

A low-angle photograph of an oil rig. In the foreground, a worker wearing a yellow hard hat, safety glasses, and a dark blue jumpsuit stands on a metal platform, holding a tablet. The rig's complex steel structure, including ladders and walkways, extends upwards into a cloudy sky. A yellow and orange graphic border frames the top left corner of the image.


US oil and gas reserves, production and ESG benchmarking study

2025

The EY logo, consisting of the letters 'EY' in a bold, white, sans-serif font, positioned next to a yellow diagonal line.

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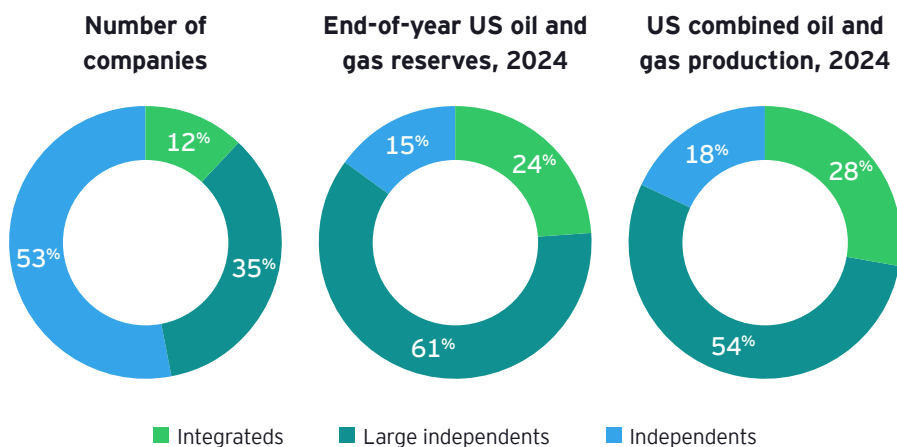
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Overview

This study is a compilation and analysis of US oil and gas reserve and production information reported by publicly traded companies to the United States Securities and Exchange Commission (SEC) and an analysis of certain publicly reported environmental, social and governance (ESG) disclosures, as applicable. It presents results for the five-year period from 2020 to 2024 for the 40 largest oil and gas companies based on 2024 end-of-year US oil and gas reserve estimates. This represents a departure from previous studies, where results were presented for the 50 largest oil and gas companies. Due to continued consolidation within the sector, this year's study group comprises 40 companies, which collectively account for approximately 41% of the US combined oil and gas production for 2024. This percentage aligns with those from previous years' study groups of 50 companies. Accordingly, we believe that these 40 companies are a good bellwether of industry trends. However, the oil and gas industry in the US is unique due to its predominant share of production from shale assets and as such, the conclusions we draw do not necessarily apply to the rest of the world.

Companies have been classified into three peer groups: integrated companies (integrateds), large independents and independents. Integrateds are companies that have oil-refining and marketing activities in addition to exploration and production (E&P) activities. Independents do not have oil-refining and marketing activities but may have midstream operations. Independents are classified as "large" if their worldwide reserves exceeded 1 billion barrels of oil equivalent (BOE) at the end of 2024.

In this year's study, we looked at the capital allocation strategy of oil and gas companies, which underwent a major shift with investments in mergers and acquisitions rising significantly in 2024 coupled with the continued focus on shareholder distributions. Further, the study group also experienced the impact of moderating oil and gas prices vis-à-vis 2023 on their operating results and end-of-year reserves due to revisions. We concluded this year's study with an analysis of trends in ESG reporting by the study group.



Study highlights

Softening commodity prices through the second half of 2024 led to declines in revenues and profits for oil and gas companies in 2024. However, the drive toward improving efficiency and achieving profitable growth continued with record high expenditures in acquisitions in 2024, despite a slowdown in the second half of the year coinciding with the US election cycle.

Capital expenditures, including acquisitions

- Expenditures totaled US\$292.1 billion, 108% higher than 2023, driven by an increase in merger and acquisition activity. Acquisitions of proved and unproved property, bolstered by several megadeals, totaled US\$206.6 billion in 2024, up 331% from 2023.
- Exploration and development expenditures decreased 7% year over year, totaling US\$85.5 billion, as sector consolidation and moderating commodity prices lowered capital budget allocations for exploration and development in 2024.
- The study group drilled 3% more development and exploration wells in the aggregate compared to 2023.

