can vest immediately, on an accelerated basis, if they meet certain market-based vesting criteria equal to the maximum return percentage discussed below for at least 20 out of any 30 consecutive trading days. Additionally, the restricted stock units include maximum and minimum return amounts equal to 400% and 25%, respectively, of the closing market price of the Company's Common Stock on the grant date. As of June 30, 2021, there was \$8.7 million of unrecognized compensation cost, which represents the unvested portion of the fair value of the restricted stock units and will be recognized over a weighted average period of 1.6 years or sooner if the accelerated vesting event occurs. Subsequent to June 30, 2021, the Company modified these restricted stock units to allow the units to be settleable in either cash or Common Stock at the Company's discretion upon vesting (refer to Note 14—Subsequent Events for additional information regarding the modification).

Performance Stock Units

The Company granted 5.5 million performance stock units ("PSU") during third quarter of 2020 to certain executive officers that will be settled in cash and are subject to market-based vesting criteria as well as a three-year service condition. Vesting at the end of the three-year service period is subject to the condition that the Company's stock price increases by a greater percentage, or decreases by a lesser percentage, than the average percentage increase or decrease, respectively, of the stock price of a peer group of companies. The market-based conditions must be met in order for the PSU awards to vest, and it is therefore possible that no units could ultimately vest and cumulative stock compensation expense recognized for these awards would then be reduced to zero. As of June 30, 2021, there was \$41 million of unrecognized compensation cost that represents the unvested portion of the fair value of the PSUs at June 30, 2021 and will be recognized over a weighted average period of 2.0 years.

Liability Awards Fair Value

The fair value of the restricted stock units and performance stock units was estimated using a Monte Carlo valuation model as of the balance sheet date. The Monte Carlo valuation model is based on random projections of stock price paths and must be repeated numerous times to achieve a probabilistic assessment. Expected volatility was calculated based on the historical volatility of the Company's Common Stock as well as the peer companies that are specified in the PSU award agreement. The risk-free rate is based on U.S. Treasury yield curve rates with maturities consistent with the remaining vesting or performance period.

The following table summarizes the key assumptions and related information used to determine the fair value of the liability awards as of June 30, 2021:

	Restricted stock units	Performance stock units
Number of simulations	10,000,000	10,000,000
Expected implied stock volatility	69.8%	72.3%
Dividend yield	—%	—%
Risk-free interest rate	0.3%	0.3%

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 7—Derivative Instruments

The Company is exposed to certain risks relating to its ongoing business operations and may use derivative instruments to manage its exposure to commodity price risk from time to time.

Commodity Derivative Contracts

Historically, prices received for crude oil and natural gas production have been volatile because of supply and demand factors, worldwide political factors, general economic conditions and seasonal weather patterns. The Company may periodically use derivative instruments, such as swaps, costless collars and basis swaps, to mitigate its exposure to declines in commodity prices and to the corresponding negative impacts such declines can have on its cash flows from operations, returns on capital and other financial results. While the use of these instruments limits the downside risk of adverse price changes, their use may also limit future revenues from favorable price changes. The Company does not enter into derivative contracts for speculative or trading purposes.

Commodity Swap and Collar Contracts. The Company may use commodity derivative instruments known as fixed price swaps to realize a known price for a specific volume of production, basis swaps to hedge the difference between the index price and a local or future index price, or costless collars to establish fixed price floors and ceilings. All transactions are settled in cash with one party paying the other for the resulting difference in price multiplied by the contract volume.

The following table summarizes the approximate volumes and average contract prices of derivative contracts the Company had in place as of June 30, 2021:

	Period	Volume (Bbls)	Volume (Bbls/d)	Wtd. Avg. Crude Price (\$/Bbl) ⁽¹⁾		
Crude oil swaps						
NYMEX WTI	July 2021 - September 2021	782,000	8,500	\$47.01		
	October 2021 - December 2021	828,000	9,000	49.82		
	January 2022 - March 2022	720,000	8,000	64.41		
	April 2022 - June 2022	500,500	5,500	63.26		
	July 2022 - September 2022	368,000	4,000	62.41		
	October 2022 - December 2022	276,000	3,000	62.15		
ICE Brent	July 2021 - September 2021	276,000	3,000	\$54.85		
	October 2021 - December 2021	184,000	2,000	48.50		
	Period	Volume (Bbls)	Volume (Bbls/d)	Wtd. Avg. Collar Price Ranges (\$/Bbl) ⁽²⁾		
Crude oil collars						
NYMEX WTI	July 2021 - September 2021	184,000	2,000	\$ 49.75	-	\$ 58.51
	October 2021 - December 2021	92,000	1,000	42.00	-	50.10
ICE Brent	July 2021 - September 2021	230,000	2,500	\$65.00	-	\$73.17
	October 2021 - December 2021	92,000	1,000	65.00	-	74.70
	Period	Volume (Bbls)	Volume (Bbls/d)	Wtd. Avg. Differential (\$/Bbl) ⁽³⁾		
Crude oil basis differential swaps						
	July 2021 - September 2021	736,000	8,000	\$0.26		
	October 2021 - December 2021	644,000	7,000	0.26		
	Period	Volume (Bbls)	Volume (Bbls/d)	Wtd. Avg. Differential (\$/Bbl) ⁽⁴⁾		
Crude oil roll differential swaps						
	January 2022 - March 2022	450,000	5,000	\$0.60		
	April 2022 - June 2022	455,000	5,000	0.60		
	July 2022 - September 2022	460,000	5,000	0.60		
	October 2022 - December 2022	460,000	5,000	0.60		

⁽¹⁾ These crude oil swap transactions are settled based on either the NYMEX WTI or ICE Brent index price, as applicable, on each trading day within the specified monthly settlement period versus the contractual swap price for the volumes stipulated.

⁽²⁾ These crude oil collars are settled based on the NYMEX WTI or ICE Brent index price, as applicable, on each trading day within the specified monthly settlement period versus the contractual floor and ceiling prices for the volumes stipulated.

⁽³⁾ These crude oil basis swap transactions are settled based on the difference between the arithmetic average of ARGUS MIDLAND WTI and ARGUS WTI CUSHING indices, during each applicable monthly settlement period.

⁽⁴⁾ These crude oil roll swap transactions are settled based on the difference between the arithmetic average of NYMEX WTI calendar month prices and the physical crude oil delivery month price.

	Period	Volume (MMBtu)	Volume (MMBtu/d)	Wtd. Avg. Gas Price (\$/MMBtu) ⁽¹⁾
Natural gas swaps				
	July 2021 - September 2021	3,680,000	40,000	\$2.89
	October 2021 - December 2021	3,680,000	40,000	2.95
	January 2022 - March 2022	2,700,000	30,000	3.00
	April 2022 - June 2022	910,000	10,000	3.00
	July 2022 - September 2022	920,000	10,000	3.00
	October 2022 - December 2022	920,000	10,000	3.00

	<u>Period</u>	<u>Volume (MMBtu)</u>	<u>Volume (MMBtu/d)</u>	<u>Wtd. Avg. Differential (\$/MMBtu)⁽²⁾</u>
Natural gas basis differential swaps	July 2021 - September 2021	3,680,000	40,000	\$(0.30)
	October 2021 - December 2021	4,290,000	46,630	(0.24)
	January 2022 - March 2022	2,700,000	30,000	(0.18)

	<u>Period</u>	<u>Volume (MMBtu)</u>	<u>Volume (MMBtu/d)</u>	<u>Wtd. Avg. Collar Price Ranges (\$/MMBtu)⁽³⁾</u>
Natural gas collars	October 2021 - December 2021	610,000	6,630	\$3.00 - \$3.30
	January 2022 - March 2022	900,000	10,000	3.00 - 3.30

⁽¹⁾ These natural gas swap contracts are settled based on the NYMEX Henry Hub price on each trading day within the specified monthly settlement period versus the contractual swap price for the volumes stipulated.

⁽²⁾ These natural gas basis swap contracts are settled based on the difference between the Inside FERC's West Texas WAHA price and the NYMEX price of natural gas, during each applicable monthly settlement period.

⁽³⁾ These natural gas collars are settled based on the Henry Hub price on each trading day within the specified monthly settlement period versus the contractual floor and ceiling prices for the volumes stipulated.

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Derivative Instrument Reporting. The Company's oil and natural gas derivative instruments have not been designated as hedges for accounting purposes. Therefore, all gains and losses are recognized in the Company's consolidated statements of operations. All derivative instruments are recorded at fair value in the consolidated balance sheets, other than derivative instruments that meet the "normal purchase normal sale" exclusion, and any fair value gains and losses are recognized in current period earnings.

The following table presents the impact of the Company's derivative instruments in its consolidated statements of operations for the periods presented:

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Net gain (loss) on derivative instruments	\$ (54,959)	\$ (29,857)	\$ (106,158)	\$ (38,362)

Offsetting of Derivative Assets and Liabilities. The Company's commodity derivatives are included in the accompanying consolidated balance sheets as derivative assets and liabilities. The Company nets its financial derivative instrument fair value amounts executed with the same counterparty pursuant to ISDA master netting agreements, which provide for net settlement over the term of the contract and in the event of default or termination of the contract. The tables below summarize the fair value amounts and the classification in the consolidated balance sheets of the Company's derivative contracts outstanding at the respective balance dates, as well as the gross recognized derivative assets, liabilities and offset amounts:

(in thousands)	Balance Sheet Classification	Gross Fair Value Asset/Liability Amounts	Gross Amounts Offset ⁽¹⁾		Net Recognized Fair Value Assets/Liabilities
			June 30, 2021		
Derivative Assets					
Commodity contracts	Prepaid and other current assets	\$ 1,173	\$ (1,173)		\$ —
	Other noncurrent assets	163	(95)		68
Derivative Liabilities					
Commodity contracts	Other current liabilities	63,885	(1,173)		62,712
	Other noncurrent liabilities	1,419	(95)		1,324
December 31, 2020					
Derivative Assets					
Commodity contracts	Prepaid and other current assets	\$ 6,131	\$ (6,131)		\$ —
	Other noncurrent assets	152	(100)		52
Derivative Liabilities					
Commodity contracts	Other current liabilities	\$ 24,392	\$ (6,131)		\$ 18,261
	Other noncurrent liabilities	\$ 100	\$ (100)		\$ 0

⁽¹⁾ The Company has agreements in place with each of its counterparties that allow for the financial right of offset for derivative assets against derivative liabilities at settlement or in the event of a default under the agreements or contract termination.

Contingent Features in Financial Derivative Instruments. None of the Company's derivative instruments contain credit-risk-related contingent features. Counterparties to the Company's financial derivative contracts are high credit-quality financial institutions that are lenders under CRP's credit agreement. The Company uses only credit agreement participants to hedge with, since these institutions are secured equally with the holders of any CRP bank debt, which eliminates the potential need to post collateral when Centennial is in a derivative liability position. As a result, the Company is not required to post letters of credit or corporate guarantees for its derivative counterparties in order to secure contract performance obligations.

In addition, the Company is exposed to credit risk associated with its derivative contracts from non-performance by its counterparties. The Company mitigates its exposure to any single counterparty by contracting with a number of financial institutions, each of which has a high credit rating and is a member under CRP's credit facility as referenced above.

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 8—Fair Value Measurements**Recurring Fair Value Measurements**

The Company follows ASC Topic 820, *Fair Value Measurement and Disclosure*, which establishes a three-level valuation hierarchy for disclosure of fair value measurements. The valuation hierarchy categorizes assets and liabilities measured at fair value into one of three different levels depending on the observability of the inputs employed in the measurement. The three levels are defined as follows:

- Level 1: Quoted Prices in Active Markets for Identical Assets – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2: Significant Other Observable Inputs – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3: Significant Unobservable Inputs – inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The following table presents, for each applicable level within the fair value hierarchy, the Company's net derivative assets and liabilities, including both current and noncurrent portions, measured at fair value on a recurring basis:

(in thousands)	Level 1	Level 2	Level 3
June 30, 2021			
Total assets	\$ —	\$ 68	\$ —
Total liabilities	—	64,036	—
December 31, 2020			
Total assets	\$ —	\$ 52	\$ —
Total liabilities	—	18,261	—

Both financial and non-financial assets and liabilities are categorized within the above fair value hierarchy based on the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment and considers factors specific to the asset or liability. The following is a description of the valuation methodologies used by the Company as well as the general classification of such instruments pursuant to the above fair value hierarchy. There were no transfers between any of the fair value levels during any period presented.

Derivatives

The Company uses Level 2 inputs to measure the fair value of its oil and natural gas commodity derivatives. The Company uses industry-standard models that consider various assumptions including current market and contractual prices for the underlying instruments, implied market volatility, time value, nonperformance risk, as well as other relevant economic measures. Substantially all of these inputs are observable in the marketplace throughout the full term of the instrument and can be supported by observable data. The Company utilizes its counterparties' valuations to assess the reasonableness of its own valuations. Refer to *Note 7—Derivative Instruments* for details of the gross and net derivatives assets, liabilities and offset amounts presented in the consolidated balance sheets.

Nonrecurring Fair Value Measurements

The Company applies the provisions of the fair value measurement standard on a nonrecurring basis to its non-financial assets and liabilities, including proved oil and gas properties. These assets and liabilities are not measured at fair value on an ongoing basis but are subject to fair value adjustments in certain circumstances.

Impairment of Oil and Natural Gas Properties. The Company reviews its proved oil and natural gas properties for impairment whenever events and circumstances indicate that the fair value of these assets may be below their carrying value. An impairment loss is indicated if the sum of the expected undiscounted future net cash flows from oil and gas properties is less than the carrying amount of the assets. In this circumstance, the Company then recognizes impairment expense for the amount by which the carrying amount of proved properties exceeds their estimated fair value. The Company reviews its oil and natural gas properties on a field-by-field basis.

