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GLOSSARY OF COMMONLY USED TERMS

The following are abbreviations and definitions of certain terms used in this document:

- "2022 Notes" means our 10.00% senior unsecured notes due April 2022.
- "2025 Second Lien Term Loans" means our second lien term loans due November 2025.
- "2026 Notes" means our 7.00% senior unsecured notes due November 2026.
- "2027 Notes" means our 9.00% senior unsecured notes due November 2027.
- "2028 Notes" means our 8.25% senior unsecured notes due December 2028.
- "2029 Notes" means our 5.875% senior unsecured notes due June 2029.
- "bbl(s)" means barrel(s) as used in reference to crude oil, condensate or NGL. One barrel equals 42 U.S. gallons liquid volume.
- "bbls/d" means barrels of crude oil, condensate or NGL per day.
- "bbtu" means billion British thermal units.
- "bcf" means billion cubic feet of natural gas.
- "bcf/d" means billion cubic feet of natural gas per day.
- "bcfe" means billion cubic feet of natural gas equivalent with one barrel of oil, condensate or NGL converted to six thousand cubic feet of natural gas.
- "bcfe/d" means billion cubic feet of natural gas equivalent per day.
- "btu" means British thermal units, a measure of heating value.
- "Credit Facility" means our senior secured revolving credit facility due June 30, 2027, which will accelerate to August 2, 2026 if an amount greater than or equal to \$150.0 million of the 2026 Notes is outstanding as of that date.
- "Convertible Notes" means our convertible notes due March 2021.
- "DD&A" means depreciation, depletion and amortization.
- "exploratory well" means a well drilled to find a new field or to find a new reservoir in a field previously found to be productive of natural gas or oil in another reservoir. Generally, an exploratory well is any well that is not a development well, an extension well, or a service well.
- "GAAP" means U.S. generally accepted accounting principles.
- "gross" means:
 - In relation to our interest in production and reserves, our interest (operating and non-operating) before deduction of royalty and overriding royalty interests;
 - In relation to our wells, the total number of wells in which we own an interest before the deduction of outside working interests, royalty interests and overriding royalty interests; and
 - In relation to our interest in a property, the total area in acres of properties in which we own an interest.
- "LIBOR" means London Interbank Offered Rate.
- "mbbls" means thousand barrels of crude oil, condensate or NGL.

"mbbls/d" means thousand barrels of crude oil, condensate or NGL per day.

"mcf" means thousand cubic feet of natural gas.

"mcfe" means thousand cubic feet of natural gas equivalent with one barrel of oil, condensate or NGL converted to six thousand cubic feet of natural gas.

"mmbtu" means million British thermal units.

"mmbtu/d" means million British thermal units per day.

"mmcf" means million cubic feet of natural gas.

"mmcf/d" means million cubic feet of natural gas per day.

"mmcfe" means million cubic feet of natural gas equivalent with one barrel of oil, condensate or NGL converted to six thousand cubic feet of natural gas.

"mmcfe/d" means million cubic feet of natural gas equivalent per day.

"net" means:

- In relation to our interest in production and reserves, our interest (operating and non-operating) after the deduction of royalty and overriding royalty interests;
- In relation to our wells, the total number of wells obtained by aggregating our working interest after the deduction of royalty and overriding royalty interests in each of its gross wells;
- In relation to our interest in a property, the total area in acres in which we own an interest multiplied by our working interest in the area after the deduction of royalty and overriding royalty interests; and
- In relation to our interest in leasehold acreage, our gross acres after the deduction of royalty and overriding royalty interests.

"NGL" means natural gas liquids.

"NYMEX" means the New York Mercantile Exchange.

"operator" means the individual or company responsible for the exploration, development and/or production of an oil or gas well or lease.

"proved developed non-producing" means reserves that consist of (i) proved reserves from wells which have been completed and tested but are not producing due to lack of market accessibility or minor completion problems which are expected to be corrected and (ii) proved reserves currently behind the pipe in existing wells and which are expected to be productive due to both the well log characteristics and analogous production in the immediate vicinity of the wells.

"proved developed producing" means proved reserves that can be expected to be recovered from currently producing zones under the continuation of present operating methods.

"proved reserves" means, as defined by the SEC, the quantities of natural gas, oil and NGL, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible from a given date forward from known reservoirs under existing economic conditions, operating methods and government regulations.

"proved undeveloped" or "PUD(s)" means 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 recompletion.

"PV-10" means pre-tax present value of estimated future natural gas, oil and NGL revenues, net of estimated direct expenses, discounted at an annual discount rate of 10%.

"reserves" means estimated remaining quantities of natural gas and oil 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.

"royalty interest" means an interest in a natural gas and oil lease that gives the owner of the interest the right to receive a portion of the production from the leased acreage (or the proceeds of the sale thereof), but generally does not require the owner to pay any portion of the costs of drilling or operating the wells on the leased acreage.

"Senior Notes" means our 2022 Notes, 2026 Notes, 2027 Notes, 2028 Notes and 2029 Notes.

"SOFR" means Secured Overnight Financing Rate.

"standardized measure" means the present value, discounted at 10% per year, of estimated future net revenues from the production of proved reserves, computed by applying sales prices used in estimating proved reserves to the year-end quantities of those reserves in effect as of the dates of such estimates and held constant throughout the productive life of the reserves (except for the consideration of future price changes to the extent provided by contractual arrangements in existence at year-end), and deducting the estimated future costs to be incurred in developing, producing and abandoning the proved reserves (computed based on year-end costs and assuming continuation of existing economic conditions). Future income taxes are calculated by applying the appropriate year-end statutory federal and state income tax rates with consideration of future tax rates already legislated, to pre-tax future net cash flows, net of the tax basis of the properties involved and utilization of available tax carryforwards related to proved natural gas and oil reserves. However, we are a disregarded entity for income tax purposes and therefore do not estimate future income tax expense.

"tcfe" means trillion cubic feet equivalent, with one barrel of oil, condensate or NGL converted to six thousand cubic feet of natural gas.

"unproved properties" means properties with no proved reserves.

"working interest" means an interest in a natural gas and oil lease that gives the owners of the interest the right to drill for and produce natural gas, oil and NGL on the leased acreage and requires the owners of the interest to pay their share of the costs of drilling, completions and production operations.

"WTI" means West Texas Intermediate.

Business Overview

Unless otherwise indicated or the context otherwise requires, references to "we," "our" and "us" refer to Ascent Resources Utica Holdings, LLC together with its wholly-owned subsidiaries.

We are one of the largest private producers of natural gas in the United States and are focused on acquiring, developing and operating natural gas and oil properties located in the Utica Shale. We are a wholly-owned subsidiary of Ascent Resources Operating, LLC (our "Member") and an indirect wholly-owned subsidiary of Ascent Resources, LLC (our "Parent"). We were formed in 2013 by our private equity sponsors, primarily The Energy & Minerals Group and First Reserve Corporation, to utilize our technical expertise to acquire and exploit assets in the Utica Shale. Our asset base is concentrated in southern Ohio, where we target primarily the Point Pleasant interval of the Utica Shale, one of the premier North American shale plays. Our largely contiguous development footprint of approximately 350,000 net leasehold acres, including approximately 74,500 mineral acres, lies within the core of the southern Utica Shale and, as supported by our drilling results and those of offset operators, offers development opportunities with predictable and repeatable production profiles, low breakeven costs and industry-leading rates of return. We also own royalty interests in approximately 5,400 mineral acres that are being developed by third-party operators and provide enhanced value without additional capital costs or operating expenses.

We are continuously focused on enhancing our drilling and completion techniques, minimizing operational costs and maximizing the recovery of natural gas, oil and NGL from our assets, with the goal of generating strong corporate-level returns and sustainable free cash flow in a capital efficient and financially disciplined manner.

2022 Highlights

On August 5, 2022, we acquired assets in Ohio for a total purchase price of \$270.0 million, or \$250.9 million after closing purchase price adjustments. The transaction was financed with a combination of cash on hand and borrowings under our Credit Facility. The assets acquired were primarily producing properties which included approximately 57 net producing wells and 22,300 net acres.

Significant financial and operating results for the year ended December 31, 2022 include:

- Our liquidity as of December 31, 2022 was \$1.46 billion, including our available borrowing capacity under our Credit Facility and our cash balance.
- On June 30, 2022, we amended the credit agreement governing our Credit Facility to increase the borrowing base thereunder from \$1.85 billion to \$3.0 billion, and to increase the elected commitment amount from \$1.85 billion to \$2.0 billion. The maturity date was extended from April 1, 2024 to June 30, 2027.
- Our net daily production for the year ended December 31, 2022 averaged 2.11 bcfe/d and was comprised of approximately 93% natural gas, 2% oil and 5% NGL.
- We spud 75 wells, hydraulically fractured 75 wells and turned-in-line 82 new wells.
- Our average realized price for the year ended December 31, 2022, including the effects of settled derivatives, increased 25% to \$3.75 per mcfe from \$2.99 per mcfe for the year ended December 31, 2021.

Market Conditions, Trends and Uncertainties

Management's estimates are based on numerous assumptions about future operations and market conditions, which we believe to be reasonable but are inherently uncertain. The uncertainties underlying our assumptions include, but are not limited to, volatility in commodity markets, rising inflation and interest rates and governmental policies aimed at transitioning towards lower carbon energy. While we cannot be certain as to the full magnitude these and other factors may have on our future financial condition, liquidity, results of operations or cash flows, we actively monitor them as they may cause actual results to differ from our historical results or current expectations.

Commodity Prices

Prices for natural gas, oil and NGL that we produce significantly impact our revenue and cash flows. In the current economic environment, we expect that commodity prices for some or all the commodities we produce will remain volatile

due to rising macroeconomic uncertainties and geopolitical tensions, including Russia's invasion of Ukraine. These factors and the resulting volatility are outside of our control and could adversely impact our business, financial condition, results of operations and future cash flows. We actively monitor commodity markets and use derivative instruments to reduce our exposure to fluctuations in future commodity prices and protect our anticipated operating cash flows against significant market movements or volatility.

Inflation

The annual inflation rate in the U.S. was unusually high during 2022, rising approximately 7% as compared to the average historical 10-year rate of approximately 3%, according to the United States Bureau of Labor Statistics consumer price index, and is largely anticipated to remain elevated through 2023. These inflationary pressures have resulted in increases to the portion of our capital and operating expenses that are not fixed and could impact the renegotiation of certain contracts, among other things. Additionally, governmental policies aimed at addressing inflation have resulted in rising interest rates which have increased the borrowing costs on our Credit Facility and 2025 Second Lien Term Loans and could increase borrowing costs on new debt. We continue to monitor these inflationary factors and remain focused in our efforts to increase the efficiencies of our operations, which may, in part, offset the increased costs that arise from inflation.

Properties

Well Data

As of December 31, 2022, we held an interest in 1,176 gross (749 net) productive wells, including 975 gross (749 net) properties in which we held a working interest and 201 gross properties in which we only held an overriding or royalty interest. Of the wells in which we had a working interest, 923 gross (717 net) were classified as productive natural gas wells and 52 gross (32 net) were classified as productive oil wells. We operated approximately 811 gross (733 net) of our productive wells in which we had a working interest. During 2022, we drilled 82 gross (76 net) wells as operator and participated in three gross wells drilled by other operators. We also held an overriding or royalty interest in another four gross wells drilled by other operators. We operated approximately 99% of our net production volumes in 2022.

Drilling Activity

The following table describes the new productive wells we operated or participated in during the periods indicated:

	Productive Wells Drilled during the Year Ended December 31,						
	202	22 2021			2020		
	Gross	Net	Gross	Net	Gross	Net	
Development	85	76	74	69	78	73	

As of December 31, 2022, we had 40 gross (35 net) wells in the process of drilling, completing or turning-in-line. We did not drill any exploratory or dry development wells during the years ended December 31, 2022, 2021 or 2020.

Acreage

The following tables set forth information as of December 31, 2022 related to our leasehold acreage position. Developed acreage is acreage spaced or assigned to productive wells and does not include undrilled acreage held by production under the terms of the lease. Undeveloped acreage is acreage on which wells have not been drilled or completed to a point that would permit the production of commercial quantities of natural gas or oil, regardless of whether such acreage contains proved reserves. A gross acre is an acre in which a working interest is owned. A net acre is deemed to exist when the sum of the fractional working interests owned in gross acres equals one.

The following table sets forth our gross and net acres of developed and undeveloped natural gas and oil leasehold as of December 31, 2022:

Develop	ed Acres	Undevelop	ped Acres	Total	Acres
Gross	Net	Gross	Net ^(a)	Gross	Net ^(b)
206,395	194,219	187,936	155,877	394,331	350,096

- (a) Approximately 73% of our net undeveloped leasehold acreage is not subject to expiration because it is held by production, or it is acreage on which we own the mineral rights.
- (b) We own royalty interests in approximately 79,900 mineral acres, including approximately 5,400 mineral acres where development is controlled by third-party operators.

The following table sets forth the number of total undeveloped acres as of December 31, 2022 that will expire unless production is established within the spacing units covering the acreage prior to the expiration dates or unless such leasehold rights are extended or renewed:

	Acres Subject to	o Expiration
	Gross	Net
2023	14,787	13,307
2024	10,342	10,085
2025	2,354	2,218
2026	5,994	5,969
2027 and thereafter	10,237	10,124
Total	43,714	41,703

Delivery Commitments

We have entered into various firm sales contracts to deliver and sell natural gas and ethane. We believe we will have sufficient production quantities and firm transportation capacity to meet substantially all of such commitments; however, we may be required to purchase natural gas from third parties to satisfy shortfalls should they occur. The following table sets forth our natural gas firm sales commitments as of December 31, 2022:

	Natural Gas (bbtu)
2023	108,431
2024	63,273
2025	46,746
2026	46,746
2027	46,746
2028 - 2029	58,398
Total	370,340

We have certain ethane firm sales commitments that extend through 2042 which require a minimum volume, and allow for additional discretionary volume if elected by the purchaser, to be delivered. Both the minimum and additional discretionary volumes are redetermined annually, and are not anticipated to have a material impact on our financial statements.

Production Volumes, Sales Prices, Lease Operating Expenses and Gathering, Processing and Transportation Expenses

The following table sets forth information regarding our net production volumes, average sales prices received, lease operating expenses and gathering, processing and transportation expenses for the periods indicated:

	Year Ended December 31,					
		2022		2021		2020
Net Production Volumes:						
Natural gas (mmcf)		719,470		645,752		646,982
Oil (mbbls)		2,814		3,110		4,291
NGL (mbbls)		5,794		7,012		9,304
Natural Gas Equivalent (mmcfe)		771,119		706,484		728,553
Average Sales Prices:						
Natural gas (\$/mcf)	\$	6.53	\$	3.89	\$	1.95
Oil (\$/bbl)	\$	87.73	\$	60.47	\$	32.33
NGL (\$/bbl)	\$	41.26	\$	34.47	\$	12.71
Natural Gas Equivalent (\$/mcfe)	\$	6.73	\$	4.16	\$	2.08
Settlements of commodity derivatives (\$/mcfe)		(2.98)		(1.17)		0.63
Average sales price, after effects of settled derivatives (\$/mcfe)	\$	3.75	\$	2.99	\$	2.71
Expenses (\$/mcfe):						
Lease operating expenses	\$	0.13	\$	0.12	\$	0.10
Gathering, processing and transportation expenses	\$	1.27	\$	1.34	\$	1.27

Natural Gas, Oil and NGL Reserves

All of our estimated proved reserves are located within the Point Pleasant interval of the Utica Shale. The following table sets forth our proved reserves as of December 31, 2022:

	December 31, 2022						
	Natural Gas	Oil	NGL	Total			
	(mmcf)	(mbbls)	(mbbls)	(mmcfe)			
Proved developed reserves ^(a)	5,101,803	16,687	63,026	5,580,079			
Proved undeveloped reserves	2,613,745	22,651	90,192	3,290,804			
Total	7,715,548	39,338	153,218	8,870,883			

(a) Approximately 112.7 bcfe, or 2%, of our proved developed reserves were proved developed non-producing.

The table below sets forth information as of December 31, 2022, with respect to our estimated proved reserves, the associated estimated future net revenue, PV-10 and the standardized measure of discounted cash flows. Neither the estimated future net revenue, PV-10 nor the standardized measure is intended to represent the current market value of the estimated natural gas, oil and NGL reserves we own. Estimated future net revenue represents the estimated future gross revenue to be generated from the production of proved reserves, net of estimated production and future development costs under existing economic conditions as of December 31, 2022. For the purpose of determining prices used in our reserve reports, we used the unweighted arithmetic average of the prices on the first day of each month within the 12-month period ended December 31, 2022. The average adjusted prices used in our reserve reports were \$6.26 per mcf of natural gas, \$87.39 per bbl of oil and \$39.13 per bbl of NGL utilizing a benchmark of \$6.36 per mmbtu of natural gas and \$94.14 per bbl of oil and condensate. These prices should not be interpreted as a prediction of future prices, nor do they reflect the prices used to value our commodity derivative instruments in place as of December 31, 2022. The amounts shown do not give effect to non-property related expenses, such as corporate general and administrative expenses and debt service costs, or to DD&A. PV-10 is a non-GAAP measure that typically differs from the standardized measure because the former does

not include the effects of estimated future income tax expense. However, because we are a disregarded entity for income tax purposes, we have estimated no future income tax expense, and the two measures are the same as of December 31, 2022.