Revenues and results of operations

- Revenues were US\$235.5 billion, down 3% from 2023, but still up by 12% from 2021 levels.
- Production costs per BOE remained flat, increasing <1% from US\$11.75 per BOE in 2023 to US\$11.85 per BOE.
- Impairments totaled US\$2.1 billion and have remained under US\$3.0 billion each year since 2021.
- Pretax profits were US\$74.8 billion, declining 10% year over year and less than half of the record profits recorded in 2022.

Capital allocation


- Large independents decreased payments of dividends and share repurchases by 28% year over year (US\$9.5 billion) while independents slightly decreased their payments of the same by 3% (US\$131 million) during the same period.
- Large independents spent less on dividends and share repurchases as a percent of netback (revenues less production costs) in 2024 (31%) compared to 2023 (36%) while independents maintained their shareholder distributions as a percent of netback, decreasing slightly from 18% to 17% in 2024, reflecting an increased focus to allocate capital for merger and acquisition pursuits.

Oil reserves and production

- Production peaked for the study period, reaching 3.5 billion barrels in 2024, a 3% increase from 2023.
- Purchases of reserves and extensions and discoveries increased 138% and 5%, respectively, compared to 2023.
- The companies reported combined oil reserves of 34.7 billion barrels in 2024, a 5% increase compared to 2023.

Gas reserves and production

- Production was 15.7 trillion cubic feet (tcf) in 2024, a 5% decrease from the production peak witnessed in 2023 by the study companies.
- Purchases of reserves were 24.7 tcf in 2024, an increase of 198% from 2023 and the highest purchases in the five-year study period.
- The companies reported combined gas reserves of 182 tcf in 2024, a decrease of 4% compared to 2023, primarily driven by 27.2 tcf of sales and 6.5 tcf of negative revisions due to declining gas prices.

An aerial photograph of an oil drilling site in a vast, flat landscape. The site is a cleared, sandy area with a tall drilling rig in the center. Several white and blue modular buildings, a red storage tank, and various vehicles are clustered around the rig. A small, rectangular, light-colored pond is visible to the left of the rig. The surrounding landscape is a mix of green and yellowish-brown, suggesting a dry or semi-arid environment. The sky is a pale, hazy blue.

**US oil and gas companies
doubled down on mergers
and acquisitions with
expenditures increasing
by 3x year over year.**

Capital expenditures

US – Capital expenditures (US\$ millions) (a)

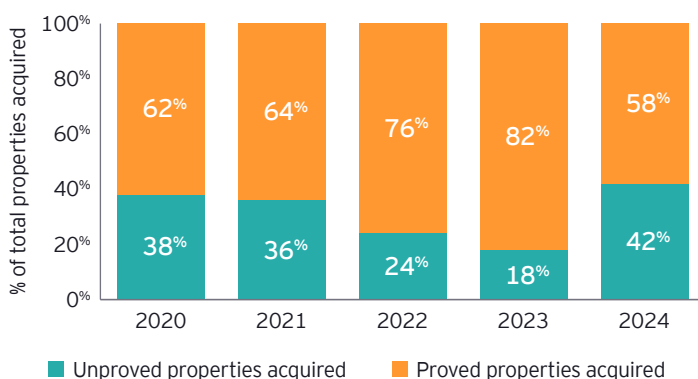
	2020	2021	2022	2023	2024
Proved properties acquired	7,240	57,971	23,368	39,298	119,604
Unproved properties acquired	4,366	33,082	7,526	8,622	86,973
Exploration	6,179	8,094	10,688	11,111	5,719
Development	41,931	40,269	61,811	81,263	79,792
Other	65	34	8	1	26
Total	59,781	139,450	103,401	140,295	292,114

(a) Includes the 40 largest companies based on 2024 end-of-year oil and gas reserve estimates; activity related to acquired companies has also been reflected as described in the Appendix.