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

The Company calculates the estimated fair values of its oil and natural gas properties using an income approach that is based on inputs that are not observable in the market and therefore represent Level 3 inputs. Significant inputs to the expected future net cash flows used for the impairment review and the related fair value measurement of oil and natural gas proved properties include estimates of: (i) reserves; (ii) future production decline rates; (iii) future operating and development costs; (iv) future commodity prices, including price differentials; and (v) a market participant-based weighted average cost of capital rate. These inputs require significant judgments and estimates by the Company's management.

Asset Retirement Obligations. The initial measurement of ARO at fair value is calculated using discounted cash flow techniques and is based on internal estimates of future retirement costs associated with property, plant and equipment. Significant Level 3 inputs used in the calculation of ARO include the estimated future costs to plug and abandon oil and gas properties and reserve lives. Refer to *Note 5—Asset Retirement Obligations* for additional information on the Company's ARO.

Other Financial Instruments

The carrying amounts of the Company's cash, cash equivalents, accounts receivable, accounts payable, and accrued liabilities approximate their fair values because of the short-term maturities and/or liquid nature of these assets and liabilities.

The Company's senior notes and borrowings under its credit agreement are accounted for at cost, and the cost basis of the Company's Senior Secured Notes issued in the Debt Exchange was measured based on their fair value on the date of the exchange. The following table summarizes the carrying values, principal amounts and fair values of these instruments as of the dates indicated:

	June 30, 2021			December 31, 2020		
	Carrying Value	Principal Amount	Fair Value	Carrying Value	Principal Amount	Fair value
Credit facility due 2023 ⁽¹⁾	\$ 255,000	\$ 255,000	\$ 255,000	\$ 330,000	\$ 330,000	\$ 330,000
8.00% Senior Secured Notes due 2025 ⁽²⁾	—	—	—	103,901	127,073	114,366
5.375% Senior Notes due 2026 ⁽²⁾	285,261	289,448	283,659	284,867	289,448	206,955
6.875% Senior Notes due 2027 ⁽²⁾	350,276	356,351	364,405	349,856	356,351	254,791
3.25% Convertible Notes due 2028 ⁽²⁾	163,780	170,000	219,606	—	—	—

⁽¹⁾ The carrying values of the amounts outstanding under CRP's credit agreement approximate fair value because its variable interest rates are tied to current market rates and the applicable credit spreads represent current market rates for the credit risk profile of the Company.

⁽²⁾ The carrying values include associated unamortized debt issuance costs and any debt discounts as reflected in the consolidated balance sheets. The fair values are determined using quoted market prices for these debt securities, a Level 1 classification in the fair value hierarchy, and are based on the aggregate principal amount of the senior notes outstanding.

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 9—Earnings Per Share

Basic earnings per share (“EPS”) is calculated by dividing net income available to Class A Common Stock by the weighted average shares of Common Stock outstanding during each period. Diluted EPS is calculated by dividing adjusted net income available to Class A Common Stock by the weighted average shares of diluted Common Stock outstanding, which includes the effect of potentially dilutive securities. Potentially dilutive securities for the diluted EPS calculation consists of (i) unvested equity-based restricted stock and performance stock units, outstanding stock options, withholding amounts from the employee stock purchase plan and warrants, all using the treasury stock method, and (ii) the Company’s Class C common stock outstanding, prior to the conversion of remaining Class C shares in the second quarter of 2020, and potential shares issuable under our Convertible Senior Notes, both using the “if-converted” method, which is net of tax.

The following table reflects the allocation of net income to common shareholders and EPS computations for the periods indicated based on a weighted average number of common shares outstanding for the period:

(in thousands, except per share data)	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Net income (loss) attributable to Class A Common Stock	\$ (25,055)	\$ 5,330	\$ (59,700)	\$ (542,653)
Basic weighted average shares of Class A Common Stock outstanding	279,185	277,133	279,061	276,543
Add: Dilutive effects of potential common stock	—	75	—	—
Diluted weighted average shares of Class A Common Stock outstanding	279,185	277,208	279,061	276,543
Basic net earnings (loss) per share of Class A Common Stock	\$ (0.09)	\$ 0.02	\$ (0.21)	\$ (1.96)
Diluted net earnings (loss) per share of Class A Common Stock	\$ (0.09)	\$ 0.02	\$ (0.21)	\$ (1.96)

The Company recognized a net loss during the three and six months ended June 30, 2021 and during the three months ended June 30, 2020. As a result, all potential common shares were anti-dilutive and were excluded from the calculation of diluted net earnings per share. The following table presents shares excluded from the diluted earnings per share calculation for the periods presented as their impact was anti-dilutive:

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Out-of-the-money stock options	2,241	4,696	2,267	4,756
Restricted stock	8,769	5,066	9,167	5,125
Employee Stock Purchase Plan	68	—	54	139
Weighted average shares of Class C Common Stock	—	11	—	523
Warrants	8,000	8,000	8,000	8,000
Performance stock units	—	—	199	—
Convertible Senior Notes	27,074	—	27,074	—

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 10—Transactions with Related Parties

Riverstone Investment Group LLC and its affiliates (“Riverstone”) beneficially own a more than 10% equity interest in the Company and are therefore considered related parties. The Company has a marketing agreement with Lucid Energy Delaware, LLC (“Lucid”), an affiliate of Riverstone. The Company believes that the terms of the marketing agreement with Lucid are no less favorable to either party than those held with unaffiliated parties.

The following table summarizes the revenues recognized and the associated processing fees incurred from this marketing agreement as included in the consolidated statements of operations for the periods indicated, as well as the related net receivables outstanding as of the balance sheet dates:

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Oil and gas sales	\$ 3,056	\$ 574	\$ 4,132	\$ 1,662
Gathering, processing and transportation expenses	1,636	1,109	2,841	2,062

(in thousands)	June 30, 2021	December 31, 2020
Accounts receivable, net ⁽¹⁾	\$ 2,251	\$ 994

⁽¹⁾ Represents amounts due from Lucid and are presented net of unpaid processing fees as of the indicated period end date.

Senior Secured Notes

Riverstone held \$106.3 million of the Company’s Senior Secured Notes as of December 31, 2020. In April 2021, the Company redeemed all of its Senior Secured Notes, including the portion held by Riverstone. In connection with this redemption, the Company paid \$3.8 million in accrued interest associated with the Senior Secured Notes, including \$3.1 million to Riverstone during the three months ended June 30, 2021. No interest payments were made to Riverstone during the three or six months ended June 30, 2020.

Note 11—Commitments and Contingencies**Commitments**

The Company routinely enters into, extends or amends operating agreements in the ordinary course of business. There have been no material, non-routine changes in commitments during the six months ended June 30, 2021. Please refer to *Note 13—Commitments and Contingencies* included in Part II, Item 8 in the Company’s 2020 Annual Report.

The Company has a firm crude oil sales agreement with a large integrated oil company, and in the first quarter of 2021, new pricing terms under this agreement went into effect. Utilizing this integrated oil company’s transport capacity out of the Permian Basin, the agreement provides for firm gross sales of 30,000 Bbls/d over the next 4 years and is based upon prevailing market prices of ICE Brent less contractual differentials. These pricing terms are resulting in realized prices that currently have wider differentials than those being realized under the Company’s other oil marketing agreements. However, if the oil price differential between the ICE Brent and NYMEX WTI indices widen in the future, the oil price realized under this delivery commitment will improve relative to the prices realized under the Company’s other oil sales contracts. Under-delivery of volumes that are committed under this agreement would result in a financial obligation to the Company, although the Company’s current production level (on a gross basis) is, and the Company believes its future production will be, sufficient to fulfill this physical delivery commitment.

Contingencies

The Company may at times be subject to various commercial or regulatory claims, prior period adjustments from service providers, litigation or other legal proceedings that arise in the ordinary course of business. While the outcome of these lawsuits and claims cannot be predicted with certainty, management believes it is remote that the impact of such matters, other than those discussed below, that are reasonably possible to occur will have a material adverse effect on the Company’s financial position, results of operations, or cash flows.

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

In February 2021, the Permian Basin was impacted by record-low temperatures and a severe winter storm (“Winter Storm Uri”) that resulted in multi-day electrical outages and shortages, pipeline and infrastructure freezes, transportation disruptions, and regulatory actions in Texas, which led to significant increases in gas prices, gathering, processing and transportation fees and electrical rates during this time. As a result, many oil and gas operations, including upstream producers like the Company, as well as gas processors and purchasers, and transportation providers experienced operational disruptions. During this time, the Company was unable to utilize the entire volume of its reserved capacity on pipelines and as a result has made certain force majeure declarations. One third-party transportation provider has filed a lawsuit against the Company claiming compensation for the full amount of the reserved capacity, both utilized and unutilized. The Company has made a payment for the utilized capacity, and filed a separate lawsuit against the transportation provider requesting declaratory relief for the purpose of construing the provisions of the transportation agreement relating to the unutilized capacity. At this time, the Company believes that a loss is reasonably possible in relation to these matters and such amount could range from zero to \$7.6 million, and no amount in that range is a better estimate than any other.

Other than the matter above, management is unaware of any pending litigation brought against the Company requiring a contingent liability to be recognized as of the date of these consolidated financial statements.

Note 12—Revenues

Revenue from Contracts with Customers

Crude oil, natural gas and NGL sales are recognized at the point that control of the product is transferred to the customer and collectability is reasonably assured. Virtually all of the Company’s contract pricing provisions are tied to a market index, with certain adjustments based on, among other factors, transportation costs to an active spot market and quality differentials. As a result, the Company’s realized prices of oil, natural gas, and NGLs fluctuate to remain competitive with other available oil, natural gas, and NGLs supplies both globally (in the case of crude oil) and locally.

Oil and gas revenues presented within the consolidated statements of operations relate to the sale of oil, natural gas and NGLs as shown below:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Operating revenues (in thousands):				
Oil sales	\$ 177,105	\$ 73,100	\$ 310,831	\$ 243,605
Natural gas sales	27,015	8,787	62,466	17,145
NGL sales	28,457	8,622	51,671	22,528
Oil and gas sales	\$ 232,577	\$ 90,509	\$ 424,968	\$ 283,278

Oil sales

The Company’s crude oil sales contracts are generally structured whereby oil is delivered to the purchaser at a contractually agreed-upon delivery point at which the purchaser takes title of the product. This delivery point is usually at the wellhead or at the inlet of a transportation pipeline. Revenue is recognized when control transfers to the purchaser at the delivery point based on the net price received from the purchaser. Any downstream transportation costs incurred by crude purchasers are reflected as a net reduction to oil sales revenues.

Natural gas and NGL sales

Under the Company’s natural gas processing contracts, liquids rich natural gas is delivered to a midstream gathering and processing entity at the inlet of the gas gathering system. The midstream processing entity gathers and processes the raw gas and then remits proceeds to Centennial for the resulting sales of NGLs, while the Company generally elects to take its residue gas product “in-kind” at the plant tailgate. For these contracts, the Company evaluates when control is transferred and revenue should be recognized. Where the Company has concluded that control transfers at the tailgate of the processing facility, fees incurred prior to transfer of control are presented as gathering, processing and transportation expenses (“GP&T”) within the consolidated statements of operations. Any transportation and fractionation costs incurred subsequent to the point of transfer of control are reflected as a net reduction to natural gas and NGL sales revenues presented in the table above.

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Performance obligations

For all commodity products, the Company records revenue in the month production is delivered to the purchaser. Settlement statements for natural gas and NGL sales may not be received for 30 to 90 days after the date production volumes are delivered and for crude oil, generally within 30 days after delivery has occurred. However, payment is unconditional once the performance obligations have been satisfied. At such time, the volumes delivered and sales prices can be reasonably estimated and amounts due from customers are accrued in *Accounts receivable, net* in the consolidated balance sheets. As of June 30, 2021 and December 31, 2020, such receivable balances were \$67.8 million and \$41.7 million, respectively.

The Company records any differences between its estimates and the actual amounts received for product sales in the month that payment is received from the purchaser. Historically, any identified differences between revenue estimates and actual revenue received have not been significant. For the six months ended June 30, 2021 and 2020, revenue recognized in the reporting period related to performance obligations satisfied in prior reporting periods were not material.

Transaction price allocated to remaining performance obligations

For the Company's product sales that have a contract term greater than one year, the Company has utilized the practical expedient in ASC Topic 606, *Revenue from contracts with Customers*, which states the Company is not required to disclose the transaction price allocated to the remaining performance obligations if the variable consideration is allocated entirely to a wholly unsatisfied performance obligation. Under these sales contracts, monthly sales of a product generally represent a separate performance obligation. Therefore, future commodity volumes to be delivered and sold are wholly unsatisfied, and disclosure of the transaction price allocated to such unsatisfied performance obligations is not required.

Note 13—Leases

At contract inception, the Company determines whether or not an arrangement contains a lease. However, in connection with the implementation of ASC Topic 842, *Leases* ("ASC 842"), this assessment was made as of the adoption date of ASC 842. Upon determination of a lease, a lease right-of-use ("ROU") asset and related liability are recorded based on the present value of the future lease payments over the lease term. ROU assets represent the Company's right to use an underlying asset for the lease term, and lease liabilities represent the obligation to make future lease payments arising from the lease.

The Company has operating leases for drilling rig contracts, office rental agreements, and other wellhead equipment. As of June 30, 2021, these leases have remaining lease terms ranging from one month to 10 years, some of which include options to extend the lease term for up to five years, and some of which include options to early terminate. These options are considered in determining the lease term and are included in the present value of future payments that are recorded for leases when the Company is reasonably certain to exercise the option. Leases with an initial term of one year or less are not recorded in the consolidated balance sheets. Additionally, none of the Company's lease agreements contain any material residual value guarantees or material restrictive covenants.