		December 31, 2022				
	Proved	Proved Proved				
(\$ in thousands)	Developed	Undeveloped	Proved			
Estimated future net revenue	\$ 25,989,281	\$ 14,162,269	\$ 40,151,550			
PV-10	\$ 12,403,484	\$ 6,636,215	\$ 19,039,699			
Standardized measure ^(a)			\$ 19,039,699			

(a) See Note 13, Standardized Measure of Discounted Future Net Cash Flows Relating to Proved Natural Gas, Oil and NGL Reserves, of the notes to our consolidated financial statements included in this report for further discussion.

As of December 31, 2022, our estimated proved reserves included approximately 3.291 tcfe of reserves classified as proved undeveloped, compared to approximately 4.350 tcfe as of December 31, 2021. The table below is a summary of changes in our PUDs for 2022:

	Total
	(mmcfe)
Proved undeveloped reserves at December 31, 2021	4,350,132
Extensions, discoveries and other additions	429,218
Purchases of reserves	7,516
Revisions	(222,904)
Conversions into proved developed reserves	(1,273,158)
Proved undeveloped reserves at December 31, 2022	3,290,804

Our proved undeveloped extensions and discoveries of approximately 429.2 bcfe of reserves resulted from the continued development of our Utica Shale acreage. Revisions of previous PUD estimates included downward revisions of 222.9 bcfe primarily due to the removal of PUDs that were not going to be developed within the SEC's five-year rule, although the majority remain in our current five-year development plan. As of December 31, 2022, there were no PUDs that had remained undeveloped for five years or more. We also added approximately 7.5 bcfe of proved undeveloped reserves through our Ohio asset acquisition. In 2022, we invested \$590.4 million to convert 1.273 tcfe from proved undeveloped reserves to proved developed reserves.

The future net revenues attributable to our estimated PUDs of \$14.16 billion as of December 31, 2022, and associated PV-10 of \$6.64 billion, have been calculated assuming that we will expend approximately \$2.01 billion to develop these reserves over the next five years, although the amount and timing of these expenditures will depend on a number of factors, including, but not limited to, actual drilling results, service costs, commodity prices and the availability of capital. Our drilling schedule is subject to revision and reprioritization throughout the year resulting from unpredictable factors such as unexpected drilling results, title issues and infrastructure availability or constraints.

Evaluation and Review of Reserves

The estimation of our proved reserves is prepared internally by our staff of petroleum engineers and geoscience professionals. Our Senior Vice President of Exploration and Resource Development is the technical person primarily responsible for overseeing the preparation of all of our reserve estimates. He holds a Bachelor of Science degree in Chemical Engineering from the University of Oklahoma. Before joining Ascent, he held various technical and managerial positions with Chesapeake Energy Corporation, Atlantic Richfield Company, Phillips Petroleum and ConocoPhillips and has more than 25 years of reservoir estimation and operations experience.

The preparation of our historical proved reserve estimates is completed in accordance with our internal control procedures. These procedures, which are intended to ensure reliability of reserve estimations, include the following:

- Verification of property ownership by our land department;
- Verification of various state severance and ad valorem tax rates by our tax department;

- Review and verification of historical production data, which data is based on actual production as reported by us;
- Review and verification of historical lease operating expenses, which data is based on actual accounting data as reported by us;
- Review and verification of historical capital expenditures, which data is based on actual accounting data as reported by us;
- Review and verification of historical realized pricing differentials and marketing contract fees, which data is based on actual accounting data as reported by us;
- Review of our proved undeveloped wells to ensure that the timing and future rates of production are consistent with current development plans and our financial ability to develop such reserves within five years;
- Review of reserve estimates by our Senior Vice President of Exploration and Resource Development or under his direct supervision; and
- Review by our Chief Executive Officer, Chief Financial Officer and Chief Operating Officer of all of our reported
 proved reserves at the close of each quarter, including the review of all significant reserve changes and all new PUD
 additions.

We engaged the services of Netherland, Sewell & Associates, Inc. ("NSAI"), an independent petroleum engineering firm, to audit the 2022 reserves estimated by our petroleum engineering staff. The purpose of this audit was to provide additional assurance on the reasonableness of internally prepared reserve estimates and represented 100% of our proved reserves and 100% of the present value of our proved reserves discounted at 10%. The technical persons at NSAI primarily responsible for auditing the estimates presented herein meet the requirements regarding qualifications, independence, objectivity and confidentiality set forth in the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers ("SPE Standards"). Additionally, our internal staff of petroleum engineers and geoscience professionals work closely with our independent reserve engineers to ensure the integrity, accuracy and timeliness of data furnished during the reserve audit process. Our internal technical team members meet with our independent reserve engineers periodically during the preparation of the reserve reports to discuss the assumptions and methods used in the proved reserve estimation process. We provide historical information for our properties, such as ownership interest, natural gas, oil and NGL production, well test data, commodity prices and operating and development costs. Any differences found in the analysis of the estimation of our proved reserves by our independent reserve engineers are reviewed with our Senior Vice President of Exploration and Resource Development. Our estimates of proved reserves and the present value of such reserves, discounted at 10%, did not differ from the estimates of our independent reserve engineers by more than the recommended threshold of 10% set forth in the SPE Standards.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Our Management's Discussion and Analysis of our Financial Condition and Results of Operations ("MD&A") should be read in conjunction with our consolidated financial statements and related notes, included herein. The following discussion and analysis contains forward-looking statements that involve known and unknown risks, uncertainties and assumptions. The forward-looking statements are not historical facts, but rather reflect our future plans, estimates, beliefs and expected performance. 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.

The following discussion and analyses primarily focus on 2022 and 2021. Discussions of 2020 items and year-to-year comparisons between 2021 and 2020 that are not included in this report can be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our prior year financial statements, which are available on our website.

Results of Operations

Year Ended December 31, 2022 Compared to 2021

Revenues. The following table sets forth certain information for the periods indicated regarding our revenues, average sales prices received and net production volumes:

	Year Ended December 31,				 Variance		
		2022		2021	Amount	Percent	
Revenues (\$ in thousands):							
Natural gas	\$	4,700,531	\$	2,510,150	\$ 2,190,381	87 %	
Oil		246,866		188,076	58,790	31 %	
NGL		239,071		241,731	(2,660)	(1)%	
Total Revenues, before effects of commodity derivatives	\$	5,186,468	\$	2,939,957	\$ 2,246,511	76 %	
Average Sales Prices:							
Natural gas (\$/mcf)	\$	6.53	\$	3.89	\$ 2.64	68 %	
Oil (\$/bbl)	\$	87.73	\$	60.47	\$ 27.26	45 %	
NGL (\$/bbl)	\$	41.26	\$	34.47	\$ 6.79	20 %	
Natural Gas Equivalent (\$/mcfe)	\$	6.73	\$	4.16	\$ 2.57	62 %	
Settlements of commodity derivatives (\$/mcfe) ^(a)		(2.98)		(1.17)	(1.81)	155 %	
Average sales price, after effects of settled derivatives (\$/mcfe)	\$	3.75	\$	2.99	\$ 0.76	25 %	
Net Production Volumes:							
Natural gas (mmcf)		719,470		645,752	73,718	11 %	
Oil (mbbls)		2,814		3,110	(296)	(10)%	
NGL (mbbls)		5,794		7,012	(1,218)	(17)%	
Natural Gas Equivalent (mmcfe)		771,119		706,484	64,635	9 %	
Average Daily Net Production Volumes:							
Natural gas (mmcf/d)		1,971		1,769	202	11 %	
Oil (mbbls/d)		8		9	(1)	(11)%	
NGL (mbbls/d)		16		19	(3)	(16)%	
Natural Gas Equivalent (mmcfe/d)		2,113		1,936	177	9 %	

(a) Does not reflect a one-time payment of \$300.0 million made in April 2022 to restructure a portion of our May through December 2022 natural gas swaps, which resulted in an increase to our weighted average strike prices for these periods.

Natural gas, oil and NGL revenues (excluding the effects of derivatives) increased \$2.25 billion during the year ended December 31, 2022 compared to the same period in 2021, of which \$1.84 billion was attributable to an increase in commodity prices and \$409.3 million was attributable to an increase in our net production volumes.

Commodity prices fluctuate in response to changes in supply and demand, market uncertainty and a variety of other factors beyond our control. A change in commodity prices has a direct impact on our sales and cash flows. The following table illustrates the effects of an increase or decrease in commodity prices on our sales and cash flows, before the effects of derivatives, assuming our production levels for the year ended December 31, 2022 remained constant:

(\$ in thousands)	Volumes	Price Fluctuation per Unit	Effect on Sales and Cash Flows
Commodity:			
Natural Gas (mmcf)	719,470	\$ 0.10	\$ 71,947
Oil (mbbls)	2,814	\$ 1.00	\$ 2,814
NGL (mbbls)	5,794	\$ 1.00	\$ 5,794

Impact of Commodity Derivative Instruments. We use commodity derivative instruments to mitigate our exposure to fluctuations in future commodity prices in order to protect our anticipated cash flows against significant market movements or volatility. For the years ended December 31, 2022 and 2021, we recorded losses related to our commodity derivatives of \$2.69 billion and \$1.74 billion, respectively, including settlement losses on our derivative instruments of \$2.30 billion and \$823.5 million for the same periods. The following table sets forth the settlements of our derivative instruments by commodity for the periods indicated:

		Year Ended l	Dece	mber 31,
(\$ in thousands)	2022			2021
Net Settlements of Commodity Derivatives:				
Natural Gas	\$	(2,209,997)	\$	(773,209)
Oil		(67,033)		(24,612)
NGL		(22,909)		(25,695)
Total Net Settlements of Commodity Derivatives	\$	(2,299,939)	\$	(823,516)

In addition, we paid \$300.0 million in April 2022 to restructure a portion of our May through December 2022 natural gas swaps, resulting in an increase to our weighted average strike prices for these periods.

Changes in the fair value of commodity derivatives vary based on future commodity prices and have no impact on our cash flows until derivative contracts are either settled or monetized prior to settlement. As commodity prices increase or decrease, such changes will have an opposite effect on the fair value and ultimate settlement of our derivatives. See Quantitative and Qualitative Disclosure About Market Risk, *Commodity Demand and Price Risk*, and Note 6 of our consolidated financial statements included in this report for further information regarding our derivative instruments.

Operating Expenses. The following table sets forth our operating expenses and costs per mcfe:

	 Year Ended December 31,				Variance			
	 2022		2021		Amount	Percent		
Operating Expenses (\$ in thousands):								
Lease operating expenses	\$ 101,659	\$	81,822	\$	19,837	24 %		
Gathering, processing and transportation expenses	\$ 979,987	\$	945,031	\$	34,956	4 %		
Taxes other than income	\$ 45,724	\$	38,988	\$	6,736	17 %		
Exploration expenses	\$ 49,142	\$	83,367	\$	(34,225)	(41)%		
General and administrative expenses	\$ 77,112	\$	58,334	\$	18,778	32 %		
Depreciation, depletion and amortization	\$ 676,053	\$	598,407	\$	77,646	13 %		
Operating Expenses (\$/mcfe):								
Lease operating expenses	\$ 0.13	\$	0.12	\$	0.01	8 %		
Gathering, processing and transportation expenses	\$ 1.27	\$	1.34	\$	(0.07)	(5)%		
Taxes other than income	\$ 0.06	\$	0.06	\$		<u> </u>		
Exploration expenses	\$ 0.06	\$	0.12	\$	(0.06)	(50)%		
General and administrative expenses	\$ 0.10	\$	0.08	\$	0.02	25 %		
Depreciation, depletion and amortization	\$ 0.88	\$	0.85	\$	0.03	4 %		

- Lease operating expenses increased as a result of an increase in producing wells from our drilling program and our recent Ohio asset acquisition. Inflationary pressure on labor and materials and increased fuel costs also contributed to our increased lease operating expenses during the year ended December 31, 2022 compared to the same period in 2021.
- The increase in gathering, processing and transportation expenses for the year ended December 31, 2022 compared to the same period in 2021 was primarily due to increased natural gas production as well as rate increases on certain of our firm transportation contracts. However, as a result of the increase in our natural gas production, gathering, processing and transportation expenses per mcfe decreased.
- Taxes other than income primarily consists of production taxes and ad valorem taxes. The increase was primarily due to increased production related to wells completed in 2022.
- Exploration expenses were primarily driven by impairments of \$46.9 million and \$79.0 million for the year ended December 31, 2022 and 2021, respectively, to our unproved natural gas and oil properties for which the leases are expected to expire. As we continue to review our acreage position and high grade our drilling inventory, focusing on our core type curve areas, additional leasehold impairments and abandonments may be recorded.
- The increase in general and administrative expenses was primarily due to a \$19.1 million increase in long-term incentive compensation expense, a \$6.0 million increase in compensation costs and a \$2.5 million increase in other general corporate expenses, which was partially offset by an \$8.8 million non-recurring legal benefit.
- DD&A increased due to an increase in our total production as well as a \$0.03 increase in our per mcfe rate during the year ended December 31, 2022, compared to the same period in 2021. The increase in our per mcfe rate was primarily the result of a slight reduction in our proved reserves, increased development costs and our recent Ohio asset acquisition. See Note 3 of the notes to our consolidated financial statements included in this report for further discussion of the acquisition.

Interest Expense. Interest expense was \$209.7 million and \$174.8 million for the year ended December 31, 2022 and 2021, respectively, detailed as follows along with our weighted average debt outstanding:

	Year Ended December 31,				Variance					
(\$ in thousands)	2022	2 2021		2021		2021		2021		Percent
Credit Facility	\$ 49,561	\$	30,652	\$	18,909	62 %				
2025 Second Lien Term Loans	61,506		55,851		5,655	10 %				
Senior Notes	121,688		112,756		8,932	8 %				
Convertible Notes			93		(93)	(100)%				
(Gain) loss on interest rate derivatives	(5,489)		267		(5,756)	(2,156)%				
Amortization of debt discounts, premium and issuance costs	21,710		18,639		3,071	16 %				
Other	4,648		5,040		(392)	(8)%				
Capitalized interest	 (43,893)		(48,458)		4,565	(9)%				
Total Interest Expense, net	\$ 209,731	\$	174,840	\$	34,891	20 %				
Weighted Average Debt Outstanding:										
Credit Facility	\$ 955,932	\$	879,855	\$	76,077	9 %				
2025 Second Lien Term Loans	549,822		549,822		_	— %				
Senior Notes	1,648,187		1,485,333		162,854	11 %				
Convertible Notes			1,343		(1,343)	(100)%				
Weighted Average Debt Outstanding	\$ 3,153,941	\$	2,916,353	\$	237,588	8 %				

The increase in interest expense for the year ended December 31, 2022 compared to the same period in 2021 was primarily due to an increase in floating interest rates associated with funds drawn on our Credit Facility and on our 2025 Term Loans. Additionally, 2022 interest expense reflected a full year of interest related to our 2029 Senior Notes, while 2021 only reflected a partial year. See Note 5 of the notes to our consolidated financial statements included in this report for further discussion of our floating interest rates on debt.

Losses on Purchases or Exchanges of Debt. We recognized a net loss on purchases or exchanges of debt of \$3.8 million in 2021 due to us repurchasing the remaining outstanding principal amount of our 2022 Notes. See Note 5, Senior Notes, of the notes to our consolidated financial statements included in this report for further discussion of our repurchases and exchanges of debt.

Liquidity and Capital Resources

Overview

Our primary sources of funds are internally generated cash flows from operations, borrowings under our Credit Facility and historically have included proceeds from the issuance of debt and equity contributions from our Parent. Our future success in growing our proved reserves and production will be highly dependent upon net cash provided by our operating activities and the capital resources available to us, and there can be no assurance that such resources will be available to us on favorable terms, or at all. Based on existing market conditions and our expected liquidity needs, among other factors, we intend to use a portion of our cash flows from operations to repay or redeem portions of our indebtedness. Additionally, we may use securities offerings or other debt issuances to repay debt prior to scheduled maturities, and we may seek opportunities to refinance all or a portion of our indebtedness, including through cash purchases, exchanges, open market purchases or privately negotiated transactions. See Note 5 of the notes to our consolidated financial statements included in this report for further discussion of our debt.

The drilling, completion and production of our natural gas and oil properties are capital intensive activities that require access to significant capital. We continually evaluate our capital needs and compare them to our capital resources. We establish a capital budget at the beginning of each calendar year and periodically review and may adjust our allocation for capital expenditures as business conditions warrant. Actual capital expenditures may vary due to many factors, including drilling results, commodity prices, industry conditions, the prices and availability of goods and services, inflationary pressure and the extent to which properties are acquired or assets are sold.

As of December 31, 2022, we had a cash balance of \$3.9 million and availability under our Credit Facility of \$1.46 billion. In November 2022, we reaffirmed the current borrowing base under our Credit Facility of \$3.0 billion and the elected commitment amount of \$2.0 billion. We currently plan to fund our capital program through cash on hand, expected cash flows from our operations and borrowings under our Credit Facility. Based on our expected operating cash flows, Credit Facility availability and cash on hand, we anticipate being able to satisfy all of our financial obligations and liquidity needs for the next twelve months.

Long-term cash flows are subject to a number of variables including our level of production and prices as well as various economic conditions that have historically affected the natural gas and oil industry. Based on our significant borrowing capacity under our Credit Facility with a maturity date in 2027, commodity derivatives we have in place which cover a portion of our expected annual production through 2026 and having no significant maturities of senior notes or term loans until 2025 and beyond, we believe we will have adequate capital resources and liquidity for the foreseeable future.