Total capital expenditures increased among the study companies in 2024, rising 108% to US\$292.1 billion. This increase places 2024 capital expenditures as the highest total in the five-year study period, more than twice the US\$139.5 billion of capital expenditures in 2021. The increase in total capital expenditures was primarily driven by large deals in Permian, Eagleford and Bakken shale regions.

Merger and acquisition expenditures increased 331% in 2024, from US\$47.9 billion in 2023, to US\$206.6 billion in 2024. The large independents and integrations were responsible for a majority of the increase in merger and acquisition expenditures as they increased their spend from US\$33.4 billion in 2023 to US\$181.5 billion in 2024. We expect the integrations' and large independents' merger and acquisition expenditures to continue to lead in 2025 with the acquisition of Hess Corporation by Chevron Corporation and acquisitions of certain subsidiaries of Double Eagle IV Midco, LLC by Diamondback Energy Inc., Encino Acquisition Partners by EOG Resources, Inc. and Maverick Natural Resources by Diversified Energy Company PLC.

Mix of properties acquired



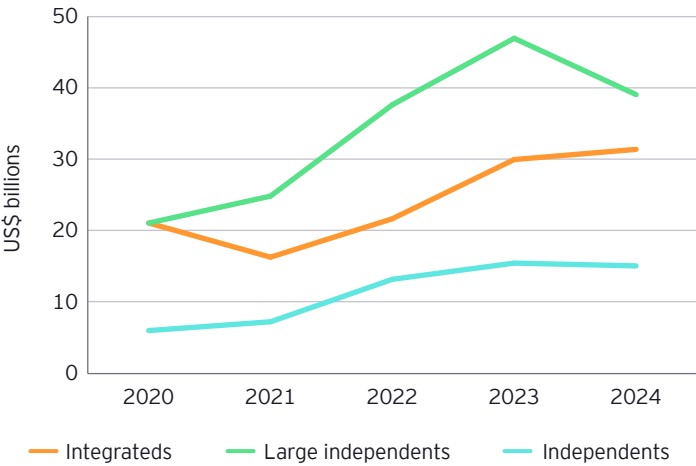
When looking at the mix of proved and unproved properties acquired by the study companies in 2024, there was an uptick in acquisitions of unproved property, which represented 42% of the value of total acquisitions. This represents the highest percentage of unproved property acquisitions during the study period, highlighting one objective of the strategic acquisitions made in 2024, which was to bolster drilling inventory.

Lower commodity prices toward the beginning of 2024 also provided attractive valuations for unproved property relative to recent years. ExxonMobil was the leading purchaser in 2024 with total property acquisition costs of US\$84.5 billion, primarily due to its acquisition of Pioneer Natural Resources. Diamondback Energy followed with total property acquisition costs of US\$36.8 billion, primarily due to its acquisition of Endeavor Energy Resources L.P. ConocoPhillips rounded out the top purchasers in 2024 with total property acquisition costs of US\$23.4 billion, primarily due to its acquisition of Marathon Oil Corporation.