The present value of future lease payments is determined at the lease commencement date based upon the Company's incremental borrowing rate. The incremental borrowing rate is calculated using a risk-free interest rate adjusted for the Company's specific risk and the specific lease term. The table below summarizes the Company's weighted-average discount rate and weighted-average remaining lease term as of the period presented.

	As of June 30, 2021
Weighted-average discount rate	4.65 %
Weighted-average remaining lease term (months)	122

The Company's drilling rig contracts, office rental agreements, and wellhead equipment agreements contain both lease and non-lease components, which are combined and accounted for as a single lease component.

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Variable lease payments are recognized in the period in which they are incurred and include operating expenses related to the office rental agreements and expenses incurred on the drilling rig contracts in excess of the contractual rate. Expenses related to short-term leases are recognized on a straight-line basis over the lease term as either expenses to the consolidated statements of operations or capitalized to the consolidated balance sheets. The following table presents the components of the Company's lease expenses for the periods presented.

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Lease costs				
Operating lease cost	\$ 842	\$ 1,527	\$ 1,715	\$ 5,832
Variable lease cost	13	3,278	22	4,485
Short-term lease cost	9,973	11,192	17,167	29,017
Total lease cost	\$ 10,828	\$ 15,997	\$ 18,904	\$ 39,334

The following table presents supplemental cash flow information related to the Company's leases for the periods presented.

(in thousands)	Six Months Ended June 30,	
	2021	2020
Operating lease liability payments:		
Cash used in operating activities	\$ 1,715	\$ 4,030
Cash used in investing activities	\$ —	\$ 1,802
Right-of-use assets recognized (derecognized) with offsetting operating lease liabilities	\$ 12,984	\$ (3,454)

Maturities of the Company's long-term operating lease liabilities by fiscal year as of June 30, 2021 are as follows:

(in thousands)	Total ⁽²⁾
2021 ⁽¹⁾	\$ 247
2022	1,038
2023	1,977
2024	2,031
2025	2,086
2026 and thereafter	12,669
Total lease payments	20,048
Less: imputed interest	(4,602)
Present value of lease liabilities ⁽³⁾	\$ 15,446

⁽¹⁾ Excludes payments made during the six months ended June 30, 2021.

⁽²⁾ Total lease payments exclude variable lease payments which can be charged under the terms of the lease agreements.

⁽³⁾ This amount is included in current and noncurrent liabilities in the line item *Operating lease liabilities* in the consolidated balance sheets as of June 30, 2021.

**CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)**

Note 14—Subsequent Events

Restricted Stock Units Modification

In July 2021, the Company modified its existing restricted stock unit agreements that were granted under the LTIP to allow the units to be settleable in either cash or Common Stock at the Company's discretion upon vesting. Additionally, the modification revised the terms of the agreement to remove the maximum and minimum return amounts if the units are settled in Common Stock. Based upon this modification and the Company's intent regarding settlement, the Company plans on settling in cash approximately \$6.1 million of these RSUs that are scheduled to vest in the third quarter of 2021 and intends to settle the remaining portion of these modified awards in Common Stock. In addition, the Company expects to recognize approximately \$17.3 million of incremental stock compensation expense as of the modification date.

CENTENNIAL RESOURCE DEVELOPMENT, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the accompanying consolidated financial statements and related notes. The following discussion and analysis contains forward-looking statements that reflect our future plans, estimates, beliefs and expected performance. The forward-looking statements are dependent upon events, risks and uncertainties that may be outside our control. Our actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, market prices for oil, natural gas and NGLs, future production volumes, estimates of proved reserves, capital expenditures, economic and competitive conditions, regulatory changes, continued and future impacts of Coronavirus Disease 2019 (“COVID-19”) and other uncertainties, as well as those factors discussed above in “Cautionary Statement Regarding Forward-Looking Statements” and under the heading “Item 1A. Risk Factors” in our 2020 Annual Report, all of which are difficult to predict. In light of these risks, uncertainties and assumptions, the forward-looking events discussed may not occur. We do not undertake any obligation to publicly update any forward-looking statements except as otherwise required by applicable law.

Overview

Centennial Resource Development, Inc. (“Centennial,” “we,” “us,” or “our”) is an independent oil and natural gas company focused on the development of oil and associated liquids-rich natural gas reserves in the Permian Basin. Our assets are concentrated in the Delaware Basin, a sub-basin of the Permian Basin. Our capital programs are focused on projects that we believe provide the highest return on capital. Unless otherwise specified or the context otherwise requires, all references in these discussions to “Centennial,” “we,” “us,” or “our” are to Centennial Resource Development, Inc. and its consolidated subsidiary, Centennial Resource Production, LLC (“CRP”).

Market Conditions

The 2020 worldwide outbreak of COVID-19, the uncertainty regarding its impact and various governmental actions taken to mitigate the effects of COVID-19 resulted in an unprecedented decline in the demand for oil and natural gas throughout 2020. In addition, the decision by Saudi Arabia to drastically reduce export prices and increase oil production in March 2020 (the “Saudi-Russia oil price war”) followed by curtailment agreements among Organization of Petroleum Exporting Countries (“OPEC”) and other countries such as Russia further increased uncertainty and volatility around global oil supply-demand dynamics. However, in April of 2020, the members of OPEC and other oil producing countries (“OPEC+”) agreed to reduce their crude oil production throughout the year, while U.S. producers substantially reduced or suspended drilling and completion activity due to low oil prices and poor economics.

The demand for oil and natural gas continued to remain low in early 2021 due to continued uncertainty regarding the impacts of COVID-19. OPEC+ extended their production cuts through the first quarter of 2021 and began to gradually increase output during the second quarter of 2021. More recently, OPEC+ announced an agreement to increase production more substantially in August 2021 through September 2022. U.S. drilling activity began to increase in the fourth quarter of 2020 and has continued to increase steadily since. The gradual increase in overall oil supply paired with the ongoing recovery in global oil demand due to the availability of COVID-19 vaccinations and less governmental mandated restrictions have aided in the recovery of global commodity prices during the first half of 2021. Specifically, WTI spot prices for crude oil reached a high of \$74.05 per barrel on June 25, 2021 from a low of negative \$37.63 per barrel on April 20, 2020 (which was due to depressed demand and insufficient storage capacity, particularly at the WTI physical settlement location in Cushing, Oklahoma).

The oil and natural gas industry is cyclical, and it is likely that commodity prices, as well as commodity price differentials, will continue to be volatile due to fluctuations in global supply and demand, inventory levels, the continued effects from COVID-19 and variant strains of the virus, geopolitical events, weather conditions, the global transition to alternative energy sources and other factors. The following table highlights the quarterly average NYMEX price trends for crude oil and natural gas since the first quarter of 2019:

	2019				2020				2021	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Crude oil (per Bbl)	\$ 54.90	\$ 59.81	\$ 56.45	\$ 56.94	\$ 46.19	\$ 28.00	\$ 40.93	\$ 42.66	\$ 57.84	\$ 66.06
Natural gas (per MMBtu)	\$ 2.88	\$ 2.51	\$ 2.33	\$ 2.34	\$ 1.88	\$ 1.65	\$ 1.95	\$ 2.47	\$ 3.44	\$ 2.88

Lower commodity prices (including realized differentials) and lower futures curves for oil and gas prices can result in further impairments of our proved oil and natural gas properties or undeveloped acreage (such as the impairments incurred in the first quarter of 2020) and may materially and adversely affect our future business, financial condition, results of operations, operating cash flows, liquidity and/or ability to finance planned capital expenditures. Lower realized prices may also reduce the borrowing base under CRP’s credit agreement, which is determined at the discretion of the lenders and is based on the collateral value of our

proved reserves that have been mortgaged to the lenders. Upon a redetermination, if any borrowings in excess of the revised borrowing capacity were outstanding, we could be forced to immediately repay a portion of the debt outstanding under the credit agreement. Additionally, the lower price environment and its impact to our operations could impact our ability to comply with the covenants under our credit agreement and senior notes.

COVID-19 Outbreak

The COVID-19 outbreak and its development into a pandemic in March 2020 have required that we take precautionary measures intended to help minimize the risk to our business, employees, customers, vendors, suppliers and the communities in which we operate. Our operational employees have been and are currently able to work on site, while the vast majority of our non-operational employees have been working remotely or reporting to our offices on a limited basis. We have taken various precautionary measures with respect to our operational employees, direct contractors and employees who returned to our offices or job sites such as (i) requesting that they have not experienced any symptoms consistent with COVID-19, or been in close contact with someone showing such symptoms, before reporting to the work site or office, (ii) self-quarantining any employees or contractors who have shown signs or symptoms of COVID-19 (regardless of whether such person has been confirmed to be infected), (iii) imposing mask and social distancing requirements on work sites and at our offices, and (iv) encouraging all employees and contractors to follow the Center of Disease Control (the “CDC”) recommended preventive measures (including those mentioned above) to limit the spread of COVID-19. We have continued to update our safety protocols in alignment with CDC guidance and governmental mandates, and have been able to reduce some requirements if employees, customers, vendors, or suppliers are fully vaccinated. We have not experienced any operational disruptions (including disruptions from our suppliers and service providers) as a result of the COVID-19 outbreak.

2021 Highlights and Future Considerations

Operational Highlights

We operated a two-rig drilling program during the first half of 2021, which enabled us to complete and bring online 23 gross operated wells with an average effective lateral length of approximately 8,800 feet.

In February 2021, the Permian Basin was impacted by record-low temperatures and a severe winter storm (“Winter Storm Uri”) that caused multi-day electrical outages and shortages, pipeline and infrastructure freezes, and transportation disruptions, which further led to significant increases in gas prices, gathering, processing and transportation fees and electrical rates during this time. Our operations were impacted by Winter Storm Uri and led to a partial shut-in of certain wells and associated production for about seven days during the event. Refer to the discussion below for the current impacts from Winter Storm Uri on our results of operations during the three and six months ended June 30, 2021.

Financing Highlights

On March 19, 2021, we issued \$150.0 million of 3.25% senior convertible notes due 2028 (the “Convertible Senior Notes”) in a public offering. On March 26, 2021, the Company issued an additional \$20.0 million of Convertible Senior Notes pursuant to the exercise of the underwriters’ over-allotment option to purchase additional Convertible Senior Notes. The issuance resulted in net proceeds of \$163.6 million, after deducting debt issuance costs of \$6.4 million, and such proceeds were used to fund the cost of entering into capped call spread transactions totaling \$14.7 million and to repay borrowing outstanding under CRP’s revolving credit facility. In April 2021, we redeemed at par all of our 2025 senior secured notes (\$127.1 million), which was the intended use of proceeds from the Convertible Senior Notes offering.

In connection with CRP’s credit facility spring 2021 semi-annual borrowing base redetermination, the borrowing base and amount of elected commitments were reaffirmed at \$700.0 million.

Results of Operations

Three Months Ended June 30, 2021 Compared to Three Months Ended June 30, 2020

The following table provides the components of our net revenues and net production (net of all royalties, overriding royalties and production due to others) for the periods indicated, as well as each period's average prices and average daily production volumes:

	Three Months Ended June 30,		Increase/(Decrease)	
	2021	2020	\$	%
Net revenues (in thousands):				
Oil sales	\$ 177,105	\$ 73,100	\$ 104,005	142 %
Natural gas sales	27,015	8,787	18,228	207 %
NGL sales	28,457	8,622	19,835	230 %
Oil and gas sales	<u>\$ 232,577</u>	<u>\$ 90,509</u>	<u>\$ 142,068</u>	157 %
Average sales prices:				
Oil (per Bbl)	\$ 60.99	\$ 21.47	\$ 39.52	184 %
Effect of derivative settlements on average price (per Bbl)	(12.59)	(1.60)	(10.99)	(687) %
Oil net of hedging (per Bbl)	<u>\$ 48.40</u>	<u>\$ 19.87</u>	<u>\$ 28.53</u>	144 %
Average NYMEX price for oil (per Bbl)	\$ 66.06	\$ 28.00	\$ 38.06	136 %
Oil differential from NYMEX	(5.07)	(6.53)	1.46	22 %
Natural gas (per Mcf)	\$ 2.55	\$ 0.87	\$ 1.68	193 %
Effect of derivative settlements on average price (per Mcf)	(0.09)	(0.14)	0.05	36 %
Natural gas net of hedging (per Mcf)	<u>\$ 2.46</u>	<u>\$ 0.73</u>	<u>\$ 1.73</u>	237 %
Average NYMEX price for natural gas (per Mcf)	\$ 2.88	\$ 1.65	\$ 1.23	75 %
Natural gas differential from NYMEX	(0.33)	(0.78)	0.45	58 %
NGL (per Bbl)	\$ 30.37	\$ 7.72	\$ 22.65	293 %
Net production:				
Oil (MBbls)	2,904	3,404	(500)	(15) %
Natural gas (MMcf)	10,613	10,140	473	5 %
NGL (MBbls)	937	1,116	(179)	(16) %
Total (MBoe) ⁽¹⁾	<u>5,610</u>	<u>6,210</u>	<u>(600)</u>	(10) %
Average daily net production:				
Oil (Bbls/d)	31,912	37,411	(5,499)	(15) %
Natural gas (Mcf/d)	116,629	111,419	5,210	5 %
NGL (Bbls/d)	10,297	12,264	(1,967)	(16) %
Total (Boe/d) ⁽¹⁾	<u>61,647</u>	<u>68,245</u>	<u>(6,598)</u>	(10) %

⁽¹⁾ Calculated by converting natural gas to oil equivalent barrels at a ratio of six Mcf of natural gas to one Boe.

Oil, Natural Gas and NGL Sales Revenues. Total net revenues for the three months ended June 30, 2021 were \$142.1 million (or 157%) higher than total net revenues for the three months ended June 30, 2020. Revenues are a function of oil, natural gas and NGL volumes sold and average commodity prices realized.