Sources of Cash and Cash Equivalents

The following table presents the sources of cash and cash equivalents:

	Year Ended De				
(\$ in thousands)	2022			2021	
Cash provided by operating activities	\$	2,042,012	\$	760,637	
Financing commodity derivative settlements		(378,270)		(11,188)	
Payment to restructure commodity derivatives		(300,000)			
Proceeds from issuance of long-term debt				400,000	
Total Sources of Cash and Cash Equivalents	\$	1,363,742	\$	1,149,449	

Our primary source of funds is net cash flow provided by operating activities, which is highly dependent upon our ability to produce and sell our natural gas, oil and NGL production and the sales prices that we receive. Commodity prices are subject to wide fluctuations and are driven by market supply and demand, which is impacted by many factors. The sales price we realize for our production is also impacted by our commodity hedging activities. Our derivative contracts allow us to ensure a certain level of cash flow to fund our operations. Although we are continually securing additional derivative positions for portions of our expected future production, there can be no assurance that we will be able to add derivative positions to cover the remainder of our expected production at favorable prices. See Quantitative and Qualitative Disclosures About Market Risk and Note 6 of the notes to our consolidated financial statements included in this report for further details.

Cash provided by operating activities. We generated \$2.04 billion and \$760.6 million in cash flows from our operations for the years ended December 31, 2022 and 2021, respectively. The increase in our operating cash flows was largely impacted by a year over year increase in the prices received for our commodity sales, which were positively impacted by restructuring a portion of our commodity derivatives, and an increase in our produced volumes.

Financing commodity derivative settlements. Certain of our commodity derivative contracts contain an other than insignificant financing element, whereby the associated settlement payments are classified as financing activities rather than cash flows from our operations. The increase in settlement payments for the year ended December 31, 2022 as compared to the year ended December 31, 2021 was due to restructuring our commodity derivatives as described below.

Payment to restructure commodity derivatives. In April 2022, we paid \$300.0 million from funds drawn on our Credit Facility to restructure a portion of our May through December 2022 natural gas swaps, resulting in an increase to our weighted average strike prices.

Proceeds from issuance of long-term debt. In June 2021, we issued \$400.0 million in aggregate principal amount of 2029 Notes.

The following table presents the uses of cash and cash equivalents:

	Year Ended December 31,				
(\$ in thousands)	2022			2021	
Natural Gas and Oil Capital Expenditures:					
Drilling and completion costs	\$	820,614	\$	496,565	
Land and leasehold costs		97,828		52,648	
Interest capitalized ^(a)		43,893		48,458	
Total Natural Gas and Oil Capital Expenditures		962,335		597,671	
Other Uses of Cash and Cash Equivalents:				_	
Cash paid for acquisition		250,882		_	
Repayment of Credit Facility, net of borrowings		125,000		458,000	
Cash paid for debt issuance and amendment costs		16,855		7,229	
Repayment of long-term debt		2,970		84,173	
Additions to other property and equipment		2,096		1,444	
Other		5,384		4,101	
Total Other		403,187		554,947	
Total Uses of Cash and Cash Equivalents	\$	1,365,522	\$	1,152,618	

(a) Interest is capitalized on significant investments in certain unproved properties and wells in process.

Drilling and completion costs. Our cash drilling and completion costs were \$820.6 million and \$496.6 million in 2022 and 2021, respectively. The increase in drilling and completion costs in 2022 was the result of increased activity as well as inflationary pressure on labor and material costs.

Land and leasehold costs. We spent cash of \$97.8 million and \$52.6 million in 2022 and 2021, respectively, primarily related to the acquisition of leases arising in the ordinary course of business.

Cash paid for acquisition. In August 2022, we acquired assets in Ohio for a total purchase price of \$270.0 million, or \$250.9 million after closing purchase price adjustments. The transaction was financed with a combination of cash on hand and borrowings under our Credit Facility. See Note 3 of the notes to our consolidated financial statements included in this report for further discussion of the acquisition.

Repayment of long-term debt. We spent cash of \$84.2 million in 2021 to redeem \$68.0 million in aggregate principal amount of our 2022 Notes at 105.0% of the outstanding principal value, plus accrued and unpaid interest, and \$8.3 million in aggregate principal amount of our Convertible Notes at 153.8% of the outstanding principal value, plus accrued and unpaid interest.

Certain Indebtedness

Credit Facility. On June 30, 2022, we amended the credit agreement governing our Credit Facility to increase the borrowing base thereunder from \$1.85 billion to \$3.0 billion, and to increase the elected commitment from \$1.85 billion to \$2.0 billion, of which \$250.0 million is authorized for letters of credit. The maturity date was extended from April 1, 2024 to June 30, 2027, which will accelerate to August 2, 2026 if an amount greater than or equal to \$150.0 million of the 2026 Notes is outstanding as of that date. The amount available to be borrowed under our Credit Facility is subject to a borrowing base that is required to be redetermined semiannually on or about April 1 and October 1 of each year, primarily based on the estimated value and future net cash flows of our proved reserves and the value of our commodity derivative positions, as determined by lenders under our Credit Facility at their discretion. If the commodity price environment declines over an extended period, it may in the future lead to a reduction in the borrowing base of our Credit Facility. We do not believe that any such reductions would have a significant impact on our ability to service our debt and fund our drilling program and related operations. In November 2022, we reaffirmed the current borrowing base of \$3.0 billion and elected commitment of \$2.0 billion under our Credit Facility. As of December 31, 2022, we had \$370.0 million of borrowings outstanding and \$169.2 million of letters of credit issued under our Credit Facility.

Our Credit Facility contains restrictive covenants that may limit our ability to, among other things, incur additional indebtedness, incur liens on assets, make certain investments, make loans to others, make certain payments, consolidate or enter into mergers, or dispose of assets. Our Credit Facility also requires us to maintain, as of the end of each fiscal quarter, a modified current ratio of not less than 1.00 to 1.00 and a consolidated leverage ratio for the trailing four quarter period of not more than 3.50 to 1.00. These covenants are subject to several exceptions and qualifications as set forth in the credit agreement that governs our Credit Facility. As of December 31, 2022, we were in compliance with all applicable financial covenants under our Credit Facility. Our ability to comply with financial covenants in future periods depends, among other things, on the success of our development program and other factors beyond our control, such as market demand and prices for natural gas, oil and NGL. See Note 5, *Credit Facility*, of the notes to our consolidated financial statements included in this report for further discussion of the terms of our Credit Facility.

Second Lien Term Loans. Our 2025 Second Lien Term Loans mature on November 1, 2025, and interest is payable quarterly at an annual rate of 9.00% plus 3-month LIBOR, with a 1.00% LIBOR floor. Our 2025 Second Lien Term Loans are secured by second liens on substantially all of our assets, including our natural gas and oil properties. As of December 31, 2022, we had \$549.8 million in aggregate principal amount of 2025 Second Lien Term Loans outstanding.

The credit agreement that governs our 2025 Second Lien Term Loans contains customary covenants restricting our ability and the ability of certain of our subsidiaries to, among other things, declare or pay any dividends or make any other payment or distribution on account of our equity interests or our capital stock, incur or guarantee additional debt or issue certain types of preferred stock, make certain investments, make restricted payments, incur liens, merge or consolidate with another company, or transfer and sell assets. These covenants are subject to several exceptions and qualifications as set forth in the credit agreement that governs our 2025 Second Lien Term Loans. As of December 31, 2022, we were in compliance with all applicable covenants under the 2025 Second Lien Term Loans. See Note 5, Second Lien Term Loans, of the notes to our consolidated financial statements included in this report for further discussion of the terms of the 2025 Second Lien Term Loans.

Senior Notes. The following table summarizes certain material terms of our outstanding Senior Notes as of December 31, 2022:

(\$ in thousands)	2026 Notes	2027 Notes ^(a)	2028 Notes	2029 Notes
Outstanding principal	\$597,000	\$348,294	\$300,000	\$400,000
Interest rate	7.00%	9.00%	8.25%	5.875%
Maturity date	November 1, 2026	November 1, 2027	December 31, 2028	June 30, 2029
Interest payment dates	May 1, Nov. 1	May 1, Nov. 1	Feb. 1, Aug. 1	Mar. 1, Sept. 1
Make-whole redemption date	Expired ^(b)	November 1, 2026	February 1, 2024	September 1, 2024

- (a) The 2027 Notes also contain a contingent payment right. See Note 5, *Senior Notes*, and Note 7, *Contingent Payment Right*, of the notes to our consolidated financial statements included in this report for further discussion.
- (b) The 2026 Notes are currently callable at 102.33% until November 1, 2023.

Upon the occurrence of a change of control (as defined in the respective indenture), we are required to offer to repurchase all or any part of our outstanding Senior Notes at a price of 101.00%, plus accrued and unpaid interest. We are also required to offer to repurchase the outstanding Senior Notes at a price of 100.00%, plus accrued and unpaid interest, in the event of certain asset sales if we do not otherwise apply the net proceeds of such asset sales as permitted under the applicable indenture. The Senior Notes may be redeemed, at our option, prior to their maturity. Prior to the make-whole redemption date specified in the table above, each applicable series of Senior Notes may be redeemed at a make-whole premium based on the present value of the remaining principal and interest payments to the make-whole redemption date. After the applicable make-whole redemption date, the Senior Notes may be redeemed at a declining premium set forth in the applicable indenture. See Note 5, Senior Notes, of the notes to our consolidated financial statements included in this report for further discussion of the terms and early redemption dates and prices for the outstanding Senior Notes.

As of December 31, 2022, we were in compliance with all applicable covenants of the indentures governing the Senior Notes.

As of December 31, 2022, our material contractual obligations included repayments of our outstanding borrowings and associated interest payment obligations, derivative obligations, asset retirement obligations, lease obligations, letters of credit, surety bonds and various other commitments we enter into in the ordinary course of business that could result in future cash obligations. In addition, we have entered into certain pipeline capacity commitments with various counterparties, some of which extend beyond 20 years, in order to facilitate the delivery of our production to market and reduce the likelihood of possible production curtailments that may arise due to limited capacity. The estimated gross undiscounted future commitments under these pipeline agreements were approximately \$7.77 billion as of December 31, 2022; however, third parties that own a working interest in the wells we operate, and royalty and overriding royalty interest owners, where applicable, will be responsible for their proportionate share of these costs. As discussed above, we believe our existing sources of liquidity will be sufficient to fund our near and long-term contractual obligations. See Notes 1, 5, 6, 10 and 11 of the notes to our consolidated financial statements included in this report for further discussion. We do not maintain off-balance sheet transactions, arrangements, obligations or other relationships with unconsolidated entities.

Critical Accounting Estimates

Our consolidated financial statements are prepared in accordance with GAAP, which requires management to make assumptions and estimates about future events and apply judgments that affect the reported amounts of assets, liabilities, revenues, expenses and the related disclosures. We base our assumptions, estimates and judgments on historical experience, current trends and other factors that management believes to be relevant at the time we prepare our consolidated financial statements. However, because future events and their effects cannot be determined with certainty, actual results could differ materially from our assumptions and estimates.

On a regular basis, management reviews our accounting policies, assumptions, estimates and judgments to ensure that our consolidated financial statements are presented fairly and in accordance with GAAP. Our significant accounting policies are discussed in Note 1, *Summary of Significant Accounting Policies*, of the notes to our consolidated financial statements included in this report. Management believes that the following accounting estimates are those most critical to fully understanding and evaluating our reported financial results, and they require management's most difficult, subjective or complex judgments, resulting from the need to make estimates about the effect of matters that are inherently uncertain.

Natural Gas. Oil and NGL Reserves

Estimates of natural gas, oil and NGL reserves and their values, future production rates and future costs and expenses are the most significant of our estimates. There are numerous uncertainties inherent in estimating quantities and values of economically recoverable natural gas, oil and NGL reserves, including many factors beyond our control. As a result, estimates of economically recoverable reserves are by their nature uncertain. The accuracy of reserve estimates is a function of the quality and quantity of available data, interpretation of that data, accuracy of various mandated economic assumptions, and judgment of our internal reserve engineers.

Natural gas, oil and NGL reserve estimates require significant judgments in the evaluation of all available geological, geophysical, engineering and economic data. The data for a given field may change substantially over time as a result of numerous factors including, but not limited to, additional development activity, production history, projected future production, economic assumptions relating to commodity prices, operating expenses, severance and other taxes, capital expenditures and remediation costs, and these estimates are inherently uncertain.

Depletion rates are determined based on reserve quantity estimates and the capitalized costs of producing properties. As the estimated reserves are adjusted, the depletion expense for our properties will change, assuming no change in production volumes or the capitalized costs. While depletion expense for the life of a property is limited to the property's total cost, proved reserve revisions result in a change in timing of when depletion expense is recognized. Downward revisions of proved reserves may result in an acceleration of depletion expense, while upward revisions tend to prolong depletion expense recognition. Additionally, a decline in estimates of proved reserves could also cause us to perform an impairment analysis to determine if the carrying amount of our natural gas and oil properties exceeds fair value and could result in an impairment charge, which would reduce earnings.

We are unable to predict future commodity prices, and the volatility of commodity prices results in increased uncertainty inherent in these estimates and assumptions. A prolonged period of depressed commodity prices may have a significant impact on the value and volumetric quantities of our proved reserve portfolio, assuming no other changes to our development plans or costs. We cannot predict what reserve revisions may be required in future periods.

We believe the estimates related to natural gas, oil and NGL reserves are critical because we must periodically reevaluate proved reserves along with estimates of future production rates and the timing and amount of future development and operating costs. Our future results of operations and balance sheet for any particular quarterly or annual period could be materially affected by changes in these assumptions.

Natural Gas and Oil Properties

We account for the exploration and development of our natural gas and oil properties under the successful efforts method of accounting. Under the successful efforts method, the costs of undeveloped leases and the costs incurred to acquire, drill and complete productive wells and development wells are capitalized. Geological and geophysical expenses, delay rentals for undeveloped leases, and costs associated with unsuccessful lease acquisitions are charged to expense as incurred. Exploratory drilling costs are initially capitalized and charged to expense if and when we determine that the well does not contain proved reserves. We did not incur any such charges in the years ended December 31, 2022, 2021 or 2020. The application of the successful efforts method of accounting requires management's judgment to determine the proper classification of wells designated as developmental or exploratory, which will ultimately determine the proper accounting treatment of the costs incurred.

Proved natural gas and oil properties are reviewed for impairment whenever events and circumstances indicate a possible decline in the recoverability of the carrying value of such properties. The estimated undiscounted future cash flows expected are compared to the carrying amount of the properties to determine if the carrying amount is recoverable. If the carrying amount exceeds the estimated undiscounted future cash flows, the carrying amount of the properties is reduced to its estimated fair value (typically determined using discounted future cash flows). No impairment of proved natural gas and oil properties was recorded for the years ended December 31, 2022, 2021 or 2020. We cannot predict whether impairment charges may be required in the future as commodity prices of natural gas, oil and NGL have a significant impact on determining future impairments. If natural gas, oil and NGL prices decrease or drilling efforts are unsuccessful, we may be required to record an impairment.

We believe that estimates related to the impairment of proved properties are critical because the process to estimate undiscounted future cash flows requires considerable judgment and are sensitive to changes in management's assumptions and estimates of future financial results. In addition, if the carrying amount exceeds the estimated undiscounted future cash flows, we would be required to estimate the fair value of our properties. Different assumptions and estimates could materially impact the calculated undiscounted future cash flows and the resulting determinations about the impairment of proved properties, which could materially impact our results of operations and financial position. Additionally, future estimates may differ materially from current estimates and assumptions. We evaluate the carrying amount of our proved natural gas and oil properties for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. As of December 31, 2022, no such event or change in circumstances had occurred.

We believe that a sensitivity analysis regarding the effect of changes in assumptions on any estimated impairments would be impractical to provide because of the number of assumptions and variables involved which have interdependent effects on the potential outcome.

Unproved natural gas and oil properties primarily consist of undeveloped leasehold costs. Individually significant unproved properties, if any, are assessed for impairment on a property-by-property basis, and if the assessment indicates an impairment, a loss is recorded to exploration expense. For individually insignificant unproved properties, impairment losses are recognized by amortizing to exploration expense the portion of the properties' costs that management estimates will not be transferred to proved properties over the remaining lease term. Our impairment assessments are affected by factors including, but not limited to, our results of exploration activities, commodity price outlooks, our anticipated drilling program, remaining lease terms and potential shifts in business strategy employed by management. For the years ended December 31, 2022, 2021 and 2020, we recorded impairments of \$46.9 million, \$79.0 million and \$100.2 million, respectively, to exploration expense for unproved natural gas and oil properties for which the leases are expected to expire.

Asset Acquisitions

As part of our business strategy, we periodically pursue the acquisition of natural gas and oil properties. The purchase price in an asset acquisition is allocated to the assets acquired and liabilities assumed based on their relative fair values as of the acquisition date, which may occur many months after the effective date of the transaction. Therefore, while the consideration to be paid may be fixed, the relative fair value of the assets acquired and liabilities assumed is subject to change during the period between the effective date and the acquisition date. Our most significant estimates in our allocation typically relate to the values assigned to future recoverable natural gas, oil and NGL reserves and unproved natural gas and oil properties.

As the allocation of the purchase price is subject to significant estimates and subjective judgments, the accuracy of this assessment is inherently uncertain.

Derivatives

We enter into commodity derivative instruments to reduce our exposure to fluctuations in future commodity prices and to protect our expected operating cash flow against significant market movements or volatility. These contracts are financial instruments and do not require or allow for physical delivery of the hedged commodity. All commodity derivative instruments, other than those that meet the normal purchase and normal sale scope exception, are recorded at fair market value in accordance with GAAP and are included in our consolidated balance sheets as assets or liabilities. Because we do not designate these derivatives as accounting hedges, they do not receive hedge accounting treatment; therefore, all mark-to-market gains or losses, as well as gains or losses on settled derivative instruments, are recognized on our statements of operations within operating revenues as commodity derivative gain (loss). We have estimated the fair value of our derivative instruments using established index prices, volatility curves and discount factors. These estimates are compared to our counterparties' values for reasonableness. The values we report in our financial statements are as of a point in time and subsequently change as these estimates are revised to reflect actual results, changes in market conditions and other factors.