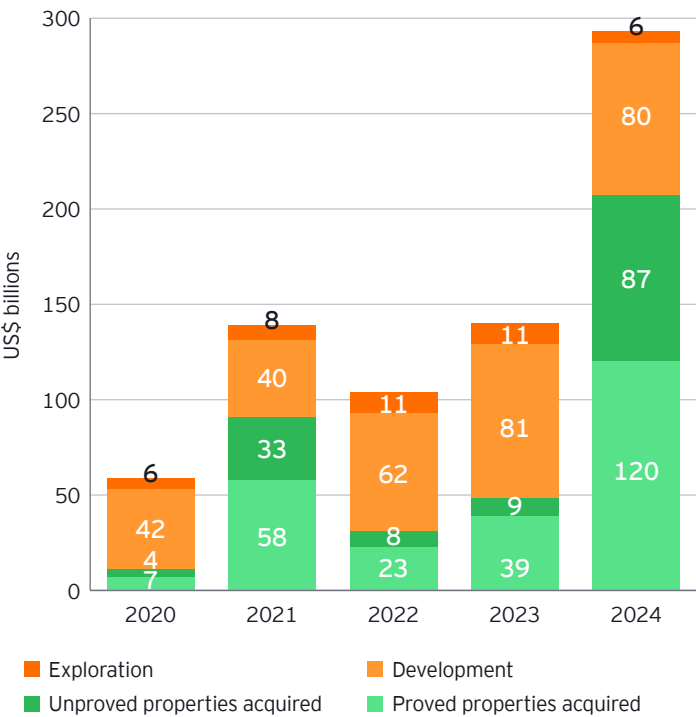
Exploration and development spending decreased 49% and 2%, respectively. Exploration spending was US\$5.7 billion in 2024 compared to US\$11.1 billion in 2023, while development spending decreased marginally from US\$81.3 billion in 2023 to US\$79.8 billion in 2024. With this decline, exploration spend in 2024 trailed COVID levels of US\$6.2 billion in 2020. The decline is indicative of the study companies looking to deploy "sustenance" capital expenditures into developmental pursuits, while adopting a cautious approach to undertaking frontier exploration activities in light of softer commodity prices.

Devon Energy Corporation led in exploration spend and incurred US\$0.69 billion. Bp p.l.c. and ConocoPhillips followed with an exploration spend of US\$0.66 billion and US\$0.65 billion respectively. The three companies represented 35% of the 2024 total exploration spend in our study. ExxonMobil and Chevron Corporation led the way with development spending in 2024 of US\$10.9 billion and US\$9.3 billion, respectively. Following the two US-based integrals were large independents ConocoPhillips and EOG Resources, Inc., which spent US\$9.1 billion and US\$4.8 billion on development expenditures, respectively.