Average realized sales prices for oil, residue gas and NGLs increased in the second quarter of 2021 compared to the same 2020 period by 184%, 193% and 293% respectively. The 184% increase in the average realized oil price before the effects of hedging was the result of higher NYMEX crude prices between periods (average NYMEX prices increased 136%) and improved oil differentials (a decrease of \$1.46 per Bbl). The 193% increase in average realized sales price of natural gas before the effects of hedging was due to higher NYMEX prices (average prices increased 75%) and improved gas differentials (\$0.45 per Mcf). The increase in average realized NGL prices of 293% between periods was primarily attributable to higher Mont Belvieu spot prices for plant products in the second quarter of 2021 as compared to the second quarter of 2020. The market prices for oil, natural gas and NGLs have all been impacted by higher global demand for oil and gas compared to the second quarter of 2020 when prices decreased significantly as a result of COVID-19 and supply disruptions from the Saudi-Russia oil price war, beginning in March 2020 as discussed in the market conditions section above.

Net production volumes for oil and NGLs decreased 15% and 16%, respectively, while natural gas increased 5% between periods. The crude oil production volume decrease was primarily the result of less drilling and completion activity over the past 12 months as a result of depressed oil and gas prices, which resulted in only 28 wells being placed on production since the second quarter of 2020. This added 872 MBbls of net oil production to the three months ended June 30, 2021 as compared to 70 wells brought online since the second quarter of 2019 that added 1,604 MBbls of net oil production to the second quarter of 2020. Oil volume declines in the second quarter of 2021 were additionally impacted by normal field production declines across our existing wells. Natural gas and NGLs are produced concurrently with our crude oil volumes, typically resulting in a high correlation between fluctuations in oil quantities sold and natural gas and NGL quantities sold. However, during the second quarter of 2020, the main processor of our raw gas operated in partial ethane-rejection for two thirds of the quarter, as compared to operating in full ethane-rejection during the entire 2021 period. Additionally, the amount of gas flared as a percentage of wellhead gas produced was significantly less during the second quarter of 2021 as compared to the same 2020 period. Both of these factors resulted in an increase in the amount of natural gas recovered and sold from our wet gas stream, while the gas processing variations resulted in fewer NGLs being recovered during the 2021 period.

Operating Expenses. The following table sets forth selected operating expense data for the periods indicated:

	Three Months Ended June 30,		Increase/(Decrease)	
	2021	2020	\$	%
Operating costs (in thousands):				
Lease operating expenses	\$ 22,976	\$ 25,839	\$ (2,863)	(11)%
Severance and ad valorem taxes	15,784	5,696	10,088	177 %
Gathering, processing and transportation expenses	19,494	17,284	2,210	13 %
Operating costs per Boe:				
Lease operating expenses	\$ 4.10	\$ 4.16	\$ (0.06)	(1)%
Severance and ad valorem taxes	2.81	0.92	1.89	205 %
Gathering, processing and transportation expenses	3.47	2.78	0.69	25 %

Lease Operating Expenses. Lease operating expenses (“LOE”) for the three months ended June 30, 2021 decreased \$2.9 million compared to the three months ended June 30, 2020. Lower LOE for the second quarter of 2021 was primarily related to (i) a significant decrease in electricity costs as a result of credits realized during the second quarter of 2021 related to Winter Storm Uri; (ii) lower well operating expenses due to cost reduction initiatives, which included moving multiple wells off generators to more cost-efficient electrical line-power and switching wells away from electric submersible pumps to more reliable and lower cost gas lift; and (iii) lower variable and semi-variable costs stemming from the 10% production decline between periods. These decreases were partially offset by higher workover activity costs of \$1.1 million between periods and increased LOE associated with our higher well count, which increased to 409 gross operated horizontal wells as of June 30, 2021 from 381 gross operated horizontal wells as of June 30, 2020.

LOE per Boe was \$4.10 for the second quarter of 2021, which represents a decrease of \$0.06 per Boe (or 1%) from the second quarter of 2020. This decrease was primarily driven by per BOE cost decreases between periods associated with lower electricity charges between periods as well as cost-reduction initiatives we have undertaken, both of which are discussed above. These decreases were partially offset by the higher level of workover activity between periods and by fixed and semi-variable costs that don’t decrease at the same rate as declines in production, such as monthly rental fees for compressors and other equipment, wellhead chemical costs and water handling costs.

Severance and Ad Valorem Taxes. Severance and ad valorem taxes for the three months ended June 30, 2021 increased \$10.1 million compared to the three months ended June 30, 2020. Severance taxes are primarily based on the market value of our production at the wellhead, while ad valorem taxes are generally based on the assessed taxable value of proved developed oil and natural gas properties and vary across the different counties in which we operate. Severance taxes for the second quarter of 2021 increased \$9.2 million compared to the same 2020 period primarily due to higher oil, natural gas and NGL revenues between periods.

Severance and ad valorem taxes as a percentage of total net revenues increased to 6.8% for the second quarter of 2021 as compared to 6.3% for the same prior year quarter. This increase in rate between periods was mainly due to a higher blended tax rate paid on oil, natural gas, and NGL revenues in 2021 due to a greater percentage of our commodity sales being generated in New Mexico, which has higher severance tax rates than Texas.

Gathering, Processing and Transportation Expenses. Gathering, processing and transportation expenses (“GP&T”) for the three months ended June 30, 2021 increased \$2.2 million as compared to the three months ended June 30, 2020. On a per Boe basis, GP&T likewise increased from \$2.78 for the second quarter of 2020 to \$3.47 for the second quarter of 2021. These increases were mainly related to substantially higher natural gas and NGL prices between periods, as these products are cost inputs into the percent-of-proceeds (“POP”) portion of our gas plant processing fees.

Depreciation, Depletion and Amortization. The following table summarizes our depreciation, depletion and amortization (“DD&A”) for the periods indicated:

(in thousands, except per Boe data)	Three Months Ended June 30,	
	2021	2020
Depreciation, depletion and amortization	\$ 73,429	\$ 93,020
Depreciation, depletion and amortization per Boe	\$ 13.09	\$ 14.98

For the three months ended June 30, 2021, DD&A expense amounted to \$73.4 million, a decrease of \$19.6 million over the same 2020 period. The primary factor contributing to lower DD&A expense in 2021 was the decrease in our DD&A rates between periods, which lowered our DD&A expense by \$10.7 million, while our lower overall production volumes between periods decreased DD&A expense by an additional \$8.9 million during the three months ended June 30, 2021.

Our DD&A rate can fluctuate as a result of finding and development costs incurred, acquisitions, impairments, as well as changes in proved developed and proved undeveloped reserves. DD&A per Boe was \$13.09 for the second quarter of 2021 compared to \$14.98 for the same period in 2020. This decrease in DD&A rate was primarily due to net upward revisions in our proved developed reserves since the second quarter of 2020 related to lower operating costs realized and higher SEC reserve pricing.

Impairment and Abandonment Expense. During the three months ended June 30, 2021 impairment and abandonment expense was \$9.2 million as compared to \$19.4 million during the three months ended June 30, 2020 both of which related to the amortization of leasehold expiration costs associated with individually insignificant unproved properties.

Exploration and Other Expenses. The following table summarizes our exploration and other expenses for the periods indicated:

(in thousands)	Three Months Ended June 30,	
	2021	2020
Geological and geophysical costs	\$ 1,173	\$ 1,081
Rig termination fees	—	1,547
Severance payments	—	722
Stock-based compensation - equity awards	221	457
Stock-based compensation - liability awards	239	—
Other expenses	131	244
Exploration and other expenses	\$ 1,764	\$ 4,051

Exploration and other expenses were \$1.8 million for the three months ended June 30, 2021 compared to \$4.1 million for the three months ended June 30, 2020. Exploration and other expenses mainly consist of topographical studies, geographical and geophysical (“G&G”) projects, salaries and expenses of G&G personnel and includes other operating costs. The period over period decrease was primarily related to \$1.5 million in rig termination fees and \$0.7 million in nonrecurring severance payments to G&G personnel in the second quarter of 2020, which were not similarly incurred in the second quarter of 2021.

General and Administrative Expenses. The following table summarizes our general and administrative (“G&A”) expenses for the periods indicated:

(in thousands)	Three Months Ended June 30,	
	2021	2020
Cash general and administrative expenses	\$ 10,126	\$ 10,840
Stock-based compensation - equity awards	4,260	4,270
Stock-based compensation - liability awards	14,421	—
Severance payments	—	2,884
General and administrative expenses	\$ 28,807	\$ 17,994

G&A expenses for the three months ended June 30, 2021 were \$28.8 million compared to \$18.0 million for the three months ended June 30, 2020. Higher G&A in the second quarter of 2021 was primarily the result of \$14.4 million in stock compensation expense related to liability awards granted to G&A employees in the third quarter of 2020 that are settleable in cash upon vesting. These liability stock-based awards are recorded at their respective fair values, and such fair values are re-measured each balance sheet date (refer to Note 6—Stock-Based Compensation for additional information regarding the liability awards). This increase was partially offset by \$2.9 million in severance payments made to G&A employees in the 2020 period that did not similarly reoccur in the second quarter of 2021.

Other Income and Expenses.

Interest Expense. The following table summarizes our interest expense for the periods indicated:

(in thousands)	Three Months Ended June 30,	
	2021	2020
Credit facility	\$ 2,762	\$ 3,159
8.00% Senior Secured Notes due 2025	367	1,129
5.375% Senior Notes due 2026	3,889	4,732
6.875% Senior Notes due 2027	6,125	7,524
3.25% Convertible Senior Notes due 2028	1,381	—
Amortization of debt issuance costs and debt discount	1,040	1,535
Interest capitalized	(382)	(708)
Total	\$ 15,182	\$ 17,371

Interest expense was \$2.2 million lower for the three months ended June 30, 2021 as compared to the three months ended June 30, 2020 primarily due to (i) \$2.2 million lower interest expense incurred on our Senior Unsecured Notes during the second quarter of 2021, as \$110.6 million of the Senior Notes due 2026 and \$143.7 million of the Senior Notes due 2027 were extinguished in our 2020 debt exchange transaction; (ii) \$0.8 million lower interest incurred on our Senior Secured Notes due 2025 as these notes were redeemed in April 2021; and (iii) \$0.4 million in decreased interest expense incurred on our credit facility borrowings. These decreases were partially offset by higher interest expense incurred on our Convertible Senior Notes that were issued in March of 2021. Refer to Note 4—Long-Term Debt under Part I, Item I of this Quarterly Report for additional information on our senior notes and debt transactions.

Our weighted average borrowings outstanding under our credit facility were \$289.8 million versus \$344.7 million for the three months ended June 30, 2021 and 2020, respectively. Our credit facility’s weighted average effective interest rate (which is a LIBOR-based rate) was 3.3% and 3.1% for the three months ended June 30, 2021 and 2020, respectively.

Gain (loss) on extinguishment of debt. During the three months ended June 30, 2021, we redeemed at par all of our \$127.1 million aggregate principal amount of Senior Secured Notes outstanding. In connection with this redemption, we recorded a loss on debt extinguishment of \$22.2 million related to the write-off of all unamortized debt issuance costs and debt discounts associated with these notes.

A gain of \$143.4 million was recognized in the second quarter of 2020 related to our 2020 debt exchange transaction. This gain was determined based on the difference between the carrying value of the Senior Unsecured Notes extinguished less the fair value of our newly issued Senior Secured Notes on their date of issuance. Refer to Note 4—Long-Term Debt for additional information regarding the debt extinguishment transactions discussed above.

Net Gain (Loss) on Derivative Instruments. Net gains and losses are a function of (i) changes in derivative fair values associated with fluctuations in the forward price curves for the commodities underlying our hedge contracts outstanding and (ii) monthly cash settlements on any closed out hedge positions during the period.

The following table presents gains and losses on our derivative instruments for the periods indicated:

(in thousands)	Three Months Ended June 30,	
	2021	2020
Realized cash settlement gains (losses)	\$ (37,513)	\$ (6,894)
Non-cash mark-to-market derivative gain (loss)	(17,446)	(22,963)
Total	\$ (54,959)	\$ (29,857)

Income Tax (Expense) Benefit. The following table summarizes our pre-tax income (loss) and income tax (expense) benefit for the periods indicated:

(in thousands)	Three Months Ended June 30,		
	2021	2020	
Income (loss) before income taxes	\$ (25,055)	\$ 3,414	
Income tax (expense) benefit	—	1,916	

Our provisions for income taxes for the three months ended June 30, 2021 and 2020 differs from the amounts that would be provided by applying the statutory U.S. federal income tax rate of 21% to pre-tax book income (loss) primarily due to (i) state income taxes, (ii) permanent differences, and (iii) any changes during the period in our deferred tax asset valuation allowance.

For the three months ended June 30, 2021, we recognized a deferred tax asset valuation allowance of \$7.6 million against net operating losses (“NOLs”) we generated during the quarter, and such NOLs are estimated as unlikely to be realized in future periods. The increase in the valuation allowance was the primary factor reducing our income tax benefit (based on the U.S. statutory rate) in the quarter to zero for the second quarter of 2021. We recognized an income tax benefit of \$1.9 million for the three months ended June 30, 2020 primarily due to the release of a portion of our deferred tax asset valuation allowance relating to our conversion of Class C shares to Class A shares during the period.