Any non-performance risk is considered in the valuation of our derivative instruments, but to date it has not had a material impact on the values of our derivatives. See Note 6 of the notes to our consolidated financial statements included in this report for further discussion of our derivative instruments.

We believe the estimates related to derivative instruments are critical because our financial condition and results of operations can be significantly impacted by changes in the market value of our derivative instruments due to the volatility of natural gas, oil and NGL prices. Future results of operations for any particular quarterly or annual period could be materially affected by changes in our assumptions.

New Accounting Pronouncements

No accounting standards were issued or adopted during 2022 that had a material impact on our consolidated financial statements.

Quantitative and Qualitative Disclosure About Market Risk

The primary objective of the following information is to provide forward-looking quantitative and qualitative information about our potential exposure to market risk as well as how we view and manage our exposure to such risk. The term "market risk" refers to the risk of loss arising from adverse changes in natural gas, oil and NGL prices, counterparty credit, customer credit and interest rates. The disclosures are not meant to be precise indicators of expected future losses, but rather indicators of reasonably possible losses.

Commodity Demand and Price Risk

Our primary market risk exposure is in the prices we receive for our natural gas, oil and NGL production. Realized pricing is primarily driven by spot regional market prices applicable to our natural gas, oil and NGL production. Pricing for natural gas, oil and NGL production is volatile and unpredictable, and we expect this volatility to continue in the future. The prices we expect to receive for our natural gas, oil and NGL production will depend on many factors outside of our control, including the supply of, and demand for, natural gas, oil and NGL, the level of economic activity in the United States and globally, the performance of specific industries and the volatility of natural gas, oil and NGL prices at

various delivery points. In 2022, 2021 and 2020, the average daily Henry Hub spot market price of natural gas was \$6.38 per mmbtu, \$3.82 per mmbtu and \$1.99 per mmbtu, respectively, and the average daily WTI oil price was \$94.33 per bbl, \$68.11 per bbl and \$39.34 per bbl, respectively. Approximately 87% of our December 31, 2022 proved reserves were natural gas; therefore, changes in realized natural gas pricing will affect us more than changes in realized oil or NGL pricing.

We use derivative instruments to reduce our exposure to fluctuations in future commodity prices and to protect our anticipated operating cash flow against significant market movements or volatility. These contracts are financial instruments and do not require or allow for physical delivery of the hedged commodity. We do not use derivative instruments for speculative or trading purposes. Under the credit agreement that governs our Credit Facility, we are permitted to hedge up to 90% of our forecasted production for any month during the next 36 months. Additionally, we may enter into commodity derivative contracts with terms greater than 36 months, and for no longer than 66 months, for up to 80% of the forecasted production from our proved reserves for any month. As of December 31, 2022, approximately 1,395,000 mmbtu/d of our projected natural gas production for 2023 was hedged at a weighted average floor price of \$3.19 per mmbtu, and approximately 1,005,000 mmbtu/d of our projected natural gas production for 2024 was hedged at a weighted average floor price of \$3.46 per mmbtu, excluding the sold puts on our three-way collars. Additionally, as of December 31, 2022, approximately 6,000 bbls/d of our projected oil production for 2023 was hedged at a weighted average floor price of \$72.30 per bbl, and approximately 4,000 bbls/d of our projected oil production for 2024 was hedged at a weighted average floor price of \$71.33 per bbl. Our open hedge positions as of December 31, 2022 had maturities extending through December 2026. We also have basis swaps to mitigate portions of our basis exposure. Our market risk associated with commodity prices did not materially change from December 31, 2021 to December 31, 2022. See Note 6 of the notes to our consolidated financial statements included in this report for a summary of our commodity hedge position as of December 31, 2022.

The fair value of our commodity derivative instruments is largely influenced by the future prices of natural gas, oil and NGL. The following table sets forth the changes in the fair value of our commodity derivative instruments due to a hypothetical 10% change in future prices as of December 31, 2022. However, any realized derivative gain or loss would be substantially offset by a decrease or increase, respectively, in the actual revenue received from the sale of our production associated with the derivative instrument.

(\$ in thousands)	oothetical 10% rease in Future Prices	Hypothetical 10% Decrease in Future Prices		
Natural gas	\$ (467,206)	\$ 460,004		
Oil	\$ (26,931)	\$ 26,931		
NGL	\$ (3,609)	\$ 3,609		

All derivative instruments, other than those that meet the normal purchase and normal sale scope exception, are recorded at fair market value in accordance with GAAP and are included in our consolidated balance sheets as assets or liabilities. Because we do not designate these derivatives as accounting hedges, they do not receive hedge accounting treatment; therefore, all mark-to-market gains or losses, as well as cash receipts or payments on settled derivative instruments, are recognized in our statements of operations within operating revenues as commodity derivative gain (loss).

Although mark-to-market adjustments of derivative instruments cause earnings volatility, our cash flows are only impacted when the associated derivative contracts are settled or are monetized prior to settlement by making or receiving payments to or from the counterparty. We expect continued volatility in the fair value of our derivative instruments. As of December 31, 2022, the estimated fair value of our commodity derivative positions was a net liability of \$1.16 billion comprised of current and long-term assets and liabilities.

By removing price volatility from a portion of our future expected production, we have mitigated, but not eliminated, the potential negative effects of changing prices on our operating cash flows for those periods. While mitigating the negative effects of falling commodity prices, these derivative contracts also limit the benefits we receive from the increases in commodity prices above the fixed hedge ceiling prices.

Counterparty Credit Risk

Our derivative instruments expose us to counterparty credit risk, which arises due to the risk of loss from counterparties not performing under the terms of a derivative contract. Adverse moves within the financial or commodities markets could negatively impact our counterparties' ability to fulfill obligations to us. To minimize such risk, we only enter into derivative contracts with counterparties that we determine are creditworthy, which includes performing both quantitative and qualitative assessments of these counterparties, based on their credit ratings and credit default swap rates where applicable. Additionally, our derivative contracts are with multiple counterparties, reducing our exposure to any individual counterparty. See Note 6, *Credit Risk*, of the notes to our consolidated financial statements included in this report for further discussion of our credit risk.

Customer Credit Risk

We are subject to credit risk resulting from the concentration of our natural gas, oil and NGL receivables; however, we do not believe the loss of any single customer would materially impact our operating results. We also have joint interest receivables, which arise from billings to entities that own working interests in the wells we operate, but historically we have not incurred any material losses.

Interest Rate Risk

Certain of our debt instruments bear interest at floating rates based on LIBOR and SOFR, and the LIBOR and SOFR components of our interest on these instruments exposes us to interest rate risk. As part of the June 2022 Credit Facility amendment, the underlying interest rate was changed from LIBOR to SOFR effective June 30, 2022. As of December 31, 2022, borrowings under our Credit Facility bore interest at a floating tiered rate based on facility usage, plus the 1-month SOFR and 0.10%. For the year ended December 31, 2022, our Credit Facility had a weighted average interest rate of 4.33%. Additionally, our 2025 Second Lien Term Loans bear interest at an annual rate of 9.00% plus 3-month LIBOR, with a 1.00% LIBOR floor, resulting in a weighted average interest rate of 11.17% for the year ended December 31, 2022. A 1.00% increase in the applicable interest rates during the year ended December 31, 2022 would have resulted in an estimated total increase of \$14.1 million in interest expense on borrowings under our Credit Facility and 2025 Second Lien Term Loans. We have entered into interest rate swaps through the end of 2023 to mitigate a portion of our exposure to interest rate volatility. See Note 6 of the notes to our consolidated financial statements included in this report for further discussion of our interest rate derivatives.



Report of Independent Auditors

To the Board of Managers and Management of Ascent Resources Utica Holdings, LLC

Opinion

We have audited the accompanying consolidated financial statements of Ascent Resources Utica Holdings, LLC and its subsidiaries (the "Company"), which comprise the consolidated balance sheets as of December 31, 2022 and 2021, and the related consolidated statements of operations, of member's equity and of cash flows for each of the three years in the period ended December 31, 2022, including the related notes (collectively referred to as the "consolidated financial statements").

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (US GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are required to be independent of the Company and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for one year after the date the consolidated financial statements are available to be issued.

Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with US GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial



likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the consolidated financial statements.

In performing an audit in accordance with US GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the consolidated financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Other Information

Management is responsible for the other information included in the annual report. The other information comprises Business Overview, Properties, Management's Discussion and Analysis of Financial Condition and Results of Operations, and Quantitative and Qualitative Disclosures About Market Risk, but does not include the consolidated financial statements and our auditors' report thereon. Our opinion on the consolidated financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the consolidated financial statements or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Oklahoma City, Oklahoma March 9, 2023

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ASCENT RESOURCES UTICA HOLDINGS, LLC CONSOLIDATED BALANCE SHEETS

	December 31,				
(\$ in thousands)	2022			2021	
Current Assets:					
Cash and cash equivalents	\$	3,894	\$	5,674	
Accounts receivable – natural gas, oil and NGL sales ^(a)		530,385		453,464	
Accounts receivable – joint interest and other		35,340		8,309	
Short-term derivative assets		14,061		6,866	
Other current assets		12,597		9,012	
Total Current Assets		596,277		483,325	
Property and Equipment:				_	
Natural gas and oil properties, based on successful efforts accounting		10,558,533		9,383,879	
Other property and equipment		39,641		36,318	
Less: accumulated depreciation, depletion and amortization		(3,900,730)		(3,225,844)	
Property and Equipment, net		6,697,444		6,194,353	
Other Assets:					
Long-term derivative assets		6,081		522	
Other long-term assets		44,117		46,241	
Total Assets	\$	7,343,919	\$	6,724,441	
Current Liabilities:					
Accounts payable	\$	77,753	\$	86,812	
Accrued interest		50,375		45,929	
Short-term derivative liabilities		684,204		648,873	
Other current liabilities ^(b)		771,062		517,953	
Total Current Liabilities		1,583,394		1,299,567	
Long-Term Liabilities:					
Long-term debt, net		2,475,222		2,588,248	
Long-term derivative liabilities		495,464		435,022	
Other long-term liabilities		113,061		104,796	
Total Long-Term Liabilities		3,083,747		3,128,066	
Commitments and contingencies (Note 11)					
Member's Equity		2,676,778		2,296,808	
Total Liabilities and Member's Equity	\$	7,343,919	\$	6,724,441	

⁽a) Including related party amounts of \$12.4 million and \$20.5 million as of December 31, 2022 and 2021, respectively.

⁽b) Including related party amounts of \$98.0 million and \$96.5 million as of December 31, 2022 and 2021, respectively.

ASCENT RESOURCES UTICA HOLDINGS, LLC CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,						
(\$ in thousands)	2022		2021	2020			
Revenues:							
Natural gas	\$	4,700,531	\$ 2,510,150	\$ 1,258,594			
Oil		246,866	188,076	138,723			
$\mathrm{NGL}^{(\mathrm{a})}$		239,071	241,731	118,224			
Commodity derivative loss		(2,687,817)	(1,743,892)	(19,167)			
Total Revenues		2,498,651	1,196,065	1,496,374			
Operating Expenses:							
Lease operating expenses		101,659	81,822	72,180			
Gathering, processing and transportation expenses ^(b)		979,987	945,031	925,327			
Taxes other than income		45,724	38,988	37,495			
Exploration expenses		49,142	83,367	104,230			
General and administrative expenses		77,112	58,334	63,825			
Depreciation, depletion and amortization		676,053	598,407	737,717			
Total Operating Expenses		1,929,677	1,805,949	1,940,774			
Income (Loss) from Operations		568,974	(609,884)	(444,400)			
Other Income (Expense):							
Interest expense, net		(209,731)	(174,840)	(134,259)			
Change in fair value of contingent payment right		(3,302)	(19,921)	(6,518)			
Losses on purchases or exchanges of debt		_	(3,822)	(6,037)			
Other income		5,438	2,182	1,850			
Total Other Expense		(207,595)	(196,401)	(144,964)			
Net Income (Loss)	\$	361,379	\$ (806,285)	\$ (589,364)			

- (a) Including related party amounts of \$91.6 million, \$109.7 million and \$67.0 million during the years ended December 31, 2022, 2021 and 2020, respectively.
- (b) Including related party amounts of \$643.8 million, \$620.3 million and \$623.7 million during the years ended December 31, 2022, 2021 and 2020, respectively.

ASCENT RESOURCES UTICA HOLDINGS, LLC CONSOLIDATED STATEMENTS OF MEMBER'S EQUITY

	Year Ended December :							
(\$ in thousands)	2022			2021		2020		
Balance, Beginning of Period	\$	2,296,808	\$	3,102,590	\$	3,681,831		
Contributions from Member		22,745		3,737		10,123		
Distributions to Member		(4,154)		(3,234)				
Net income (loss)		361,379		(806,285)		(589,364)		
Balance, End of Period	\$	2,676,778	\$	2,296,808	\$	3,102,590		

ASCENT RESOURCES UTICA HOLDINGS, LLC CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,					1,
(\$ in thousands)		2022		2021		2020
Cash Flows from Operating Activities:						
Net income (loss)	\$	361,379	\$	(806,285)	\$	(589,364)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:						
Depreciation, depletion and amortization		676,053		598,407		737,717
Loss on commodity derivatives		2,687,817		1,743,892		19,167
Settlements of commodity derivatives	(1,868,139)		(812,328)		454,303
Impairment of unproved natural gas and oil properties		46,902		78,993		100,207
Non-cash interest expense		16,851		18,301		25,916
Long-term incentive compensation		22,745		3,616		1,775
Change in fair value of contingent payment right		3,302		19,921		6,518
(Gains) losses on purchases or exchanges of debt		_		3,810		(11,500)
Other		42		160		(3)
Changes in operating assets and liabilities						
(Increase) decrease in accounts receivable and other assets		(96,350)		(249,315)		40,136
Increase (decrease) in accounts payable, liabilities and other		191,410		161,465		(11,036)
Net Cash Provided by Operating Activities		2,042,012		760,637		773,836
Cash Flows from Investing Activities:						
Natural gas and oil capital expenditures		(962,335)		(597,671)		(710,966)
Cash paid for acquisition		(250,882)		_		_
Additions to other property and equipment		(2,096)		(1,444)		(1,509)
Net Cash Used in Investing Activities	(1,215,313)		(599,115)		(712,475)
Cash Flows from Financing Activities:						
Proceeds from Credit Facility borrowings		4,245,000		2,100,000		1,065,000
Repayment of Credit Facility borrowings	(4,370,000)	((2,558,000)	(1,300,000)
Proceeds from issuance of long-term debt		_		400,000		300,000
Repayment of long-term debt		(2,970)		(84,173)		(138,764)
Proceeds from the Exchange		_		_		20,000
Cash paid for debt issuance and amendment costs		(16,855)		(7,229)		(6,842)
Cash paid for settlements of commodity derivatives		(378,270)		(11,188)		1,557
Cash paid to restructure commodity derivatives		(300,000)		_		_
Other		(5,384)		(4,101)		(815)
Net Cash Used in Financing Activities		(828,479)		(164,691)		(59,864)
Net Increase (Decrease) in Cash and Cash Equivalents		(1,780)		(3,169)		1,497
Cash and Cash Equivalents, Beginning of Period		5,674		8,843		7,346
Cash and Cash Equivalents, End of Period	\$	3,894	\$	5,674	\$	8,843
Supplemental disclosures of cash flow information:						
Interest paid, net of capitalized interest	\$	187,988	\$	142,576	\$	115,589
Supplemental disclosures of significant non-cash investing and financing activities:						
Financing commodity derivative settlements	\$	53,530	\$		\$	
Contributions from Member	\$	22,745	\$	3,737	\$	2,160
Increase (decrease) in accrued capital expenditures	\$	2,436	\$	72,025	\$	(57,925)

1. Basis of Presentation and Summary of Significant Accounting Policies

Description of Company

Ascent Resources Utica Holdings, LLC ("ARUH"), together with its wholly-owned subsidiaries (collectively, "we," "our" or "us"), is engaged in the acquisition, exploration, development, production and operation of natural gas and oil properties located in the Utica Shale in Ohio (the "Utica Shale"). ARUH is a wholly-owned subsidiary of Ascent Resources Operating, LLC (our "Member"), which is an indirect, wholly-owned subsidiary of Ascent Resources, LLC (our "Parent"). Together, The Energy & Minerals Group ("EMG") and First Reserve Corporation ("First Reserve") own a majority interest in our Parent.

Basis of Presentation and Principles of Consolidation

Our accompanying consolidated financial statements and notes were prepared in accordance with United States GAAP. All material intercompany balances and transactions have been eliminated.

Business Segment Information

Operating segments are defined as components of an enterprise that engage in business activities from which it may earn revenues and incur expenses for which discrete operational financial information is available, and this information is regularly reviewed by the chief operating decision makers to make decisions about the allocation of resources and assess performance. Based on an evaluation of how we are organized and managed, we have identified only one operating segment, which is the exploration, development and production of natural gas, oil and NGL in the United States. We have a single, company-wide management team that manages all properties as a whole rather than by various distinct operating segments. We measure financial performance as a single enterprise and not on a geographical basis.

Use of Estimates

The preparation of consolidated financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the amounts reported herein. Actual amounts could differ significantly from these estimates, and changes in these estimates are recorded when known. Estimates of natural gas, oil and NGL reserves are the most significant of our estimates, which are the basis of the calculation of the depletion and impairment of natural gas and oil properties. Other items in our consolidated financial statements that involve the use of significant estimates include asset acquisitions, derivative assets and liabilities, accrued revenue, and commitments and other contingencies.