Total exploration and development costs by peer group



Costs incurred

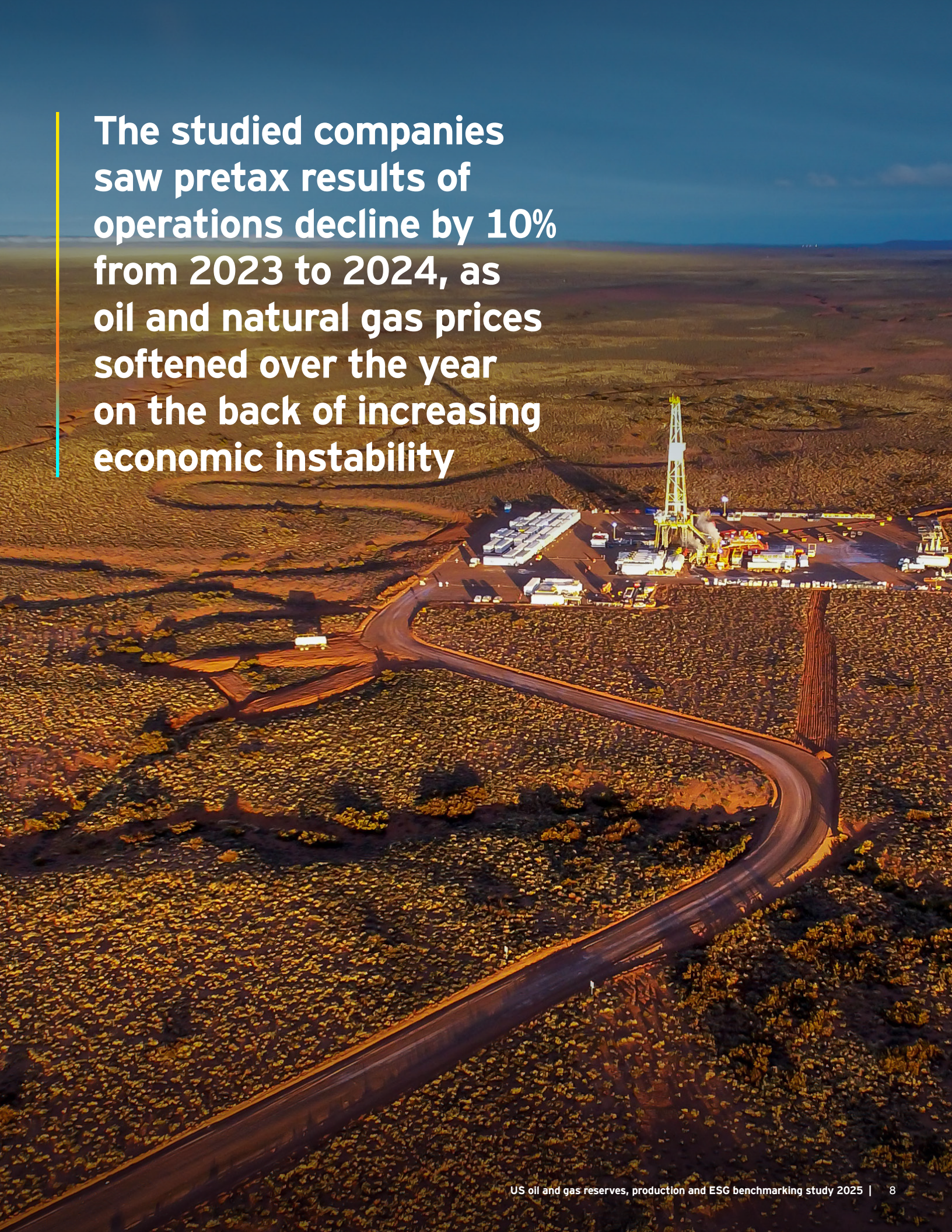


Highest capital expenditures for 2024 (US\$ millions)

Proved properties acquired	
ExxonMobil*	39,271
Diamondback Energy, Inc.	21,275
ConocoPhillips	12,415
Expand Energy Corporation*	10,010
Occidental Petroleum Corporation	8,963
Unproved properties acquired	
ExxonMobil*	45,196
Diamondback Energy, Inc.	15,568
ConocoPhillips	10,985
Expand Energy Corporation*	4,393
Occidental Petroleum Corporation	3,178
Exploration	
Devon Energy Corporation	690
BP p.l.c.	655
ConocoPhillips	646
Occidental Petroleum Corporation	544
Shell plc	499
Development	
ExxonMobil*	10,906
Chevron Corporation	9,334
ConocoPhillips	9,109
EOG Resources, Inc.	4,783
Occidental Petroleum Corporation	4,584

*See company endnotes on page 42.



An aerial photograph of an oil and gas field at sunset. A winding road leads from the bottom left towards a central industrial facility. The facility includes several large storage tanks, a tall drilling rig, and various smaller structures. The surrounding landscape is flat and covered in low-lying vegetation, with a few scattered trees. The sky is a deep blue with some light clouds, and the ground is illuminated with warm, golden light from the setting sun.

**The studied companies
saw pretax results of
operations decline by 10%
from 2023 to 2024, as
oil and natural gas prices
softened over the year
on the back of increasing
economic instability**

Revenues and results of operations

US – Revenues and results of operations (US\$ millions) (a)

	2020	2021	2022	2023	2024
Revenues	110,075	210,167	330,331	242,453	235,546
Production costs (b)	47,830	55,976	72,142	70,925	72,166
Exploration expense	8,264	2,193	2,487	3,038	2,738
DD&A (c)	86,791	59,653	59,373	71,245	77,746
Impairments	66,144	1,540	917	2,660	2,088
Other expenses (d)	7,620	4,085	8,631	11,720	6,009
Pretax results of operations	(106,574)	86,720	186,791	82,865	74,799
Income tax expense (benefit) (e)	(18,590)	14,161	38,608	15,991	14,643
Results of operations	(87,984)	72,559	148,183	66,874	60,156

US – Revenues and results of operations (US\$ per BOE) (a)

	2020	2021	2022	2023	2024
Revenues	21.46	39.41	56.46	39.55	38.67
Production costs (b)	9.32	10.50	12.33	11.57	11.85
Exploration expense	1.61	0.41	0.42	0.50	0.45
DD&A (c)	16.92	11.19	10.15	11.62	12.76
Impairments	12.89	0.29	0.16	0.43	0.34
Other expenses (d)	1.49	0.77	1.48	1.91	0.99
Pretax results of operations	(20.77)	16.25	31.92	13.52	12.28
Income tax expense (benefit) (e)	(3.62)	2.66	6.60	2.61	2.40
Results of operations	(17.15)	13.59	25.32	10.91	9.88

(a) Includes the 40 largest companies based on 2024 end-of-year oil and gas reserves; activity related to acquired companies has also been reflected as described in the Appendix.