Six Months Ended June 30, 2021 Compared to Six Months Ended June 30, 2020

The following table provides the components of our net revenues and net production (net of all royalties, overriding royalties and production due to others) for the periods indicated, as well as each period's average prices and average daily production volumes:

	Six Months Ended June 30,		Increase/(Decrease)	
	2021	2020	\$	%
Net revenues (in thousands):				
Oil sales	\$ 310,831	\$ 243,605	\$ 67,226	28
Natural gas sales	62,466	17,145	45,321	264
NGL sales	51,671	22,528	29,143	129
Oil and gas sales	\$ 424,968	\$ 283,278	\$ 141,690	50
Average sales prices:				
Oil (per Bbl)	\$ 57.08	\$ 33.92	\$ 23.16	68
Effect of derivative settlements on average price (per Bbl)	(11.12)	(0.76)	(10.36)	(1,363)
Oil net of hedging (per Bbl)	\$ 45.96	\$ 33.16	\$ 12.80	39
Average NYMEX price for oil (per Bbl)	\$ 61.95	\$ 37.09	\$ 24.86	67
Oil differential from NYMEX	(4.87)	(3.17)	(1.70)	(54)
Natural gas (per Mcf)	\$ 3.13	\$ 0.82	\$ 2.31	282
Effect of derivative settlements on average price (per Mcf)	0.01	(0.07)	0.08	114
Natural gas net of hedging (per Mcf)	\$ 3.14	\$ 0.75	\$ 2.39	319
Average NYMEX price for natural gas (per Mcf)	\$ 3.15	\$ 1.76	\$ 1.39	79
Natural gas differential from NYMEX	(0.02)	(0.94)	0.92	98
NGL (per Bbl)	\$ 30.10	\$ 10.79	\$ 19.31	179
Net production:				
Oil (MBbls)	5,446	7,182	(1,736)	(24)
Natural gas (MMcf)	19,956	20,855	(899)	(4)
NGL (MBbls)	1,717	2,088	(371)	(18)
Total (MBoe) ⁽¹⁾	10,488	12,746	(2,258)	(18)
Average daily net production:				
Oil (Bbls/d)	30,086	39,461	(9,375)	(24)
Natural gas (Mcf/d)	110,253	114,585	(4,332)	(4)
NGLs (Bbls/d)	9,484	11,474	(1,990)	(17)
Total (Boe/d) ⁽¹⁾	57,945	70,333	(12,388)	(18)

⁽¹⁾ Calculated by converting natural gas to oil equivalent barrels at a ratio of six Mcf of natural gas to one Boe.

Oil, Natural Gas and NGL Sales Revenues. Total net revenues for the six months ended June 30, 2021 were \$141.7 million, or 50%, higher than total net revenues for the six months ended June 30, 2020. Revenues are a function of oil, natural gas and NGL volumes sold and average commodity prices realized.

Average realized sales prices for oil, natural gas and NGLs for the first half of 2021 all increased when compared to the same 2020 period. The average price for oil before the effects of hedging increased 68%, the average price for natural gas before the effects of hedging increased 282%, and the average price for NGLs increased 179% between periods. The 68% increase in the average realized oil price was mainly the result of higher NYMEX crude prices between periods (average NYMEX prices increased 67%), which was minimally offset by wider oil differentials (\$1.70 per Bbl wider). The average realized sales price of natural gas increased 282% due to higher average NYMEX gas prices between periods (average NYMEX prices increased 79%), as well as improved gas differentials (\$0.92 per Mcf). The 179% increase in average realized NGL prices between periods was primarily attributable to higher Mont Belvieu spot prices for plant products for the first half of 2021 compared to the first half of 2020. The market prices for oil, natural gas and NGLs have all been impacted by higher global demand for oil and gas compared to the first half of 2020 when prices decreased significantly as a result of COVID-19 and supply disruptions from the Russia-Saudi oil price war, beginning in March 2020 as discussed in the market conditions section above. Additionally, the first quarter 2021 realized price for natural gas in the Permian Basin was impacted by Winter Storm Uri, which caused gas pipeline and supply disruptions and resulted in significant increases in Permian natural gas prices during this period.

Net production volumes for oil, natural gas, and NGLs decreased 24%, 4%, and 18%, respectively. The oil production volume decrease was primarily the result of less drilling and completion activity over the past 12 months as a result of depressed oil and gas prices, which resulted in only 28 wells being placed on production since the second quarter of 2020. This added 1,214 MBbls of net oil production to the six months ended June 30, 2021 as compared to 70 wells brought online since the second quarter of 2019 that added 3,207 MBbls of net oil production to the six months ended June 30, 2020. Oil volume declines in the first half of 2021 were additionally impacted by the temporary shut-in of our wells during mid-February as a result of Winter Storm Uri and normal field production declines across our existing wells. Natural gas and NGLs are produced concurrently with our crude oil volumes, typically resulting in a high correlation between fluctuations in oil quantities sold and natural gas and NGL quantities sold. However, during the first half of 2021, the amount of gas flared as a percentage of wellhead gas produced was significantly less as compared to the same 2020 period, resulting in a higher ratio of natural gas and NGL volumes produced compared to oil volumes during the period.

Operating Expenses. The following table summarizes our operating expenses for the periods indicated:

	Six Months Ended June 30,		Increase/(Decrease)	
	2021	2020	\$	%
Operating costs (in thousands):				
Lease operating expenses	\$ 48,837	\$ 58,478	\$ (9,641)	(16)
Severance and ad valorem taxes	28,367	22,269	6,098	27
Gathering, processing and transportation expenses	40,119	34,223	5,896	17
Operating costs per Boe:				
Lease operating expenses	\$ 4.66	\$ 4.59	\$ 0.07	2
Severance and ad valorem taxes	2.70	1.75	0.95	54
Gathering, processing and transportation expenses	3.83	2.68	1.15	43

Lease Operating Expenses. LOE for the six months ended June 30, 2021 decreased \$9.6 million as compared to the six months ended June 30, 2020. Lower LOE for the first half of 2021 was primarily related to (i) a \$3.6 million decrease in workover expense between periods; (ii) decreases in electricity costs as a result of credits realized in the current year period related to Winter Storm Uri; (iii) lower well operating expenses due to cost reduction initiatives, which included moving multiple wells off generator to more cost-efficient electrical line-power and switching wells away from electric submersible pumps to more reliable and lower cost gas lift; and (iv) lower variable and semi-variable costs stemming from the 18% production decline between periods. These decreases were partially offset by additional LOE associated with our higher well count, which increased to 409 gross operated horizontal wells as of June 30, 2021 from 381 gross operated horizontal wells as of June 30, 2020.

LOE per Boe was \$4.66 for the six months ended June 30, 2021, which represents an increase of \$0.07 per Boe (or 2%) from the comparable 2020 period. This increase in rate was primarily driven by per BOE cost increases between periods associated with fixed and semi-variable costs that don't decrease at the same rate as declines in production, such as monthly rental fees for compressors and other equipment, wellhead chemical costs, and water handling costs. These increases were partially offset by the lower level of workover activity in the 2021 period, decreased electricity costs, as well as cost reduction initiatives we have undertaken, all of which are discussed above.

Severance and Ad Valorem Taxes. Severance and ad valorem taxes for the six months ended June 30, 2021 increased \$6.1 million compared to the six months ended June 30, 2020. Severance taxes are primarily based on the market value of our production at the wellhead, while ad valorem taxes are generally based on the assessed taxable value of our proved developed oil and natural gas reserves and vary across the different counties in which we operate. Severance taxes for the first half of 2021 increased \$8.5 million compared to the same 2020 period primarily due to higher oil, natural gas and NGL revenues between periods. These increases were partially offset by a \$2.4 million decrease in ad valorem taxes between periods due to lower tax assessments on our oil and gas reserve values. Severance and ad valorem taxes as a percentage of total net revenues decreased to 6.7% for the first half of 2021 as compared to 7.9% for the same 2020 period as a result of the 2021 ad valorem tax assessments that were \$2.4 million lower in the current period, as discussed above.

Gathering, Processing and Transportation Expenses. GP&T for the six months ended June 30, 2021 increased \$5.9 million compared to the six months ended June 30, 2020. On a per Boe basis, GP&T likewise increased from \$2.68 for the first half of 2020 to \$3.83 for the same 2021 period. These increases were mainly attributable to (i) higher gas plant processing costs, whose POP fee portion is based on natural gas and NGL prices, both of which increased substantially between periods as discussed above, and (ii) a \$1.5 million decrease in reimbursements received from third parties for their usage of our available firm transport capacity.

Depreciation, Depletion and Amortization. The following table summarizes our DD&A for the periods indicated:

(in thousands, except per Boe data)	Six Months Ended June 30,	
	2021	2020
Depreciation, depletion and amortization	\$ 137,212	\$ 194,2
Depreciation, depletion and amortization per Boe	\$ 13.08	\$ 15.

For the six months ended June 30, 2021, DD&A expense amounted to \$137.2 million, a decrease of \$57.1 million over the same 2020 period. The primary factor contributing to lower DD&A expense in 2021 was the decrease in our overall production volumes between periods, which lowered DD&A expense by \$34.3 million during the first half of 2021, while lower DD&A rates between periods decreased DD&A expense by \$22.8 million during the six months ended June 30, 2021.

Our DD&A rate can fluctuate as a result of finding and development costs incurred, acquisitions, impairments, as well as changes in proved developed and proved undeveloped reserves. DD&A per Boe was \$13.08 for the first half of 2021 compared to \$15.24 for the same period in 2020. This decrease in DD&A rate was primarily due to (i) the proved property impairment recognized in the first quarter of 2020, which lowered the carrying value of our depletion base by \$591.8 million; and (ii) net upward revisions in our proved developed reserves since the second quarter of 2020 related to lower operating costs realized and higher SEC reserve pricing.

Impairment and Abandonment Expense. During the six months ended June 30, 2021, \$18.4 million of impairment and abandonment expense was incurred related to the amortization of leasehold expiration costs associated with individually insignificant unproved properties. During the six months ended June 30, 2020, impairment and abandonment expense was \$630.7 million and consisted of (i) a \$591.8 million non-cash impairment of our proved oil and gas properties as a result of depressed NYMEX oil and gas forward curves as of March 31, 2020; and (ii) \$38.9 million related to the amortization of leasehold expiration costs associated with individually insignificant unproved properties.

Exploration and Other Expenses. The following table summarizes our exploration and other expenses for the periods indicated:

(in thousands)	Six Months Ended June 30,	
	2021	2020
Geological and geophysical costs	\$ 1,786	\$ 3,0
Rig termination fees	—	3,0
Severance payments	—	7
Stock-based compensation - equity awards	429	9
Stock-based compensation - liability awards	406	.
Other expenses	238	2.
Exploration and other expenses	\$ 2,859	\$ 8,0

Exploration and other expenses were \$2.9 million for the six months ended June 30, 2021 compared to \$8.1 million for the same prior year period. Exploration and other expenses mainly consist of topographical studies, G&G projects, salaries and expenses of G&G personnel and includes other operating costs. The period over period decrease was primarily due to (i) rig

termination fees that went from \$3.0 million in the first half of 2020 (when we reduced our drilling program from five rigs to none) to zero in the 2021 period; (ii) \$1.0 million in lower ongoing G&G personnel costs related to the 2020 workforce reduction; and (iii) \$0.7 million in severance payments to G&G employees in the 2020 period that did not reoccur in the first half of 2021.

General and Administrative Expenses. The following table summarizes our G&A expenses for the periods indicated:

(in thousands)	Six Months Ended June 30,	
	2021	2020
Cash general and administrative expenses	\$ 20,758	\$ 23,8
Stock-based compensation expense - equity awards	8,637	10,1
Stock-based compensation expense - liability awards	24,668	
Severance payments	—	2,8
General and administrative expenses	\$ 54,063	\$ 36,8

G&A expenses for the six months ended June 30, 2021 were \$54.1 million compared to \$36.9 million for the six months ended June 30, 2020. The higher G&A expenses incurred in the first six months of 2021 were primarily the result of \$24.7 million in stock compensation expense related to liability awards granted to G&A employees in the third quarter of 2020 that are settleable in cash upon vesting. These liability stock-awards are recorded at their respective fair values, and such fair values are re-measured each balance sheet date (refer to *Note 6—Stock-Based Compensation* for additional information regarding the liability awards). This increase was partially offset by (i) \$2.9 million in severance payments to G&A employees in the 2020 period that did not reoccur in the first half of 2021; and (ii) \$1.8 million in lower payroll and other personnel related costs and a \$1.5 million decrease in equity-based stock compensation expense between periods; both of which were primarily the result of the reduction in workforce.

Other Income and Expenses.

Interest Expense. The following table summarizes our interest expense for the periods indicated:

(in thousands)	Six Months Ended June 30,	
	2021	2020
Credit facility	\$ 6,077	\$ 5,3
8.00% Senior Secured Notes due 2025	2,908	1,1
5.375% Senior Notes due 2026	7,778	10,1
6.875% Senior Notes due 2027	12,250	16,1
3.25% Convertible Senior Notes due 2028	1,553	
Amortization of debt issuance costs and debt discount	2,887	2,3
Interest capitalized	(786)	(1,2)
Total	\$ 32,667	\$ 33,7

Interest expense was \$1.1 million lower for the six months ended June 30, 2021 compared to the same 2020 period mainly due to \$6.2 million of lower interest incurred on our Senior Unsecured Notes during the 2021 period, as \$110.6 million of the Senior Notes due 2026 and \$143.7 million of the Senior Notes due 2027 were extinguished in our debt exchange transaction in May 2020. This decrease was partially offset by (i) \$1.8 million in increased interest expense on our Senior Secured Notes due 2025 that were issued in May of 2020 and then subsequently redeemed in April of 2021; (ii) \$1.6 million in additional interest incurred on our Convertible Senior Notes that were issued in March of 2021; and (iii) \$0.8 million in higher interest expense incurred on our credit facility borrowings. Refer to *Note 4—Long-Term Debt* under Part I, Item I of this Quarterly Report for additional information on our senior notes and debt transactions.