Summary of Significant Accounting Policies

Cash and Cash Equivalents. We consider investments in all highly liquid instruments with original maturities of three months or less at the date of purchase to be cash equivalents. We maintain our cash in accounts that may not be federally insured beyond certain limits; however, we have not experienced any losses in such accounts and believe we are not exposed to any significant credit risk on such accounts.

Accounts Receivable. We sell natural gas, oil and NGL to various customers and participate with other companies in the drilling, completion and operation of natural gas and oil wells. Accounts receivable as of December 31, 2022 and 2021 were \$565.7 million and \$461.8 million, respectively, and consisted primarily of accrued natural gas, oil and NGL revenue receivables and receivables from joint interest billings to owners of properties we operate. Receivables are considered past due if full payment is not received by the contractual due date. If we had past due accounts, and all attempts to collect the balance are exhausted, they would generally be written off against the allowance for doubtful accounts. All accounts receivable are considered to be fully collectible; therefore, no allowance for doubtful accounts has been recorded in the consolidated balance sheets as of December 31, 2022 or 2021.

Natural Gas and Oil Properties. We account for the exploration and development of our natural gas and oil properties under the successful efforts method of accounting. Under this method, the costs of undeveloped leases and the costs incurred to acquire, drill and complete development and productive wells are capitalized. Geological and geophysical expenses, delay rentals for undeveloped leases, and costs associated with unsuccessful lease acquisitions are charged to expense as incurred. Exploratory drilling costs are initially capitalized and charged to expense if and when we

determine that the well does not contain proved reserves. The application of the successful efforts method of accounting requires management judgment to determine the proper classification of wells designated as developmental or exploratory, which will ultimately determine the proper accounting treatment of the costs incurred. We did not incur any exploratory drilling costs in the years ended December 31, 2022, 2021 or 2020.

Proved natural gas and oil properties are reviewed for impairment whenever events and circumstances indicate a possible decline in the recoverability of the carrying value of such properties. The estimated undiscounted future cash flows expected are compared to the carrying amount of the properties to determine if the carrying amount is recoverable. If the carrying amount exceeds the estimated undiscounted future cash flows, the carrying amount of the properties is reduced to its estimated fair value, which is based on discounted future cash flows utilizing assumptions typical of third party market participants. No impairment of proved natural gas and oil properties was recorded for the years ended December 31, 2022, 2021 or 2020. We cannot predict whether impairment charges may be required in the future as commodity prices of natural gas, oil and NGL have a significant impact on determining future impairments.

Unproved natural gas and oil properties primarily consist of undeveloped leasehold costs. Individually significant unproved properties, if any, are assessed for impairment on a property-by-property basis, and if the assessment indicates an impairment, a loss is recorded to exploration expense. For individually insignificant unproved properties, impairment losses are recognized by amortizing to exploration expense the portion of the properties' costs that management estimates will not be transferred to proved properties over the remaining lease term. Our impairment assessments are affected by economic factors such as the results of exploration activities, commodity price outlooks, our anticipated drilling program, remaining lease terms and potential shifts in business strategy employed by management. For the years ended December 31, 2022, 2021 and 2020, we recorded impairments of \$46.9 million, \$79.0 million and \$100.2 million, respectively, to exploration expense for unproved natural gas and oil properties for which the leases are expected to expire.

Natural Gas and Oil DD&A. DD&A of capitalized drilling and completion costs related to developed natural gas and oil properties is computed using the unit-of-production method, based on total estimated proved developed natural gas, oil and NGL reserves. Costs of acquiring proved properties, including leasehold acquisition costs and capitalized interest transferred from unproved properties, are depleted using the unit-of-production method based on total estimated proved natural gas, oil and NGL reserves. DD&A expense for natural gas and oil properties was \$673.0 million, \$595.5 million and \$733.5 million for the years ended December 31, 2022, 2021 and 2020, respectively.

Other Property and Equipment. Other property and equipment is recorded at cost. Depreciation of other property and equipment is computed using the straight-line method over the estimated useful lives of the related assets, generally ranging from three to seven years. Our field office location is depreciated using the straight-line method over the estimated useful life of 39 years. Depreciation expense for other property and equipment was \$3.1 million, \$2.9 million and \$4.3 million for the years ended December 31, 2022, 2021 and 2020, respectively. Upon retirement or disposition of assets, the cost and related accumulated depreciation are removed from the balance sheet with the resulting gain or loss, if any, recorded to other income on the consolidated statements of operations.

Asset Acquisitions. As part of our business strategy, we periodically pursue the acquisition of natural gas and oil properties. The purchase price in an asset acquisition is allocated to the assets acquired and liabilities assumed based on their relative fair values as of the acquisition date, which may occur many months after the effective date. Therefore, while the consideration to be paid may be fixed, the relative fair value of the assets acquired and liabilities assumed is subject to change during the period between the effective date and the acquisition date.

Asset Retirement Obligations. We are obligated to retire our natural gas and oil wells at the end of their lives. We recognize the fair value of a liability for a retirement obligation in the period in which a natural gas or oil well is acquired or spud and accrete it to its expected settlement value over time, until the well is retired or sold, at which time the liability is removed. The related asset retirement cost is capitalized as part of the carrying amount of our natural gas and oil properties and expensed through depletion of the asset as a component of DD&A on our consolidated statements of operations. The associated liabilities were \$12.4 million and \$8.6 million as of December 31, 2022 and 2021, respectively.

Capitalized Interest. We capitalize interest on expenditures made in connection with exploration and development projects, which include developing and constructing assets that have not yet commenced production and investments in

unproved natural gas and oil properties. Capitalized interest is determined by multiplying our weighted average interest rate, based on our outstanding borrowings, by the average amount of qualifying costs incurred. Capitalized interest is depreciated over the useful lives of the assets in the same manner as the depreciation of the underlying asset.

Debt Issuance and Amendment Costs. Debt issuance costs associated with our term debt have been presented as a reduction to long-term debt on the consolidated balance sheets and are amortized through their respective maturity dates using the effective interest method. The amortization of debt issuance costs associated with term debt is recorded in interest expense on the consolidated statements of operations.

Debt issuance and amendment costs associated with our Credit Facility have been presented as other long-term assets on the consolidated balance sheets and are amortized over the scheduled maturity period of the facility on a straight-line basis, which approximates the effective interest method. The amortization of debt issuance and amendment costs associated with our Credit Facility is recorded in interest expense on the consolidated statements of operations.

Revenue Recognition. Revenue from the sale of natural gas, oil and NGL is recognized when production is sold to a customer at a fixed or determinable price, delivery has occurred, control has transferred and collection of the revenue is probable. We recognize revenue from the sale of natural gas, oil and NGL based on our share of volumes sold. See Note 2 for further discussion of our revenues from contracts with customers.

Credit and Concentration Risk. We are subject to credit risk resulting from the concentration of our natural gas, oil and NGL receivables. If our largest customers stopped purchasing our natural gas, oil or NGL, our revenues could decline and our operating results and financial condition could be adversely affected. We did not have any concentration of sales to any individual customers that constituted 10% or more of our revenues, before the effect of derivatives, for the year ended December 31, 2022. The following table provides the concentration of sales to individual customers that constituted 10% or more of our revenues, before the effects of derivatives, for the years ended December 31, 2021 and 2020:

	% of Sales
Year Ended December 31, 2021	
Company A	14 %
Company B	11 %
Year Ended December 31, 2020	
Company A	13 %

We do not believe the loss of any single customer would materially impact our operating results, as natural gas, oil and NGL are fungible products with well-established markets, and we transact with numerous customers in our operating region. We historically have not incurred any material losses on our natural gas, oil and NGL receivables.

We also have joint interest receivables, which arise from billings to entities that own working interests in the wells we operate. These entities participate in our wells primarily based on their ownership in leases. We have little ability to control whether these entities will participate in our wells but can require these entities to prepay drilling costs. We historically have not incurred any material losses on our joint interest receivables.

By using derivative instruments, we are also exposed to credit risk associated with our hedge counterparties. To minimize such risk, we enter into derivative contracts with multiple counterparties, reducing our exposure to any individual counterparty. In addition, we only enter into derivative contracts with counterparties that we determine are creditworthy, and such creditworthiness is subject to periodic review. Any non-performance risk is considered in the valuation of our derivative instruments, but to date it has not had a material impact on the values of our derivatives. See Note 6 for further discussion of our derivative instruments.

Fair Value of Financial Instruments. Certain financial instruments are reported at fair value on the consolidated balance sheets. Under fair value measurement accounting guidance, fair value is defined as the amount that would be received from the sale of an asset or paid for the transfer of a liability in an orderly transaction between market participants, (i.e., an exit price). To estimate an exit price, a three-level hierarchy is used. The fair value hierarchy

prioritizes the inputs, which refer broadly to assumptions market participants would use in pricing an asset or a liability, into three levels. Level 1 inputs are unadjusted quoted prices in active markets for identical assets and liabilities and have the highest priority. Level 2 inputs are inputs other than quoted prices within Level 1 that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs for the asset or liability and have the lowest priority.

The valuation techniques that may be used to measure fair value include a market approach, an income approach and a cost approach. A market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities. An income approach uses valuation techniques to convert future amounts to a single present amount based on current market expectations, including present value techniques, option-pricing models and the excess earnings method. The cost approach is based on the amount that currently would be required to replace the service capacity of an asset (replacement cost).

The carrying values of financial instruments comprising cash and cash equivalents, accounts payable and accounts receivable approximate fair values due to the short-term maturities of these instruments. See Note 7 for further discussion of our fair value measurements.

Derivatives. We enter into derivative instruments to reduce our exposure to fluctuations in future commodity prices and floating interest rates in order to protect our expected operating cash flow against significant market movements or volatility. All derivative instruments are recognized at their current fair value as either assets or liabilities on the consolidated balance sheets. We have estimated the fair value of our derivative instruments using established index prices, volatility curves and discount factors. These estimates are compared to our counterparty values for reasonableness. The values we report in our financial statements are as of a point in time and subsequently change as these estimates are revised to reflect actual results, changes in market conditions and other factors. Changes in the fair value of these derivative instruments are recorded in earnings unless specific hedge accounting criteria are met. We elected not to designate any of our commodity derivative instruments for hedge accounting treatment.

Our derivative instruments reflected as current on the consolidated balance sheets represent the estimated fair value of derivatives scheduled to settle over the next twelve months based on market prices or rates as of the respective balance sheet dates. Cash settlements of our derivative instruments are generally classified as operating cash flows unless the derivatives are deemed to contain, for accounting purposes, a significant financing element at contract inception, in which case these cash settlements are classified as financing cash flows on the accompanying consolidated statements of cash flows. All of our derivative instruments are subject to International Swaps and Derivatives Association ("ISDA") master netting arrangements by contract type which provide for the offsetting of asset and liability positions within each contract type, by counterparty. ISDA master agreements also provide for net settlement over the term of the contract and in the event of default or termination of the contract. We net the value of our derivative instruments by counterparty on the accompanying consolidated balance sheets. See Note 6 for further discussion of our derivative instruments.

Long-Term Incentive Compensation. We recognize compensation cost for equity-classified restricted stock units based on the fair value on the date of the grant, and such amount is recognized on a straight-line basis over the requisite service period. Compensation cost for liability-classified restricted stock units is recognized once it becomes probable that such awards will be settled. The cost is measured at fair value as of the date it becomes probable and is re-measured at fair value at the end of each reporting period until the settlement date. Long-term incentive compensation associated with restricted stock units is presented as general and administrative expenses on the consolidated statements of operations. See Note 8 for further discussion of our long-term incentive compensation.

Leases. We capitalize our leases to our consolidated balance sheet through a right-of-use ("ROU") asset and a corresponding lease liability. ROU assets associated with our operating leases are presented net within other long-term assets and consist of drilling rigs, real estate, compressors and other equipment, with corresponding lease liabilities reflected as other current liabilities and other long-term liabilities on the consolidated balance sheets. ROU assets associated with our financing leases are reflected as other property and equipment and consist of commercial vehicles, with corresponding lease liabilities reflected as other current liabilities and other long-term liabilities on the consolidated balance sheets. Short-term leases that have an initial term of one year or less are not capitalized to the consolidated balance sheet, and instead are recognized as lease costs in accordance with the lease terms. As of December 31, 2022 and 2021, we were not a lessor.

Our leases are recognized at the commencement date of an arrangement and the associated ROU assets and lease liabilities are based on the present value of the minimum lease payments over the lease term. Most leases do not provide an implicit interest rate; therefore, we use our incremental borrowing rate, based on information available at the inception date, to determine the present value of the lease payments. Certain leases may also contain variable payments. Variable payments that do not depend on an index or rate are excluded from lease payments at lease commencement for initial measurement. Subsequent to initial measurement, these variable payments are recognized in the period in which the obligation for the payment is incurred.

Certain leases include options to renew on a month-to-month basis; however, they are not recognized as part of the ROU assets or lease liabilities as they are not reasonably certain to be exercised.

We have made an accounting policy election to combine lease and non-lease components on an asset class basis, which allows us to account for them as a single lease component. See Note 10 for further information on our leases.

Commitments and Contingencies. Liabilities for loss contingencies arising from claims, assessments, litigation or other sources, or for environmental remediation or restoration claims resulting from allegations of improper operation of assets, are recorded when it is probable that a liability has been incurred and the amount can be reasonably estimated. Expenditures related to such environmental matters are expensed or capitalized in accordance with our accounting policy for natural gas and oil properties.

Income Taxes. We are treated as a disregarded entity for income tax purposes. Our Parent is treated as a partnership for income tax purposes, with each partner being separately taxed on their share of income. As such, no income taxes are shown on our consolidated financial statements.

Reclassifications

Certain immaterial reclassifications have been made to our 2021 and 2020 consolidated financial statements to conform to the presentation used for the 2022 consolidated financial statements.

Adopted and Recently Issued Accounting Pronouncements

No accounting standards were issued or adopted during 2022 that had a material impact on our consolidated financial statements.

Subsequent Events

As of March 9, 2023, the date the consolidated financial statements were issued, we completed our evaluation of material subsequent events for disclosure, and no items were noted.

2. Revenue from Contracts with Customers

Our revenues are derived from the sale of natural gas, oil and NGL and are recognized when production is sold to a customer at a fixed or determinable price, delivery has occurred, control has transferred and collection of the revenue is probable. We typically receive payment for natural gas, oil and NGL sales within 30 days of the month of delivery. Under our natural gas, oil and NGL sales contracts, we generally consider the delivery of each unit of mmbtu or bbl to be a separate performance obligation that is satisfied upon delivery. A significant number of our sales contracts are short-term in nature, generally through evergreen contracts with terms of one year or less, and our sales contracts with a term greater than one year have no material long-term fixed consideration.

Under our natural gas sales contracts, we deliver natural gas to the customer at a delivery point specified under the sales contracts, utilizing third parties to gather, compress, process and transport our natural gas. Our sales contracts provide that we generally receive revenue for the sale of our natural gas based on a specific index price adjusted for pricing differentials. We transfer control of the natural gas at the delivery point and recognize revenue based on the contract price. The costs incurred to gather, compress, process and transport the natural gas prior to the point when control is transferred to the customer are recorded on the consolidated statements of operations as gathering, processing and transportation expenses.

NGL, which are extracted from natural gas through processing, are either sold by us directly or to the processor under processing contracts. For NGL sold by us directly, the sales contracts provide that the product is delivered to the customer at an agreed upon delivery point and that we generally receive revenue for the sale of our NGL based on a specific index price adjusted for pricing differentials. We transfer control of the product to the customer at the delivery point and recognize revenue based on the contract price. The costs to process and transport NGL to the delivery points are recorded on the consolidated statements of operations as gathering, processing and transportation expenses. For NGL sold to the processor, control is transferred by us to the processor at the tailgate of the processing plant, and revenue is recognized based on the price received from the processor.

Under our oil sales contracts, oil is sold to the customer from storage tanks near the wellhead, and we receive revenue for the sale of our oil based on a specific index price adjusted for pricing differentials. We transfer control of the product to the customer at the storage tanks and recognize revenue based on the contract price.

Our revenues from the sale of natural gas, oil and NGL are each presented separately on our consolidated statements of operations. We believe that the disaggregation of revenue into these three major product types appropriately depicts the accounting guidance for revenue recognition.

Under our sales contracts, customers are invoiced after our performance obligations have been satisfied, generally when control of the product has been transferred to the customer, at which point payment is unconditional. Accordingly, we have no contract assets or contract liabilities associated with our revenues from contracts with customers. As of December 31, 2022 and 2021, receivables from contracts with customers were \$530.4 million and \$453.5 million, respectively, and were reported in accounts receivable – natural gas, oil and NGL sales on the consolidated balance sheets.

3. Acquisition

On August 5, 2022, we acquired assets in Ohio for a total purchase price of \$270.0 million, or \$250.9 million after closing purchase price adjustments. The transaction was financed with a combination of cash on hand and borrowings under our Credit Facility. The assets acquired were primarily producing properties which included approximately 57 net producing wells and 22,300 net acres. The transaction was accounted for as an asset acquisition.

4. Property and Equipment

Net property and equipment included the following as of the dates indicated:

	December 31,				
(\$ in thousands)		2022		2021	
Proved natural gas and oil properties	\$	9,884,342	\$	8,560,861	
Unproved natural gas and oil properties		674,191		823,018	
Other property and equipment		39,641		36,318	
Total Property and Equipment		10,598,174		9,420,197	
Accumulated depreciation, depletion and amortization		(3,900,730)		(3,225,844)	
Property and Equipment, net	\$	6,697,444	\$	6,194,353	

As of December 31, 2022 and 2021, we did not have any capitalized well costs associated with exploratory wells that were pending determination of proved reserves.