(b) Includes production taxes and transportation costs for companies that separately disclose these expenses.

(c) DD&A = depreciation, depletion and amortization.

(d) Includes asset retirement obligation accretion and production-related general and administrative costs, among other items, for companies that separately disclose these expenses.

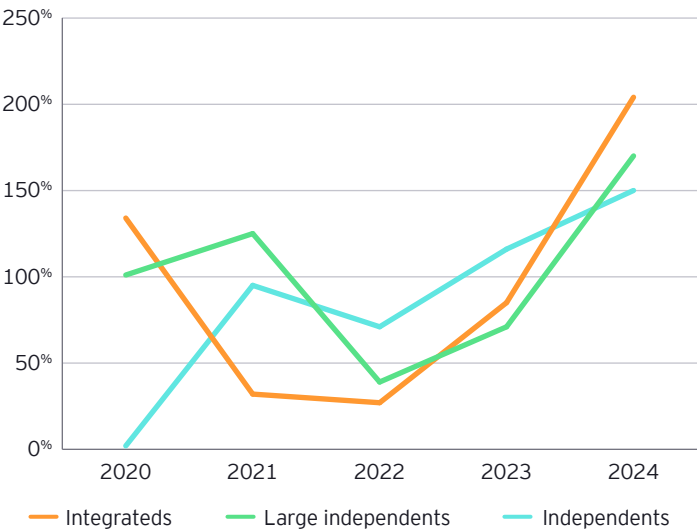
(e) Income taxes are presented for informational purposes only. The study is focused on pretax results of operations as a more meaningful comparative metric. Facts and circumstances underlying an individual company's tax results might not be representative of the study group as a whole and, as such, are not discussed in further details.

The study companies reported combined pretax results of operations of US\$74.8 billion in 2024, representing a decline of 10% year over year and less than half of the record pretax profits recorded in 2022. This is mainly due to the average Henry Hub natural gas price decreasing by 14% year over year, along with a corresponding 5% reduction in gas production. Furthermore, average West Texas Intermediate (WTI) crude oil spot prices remained similar to 2023, within the US\$70 to US\$80 per barrel range, and oil production also only slightly increased (3%) within the study companies, compared to 2023. Accordingly, revenues also saw a slight drop (3%) in 2024, coming in at US\$235.5 billion, compared to US\$242.5 billion in 2023.