Our weighted average borrowings outstanding under our credit facility were \$310.2 million and \$311.6 million for the first half of 2021 and 2020, respectively. Our credit facility's weighted average effective interest rate (which is a LIBOR-based rate) was 3.4% and 3.0% for the six months ended June 30, 2021 and 2020, respectively.

Gain (loss) on extinguishment of debt. During the three months ended June 30, 2021, we redeemed at par all of our \$127.1 million aggregate principal amount of Senior Secured Notes outstanding. In connection with this redemptions, we recorded a loss on debt extinguishment of \$22.2 million related to the write-off of all unamortized debt issuance costs and debt discounts associated with these notes.

A gain of \$143.4 million was recognized in the first half of 2020 related to our 2020 debt exchange transaction. This gain was determined based on the difference between the carrying value of the Senior Unsecured Notes extinguished less the fair value of our newly issued Senior Secured Notes on their date of issuance. Refer to *Note 4—Long-Term Debt* for additional information regarding the debt extinguishment transactions discussed above.

Net Gain (Loss) on Derivative Instruments. Net gains and losses are a function of (i) changes in derivative fair values associated with fluctuations in the forward price curves for the commodities underlying our hedge contracts outstanding and (ii) monthly cash settlements on any closed out hedge positions during the period.

The following table presents gains and losses for derivative instruments for the periods indicated:

(in thousands)	Six Months Ended June 30,	
	2021	2020
Realized cash settlement gains (losses)	\$ (60,399)	\$ (6,947)
Non-cash mark-to-market derivative gain (loss)	(45,759)	(31,415)
Total	\$ (106,158)	\$ (38,362)

Income Tax (Expense) Benefit. The following table summarizes our pre-tax income (loss) and income tax (expense) benefit for the periods indicated:

(in thousands)	Six Months Ended June 30,	
	2021	2020
Income (loss) before income taxes	\$ (59,700)	\$ (630,111)
Income tax (expense) benefit	—	85,111

Our provisions for income taxes for the first half of 2021 and 2020 differs from the amounts that would be provided by applying the statutory U.S. federal income tax rate of 21% to pre-tax book income (loss) primarily due to (i) state income taxes; (ii) permanent differences; and (iii) any changes during the period in our deferred tax asset valuation allowance.

For the six months ended June 30, 2021 and 2020, we recognized deferred tax asset valuation allowances of \$20.0 million and \$49.7 million, respectively, against net operating losses (“NOLs”) we generated during those respective periods, and such NOLs are estimated as unlikely to be realized in future periods. These increases in the valuation allowance were the primary factor reducing our income tax benefits (based on the U.S. statutory rate) in each respective quarter to zero for the first six months of 2021 and to \$85.1 million for the first six months of 2020.

Liquidity and Capital Resources

Overview

Our drilling and completion activities require us to make significant capital expenditures. Historically, our primary sources of liquidity have been cash flows from operations, borrowings under CRP's revolving credit facility, and proceeds from offerings of debt or equity securities. Future cash flows are subject to a number of variables, including oil and natural gas prices, which have been and will likely continue to be volatile. Lower commodity prices can negatively impact our cash flows and our ability to access debt or equity markets, and sustained low oil and natural gas prices could have a material and adverse effect on our liquidity position. To date, our primary use of capital has been for drilling and development capital expenditures and the acquisition of oil and natural gas properties. The following table summarizes our capital expenditures ("capex") incurred for the six months ended June 30, 2021:

(in millions)	Six Months Ended June 30, 2021	
Drilling, completion and facilities	\$	152.9
Infrastructure, land and other		3.2
Total capital expenditures incurred	\$	156.1

We continually evaluate our capital needs and compare them to our capital resources. We operated a two-rig drilling program during the first half of 2021 and plan to continue with two rigs for the remainder of the year. We expect our total capex budget for 2021 to be between \$260 million to \$310 million, of which \$250 million to \$290 million is allocated to drilling, completion and facilities activity. We funded our capital expenditures for the six months ended June 30, 2021 entirely from cash flows from operations, and we expect to fund the remainder of our 2021 capex budget entirely from cash flows from operations as well, given current commodity price levels and our commodity hedge position. We were free cash flow positive during the first half of 2021 such that we were able to partially pay down borrowings under our credit agreement during the period, and based upon current commodity prices, we expect to continue to pay down borrowings with expected free cash flow generation during the remainder of 2021.

Because we are the operator of a high percentage of our acreage, we can control the amount and timing of our capital expenditures. We can choose to defer or accelerate a portion of our planned capex depending on a variety of factors, including but not limited to: prevailing and anticipated prices for oil and natural gas; oil storage or transportation constraints; the success of our drilling activities; the availability of necessary equipment, infrastructure and capital; the receipt and timing of required regulatory permits and approvals; seasonal conditions; property or land acquisition costs; and the level of participation by other working interest owners.

We cannot ensure that cash flows from operations will be available or other sources of needed capital on acceptable terms or at all. Further, our ability to access the public or private debt or equity capital markets at economic terms in the future will be affected by general economic conditions, the domestic and global oil and financial markets, our operational and financial performance, the value and performance of our debt or equity securities, prevailing commodity prices and other macroeconomic factors outside of our control.

Moreover, to manage our future maturities, lower interest expense, and improve our liquidity position, we issued 3.25% Convertible Senior Notes in March 2021, which resulted in net proceeds of \$163.6 million. The proceeds were used to repay borrowing outstanding under CRP's revolving credit facility and to fund the cost of entering into capped call spread transactions of \$14.7 million. In April 2021, we redeemed at par all of our 2025 senior secured notes (\$127.1 million) that bore interest at 8% per year and paid accrued interest of \$3.8 million on these notes, which was the intended use of proceeds from the Convertible Senior Notes offering.

Analysis of Cash Flow Changes

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

(in thousands)	Six Months Ended June 30,	
	2021	2020
Net cash provided by operating activities	\$ 179,625	\$ 84,503
Net cash used in investing activities	(127,076)	(277,050)
Net cash (used in) provided by financing activities	(53,644)	189,558

For the six months ended June 30, 2021, we generated \$179.6 million of cash from operating activities, an increase of \$95.1 million from the same period in 2020. Cash provided by operating activities increased primarily due to higher realized prices for all commodities, lower lease operating expenses, lower exploration expense, lower cash G&A expenses and the timing of our

supplier payments during the six months ended June 30, 2021. These increasing factors were partially offset by lower production volumes, higher GP&T and severance and ad valorem costs, the timing of our receivable collections, and cash settlement losses from derivatives for the six months ended June 30, 2021 as compared to the same 2020 period. Refer to “Results of Operations” for more information on the impact of volumes and prices on revenues and on fluctuations in our operating expenses between periods.

During the six months ended June 30, 2021, cash flows from operating activities and net proceeds from the issuance of the Convertible Senior Notes were used to finance \$126.7 million of drilling and development cash expenditures, repay net borrowings of \$75.0 million under our credit facility, redeem \$127.1 million of our 2025 senior secured notes outstanding and to fund \$14.7 million in capped call spread transactions.

During the six months ended June 30, 2020, cash flows from operating activities, cash on hand, and net borrowings of \$195.0 million under our credit facility were used to finance \$271.4 million of drilling and development cash expenditures, to fund \$6.1 million in oil and gas property acquisitions, and to finance \$5.1 million of debt issuance and exchange costs.

Credit Agreement

CRP, our consolidated subsidiary, has a credit agreement with a syndicate of banks that provides for a five-year secured revolving credit facility, maturing on May 4, 2023 (the “Credit Agreement”). As of June 30, 2021, we had \$255.0 million in borrowings outstanding and \$441.0 million in available borrowing capacity, which was net of \$4.0 million in letters of credit. The borrowing base had previously been reduced by an availability blocker of \$31.8 million, however, the blocker was removed as a result of the Senior Secured Note redemption discussed above. In connection with the Credit Agreement’s spring 2021 semi-annual borrowing base redetermination, the borrowing base and amount of elected commitments were reaffirmed at \$700.0 million.

CRP’s Credit Agreement contains restrictive covenants that limit its ability to, among other things: (i) incur additional indebtedness; (ii) make investments and loans; (iii) enter into mergers; (iv) make or declare dividends; (v) enter into commodity hedges exceeding a specified percentage of our expected production; (vi) enter into interest rate hedges exceeding a specified percentage of its outstanding indebtedness; (vii) incur liens; (viii) sell assets; and (ix) engage in transactions with affiliates.

CRP’s Credit Agreement also requires us to maintain compliance with the following financial ratios:

(i) a current ratio, which is the ratio of CRP’s consolidated current assets (including unused commitments under its revolving credit facility and excluding non-cash derivative assets and certain restricted cash) to its consolidated current liabilities (excluding any current portion of long-term debt due under the credit agreement and non-cash derivative liabilities), of not less than 1.0 to 1.0;

(ii) a first lien leverage ratio, as defined within the Credit Agreement as the ratio of first lien debt to EBITDAX for the rolling four fiscal quarter period, which may not exceed 2.75 to 1.00 beginning with the quarter ending June 30, 2020 and extending through the quarter ending December 31, 2021, after which the maximum ratio shall decrease to 2.50 to 1.00 for each of the quarters ending in 2022; and

(iii) a leverage ratio, as defined with the Credit Agreement as the ratio of total funded debt to consolidated EBITDAX for the rolling four fiscal quarter period. Pursuant to the Q2 2020 Amendments, the leverage ratio is suspended until March 31, 2022, at which time, the ratio may not exceed 5.00 to 1.00, with such maximum ratio declining at a rate of 0.25 for each succeeding quarter until March 31, 2023 when the ratio is set at not greater than 4.0 to 1.0.

CRP was in compliance with the covenants and the applicable financial ratios described above as of June 30, 2021 and through the filing of this Quarterly Report.

For further information on the Credit Agreement, refer to *Note 4—Long-Term Debt* under Part I, Item I of this Quarterly Report.

Convertible Senior Notes

On March 19, 2021, CRP issued \$150.0 million in aggregate principal amount of Convertible Senior Notes. On March 26, 2021, CRP issued an additional \$20.0 million of Convertible Senior Notes pursuant to the exercise of the underwriters’ over-allotment option to purchase additional Convertible Senior Notes. The Convertible Senior Notes bear interest at an annual rate of 3.25% and are due on April 1, 2028. Interest is payable semi-annually in arrears on each April 1 and October 1, commencing on October 1, 2021. CRP can settle the Convertible Senior Notes by paying or delivering cash, shares of the Company’s Class A common stock (the “Common Stock”), or a combination of cash and Common Stock, at CRP’s election.

The Convertible Senior Notes are fully and unconditionally guaranteed on a senior unsecured basis by the Company and each of CRP’s current subsidiaries that guarantee CRP’s outstanding Senior Unsecured Notes as defined below.

Senior Notes

On November 30, 2017, CRP issued \$400.0 million of 5.375% senior notes due 2026 (the “2026 Senior Notes”) and on March 15, 2019, CRP issued \$500.0 million of 6.875% senior notes due 2027 (the “2027 Senior Notes”) and, together with the 2026 Senior Notes, the “Senior Unsecured Notes”) in 144A private placements. In May 2020, \$110.6 million aggregate principal amount of the 2026 Senior Notes and \$143.7 million aggregate principal amount of the 2027 Senior Notes were validly tendered and exchanged by certain eligible bondholders for consideration consisting of \$127.1 million aggregate principal amount of 8.00% second lien senior secured notes due (the “Senior Secured Notes”). The Senior Secured Notes were fully redeemed at par in connection with the Convertible Senior Notes issuance during the second quarter of 2021.

The Senior Unsecured Notes are fully and unconditionally guaranteed on a senior unsecured basis by Centennial and each of CRP’s current subsidiaries that guarantee CRP’s revolving credit facility.

The indentures governing the Senior Unsecured Notes contain covenants that, among other things and subject to certain exceptions and qualifications, limit CRP’s ability and the ability of CRP’s restricted subsidiaries to: (i) incur or guarantee additional indebtedness or issue certain types of preferred stock; (ii) pay dividends on capital stock or redeem, repurchase or retire capital stock or subordinated indebtedness; (iii) transfer or sell assets; (iv) make investments; (v) create certain liens; (vi) enter into agreements that restrict dividends or other payments from their subsidiaries to them; (vii) consolidate, merge or transfer all or substantially all of their assets; (viii) engage in transactions with affiliates; and (ix) create unrestricted subsidiaries. CRP was in compliance with these covenants as of June 30, 2021 and through the filing of this Quarterly Report.

For further information on our Convertible Senior Notes and Senior Unsecured Notes, refer to *Note 4—Long-Term Debt* under Part I, Item I of this Quarterly Report.

Contractual Obligations

Our contractual obligations include operating and transportation agreements, drilling rig contracts, office and equipment leases, asset retirement obligations, long-term debt obligations and cash interest expense on long-term debt obligations, which we routinely enter into, modify or extend. Since December 31, 2020, there have not been any significant, non-routine changes in our contractual obligations, other than the changes to certain of our operating lease commitments and principal and interest due under our senior notes discussed above. Refer to *Note 13—Leases* under Part I, Item I of this Quarterly Report for updated contractual obligations associated with our operating leases as of June 30, 2021.

Critical Accounting Policies and Estimates

There have been no material changes during the six months ended June 30, 2021 to the critical accounting policies previously disclosed in our 2020 Annual Report. Please refer to Part II, Item 7. *Management’s Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Estimates* in our 2020 Annual Report for a discussion of our critical accounting policies and estimates.

New Accounting Pronouncements

Please refer to *Note 1—Basis of Presentation and Summary of Significant Accounting Policies* under Part I, Item 1. of this Quarterly Report for a discussion of recently adopted accounting standards and the potential effects of new accounting pronouncements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

The term “market risk” as it applies to our business refers to the risk of loss arising from adverse changes in oil and natural gas prices and interest rates, and we are exposed to market risk as described below. The primary objective of the following information is to provide quantitative and qualitative information about our potential exposure to market risks. The disclosures are not meant to be precise indicators of expected future losses, but rather indicators of reasonably possible losses. All of our market risk sensitive instruments were entered into for purposes other than speculative trading.