5. Debt

Our long-term debt consisted of the following as of the dates indicated:

	December 31,				
(\$ in thousands)		2022		2021	
Credit Facility ^(a)	\$	370,000	\$	495,000	
Second lien term loans due November 2025 ^(b)		549,822		549,822	
7.00% senior notes due November 2026		597,000		600,000	
9.00% senior notes due November 2027		348,294		348,294	
8.25% senior notes due December 2028		300,000		300,000	
5.875% senior notes due June 2029		400,000		400,000	
Unamortized debt issuance costs		(11,997)		(13,675)	
Unamortized debt discounts		(77,897)		(91,193)	
Total Long-Term Debt, net	\$	2,475,222	\$	2,588,248	

- (a) The interest rate was 6.47% and 2.35% as of December 31, 2022 and 2021, respectively.
- (b) The interest rate was 12.94% and 10.00% as of December 31, 2022 and 2021, respectively.

Credit Facility

On June 30, 2022, we amended the credit agreement governing our Credit Facility (the "Amendment") to increase the borrowing base thereunder from \$1.85 billion to \$3.0 billion, and to increase the elected commitment from \$1.85 billion to \$2.0 billion, of which \$250.0 million is authorized for letters of credit. In addition, the Amendment extended the maturity date of our Credit Facility from April 1, 2024 to June 30, 2027, which will accelerate to August 2, 2026 if an amount greater than or equal to \$150.0 million of the 2026 Notes is outstanding as of that date. Our Credit Facility is secured by liens on substantially all of our assets, including our natural gas and oil properties. The borrowing base under our Credit Facility is subject to a semiannual redetermination on or about April 1 and October 1 of each year primarily based on the estimated value and future net cash flows of our proved natural gas, oil and NGL reserves and the value of our commodity hedge positions as determined by lenders under our Credit Facility at their discretion. Additionally, we may request an interim redetermination of the borrowing base in certain circumstances, including acquisitions of proved reserves in excess of certain thresholds. In November 2022, we reaffirmed the current borrowing base under our Credit Facility of \$3.0 billion and elected commitment of \$2.0 billion. As of December 31, 2022, we had \$370.0 million of borrowings outstanding and \$169.2 million of letters of credit issued under our Credit Facility.

Under our Credit Facility agreement, we may borrow either term benchmark loans or alternate base rate loans, and as of December 31, 2022, all of the borrowings under our Credit Facility were term benchmark loans. Term benchmark loans bear interest at a rate per annum equal to the term SOFR plus 0.10%, plus an applicable margin ranging from 2.00% to 3.00% per annum based on Credit Facility utilization. Principal amounts borrowed are payable on the maturity date and may be repaid prior to the maturity date without any premium or penalty. Interest is payable at the end of the applicable interest period. We were subject to a weighted average rate of 6.47% per annum as of December 31, 2022. Prior to the Amendment, the credit agreement governing our Credit Facility provided for borrowing either alternate base rate loans or Eurodollar loans, and prior to June 30, 2022, all of the borrowings under our Credit Facility were Eurodollar loans.

Under our Credit Facility agreement, we are subject to commitment fees payable to the administrative agent for the unutilized portion of our available elected commitment, the rate of which ranges from 0.375% to 0.50% based on Credit Facility utilization. Additionally, we are subject to letter of credit participation fees payable to the administrative agent which escalate based on applicable margins, ranging from 2.00% to 3.00% per annum, in accordance with our Credit Facility utilization. We are also subject to a letter of credit fronting fee that is payable to the issuing bank at a rate of 0.125% per annum of the balance of outstanding letters of credit issued.

We had \$21.2 million and \$11.0 million in unamortized debt issuance and amendment costs associated with our Credit Facility as of December 31, 2022 and 2021, respectively, which are presented as part of other long-term assets on

the consolidated balance sheets. We recorded a loss of \$2.0 million for the year ended December 31, 2022 associated with the write-off of certain deferred charges related to the Amendment, which is included in interest expense on the consolidated statements of operations.

Second Lien Term Loans

In October 2020, we issued \$537.8 million in aggregate principal amount of 2025 Second Lien Term Loans and \$339.7 million in aggregate principal amount of 2027 Notes in a private placement to eligible purchasers in exchange for \$856.7 million of aggregate principal amount of 2022 Notes (the "Exchange"). We accounted for the Exchange as a modification to existing debt, and no gain or loss was recognized related to the principal exchanged. However, we incurred \$17.7 million of fees related to the Exchange during the year ended December 31, 2020, which is presented as a loss on purchases or exchanges of debt on the consolidated statements of operations. Our 2025 Second Lien Term Loans mature on November 1, 2025, and interest is payable quarterly at an annual rate of 9.00% plus 3-month LIBOR, with a 1.00% LIBOR floor. Due to the 3-month LIBOR being 3.94% for the applicable interest period, we were subject to a rate of 12.94% per annum as of December 31, 2022. The 2025 Second Lien Term Loans are secured by second liens on substantially all of our assets, including our natural gas and oil properties. Our obligations under the 2025 Second Lien Term Loans are fully and unconditionally guaranteed, jointly and severally, by our current material subsidiaries and will be so guaranteed by any of our future material subsidiaries. We may redeem some or all of the 2025 Second Lien Term Loans at redemption prices ranging from 105.00% to 100.00% at any time on or after April 13, 2023. At any time prior to April 13, 2023, we may redeem some or all of the 2025 Second Lien Term Loans at a price of 100.00% plus a makewhole premium (as defined in the term loan credit agreement), and we may redeem up to 40% of the aggregate principal amount of 2025 Second Lien Term Loans at a price of 105.00% with an amount of cash not greater than the net cash proceeds of one or more equity offerings, subject to certain conditions. Upon the occurrence of a change of control (as defined in the term loan credit agreement), we are required to offer to repurchase all or any part of the 2025 Second Lien Term Loans at a price of 101.00%, plus accrued and unpaid interest.

Senior Notes

2026 Notes. Our 2026 Notes mature on November 1, 2026, and interest is payable on May 1 and November 1 of each year. We may redeem at any point some or all of the 2026 Notes at redemption prices ranging from 102.33% to 100.00%, plus accrued and unpaid interest up to, but excluding, the redemption date. Upon the occurrence of a change of control (as defined in the indenture that governs the 2026 Notes), we are required to offer to repurchase all or any part of the 2026 Notes at a price of 101.00%, plus accrued and unpaid interest. During the year ended December 31, 2022, we repurchased approximately \$3.0 million of outstanding principal amount of our 2026 Notes for \$3.0 million, plus accrued and unpaid interest.

2027 Notes. In October 2020, we issued \$339.7 million in aggregate principal amount of 2027 Notes as part of the Exchange. Our 2027 Notes mature on November 1, 2027, and interest is payable on May 1 and November 1 of each year. Unless and until a Triggering Event (as defined below) has occurred and we have paid all consideration payable in respect thereof, we may redeem some or all of the 2027 Notes (i) at any time prior to November 1, 2026, subject to a make-whole premium (as defined in the indenture that governs the 2027 Notes) and (ii) on or after November 1, 2026, at a redemption price equal to 100.00% of the principal amount of 2027 Notes to be redeemed, in each case plus accrued and unpaid interest up to, but excluding, the redemption date. If a Triggering Event has occurred and we have paid all consideration payable in respect thereof, we may redeem some or all of the 2027 Notes (i) at any time prior to November 1, 2023, subject to a make-whole premium and (ii) on or after November 1, 2023, at redemption prices ranging from 104.50% to 100.00%, in each case plus accrued and unpaid interest up to, but excluding, the redemption date. Upon the occurrence of a change of control (as defined in the indenture that governs the 2027 Notes), we are required to offer to repurchase all or any part of the 2027 Notes at a price of 101.00%, plus accrued and unpaid interest.

The 2027 Notes also contain a contingent payment right which entitles the holders to receive a fixed amount of cash or equity ranging from 40% to 45% of the then-outstanding aggregate principal amount of 2027 Notes, if certain additional consideration triggering events (each a "Triggering Event") occur. Triggering Event is defined to include a qualified public offering, a qualified merger or consolidation that results in our Parent's equity holders receiving an equity interest that is listed or quoted on any national securities exchange, or a change of control. The amount paid to holders of

the 2027 Notes in connection with the contingent payment right is dependent upon the timing of the first occurrence of such a Triggering Event. The contingent payment right is required to be bifurcated and accounted for at fair value, and the estimated fair value was \$88.5 million and \$85.2 million as of December 31, 2022 and 2021, respectively, and is presented as part of other long-term liabilities on the consolidated balance sheets. See Note 7, *Contingent Payment Right*, for further discussion of the contingent payment right valuation. In certain instances, the contingent payment right may be replaced by a Contingent Value Right ("CVR"), which entitles the holder of the CVR to the same fixed amount of consideration upon a Triggering Event despite no longer holding the associated 2027 Notes. However, if any of the 2027 Notes are voluntarily sold to us prior to a Triggering Event through means of open market transactions or other negotiated transactions, the associated contingent payment right will expire.

2028 Notes. In December 2020, we issued \$300.0 million in aggregate principal amount of 2028 Notes in a private placement to eligible purchasers. Our 2028 Notes mature on December 31, 2028, and interest is payable on February 1 and August 1 of each year. The net proceeds were used to repay a portion of the borrowings outstanding under our Credit Facility. We may redeem some or all of the 2028 Notes at redemption prices ranging from 104.125% to 100.00% at any time on or after February 1, 2024, plus accrued and unpaid interest up to, but excluding, the redemption date. At any time prior to February 1, 2024, we may redeem some or all of the 2028 Notes at a price of 100.00% plus a make-whole premium (as defined in the indenture that governs the 2028 Notes), and we may redeem up to 40% of the aggregate principal amount of 2028 Notes at a price of 108.25% with an amount of cash not greater than the net cash proceeds of one or more equity offerings, subject to certain conditions. Upon the occurrence of a change of control (as defined in the indenture that governs the 2028 Notes), we are required to offer to repurchase all or any part of the 2028 Notes at a price of 101.00%, plus accrued and unpaid interest.

2029 Notes. In June 2021, we issued \$400.0 million in aggregate principal amount of 2029 Notes in a private placement to eligible purchasers. The 2029 Notes mature on June 30, 2029, and interest is payable on March 1 and September 1 of each year. The net proceeds were used to repay a portion of the borrowings outstanding under our Credit Facility. We may redeem some or all of the 2029 Notes at redemption prices ranging from 102.938% to 100.00% at any time on or after September 1, 2024, plus accrued and unpaid interest up to, but excluding, the redemption date. At any time prior to September 1, 2024, we may redeem some or all of the 2029 Notes at a price of 100.00% plus a make-whole premium (as defined in the indenture that governs the 2029 Notes), and we may redeem up to 40% of the aggregate principal amount of 2029 Notes at a price of 105.875% with an amount of cash not greater than the net cash proceeds of one or more equity offerings, subject to certain conditions. Upon the occurrence of a change of control (as defined in the indenture that governs the 2029 Notes), we are required to offer to repurchase all or any part of the 2029 Notes at a price of 101.00%, plus accrued and unpaid interest.

2022 Notes. During the year ended December 31, 2020, we repurchased approximately \$50.3 million of outstanding principal amount of our 2022 Notes at a discount for \$35.4 million, plus accrued and unpaid interest, and recorded a \$14.3 million gain, including the write-off of unamortized debt issuance costs and discounts. Additionally, in October 2020, we completed the Exchange which resulted in \$856.7 million of aggregate principal amount of 2022 Notes being exchanged for a combination of 2025 Second Lien Term Loans and 2027 Notes. On April 1, 2021, we redeemed the remaining \$68.0 million of outstanding principal amount of our 2022 Notes at a price of 105.00% for \$71.4 million, plus accrued and unpaid interest, resulting in a loss of \$3.8 million, including the redemption premium and the write-off of unamortized discounts and debt issuance costs.

The outstanding Senior Notes are senior unsecured obligations and rank equally in right of payment with all of our existing and future senior unsecured debt, and the outstanding Senior Notes will rank senior in right of payment to all of our future subordinated debt. The outstanding Senior Notes are effectively subordinated to all of our existing and future secured debt to the extent of the value of the collateral securing such indebtedness. Our obligations under the outstanding Senior Notes are fully and unconditionally guaranteed, jointly and severally, by our current material subsidiaries and will be so guaranteed by any of our future material subsidiaries.

Convertible Notes

During the year ended December 31, 2020, we repurchased \$69.0 million of outstanding principal amount for \$103.4 million, plus accrued and unpaid interest, resulting in a loss of \$2.7 million, including the write-off of debt

issuance costs, discounts and premiums. On March 1, 2021, the remaining \$8.3 million of outstanding aggregate principal amount of our Convertible Notes matured and was redeemed at a 53.8% premium for \$12.8 million, plus accrued and unpaid interest.

Debt Covenants

The agreements governing our debt contain restrictive covenants including, but not limited to, restrictions on our ability to incur additional indebtedness, create certain liens on assets, make certain investments or restricted payments, make loans to others, make certain payments, consolidate or merge, hedge hydrocarbons, enter into transactions with affiliates, dispose of assets or engage in certain other transactions without the prior consent of the lenders. Our Credit Facility also requires us to maintain the following two financial ratios: (i) a consolidated leverage ratio, which requires us to maintain a consolidated funded indebtedness to consolidated EBITDAX ratio for the aggregate of the last four consecutive quarters (as defined in the Credit Facility agreement) of not more than 3.50 to 1.00 for each fiscal quarter and (ii) a modified current ratio (as defined in the Credit Facility agreement), which requires us to maintain consolidated current assets to consolidated current liabilities of not less than 1.00 to 1.00 as of the end of each fiscal quarter. We were in compliance with all applicable debt covenants as of December 31, 2022.

Debt Maturities

The principal amount of debt maturities for the five years ended after December 31, 2022 and thereafter are as follows:

(\$ in thousands)	Prir D	ncipal Amount of Debt Securities
2023	\$	_
2024		
2025		549,822
2026		597,000
2027		718,294
2028 and Thereafter		700,000
Total	\$	2,565,116

6. Derivative Instruments

We use derivative instruments to mitigate our exposure to fluctuations in future commodity prices and floating interest rates in order to protect our anticipated operating cash flow against significant market movements or volatility. We do not use derivative instruments for speculative or trading purposes. We utilize the following types of derivative instruments:

- Swaps. We receive a fixed price and pay a floating market price to the counterparty for the hedged commodity.
- *Call Options*. We sell call options in exchange for a premium, which establish the maximum price we will receive for contracted commodity volumes. At the time of settlement, if the market price exceeds the fixed price of the call option, we pay the difference to the counterparty. From time to time, we may sell future call options to obtain more favorable strike prices on swap or collar contracts.
- *Collars*. These instruments contain a fixed floor price ("put") and ceiling price ("call"). If the market price exceeds the call strike price, we pay the difference between the market price and the strike price of the sold call to the counterparty. If the market price falls below the put strike price, we receive the difference between the market price and the strike price of the purchased put from the counterparty. If the market price is between the put and the call strike prices, no payments are due to or from either party.
- *Three-Way Collars*. Three-way collars consist of a traditional collar and our sale of an additional put option in exchange for more favorable strike prices on purchased put or sold call options.

- Basis Swaps. Our natural gas production is sold at various delivery points that at times may have material spreads or volatility relative to NYMEX. Therefore, we periodically use basis swaps to fix the differential between product prices at the following market locations relative to NYMEX: Chicago (Citygate), Dawn (Ontario), MichCon, Rex Zone 3, Eastern Gas South, TCO, Tetco M-2 and Trunkline Zone 1A. Under these instruments, we receive the fixed price differential and pay the floating market price differential to the counterparty for the contracted volumes.
- *Interest Rate Swaps*. Interest rate swaps are used to fix interest rates on existing or anticipated floating rate indebtedness. The purpose of these instruments is to manage our existing or anticipated exposure to unfavorable interest rate changes. We pay a fixed interest rate and receive a floating interest rate from the counterparty.

All derivative instruments are recognized at their current fair value as either assets or liabilities on the consolidated balance sheets. Changes in the fair value are recorded in earnings as we have not elected hedge accounting for any of our derivative instruments.