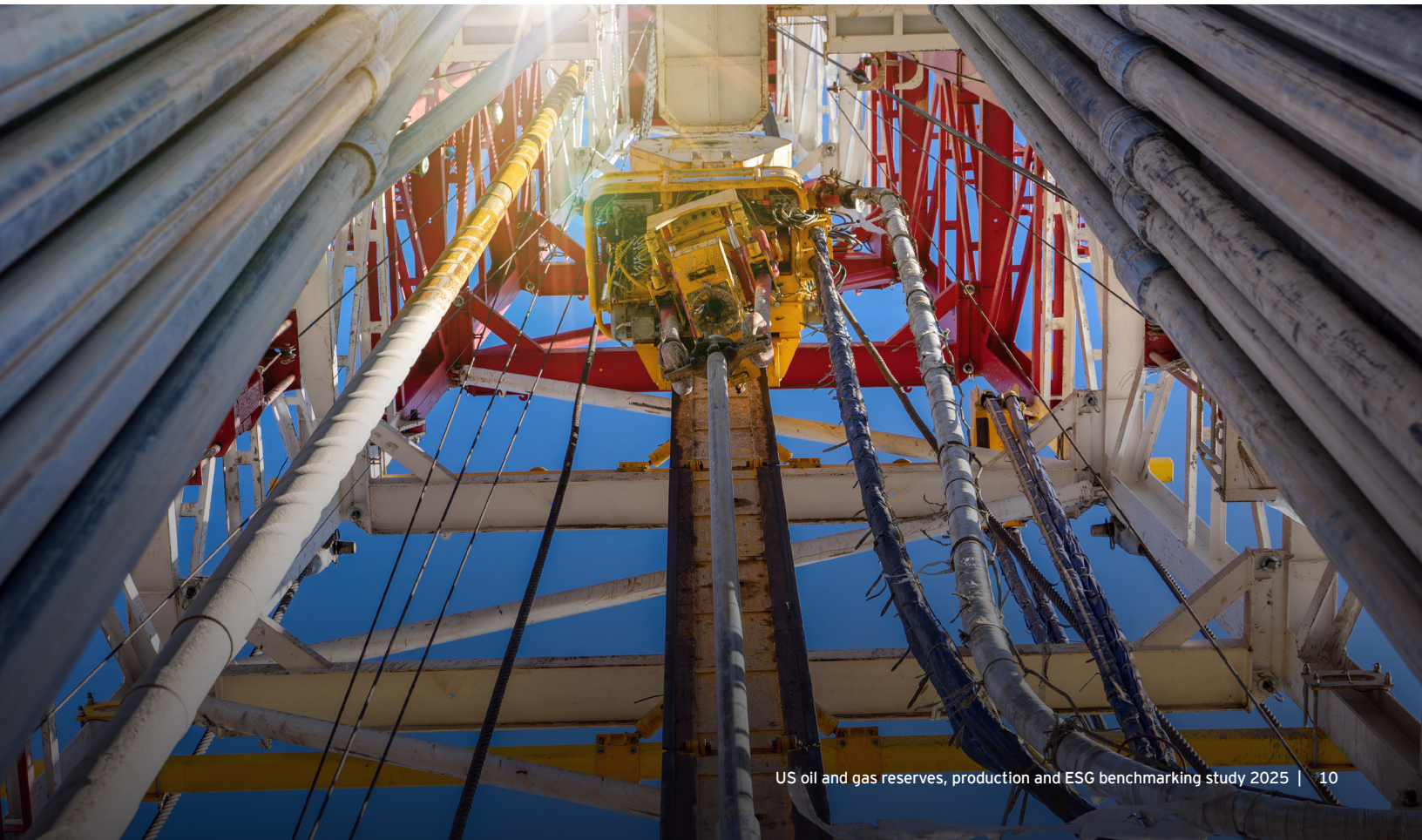
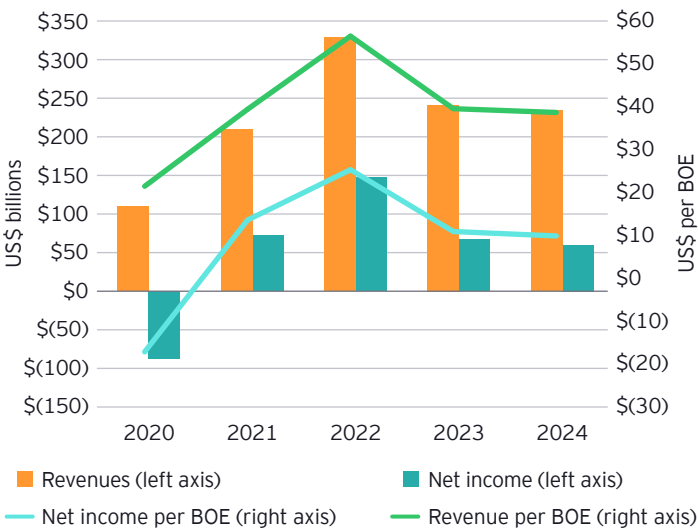
The study companies recognized an increase of US\$0.28 per BOE, or 2%, in production costs year over year. DD&A increased year over year by US\$1.14 per BOE, or 10%, reflecting the higher investments in property and equipment over the last several years, along with consistent rates of production. Exploration expenses and impairments incurred by the study companies were inconsequential to the composition of the results of operations.