Commodity Price Risk

Our primary market risk exposure is in the pricing that we receive for our oil, natural gas and NGL production. Pricing for oil, natural gas and NGLs has been volatile and unpredictable for several years, and we expect this volatility to continue for the foreseeable future. Based on our production for the first half of 2021, our oil and gas sales for the six months ended June 30, 2021 would have moved up or down \$31.1 million for each 10% change in oil prices per Bbl, \$5.2 million for each 10% change in NGL prices per Bbl, and \$6.2 million for each 10% change in natural gas prices per Mcf.

Due to this volatility, we have historically used, and we may elect to continue to selectively use, commodity derivative instruments (such as collars, swaps and basis swaps) to mitigate price risk associated with a portion of our anticipated production. Our derivative instruments allow us to reduce, but not eliminate, the potential effects of the variability in cash flows from operations due to fluctuations in oil and natural gas prices and thereby provide increased certainty of cash flows for our drilling program and debt service requirements. These instruments provide only partial price protection against declines in oil and natural gas prices, but alternatively they may partially limit our potential gains from future increases in prices. Our Credit Agreement limits our ability to enter into commodity hedges covering greater than 85% of our reasonably anticipated projected production from proved properties.

The table below summarizes the terms of the derivative contracts we had in place as of June 30, 2021 and additional contracts entered into through July 31, 2021. Refer to *Note 7—Derivative Instruments* in Item 1 of Part I of this Quarterly Report for open derivative positions as of June 30, 2021.

	Period	Volume (Bbls)	Volume (Bbls/d)	Wtd. Avg. Crude Price (\$/Bbl) ⁽¹⁾		
Crude oil swaps						
NYMEX WTI	July 2021 - September 2021	782,000	8,500	\$47.01		
	October 2021 - December 2021	828,000	9,000	49.82		
	January 2022 - March 2022	1,035,000	11,500	64.89		
	April 2022 - June 2022	819,000	9,000	64.22		
	July 2022 - September 2022	552,000	6,000	63.50		
	October 2022 - December 2022	460,000	5,000	63.56		
ICE Brent	July 2021 - September 2021	276,000	3,000	\$54.85		
	October 2021 - December 2021	322,000	3,500	58.10		
	Period	Volume (Bbls)	Volume (Bbls/d)	Wtd. Avg. Collar Price Ranges (\$/Bbl) ⁽²⁾		
Crude oil collars						
NYMEX WTI	July 2021 - September 2021	184,000	2,000	\$49.75	-	\$58.51
	October 2021 - December 2021	92,000	1,000	42.00	-	50.10
ICE Brent	July 2021 - September 2021	230,000	2,500	\$65.00	-	\$73.17
	October 2021 - December 2021	138,000	1,500	66.67	-	74.80

	Period	Volume (Bbls)	Volume (Bbls/d)	Wtd. Avg. Differential (\$/Bbl)⁽³⁾
Crude oil differential basis swaps	July 2021 - September 2021	736,000	8,000	\$0.26
	October 2021 - December 2021	644,000	7,000	0.26
	Period	Volume (Bbls)	Volume (Bbls/d)	Wtd. Avg. Differential (\$/Bbl)⁽⁴⁾
Crude oil roll differential swaps	January 2022 - March 2022	450,000	5,000	\$0.60
	April 2022 - June 2022	455,000	5,000	0.60
	July 2022 - September 2022	460,000	5,000	0.60
	October 2022 - December 2022	460,000	5,000	0.60

(1) These crude oil swap transactions are settled based on either the NYMEX WTI or ICE Brent index price, as applicable, on each trading day within the specified monthly settlement period versus the contractual swap price for the volumes stipulated.

(2) These crude oil collars are settled based on the NYMEX WTI or ICE Brent index price, as applicable, on each trading day within the specified monthly settlement period versus the contractual floor and ceiling prices for the volumes stipulated.

(3) These crude oil basis swap transactions are settled based on the difference between the arithmetic average of ARGUS MIDLAND WTI and ARGUS WTI CUSHING indices, during each applicable monthly settlement period.

(4) These crude oil roll swap transactions are settled based on the difference between the arithmetic average of NYMEX WTI calendar month prices and the physical crude oil delivery month price.

	Period	Volume (MMBtu)	Volume (MMBtu/d)	Wtd. Avg. Gas Price (\$/MMBtu)⁽¹⁾
Natural gas swaps	July 2021 - September 2021	3,680,000	40,000	\$2.89
	October 2021 - December 2021	3,680,000	40,000	2.95
	January 2022 - March 2022	2,700,000	30,000	3.00
	April 2022 - June 2022	1,820,000	20,000	3.01
	July 2022 - September 2022	1,840,000	20,000	3.01
	October 2022 - December 2022	1,230,000	13,370	3.00

	Period	Volume (MMBtu)	Volume (MMBtu/d)	Wtd. Avg. Differential (\$/MMBtu)⁽²⁾
Natural gas basis differential swaps	July 2021 - September 2021	3,680,000	40,000	\$(0.30)
	October 2021 - December 2021	4,290,000	46,630	(0.24)
	January 2022 - March 2022	2,700,000	30,000	(0.18)

	Period	Volume (MMBtu)	Volume (MMBtu/d)	Wtd. Avg. Collar Price Ranges (\$/MMBtu)⁽³⁾	
Natural gas collars	October 2021 - December 2021	1,220,000	13,261	\$3.15	\$4.65
	January 2022 - March 2022	1,800,000	20,000	3.15	4.65

(1) These natural gas swap contracts are settled based on the NYMEX Henry Hub price on each trading day within the specified monthly settlement period versus the contractual swap price for the volumes stipulated.

(2) These natural gas basis swap contracts are settled based on the difference between the Inside FERC's West Texas WAHA price and the NYMEX price of natural gas, during each applicable monthly settlement period.

(3) These natural gas collars are settled based on the Henry Hub price on each trading day within the specified monthly settlement period versus the contractual floor and ceiling prices for the volumes stipulated.

Changes in the fair value of derivative contracts from December 31, 2020 to June 30, 2021, are presented below:

(in thousands)	Commodity derivative asset (liability)
Net fair value of oil and gas derivative contracts outstanding as of December 31, 2020	\$ (18,209)
Commodity hedge contract settlement payments, net of any receipts	60,399
Cash and non-cash mark-to-market losses on commodity hedge contracts ⁽¹⁾	(106,158)
Net fair value of oil and gas derivative contracts outstanding as of June 30, 2021	\$ (63,968)

c

⁽¹⁾ At inception, new derivative contracts entered into by us have no intrinsic value.

A hypothetical upward or downward shift of 10% per Bbl in the NYMEX forward curve for crude oil as of June 30, 2021 would cause a \$31.0 million increase or \$30.4 million decrease, respectively, in this fair value position, and a hypothetical upward or downward shift of 10% per Mcf in the NYMEX forward curve for natural gas as of June 30, 2021 would cause a \$4.4 million increase or \$4.3 million decrease, respectively, in this same fair value position.

Interest Rate Risk

Our ability to borrow and the rates offered by lenders can be adversely affected by deteriorations in the credit markets and/or downgrades in our credit rating. CRP's credit facility interest rate is based on a LIBOR spread (subject to a 1% floor), which exposes us to interest rate risk on our borrowings outstanding to the extent LIBOR increases above the floor and we have borrowings outstanding. Further, LIBOR rates are expected to no longer be published beginning June 30, 2023, however, due to the structure of the Credit Agreement, we do not expect the termination of LIBOR rates to have a material impact to us.

As of June 30, 2021, we had \$255.0 million of debt outstanding under our Credit Agreement, with a weighted average interest rate of 3.25%. Assuming no change in the amount outstanding, the impact on interest expense of a 1.0% increase or decrease in the weighted average interest rate would be approximately \$2.6 million per year. We do not currently have or intend to enter into any derivative hedge contracts to protect against fluctuations in interest rates applicable to our outstanding indebtedness.

The remaining long-term debt balance of \$799.3 million consists of our senior notes, which have fixed interest rates; therefore, this balance is not affected by interest rate movements. For additional information regarding our debt instruments, see *Note 4—Long-Term Debt*, in Item 1 of Part I of this Quarterly Report.

Item 4. Controls and Procedures

Evaluation of Disclosure Control and Procedures

In accordance with Rules 13a-15 and 15d-15 under the Exchange Act, we have evaluated, under the supervision and with the participation of 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 June 30, 2021. Our disclosure controls and procedures are designed to provide reasonable assurance that the information required to be disclosed 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 that evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective as of June 30, 2021 at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There were no changes in the system of internal control over financial reporting (as defined in Rule 13a-15(f) and Rule 15d-15(f) under the Exchange Act) during the three months ended June 30, 2021 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

Refer to in Item 1, *Note 11—Commitments and Contingencies* under Part I, Item 1. of this Quarterly Report for more information regarding our legal proceedings.

Item 1A. Risk Factors

In addition to the other information set forth in this Quarterly Report, you should carefully consider the risk factors and other cautionary statements described under the heading "Item 1A. Risk Factors" included in our 2020 Annual Report and the risk factors and other cautionary statements contained in our other SEC filings. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition or future results. There have been no material changes in our risk factors from those described in our 2020 Annual Report or our SEC filings.

Item 6. Exhibits

Exhibit Number	Description of Exhibit
3.1	Third Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q as filed with the SEC on May 6, 2019).
3.2	Second Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K as filed with the SEC on May 1, 2019).
3.3	Fifth Amended and Restated Limited Liability Company Agreement of Centennial Resource Production, LLC dated as of October 11, 2016 (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K as filed with the SEC on October 11, 2016).
3.4	Amendment No. 1 to Fifth Amended and Restated Limited Liability Company Agreement of Centennial Resource Production, LLC dated as of December 28, 2016 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K as filed with the SEC on December 29, 2016).
3.5	Amendment No. 2 to Fifth Amended and Restated Limited Liability Company Agreement of Centennial Resource Production, LLC dated as of March 20, 2017 (incorporated by reference to Exhibit 3.5 to the Company's Annual Report on Form 10-K as filed with the SEC on March 23, 2017).
3.6	Amendment No. 3 to Fifth Amended and Restated Limited Liability Company Agreement of Centennial Resource Production, LLC dated as of June 15, 2018 (incorporated by reference to Exhibit 3.6 to the Company's Quarterly Report on Form 10-Q as filed with the SEC on August 6, 2018).
4.1	Indenture, dated as of March 19, 2021, between Centennial Resource Production, LLC and UMB Bank, N.A., a trustee (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K as filed with the SEC on March 19, 2021).
4.2	First Supplemental Indenture, dated as of March 19, 2021, between Centennial Resource Production, LLC, the guarantor parties thereto, and UMB Bank, N.A., a trustee (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K as filed with the SEC on March 19, 2021).
10.1*#	Form of Performance Restricted Stock Unit Agreement under the Centennial Resource Development, Inc. 2016 Long Term Incentive Plan
31.1*	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350.
32.2*	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350.
101.INS*	Inline XBRL Instance Document - The instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH*	Inline XBRL Taxonomy Extension Schema Document.
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document.

Management contract or compensatory plan or agreement.

* Filed 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 thereto duly authorized.

CENTENNIAL RESOURCE DEVELOPMENT, INC.

By: /s/ GEORGE S. GLYPHIS

George S. Glyphis
Executive Vice President and Chief Financial Officer

Date: August 4, 2021

**CENTENNIAL RESOURCE DEVELOPMENT, INC.
2016 LONG TERM INCENTIVE PLAN**

PERFORMANCE RESTRICTED STOCK UNIT GRANT NOTICE

Capitalized terms not specifically defined in this Performance Restricted Stock Unit Grant Notice (the “**Grant Notice**”) have the meanings given to them in the 2016 Long Term Incentive Plan (as amended and/or restated from time to time, the “**Plan**”) of Centennial Resource Development, Inc. (the “**Company**”).

The Company has granted to the participant listed below (“**Participant**”) the Restricted Stock Units described in this Grant Notice (the “**PSUs**”), subject to the terms and conditions of the Plan and the Performance Restricted Stock Unit Agreement attached as **Exhibit A** (the “**Agreement**”), both of which are incorporated into this Grant Notice by reference.

Participant: []
Grant Date: July 27, 2021
Performance Period: July 1, 2021 through June 30, 2024
Target Number of PSUs: []

By Participant’s signature below, Participant agrees to be bound by the terms of this Grant Notice, the Plan and the Agreement. Participant has reviewed the Plan, this Grant Notice and the Agreement in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of the Plan, this Grant Notice and the Agreement. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan, this Grant Notice or the Agreement.

**CENTENNIAL RESOURCE
DEVELOPMENT, INC.**

PARTICIPANT

By: _____
Name: _____
Title: _____

[Participant Name]

PERFORMANCE RESTRICTED STOCK UNIT AGREEMENT

Capitalized terms not specifically defined in this Agreement have the meanings specified in the Grant Notice or, if not defined in the Grant Notice, in the Plan.

ARTICLE I. GENERAL

1.1 Award of PSUs and Dividend Equivalents.

(a) The Company has granted the PSUs to Participant effective as of the grant date set forth in the Grant Notice (the “**Grant Date**”). Each PSU represents the right to receive one Share or, at the option of the Administrator, an amount of cash, in either case, as set forth in this Agreement. Participant will have no right to receive any Shares or cash in respect of this Award until the time (if ever) the PSUs have vested.