The following table sets forth the average volumes per day associated with our outstanding natural gas derivative instruments as of December 31, 2022, the contracted weighted average natural gas prices, the contracted weighted average basis swap spreads and the estimated fair values:

		Weighted Average Prices (\$/mmbtu)											
	Average Volume		Average Volume		Swap		Sold Call	P	urchased Put		Sold Put		Fair Value
	(mmbtu/d)		Strike Price		Strike Price		Strike Price		Strike Price	(\$	in thousands)		
Natural gas:													
Swaps:										\$	(717,670)		
2023	1,205,000	\$	3.19										
2024	655,000	\$	3.36										
2025	270,000	\$	3.78										
2026	40,000	\$	4.34										
Collars:											166		
2023	190,000			\$	5.33	\$	3.17						
2024	320,000			\$	6.37	\$	3.59						
2025	330,000			\$	6.21	\$	3.48						
2026	80,000			\$	6.13	\$	4.00						
Three-way collars:											471		
2024	30,000			\$	6.39	\$	4.25	\$	3.00				
2025	40,000			\$	5.96	\$	4.25	\$	3.00				
2026	40,000			\$	6.09	\$	4.25	\$	3.00				
Call options:											(445,707)		
2023	370,000			\$	2.89								
2024	400,000			\$	2.84								
Basis swaps:											11,797		
2023	963,000	\$	(0.46)										
2024	433,000	\$	(0.62)										
2025	140,000	\$	(0.71)										
Total Estimated Fair Value										\$	(1,150,943)		

The following table sets forth the average volumes per day associated with our outstanding oil derivative instruments as of December 31, 2022, the contracted weighted average oil prices and the estimated fair values:

	Weighted Average				
			Prices (\$/bbl)		
	Average Volume	Swap		Fair Value	
	(bbls/d)		Strike Price	(\$ i	n thousands)
Oil:					
Swaps:				\$	(17,974)
2023	6,000	\$	72.30		
2024	4,000	\$	71.33		
Total Estimated Fair Value				\$	(17,974)

The following table sets forth the average volumes per day associated with our outstanding NGL derivative instruments as of December 31, 2022, the contracted weighted average NGL prices and the estimated fair values:

			ghted Average rices (\$/bbl)	
	Average Volume (bbls/d)	S	Swap Strike Price	air Value thousands)
NGL:				
Swaps - Propane:				\$ 4,532
2023	3,000	\$	38.08	
Total Estimated Fair Value				\$ 4,532

The following table sets forth the notional amounts associated with our outstanding interest rate derivative instruments as of December 31, 2022, the contracted fixed rate to be paid, the contracted floating rate to be received and the estimated fair value:

(\$ in thousands)	Not	ional Amount	Fixed Rate	Floating Rate	F	air Value
Interest Rate:						
Swaps:					\$	4,859
2023	\$	150,000	1.575 %	1-month SOFR		
Total Estimated Fair Value					\$	4,859

The following tables summarize the fair value of our derivative instruments on a gross basis, the effects of netting assets and liabilities for which the right of offset exists based on master netting agreements and the net amount presented on our consolidated balance sheets as of December 31, 2022 and 2021:

			Dece	mber 31, 2022		
(\$ in thousands)	Fair Value,			ounts Netted		Fair Value,
Consolidated Balance Sheet Presentation	Gross		on Balance Sheet			Net
Short-term derivative assets:						
Commodity derivatives	\$	112,161	\$	(102,959)	\$	9,202
Interest rate derivatives		4,859		 _		4,859
Total short-term derivative assets	\$	117,020	\$	(102,959)	\$	14,061
Long-term derivative assets:						
Commodity derivatives	\$	234,322	\$	(228,241)	\$	6,081
Total long-term derivative assets	\$	234,322	\$	(228,241)	\$	6,081
Short-term derivative liabilities:						
Commodity derivatives	\$	787,163	\$	(102,959)	\$	684,204
Total short-term derivative liabilities	\$	787,163	\$	(102,959)	\$	684,204
Long-term derivative liabilities:						
Commodity derivatives	\$	723,705	\$	(228,241)	\$	495,464
Total long-term derivative liabilities	\$	723,705	\$	(228,241)	\$	495,464
				mber 31, 2021		
(\$ in thousands)		Cain X/alma				
	ı	Fair Value,		ounts Netted		Fair Value,
Consolidated Balance Sheet Presentation		Gross		ounts Netted Balance Sheet		Fair Value, Net
Consolidated Balance Sheet Presentation Short-term derivative assets:		*				
	\$	*			\$	
Short-term derivative assets:	_	Gross	on I	Balance Sheet	_	Net
Short-term derivative assets: Commodity derivatives	\$	Gross 47,869	on I	Salance Sheet (41,003)	_	Net 6,866
Short-term derivative assets: Commodity derivatives Total short-term derivative assets	\$	Gross 47,869	on I	Salance Sheet (41,003)	\$	Net 6,866
Short-term derivative assets: Commodity derivatives Total short-term derivative assets Long-term derivative assets:	\$	47,869 47,869	\$ \$	(41,003) (41,003)	\$	Net 6,866 6,866
Short-term derivative assets: Commodity derivatives Total short-term derivative assets Long-term derivative assets: Commodity derivatives	\$ \$ \$	47,869 47,869 23,896	\$ \$ \$	(41,003) (41,003) (23,374)	\$	6,866 6,866
Short-term derivative assets: Commodity derivatives Total short-term derivative assets Long-term derivative assets: Commodity derivatives Total long-term derivative assets	\$ \$ \$	47,869 47,869 23,896	\$ \$ \$	(41,003) (41,003) (23,374)	\$ \$ \$	6,866 6,866
Short-term derivative assets: Commodity derivatives Total short-term derivative assets Long-term derivative assets: Commodity derivatives Total long-term derivative assets Short-term derivative liabilities:	\$ \$ \$	47,869 47,869 23,896 23,896	\$ \$ \$ \$ \$	(41,003) (41,003) (23,374) (23,374)	\$ \$ \$	6,866 6,866 522 522
Short-term derivative assets: Commodity derivatives Total short-term derivative assets Long-term derivative assets: Commodity derivatives Total long-term derivative assets Short-term derivative liabilities: Commodity derivatives	\$ \$ \$ \$	47,869 47,869 23,896 23,896 689,876	\$ \$ \$ \$ \$ \$	(41,003) (41,003) (23,374) (23,374) (41,003)	\$ \$ \$	6,866 6,866 522 522
Short-term derivative assets: Commodity derivatives Total short-term derivative assets Long-term derivative assets: Commodity derivatives Total long-term derivative assets Short-term derivative liabilities: Commodity derivatives Total short-term derivative liabilities	\$ \$ \$ \$	47,869 47,869 23,896 23,896 689,876	\$ \$ \$ \$ \$ \$	(41,003) (41,003) (23,374) (23,374) (41,003)	\$ \$ \$ \$	6,866 6,866 522 522

The following table summarizes the effects of derivative instruments on the consolidated statements of operations for the periods indicated:

	Consolidated Statements	Ye	ar Ei	nded December	31,	
(\$ in thousands)	of Operations Presentation	 2022		2021		2020
Commodity derivatives	Commodity derivative loss	\$ (2,687,817)	\$	(1,743,892)	\$	(19,167)
Interest rate derivatives	Interest expense, net	\$ 5,489	\$	(267)	\$	(790)

Credit Risk

By using derivative instruments, we are also exposed to credit risk associated with our hedge counterparties. To minimize such risk, we enter into derivative contracts with multiple counterparties, reducing our exposure to any individual counterparty. In addition, we only enter into derivative contracts with counterparties that we determine are creditworthy, and such creditworthiness is subject to periodic review. Any non-performance risk is considered in the valuation of our derivative instruments, but to date it has not had a material impact on the values of our derivatives.

7. Fair Value Measurements

We use a three-level valuation hierarchy for disclosure of fair value measurements. The valuation hierarchy is based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows:

- Level 1 Unadjusted quoted prices for identical assets or liabilities in active markets.
- Level 2 Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; and model-derived valuations whose inputs or significant value drivers are observable
- Level 3 Unobservable inputs that reflect our own assumptions.

Fair Value on a Recurring Basis

The following tables summarize the valuation of financial instruments by pricing levels that were accounted for at fair value on a recurring basis as of December 31, 2022 and 2021. There were no transfers in or out of our Level 3 fair value measurements.

	Fair value measurements at December 31, 2022:							
(\$ in thousands)		Level 1		Level 2		Level 3	_	Total
Assets:								
Commodity derivatives	\$		\$	15,283	\$		\$	15,283
Interest rate derivatives		<u> </u>		4,859		<u> </u>		4,859
Total	\$		\$	20,142	\$		\$	20,142
Liabilities:								
Commodity derivatives	\$		\$	1,179,668	\$		\$	1,179,668
Contingent payment right		 _		<u> </u>		88,525		88,525
Total	\$		\$	1,179,668	\$	88,525	\$	1,268,193
		Fair	r val	lue measuremen	ts at	December 31, 20)21:	
(\$ in thousands)		Fair Level 1	r val	lue measuremen Level 2	ts at	December 31, 20)21:	Total
			r val		ts at)21: 	Total
(\$ in thousands)	\$		r val		ts at		\$	Total 7,388
(\$ in thousands) Assets:	\$ \$		r val	Level 2			\$	
(\$ in thousands) Assets: Commodity derivatives	_		\$ \$	Level 2 7,388	\$		\$	7,388
(\$ in thousands) Assets: Commodity derivatives Total	_		\$ \$ \$	Level 2 7,388	\$		\$ \$	7,388
(\$ in thousands) Assets: Commodity derivatives Total Liabilities:	\$		\$	7,388 7,388	\$		\$	7,388 7,388
(\$ in thousands) Assets: Commodity derivatives Total Liabilities: Commodity derivatives	\$		\$	7,388 7,388	\$	Level 3	\$	7,388 7,388 1,083,895

Derivatives. We estimate the fair value of our commodity and interest rate derivatives using models that utilize market-based parameters and are therefore classified as Level 2 fair value measurements. The fair value of our commodity swaps, collars and options are based on standard industry income approach models that use significant observable inputs including, but not limited to, forward curves, discount rates, nonperformance risk and volatilities. We estimate the fair

value of our interest rate swaps using a discounted cash flow model utilizing the contracted notional amounts, active market-quoted SOFR yield curves and the applicable credit-adjusted risk-free rate yield curve. See Note 6 for further information regarding our derivative instruments.

Contingent Payment Right. The 2027 Notes contain a contingent payment right which entitles the holders to receive a fixed amount of cash or equity that ranges from 40% to 45% of the then-outstanding aggregate principal amount of 2027 Notes, if a Triggering Event occurs. See Note 5, 2027 Notes, for further information regarding the contingent payment right. The contingent payment right is required to be bifurcated and accounted for as a liability at fair value. The fair value of the contingent payment right is based on unobservable inputs and is therefore classified as Level 3.

The fair value of the contingent payment right was determined using a "with" and "without" analysis, which compares the value of the 2027 Notes including the contingent payment right to the value of an otherwise identical bond that omits the contingent payment right feature by comparing the discounted cash flows. The significant unobservable inputs used to estimate the fair value of the contingent payment right include the probability of a Triggering Event occurring prior to maturity and the discount rate used in the discounted cash flow analysis. Changes in these inputs impact the fair value measurement of the contingent payment right. For example, an increase or decrease in the probability of a Triggering Event occurring would increase or decrease, respectively, the fair value of the contingent payment right. Additionally, an increase or decrease in the discount rate would decrease or increase, respectively, the fair value of the contingent payment right.

The following table presents quantitative information about Level 3 inputs used in the fair value measurement of the contingent payment right:

	Decemb	oer 31,
	2022	2021
Probability of a Triggering Event prior to maturity	75%	70%
Discount rate	11.1%	6.5%

The contingent payment right is presented as part of other long-term liabilities on the consolidated balance sheets. Changes in its fair value are presented as a change in fair value of the contingent payment right on the consolidated statements of operations. The following table presents a reconciliation of changes in the fair value of the contingent payment right:

	 December 31,				
(\$ in thousands)	 2022		2021		
Balance, beginning of period	\$ 85,223	\$	65,302		
Change in fair value	 3,302		19,921		
Balance, end of period	\$ 88,525	\$	85,223		

Fair Value of Debt

The carrying amounts and estimated fair values of our debt instruments as of December 31, 2022 and 2021 are shown in the table below. The fair values were estimated using Level 2 market data inputs. See Note 5 for further information regarding our debt.

	December 31,								
		20	22		2021				
		Carrying		Fair		Carrying		Fair	
(\$ in thousands)		Value ^(a)		Value		Value ^(a)		Value	
Credit Facility ^(b)	\$	370,000	\$	370,000	\$	495,000	\$	495,000	
2025 Second Lien Term Loans		534,945		586,248		530,841		599,306	
2026 Notes		588,542		584,010		589,644		612,663	
2027 Notes		291,569		424,296		283,795		465,639	
2028 Notes		295,879		297,160		295,375		312,803	
2029 Notes		394,287		357,958		393,593		384,190	
Total	\$	2,475,222	\$	2,619,672	\$	2,588,248	\$	2,869,601	

- (a) Carrying values for our 2025 Second Lien Term Loans and Senior Notes are presented net of unamortized debt issuance costs and debt discounts or premiums.
- (b) The carrying value of borrowings under our Credit Facility approximates fair value as the interest rate is based on prevailing market rates.

8. Long-Term Incentive Compensation

In July 2020, our Parent established a long-term incentive plan (the "Plan") in order to further our growth and success. Under the Plan, the board of managers of our Parent may grant restricted stock units ("RSUs") and rights to receive cash award payments ("Cash Awards") to certain of our employees and certain managers of the board of our Parent. Our long-term incentive compensation was \$22.7 million, \$3.6 million and \$1.8 million for the years ended December 31, 2022, 2021 and 2020, respectively, and is presented as part of our general and administrative expenses on the consolidated statements of operations.

Under the Plan, 360.2 million common units of our Parent were reserved for issuance. The RSUs contain distribution equivalent rights, which entitle participants to cash distributions on unvested RSUs if and to the extent holders of common units receive cash distributions from our Parent. As of December 31, 2022, approximately 66.1 million common units were available for future grants under the Plan. We account for forfeitures during the period in which they occur by reversing the expense previously recognized for such awards.

Time-Vested Awards

Time-Vested Restricted Stock Units. Time-Vested RSUs are accounted for as equity awards, and vesting is subject to a service condition which is generally satisfied over five years in one-year tranches. Long-term incentive compensation related to the Time-Vested RSUs is measured based on the fair value on the date of grant using appropriate valuation techniques and is recognized on a straight-line basis over the requisite service period. Time-Vested RSUs are subject to an accelerated vesting schedule upon certain events which are generally outside of the control of the participant.

A summary of Time-Vested RSU activity for the year ended December 31, 2022 is as follows:

(in thousands, except weighted average fair value)	Number of Unvested Time-Vested RSUs	Weighted Average Grant Date Fair Value
Unvested Time-Vested RSUs as of December 31, 2021	130,606	\$ 0.11
Granted	2,717	\$ 0.22
Forfeited	(2,883)	\$ 0.10
Vested	(31,965)	\$ 0.10
Unvested Time-Vested RSUs as of December 31, 2022	98,475	\$ 0.11

During the years ended December 31, 2022, 2021 and 2020, respectively, we recognized \$3.4 million, \$3.6 million and \$1.8 million of long-term incentive compensation associated with our Time-Vested RSUs. As of December 31, 2022, there was \$8.5 million of unrecognized compensation costs related to unvested Time-Vested RSUs. The unamortized compensation costs are expected to be recognized over a weighted average period of approximately 2.6 years.

Performance-Vested Awards

Performance-Vested Restricted Stock Units. Performance-Vested RSUs are accounted for as liability awards, and vesting is subject to a performance condition which is generally satisfied upon the occurrence of a qualifying liquidity event ("QLE") as defined in the Plan. Upon each QLE, participants are generally entitled to cash payments from our Parent, or upon a QLE by which our Parent becomes a publicly held corporation, common stock in such public entity. We recognize long-term incentive compensation related to the Performance-Vested RSUs at fair value using appropriate valuation techniques on such date it becomes probable that the performance condition will be achieved and is remeasured each period at fair value through the date of settlement. Performance-Vested RSUs are subject to an accelerated vesting schedule dependent upon certain events which are generally outside the control of the participant and are also subject to expiration. The ultimate settlement of Performance-Vested RSUs will be partially or fully offset to the extent Cash Awards were previously paid by our Parent as part of the Plan (the "Cash Award Offset Payments") and any corresponding Performance-Vested RSUs will be forfeited to the extent of any such previous Cash Award Offset Payments.

A summary of Performance-Vested RSU activity for the year ended December 31, 2022 is as follows:

(in thousands, except weighted average fair value)	Number of Unvested Performance-Vested RSUs	Weighted Average Grant Date Fair Value
Unvested Performance-Vested RSUs as of December 31, 2021	161,089	\$ 0.10
Granted	2,717	\$ 0.22
Forfeited	(4,383)	\$ 0.10
Vested		\$
Unvested Performance-Vested RSUs as of December 31, 2022	159,423	\$ 0.11

As of December 31, 2022, we had not recognized any long-term incentive compensation associated with the Performance-Vested RSUs.

Cash Awards. Under the Plan, Cash Awards are triggered and paid by our Parent upon us achieving certain leverage ratios, as defined in the Plan, and are determined based on our annual free cash flows, also defined in the Plan. If our leverage ratio for a calendar year is between 2.0 times to 1.75 times, or below 1.75 times, the result would be a cash payment from our Parent to participants based on 2.5% or 5.0%, respectively, of our annual free cash flow. The Cash Awards will be funded by our Parent following distributions from us in future periods. Cash Awards are limited to a total of five annual payments, after which the opportunity for future Cash Awards is terminated.

We account for Cash Awards in accordance with ASC 710, *Compensation*, and long-term incentive compensation is accrued once determined probable and reasonably estimable. For the year ended December 31, 2022, as a result of our leverage ratio being less than 1.75 times, long-term incentive compensation was determined to be \$16.9 million related to the Cash Awards, which will be paid by our Parent during the first quarter of 2023.

9. Related Party Transactions

Natural Gas Gathering, Firm Transportation, Processing and Commodity Sales Agreements

In the normal course of our business, we have entered into certain business relationships with entities in which EMG or First Reserve have control or significant influence through their equity investments. These relationships include agreements for the sale of our NGL production and the gathering, processing and transportation of our natural gas and NGL production. These amounts are disclosed as footnotes on the face of our consolidated balance sheets and statements of operations.

For information regarding the credit support requirements due to certain related parties, see Note 11, *Pipeline Commitments*.

Long-Term Debt

As of both December 31, 2022 and 2021, \$8.6 million in aggregate principal amount of 2025 Second Lien Term Loans and \$0.3 million in aggregate principal amount of 2027 Notes were held by certain related parties.

10. Leases

We enter into certain agreements for tangible assets, real estate and easements to support our operations. To the extent that we determine an arrangement represents a lease in accordance with ASC 842, we classify that lease as an operating or financing lease. The following table summarizes our ROU assets and lease liabilities on the consolidated balance sheets as of December 31, 2022 and 2021:

			Decem	ber 31	,
(\$ in thousands)	Consolidated Balance Sheet Presentation		2022		2021
Operating leases:					
ROU assets, net	Other long-term assets	\$	22,598	\$	35,132
		1			
Short-term lease liabilities	Other current liabilities	\$	14,230	\$	25,127
Long-term lease liabilities	Other long-term liabilities		8,316		9,769
Total operating lease liabilities		\$	22,546	\$	34,896
		1			
Financing leases:					
ROU assets, net	Property and equipment, net	\$	1,958	\$	1,557
Short-term lease liabilities	Other current liabilities	\$	720	\$	686
Long-term lease liabilities	Other long-term liabilities		725		469
Total financing lease liabilities		\$	1,445	\$	1,155

The following table summarizes our total lease costs before amounts are recovered from our joint interest partners, where applicable, for the periods presented:

		Year Ended December 3			r 31,		
(\$ in thousands)	Consolidated Financial Statement Presentation		2022		2021		2020
Operating lease cost:							
Operating lease cost	General and administrative expense	\$	1,792	\$	1,881	\$	1,931
Operating lease cost	Gathering, processing and transportation ^(a)		12,472		10,142		6,707
Operating lease cost	Lease operating expense		96		338		915
Operating lease cost	Natural gas and oil properties ^(b)		30,084		28,673		26,599
Total operating lease cost		\$	44,444	\$	41,034	\$	36,152
Financing lease cost:							
Amortization of ROU assets	DD&A	\$	1,123	\$	1,024	\$	697
Interest on lease liabilities	Interest expense		42		43		46
Total financing lease cost		\$	1,165	\$	1,067	\$	743

- (a) Includes short-term lease costs of \$5.0 million, \$4.8 million and \$4.6 million for the years ended December 31, 2022, 2021 and 2020, respectively.
- (b) Includes short-term and variable lease costs of \$7.0 million, \$17.4 million and \$19.1 million for the years ended December 31, 2022, 2021 and 2020, respectively.

Additional information for our operating and financing leases is summarized below:

	Year Ended December 31,											
		20	22			20	21		2020			
(\$ in thousands)	0	perating		Financing		Operating		Financing	(Operating		Financing
Cash outflows for lease liabilities:												
Operating cash flows	\$	9,388	\$	42	\$	7,605	\$	43	\$	4,887	\$	47
Investing cash flows	\$	22,943	\$	_	\$	11,095	\$	_	\$	7,666	\$	_
Financing cash flows	\$	_	\$	1,256	\$	_	\$	998	\$	_	\$	814
Non-cash activities:												
ROU assets obtained in exchange for lease liabilities	\$	19,121	\$	1,589	\$	35,100	\$	1,031	\$	18,207	\$	1,132

	December	31, 2022	December	31, 2021
	Operating	Financing	Operating	Financing
Weighted average remaining lease term (in years)	1.7	2.2	1.7	1.9
Weighted average discount rate	3.6 %	3.9 %	2.6 %	3.1 %

The following table presents our maturity analysis as of December 31, 2022 for future lease expirations. We do not have any lease maturities after 2025.

		December 31, 2022							
(\$ in thousands)	$O_{\mathbf{l}}$	erating		Financing					
2023	\$	14,777	\$	763					
2024		6,293		503					
2025		2,294		248					
Total lease payments		23,364		1,514					
Less: imputed interest		(818)		(69)					
Present value of lease liabilities	\$	22,546	\$	1,445					

11. Commitments and Contingencies

Litigation Matters

We are periodically involved in litigation and regulatory proceedings, investigations and disputes, including matters relating to commercial transactions, operations, landowner disputes, royalty claims, property damage claims, contract actions and environmental, health and safety matters. We may also periodically be involved in disputes with our midstream counterparties, some of which are related parties as discussed in Note 9, including disputes arising due to the overlapping nature of dedication provisions, ownership and contractual interests in the Utica Shale. A liability is recognized for any contingency that is probable and reasonably estimable. We continually assess the likelihood of adverse judgments or outcomes in these matters, as well as potential ranges of possible losses, based on a careful analysis of each matter and, if necessary, with the assistance of outside legal counsel and other experts. We will continue to monitor the impact that litigation could have on us and will assess the impact of future events. Legal defense costs are accounted for in the period the costs are incurred.

We are defending against certain pending claims, have resolved a number of claims through negotiated settlements and have prevailed in various other lawsuits. Based on management's current assessment, we believe no pending or threatened lawsuit or dispute relating to our business operations is likely to have a material adverse effect on our consolidated financial position, results of operations or cash flows.

During the year ended December 31, 2022, we decreased our accrual for all such claims, disputes and threatened or pending litigation by \$12.7 million, which was reflected as a decrease in our general and administrative expenses on the consolidated statements of operations. As of December 31, 2022 and 2021, we had accrued \$2.3 million and \$15.0 million, respectively, which is presented as part of other current liabilities on the consolidated balance sheets. The final resolution of such matters could differ materially from management's estimates.

Environmental Matters

We are subject to existing federal, state and local laws and regulations governing environmental matters, such as the Comprehensive Environmental Response, Compensation and Liability Act and similar statutes. From time to time, we are party to various environmental and regulatory proceedings in the ordinary course of business. Management does not believe the results of these environmental proceedings, individually or in the aggregate, will have a material adverse effect on us.

Pipeline Commitments

We have entered into certain pipeline capacity commitments with various counterparties in order to facilitate the delivery of our production to market and reduce the likelihood of possible production curtailments that may arise due to limited capacity. Through these contracts, we are committed to transport minimum daily natural gas volumes at negotiated rates or pay for any deficiencies. The table below presents our undiscounted pipeline commitments that have initial or remaining non-cancelable terms in excess of one year as of December 31, 2022 and represents the gross amounts we are

committed to pay; however, working interest owners and royalty interest owners, where appropriate, will be responsible for their proportionate share of these costs.

(\$ in thousands)	Pipeline	Commitments
2023	\$	686,255
2024		687,501
2025		662,508
2026		658,724
2027		646,948
2028 and Thereafter		4,430,976
Total	\$	7,772,912

To satisfy credit support requirements for these commitments, \$169.2 million in letters of credit and \$262.1 million in surety bonds were issued by us or on our behalf to certain transportation providers as of December 31, 2022. Our credit support includes support provided to certain related parties, which, as of December 31, 2022, included \$121.3 million in letters of credit and \$196.0 million in surety bonds. For information regarding certain other transactions with related parties, see Note 9.

12. Other Current Liabilities

Our other current liabilities consisted of the following as of the dates indicated:

	December 31,				
(\$ in thousands)		2022		2021	
Revenues and royalties due others	\$	272,000	\$	196,966	
Derivative liability		170,178		3,042	
Gathering, processing and transportation expense accrual		135,421		130,677	
Drilling and completion cost accrual		102,871		73,851	
Taxes other than income accrual		31,556		27,364	
Operating and financing leases		14,950		25,813	
Other		44,086		60,240	
Total Other Current Liabilities	\$	771,062	\$	517,953	

13. Supplemental Information on Natural Gas, Oil and NGL Producing Activities (Unaudited)

The following disclosures provide supplemental unaudited information regarding our natural gas, oil and NGL activities, which are entirely within the United States:

Capitalized costs related to our natural gas, oil and NGL producing activities are summarized as follows:

	 December 31				
(\$ in thousands)	 2022		2021		
Proved	\$ 9,884,342	\$	8,560,861		
Unproved	674,191		823,018		
Total	10,558,533		9,383,879		
Accumulated depreciation, depletion and amortization	(3,877,227)		(3,204,967)		
Net Capitalized Costs	\$ 6,681,306	\$	6,178,912		

Costs incurred in natural gas and oil property acquisition, exploration and development activities are summarized in the table below:

	Year Ended December 31,					
(\$ in thousands)		2022		2021		2020
Acquisition costs of properties:						
Proved properties	\$	240,032	\$	2,624	\$	4,811
Unproved properties		132,437		91,801		121,211
Total property acquisition costs		372,469		94,425		126,022
Exploration costs		2,187		3,049		3,926
Development costs		849,087		577,805		531,066
Total	\$	1,223,743	\$	675,279	\$	661,014

Results of Operations from Natural Gas, Oil and NGL Producing Activities

The results of operations included below consist of revenues and expenses directly associated with our natural gas, oil and NGL producing activities. These results do not include the effects of commodity derivatives or any interest expense or indirect general and administrative costs, and therefore, are not necessarily indicative of the net operating results of our natural gas, oil and NGL operations.

	Year Ended December 31,					
(\$ in thousands)		2022		2021		2020
Revenues, excluding the effects of commodity derivatives	\$	5,186,468	\$	2,939,957	\$	1,515,541
Lease operating expenses		(101,659)		(81,822)		(72,180)
Gathering, processing and transportation expenses		(979,987)		(945,031)		(925,327)
Taxes other than income		(45,724)		(38,988)		(37,495)
Exploration expenses		(49,142)		(83,367)		(104,230)
Natural gas and oil depreciation, depletion and amortization		(673,003)		(595,481)		(733,450)
Results of Operations	\$	3,336,953	\$	1,195,268	\$	(357,141)

Natural Gas. Oil and NGL Reserves

Proved reserves are estimated volumes of natural gas, oil and NGL that geological and engineering data demonstrate with reasonable certainty are recoverable in future years from known reservoirs under existing economic and operating conditions. Proved developed reserves are those reserves expected to be recovered through existing wells, equipment and operating methods. Proved undeveloped reserves include drilling locations that are more than one offset location away from productive wells, reasonably certain of containing proved reserves and scheduled to begin drilling within five years under our development plan. Our development plans are subject to uncertainties and variables, including the availability of capital, future natural gas, oil and NGL prices, cash flows from operations, future drilling costs, demand for natural gas, oil and NGL and other economic factors. Our net quantities of proved reserves include our royalty interests and exclude any interests owned by others.

Our proved natural gas, oil and NGL reserves for the years ended December 31, 2022 and 2021 were prepared by our internal reserve engineers and audited by Netherland, Sewell & Associates, Inc. ("NSAI") utilizing data we compiled. Proved reserves estimates for the year ended December 31, 2020 were prepared by NSAI, where their type curves were used as the basis for their reserves projections.

Estimating quantities of proved natural gas, oil and NGL reserves is a complex process that involves significant interpretations and assumptions and cannot be measured in an exact manner. It requires interpretations and judgment of available technical data, including the evaluation of available geological, geophysical, and engineering data and estimates are revised, as warranted by additional performance data. The information provided below related to our natural gas, oil and NGL reserves is presented in accordance with regulations prescribed by the SEC.

The following table sets forth our proved reserves during the periods indicated, all of which are located within the Utica Shale:

	Natural Gas (mmcf)	Oil (mbbls)	NGL (mbbls)	Total (mmcfe)
Proved Reserves at December 31, 2019	8,146,065	48,259	136,016	9,251,715
Extensions, discoveries and other additions	822,859	4,644	9,445	907,393
Revisions	(248,908)	(5,999)	(25,796)	(439,680)
Production	(646,982)	(4,291)	(9,304)	(728,553)
Proved Reserves at December 31, 2020	8,073,034	42,613	110,361	8,990,875
Extensions, discoveries and other additions	735,688	6,707	15,384	868,234
Revisions	46,756	1,502	5,349	87,862
Production	(645,752)	(3,110)	(7,012)	(706,484)
Proved Reserves at December 31, 2021	8,209,726	47,712	124,082	9,240,487
Extensions, discoveries and other additions	614,095	1,766	5,234	656,094
Revisions	(607,465)	(7,368)	29,481	(474,785)
Purchases of reserves	218,662	42	215	220,206
Production	(719,470)	(2,814)	(5,794)	(771,119)
Proved Reserves at December 31, 2022	7,715,548	39,338	153,218	8,870,883
Proved developed reserves:				
December 31, 2020	3,830,924	16,273	57,831	4,275,548
December 31, 2021	4,493,267	14,587	51,594	4,890,355
December 31, 2022	5,101,803	16,687	63,026	5,580,079
Proved undeveloped reserves:				
December 31, 2020	4,242,110	26,340	52,530	4,715,327
December 31, 2021	3,716,459	33,124	72,488	4,350,132
December 31, 2022	2,613,745	22,651	90,192	3,290,804

During the year ended December 31, 2022, we added approximately 656.1 bcfe in proved reserves through the continued development of our Utica Shale acreage. Downward revisions of previous estimates of approximately 474.8 bcfe included a decrease of 251.9 bcfe primarily due to negative performance revisions and a decrease of 222.9 bcfe in PUD revisions primarily due to the removal of PUDs that were not going to be developed within the SEC's five-year rule, although the majority remain in our current five-year development plan. As of December 31, 2022, all proved undeveloped locations were in accordance with the SEC five-year rule. We also added approximately 220.2 bcfe of proved reserves through our Ohio asset acquisition. The average adjusted prices used to calculate reserves at December 31, 2022 were \$6.26 per mcf for natural gas, \$87.39 per bbl for oil and \$39.13 per bbl of NGL utilizing a benchmark of \$6.36 per mmbtu of natural gas and \$94.14 per bbl of oil and condensate.

During the year ended December 31, 2021, we added approximately 868.2 bcfe in proved reserves through the continued development of our Utica Shale acreage. Upward revisions of previous estimates of approximately 87.9 bcfe were primarily driven by SEC price improvements which resulted in an increase of 176.8 bcfe, partially offset by a decrease of 88.9 bcfe due to the removal of PUDs where it was determined development would occur outside of our five-year development plan, net of positive performance revisions and development plan optimization. As of December 31, 2021, all proved undeveloped locations were in accordance with the SEC five year rule. The average adjusted prices used to calculate reserves at December 31, 2021 were \$3.56 per mcf for natural gas, \$59.39 per bbl for oil and \$31.89 per bbl of NGL utilizing a benchmark of \$3.60 per mmbtu of natural gas and \$66.55 per bbl of oil and condensate.

During the year ended December 31, 2020, we added approximately 907.4 bcfe in proved reserves through the continued development of our Utica Shale acreage. Downward revisions of previous estimates of approximately 439.7

befe included revisions of 258.6 befe resulting from removing PUDs where it was determined development would occur outside of our five-year development plan and other revisions to proved reserves estimates of 181.1 befe primarily due to type curve updates. As of December 31, 2020, all proved undeveloped locations were in accordance with the SEC five year rule. The average adjusted prices used to calculate reserves at December 31, 2020 were \$1.89 per mcf for natural gas, \$32.40 per bbl for oil and \$12.36 per bbl of NGL utilizing a benchmark of \$1.99 per mmbtu of natural gas and \$39.54 per bbl of oil and condensate.

Standardized Measure of Discounted Future Net Cash Flows Relating to Proved Natural Gas, Oil and NGL Reserves

ASC 932, *Extractive Activities - Oil and Gas*, prescribes guidelines for computing a standardized measure of future net cash flows and changes therein related to proved reserves. We have followed these guidelines which are briefly discussed below.

Future cash inflows and future production and development costs as of December 31, 2022, 2021 and 2020 were determined by applying the unweighted arithmetic average of the prices on the first day of each month for the 12 months of the year and year-end costs to the estimated quantities of natural gas, oil and NGL to be produced. Actual future prices and costs may be materially higher or lower than the prices and costs used. For each year, estimates are made of quantities of proved reserves and the future periods during which they are expected to be produced based on a continuation of the economic condition applied for that year. We are a disregarded entity for income tax purposes, and therefore, we have estimated no future income tax expense. The resulting future net cash flows are reduced to the present value amount by applying a 10% annual discount factor.

The assumptions used to compute the standardized measure are those prescribed by the FASB and do not necessarily reflect our expectations of actual revenue to be derived from those reserves nor their present worth. The limitations inherent in the reserve quantity estimation process, as discussed previously, are equally applicable to the standardized measure computations since these estimates reflect the valuation process.

The following table sets forth our standardized measure of future net cash flows from our proved natural gas, oil and NGL reserves:

		December 31,	
(\$ in thousands)	2022	2021	2020
Future cash inflows	\$ 57,745,828	\$ 36,002,574	\$ 18,007,344
Future production costs	(15,387,792)	(15,079,666)	(13,243,886)
Future development costs	(2,206,486)	(1,850,383)	(1,975,980)
Future net cash flows	40,151,550	19,072,525	2,787,478
Discount to present value at 10% annual rate	(21,111,851)	(9,936,965)	(1,522,378)
Standardized Measure of Discounted Future Net Cash Flows	\$ 19,039,699	\$ 9,135,560	\$ 1,265,100

Changes in Standardized Measure of Discounted Future Net Cash Flows Relating to Proved Natural Gas, Oil and NGL Reserves

The following table sets forth the changes in our standardized measure of future net cash flows from our proved natural gas, oil and NGL reserves:

	Year Ended December 31,		
(\$ in thousands)	2022	2021	2020
Standardized Measure of Discounted Future Net Cash Flows, Beginning of Period	\$ 9,135,560	\$ 1,265,100	\$ 3,957,652
Sales of natural gas, oil and NGL produced, net of production costs	(4,059,098)	(1,874,116)	(479,630)
Net changes in prices and production costs	12,204,960	9,049,798	(3,519,899)
Extensions and discoveries, net of production and development costs	1,698,834	962,303	87,268
Changes in future development costs	(781,366)	(68,401)	455,834
Development costs incurred	595,026	310,194	545,553
Revisions of previous quantity estimates	(1,468,592)	58,031	(133,195)
Purchase of reserves	350,314		
Accretion of discount	913,556	126,510	395,765
Changes in production rates and other	450,505	(693,859)	(44,248)
Standardized Measure of Discounted Future Net Cash Flows, End of Period	\$ 19,039,699	\$ 9,135,560	\$ 1,265,100