(b) The Company hereby grants to Participant, with respect to each PSU, a Dividend Equivalent for ordinary cash dividends paid to substantially all holders of outstanding Shares with a record date after the Grant Date and prior to the date the applicable PSU is settled, forfeited or otherwise expires. Each Dividend Equivalent entitles Participant to receive the equivalent value of any such ordinary cash dividends paid on a single Share. The Company will establish a separate Dividend Equivalent bookkeeping account (a “**Dividend Equivalent Account**”) for each Dividend Equivalent and credit the Dividend Equivalent Account (without interest) on the applicable dividend payment date with the amount of any such cash paid.

1.2 Incorporation of Terms of Plan. The PSUs and Dividend Equivalents are subject to the terms and conditions set forth in this Agreement and the Plan, which is incorporated herein by reference. In the event of any inconsistency between the Plan and this Agreement, the terms of the Plan will control.

1.3 Unsecured Promise. The PSUs and Dividend Equivalents will at all times prior to settlement represent an unsecured Company obligation payable only from the Company’s general assets.

ARTICLE II. VESTING; FORFEITURE AND SETTLEMENT

2.1 Vesting; Forfeiture.

(a) The PSUs will be earned based on the Company’s achievement of the performance conditions set forth in Appendix A and, to the extent earned, the PSUs will vest in accordance with the schedule and terms set forth in Section 2.1(b). Any fraction of a PSU that would otherwise be vested will be rounded to the nearest whole PSU. Any PSUs that are not earned in accordance with the performance conditions set forth in Appendix A will immediately and automatically be cancelled and forfeited without consideration as of the date of determination. In the event of Participant’s Termination of Service for any reason, all unvested PSUs will immediately and automatically be cancelled and forfeited, except as otherwise

determined by the Administrator or provided in a binding written agreement between Participant and the Company. Dividend Equivalents (including any Dividend Equivalent Account balance) will vest or be forfeited, as applicable, upon the vesting or forfeiture of the PSU with respect to which the Dividend Equivalent (including the Dividend Equivalent Account) relates.

(b) The PSUs will be earned, if at all, at a level of between 26.25% and 250% of the Target Number of PSUs specified in the Grant Notice (the “**Target Number of PSUs**”) based on the Company’s achievement of the performance conditions set forth in Appendix A for the Performance Period set forth in the Grant Notice (the “**Performance Period**”). When practicable following the completion of the Performance Period, but in no event more than forty-five (45) days thereafter, the Administrator shall determine the extent to which the performance conditions set forth in Appendix A have been satisfied (such date of determination, the “**Final Determination Date**”). To the extent earned, the PSUs will vest on the Final Determination Date, subject to Participant not incurring a Termination of Service on or prior to the last day of the Performance Period.

2.2 Settlement.

(a) PSUs and Dividend Equivalents (including any Dividend Equivalent Account balance) will be paid in Shares or cash at the Administrator’s option as soon as administratively practicable after the vesting of the applicable PSU, but in no event more than thirty (30) days after the PSU’s vesting date. Notwithstanding the foregoing, the Company may delay any payment under this Agreement that the Company reasonably determines would violate Applicable Law until the earliest date the Company reasonably determines the making of the payment will not cause such a violation (in accordance with Treasury Regulation Section 1.409A-2(b)(7)(ii)), provided the Company reasonably believes the delay will not result in the imposition of excise taxes under Section 409A.

(b) If a PSU is paid in cash, the amount of cash paid with respect to each PSU will equal the average Fair Market Value of a Share over the five consecutive trading days ending on the day before the PSU’s vesting date, less applicable withholdings. If a Dividend Equivalent is paid in Shares, the number of Shares paid with respect to the Dividend Equivalent will equal the quotient, rounded down to the nearest whole Share, of the Dividend Equivalent Account balance divided by the average Fair Market Value of a Share over the five consecutive trading days ending on the day before the payment date.

(c) Notwithstanding anything to the contrary in this Agreement, this Award may only be settled in Shares to the extent Shares are then available for issuance in respect of the Award under the terms of the Plan.

ARTICLE III. TAXATION AND TAX WITHHOLDING

3.1 Representation. Participant represents to the Company that Participant has reviewed with Participant’s own tax advisors the tax consequences of this Award and the transactions contemplated by the Grant Notice and this Agreement. Participant is relying solely on such advisors and not on any statements or representations of the Company or any of its agents.

3.2 Tax Withholding.

(a) The Company has the right and option, but not the obligation, to treat Participant's failure to provide timely payment in accordance with the Plan of any withholding tax arising in connection with the PSUs or Dividend Equivalents as Participant's election to satisfy all or any portion of the withholding tax by requesting the Company retain Shares otherwise issuable under the Award.

(b) Participant acknowledges that Participant is ultimately liable and responsible for all taxes owed in connection with the PSUs and the Dividend Equivalents, regardless of any action the Company or any Subsidiary takes with respect to any tax withholding obligations that arise in connection with the PSUs or Dividend Equivalents. Neither the Company nor any Subsidiary makes any representation or undertaking regarding the treatment of any tax withholding in connection with the awarding, vesting or payment of the PSUs or the Dividend Equivalents or the subsequent sale of Shares. The Company and the Subsidiaries do not commit and are under no obligation to structure the PSUs or Dividend Equivalents to reduce or eliminate Participant's tax liability.

**ARTICLE IV.
OTHER PROVISIONS**

4.1 Adjustments. Participant acknowledges that the PSUs, the Shares subject to the PSUs and the Dividend Equivalents are subject to adjustment, modification and termination in certain events as provided in this Agreement and the Plan.

4.2 Notices. Any notice to be given under the terms of this Agreement to the Company must be in writing and addressed to the Company in care of the Company's Secretary at the Company's principal office or the Secretary's then-current email address or facsimile number. Any notice to be given under the terms of this Agreement to Participant must be in writing and addressed to Participant at Participant's last known mailing address, email address or facsimile number in the Company's personnel files. By a notice given pursuant to this Section, either party may designate a different address for notices to be given to that party. Any notice will be deemed duly given when actually received, when sent by email, when sent by certified mail (return receipt requested) and deposited with postage prepaid in a post office or branch post office regularly maintained by the United States Postal Service, when delivered by a nationally recognized express shipping company or upon receipt of a facsimile transmission confirmation.

4.3 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

4.4 Conformity to Securities Laws. Participant acknowledges that the Plan, the Grant Notice and this Agreement are intended to conform to the extent necessary with all Applicable Laws and, to the extent Applicable Laws permit, will be deemed amended as necessary to conform to Applicable Laws.

4.5 Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement will inure to the benefit of the

successors and assigns of the Company. Subject to the restrictions on transfer set forth in the Plan, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

4.6 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan or this Agreement, if Participant is subject to Section 16 of the Exchange Act, the Plan, the Grant Notice, this Agreement, the PSUs and the Dividend Equivalents will be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3) that are requirements for the application of such exemptive rule. To the extent Applicable Laws permit, this Agreement will be deemed amended as necessary to conform to such applicable exemptive rule.

4.7 Entire Agreement. The Plan, the Grant Notice and this Agreement (including any exhibit hereto) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof.

4.8 Agreement Severable. In the event that any provision of the Grant Notice or this Agreement is held illegal or invalid, the provision will be severable from, and the illegality or invalidity of the provision will not be construed to have any effect on, the remaining provisions of the Grant Notice or this Agreement.

4.9 Limitation on Participant's Rights. Participation in the Plan confers no rights or interests other than as herein provided. This Agreement creates only a contractual obligation on the part of the Company as to amounts payable and may not be construed as creating a trust. Neither the Plan nor any underlying program, in and of itself, has any assets. Participant will have only the rights of a general unsecured creditor of the Company with respect to amounts credited and benefits payable, if any, with respect to the PSUs and Dividend Equivalents, and rights no greater than the right to receive cash or the Shares as a general unsecured creditor with respect to the PSUs and Dividend Equivalents, as and when settled pursuant to the terms of this Agreement.

4.10 Not a Contract of Employment. Nothing in the Plan, the Grant Notice or this Agreement confers upon Participant any right to continue in the employ or service of the Company or any Subsidiary or interferes with or restricts in any way the rights of the Company and its Subsidiaries, which rights are hereby expressly reserved, to discharge or terminate the services of Participant at any time for any reason whatsoever, with or without Cause, except to the extent expressly provided otherwise in a written agreement between the Company or a Subsidiary and Participant.

4.11 Counterparts. The Grant Notice may be executed in one or more counterparts, including by way of any electronic signature, subject to Applicable Law, each of which will be deemed an original and all of which together will constitute one instrument.

* * * * *

Appendix A

Performance Goals

The performance measures for the PSU award are (a) the Company's total shareholder return ("**TSR**") compared to the TSR of a group of peer companies and one exchange-traded index fund over the Performance Period and (b) the Company's absolute annualized TSR over the Performance Period. TSR combines share price appreciation and dividends paid to show the total return to the shareholder.

TSR will be (a) (1) the sum of the Company's ending stock price plus dividends with a record date during the Performance Period *minus* (2) the Company's beginning stock price, *divided by* (b) the Company's beginning stock price. Both the beginning and ending stock prices will be calculated using the average closing price during the last 20 trading days prior to and including the calculation date. This calculation is used instead of the actual closing price on the given date to smooth volatility in the stock price and avoid single-day fluctuations.

Peer Group

The following 11 companies and one exchange-traded index fund are included in the Company's peer group for purposes of this Award:

Callon Petroleum Company	Oasis Petroleum Inc.
Cimarex Energy Co.	PDC Energy, Inc.
Earthstone Energy, Inc.	Penn Virginia Corporation
Laredo Petroleum, Inc.	SM Energy Company
Magnolia Oil & Gas Corporation	SPDR S&P Oil & Gas Exploration & Production ETF (XOP)
Matador Resources Company	Whiting Petroleum

Should a peer company cease to exist as a separate publicly traded company during the Performance Period due to bankruptcy, it will nonetheless remain as a member of the Company's peer group for purposes of the payout calculation described below and the Company shall be ranked higher than such peer company for purposes of the payout calculation. Should a peer company cease to exist as a separate publicly traded company during the Performance Period due to a merger, acquisition or other similar transaction, or should shares of the SPDR S&P Oil & Gas Exploration & Production ETF cease to be publicly traded during the Performance Period, it will be automatically removed from the peer group list and the number of PSUs earned will be determined based on the Company's percentile rank among the resulting peer group.

Payout Calculation

At the end of the Performance Period, the number of PSUs earned will be equal to (a) the Target Number of PSUs *multiplied by* (b) the Relative TSR Multiplier (defined below) *multiplied by* (c) the Absolute TSR Multiplier (defined below). The Relative TSR Multiplier and the Absolute TSR Multiplier are both expressed as percentages and, after both multipliers have been applied,

the number of PSUs earned, if at all, will be at a level between 26.25% and 250% of the Target Number of PSUs.

Relative TSR Multiplier

The Relative TSR Multiplier is determined based on the Company's TSR relative to the Company's peer group over the Performance Period. The Company's TSR is ranked among the peers and the percentile rank is calculated, based on the Company's position in the ranking, as the percentage of members of the peer group (including the Company and as the peer group is constituted on the final day of the Performance Period) with a ranking that is greater than or equal to the Company's ranking (i.e., with a TSR that is less than or equal to the Company's TSR). The Relative TSR Multiplier will be determined based on the Company's TSR Percentile Ranking, with linear interpolation between any specified TSR Percentile Ranking set forth in the table below; *provided, however*, that the Relative TSR Multiplier shall equal 0% if the Company's TSR Percentile Ranking is below 25%.

TSR Percentile Rankin	Relative TSR Multiplier
100%	200%
75%	150%
50%	100%
25%	35%
0%	0%

Absolute TSR Multiplier

The Absolute TSR Multiplier is determined based on the Company's absolute annualized TSR over the Performance Period in accordance with the table below.

Absolute Annualized TSR	Absolute TSR Multiplier
Below 0%	75%
Between 0% and 15%	100%
Above 15%	125%

Adjustments for Extraordinary Events

Notwithstanding the foregoing, if the Administrator determines that due to a reduction in the size of the peer group or other unusual, extraordinary or nonrecurring transactions or events materially affecting the Award, an adjustment in the peer group, the payment schedule and/or other terms of the Award is necessary or appropriate to avoid the dilution or enlargement of the benefits or potential benefits intended to be made available under the Award, the Administrator may adjust the peer group (including by removing constituent companies, substituting new constituent companies for existing constituent companies or selecting new constituent companies to replace withdrawn constituent companies), the payment schedule and/or such other terms of the Award in such a manner as the Administrator determines in good faith to be equitable to

reflect such transactions or events. As used in the prior sentence, “constituent companies” includes indices such as the SPDR S&P Oil & Gas Exploration & Production ETF (XOP).

* * * * *

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO RULES 13a-14(a) AND 15d-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED**

I, Sean R. Smith, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q (this “report”) of Centennial Resource Development, Inc. (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)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: August 4, 2021

CENTENNIAL RESOURCE DEVELOPMENT, INC.

By: /s/ SEAN R. SMITH

Sean R. Smith

Chief Executive Officer (Principal Executive Officer)

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

In connection with the Quarterly Report on Form 10-Q for the quarter ended June 30, 2021 of Centennial Resource Development, Inc. (the “Company”), as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Sean R. Smith, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

Date: August 4, 2021

CENTENNIAL RESOURCE DEVELOPMENT, INC.

By: /s/ SEAN R. SMITH
Sean R. Smith
Chief Executive Officer (Principal Executive Officer)

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

In connection with the Quarterly Report on Form 10-Q for the quarter ended June 30, 2021 of Centennial Resource Development, Inc. (the “Company”), as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, George S. Glyphis, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

Date: August 4, 2021

CENTENNIAL RESOURCE DEVELOPMENT, INC.

By: /s/ GEORGE S. GLYPHIS
George S. Glyphis
Executive Vice President and Chief Financial Officer (Principal Financial Officer)