The study companies posted a 179% plowback percentage in 2024 compared to 82% in 2023. The plowback percentage represents total capital expenditures as a percentage of the netback (revenues less production costs). Each peer group saw a substantial increase in their 2024 plowback percentage in response to record spending on mergers and acquisitions. It should be noted, however, that the spend on mergers and acquisitions included in the plowback percentage came in the form of equity, as opposed to cash for many of these transactions. Large independents posted the largest increase in plowback percentage, growing from 71% in 2023 to 170% in 2024. Integrations and independents also saw substantial increases in the plowback percentage, increasing from 85% to 204% and 116% to 150%, respectively.

Plowback percentage

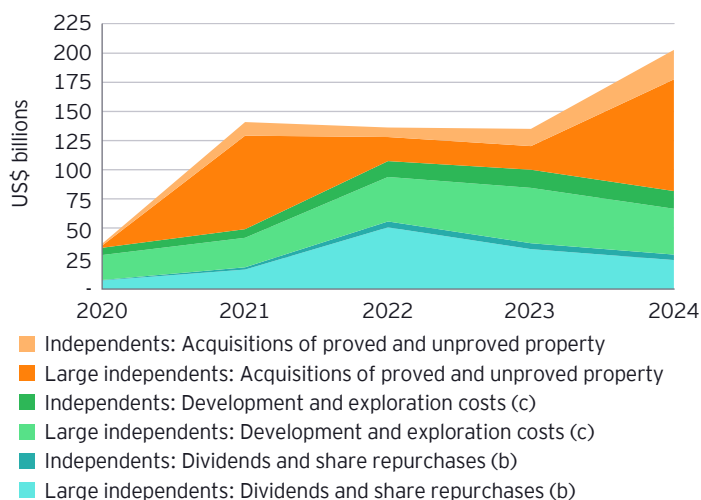


Revenues and results of operations



Capital allocation analysis

US – Dividends paid, shares repurchased, development and exploration costs, and acquisitions of proved and unproved property (a)

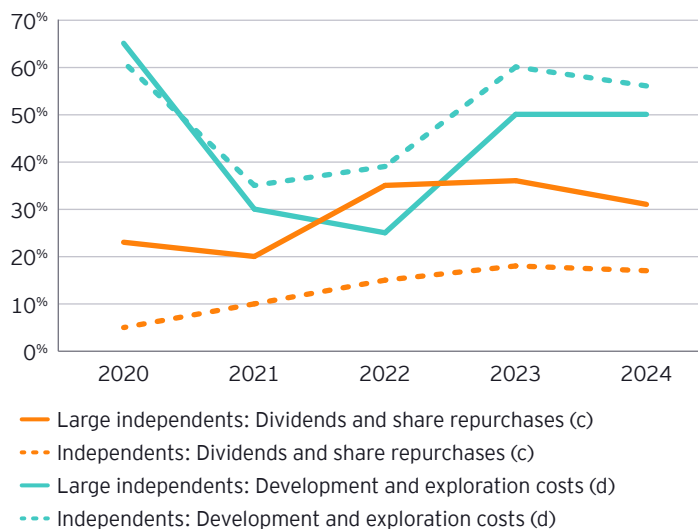


- (a) Integrated are excluded from this analysis as the reported dividends and share repurchases are for the consolidated company, whereas the development and exploration costs are for US exploration and production operations.
 (b) Dividends and share repurchases reflect the amounts recorded as financing activities within the statement of cash flows.
 (c) Includes capital expenditures noted as "other" (see Capital expenditures table on page 23).

Large independents and independents have steadily decreased dividend payments and share repurchases since 2022, as commodity prices have retreated from their 2022 high. Compared to 2023, large independents decreased payments of dividends and share repurchases by 28% (US\$9.5 billion), while for independents it fell slightly, decreasing by 3% (US\$131 million). Despite the decline, dividend payments and share repurchases remained higher in 2024 compared to 2020-2021, highlighting the continued pressure from shareholders to provide higher returns. Cumulatively, the payments of dividends and share repurchases by large independents and independents declined by 25% year over year to US\$29.2 billion. A similar trend was observed in exploration and development spend by large independents and independents, which also declined by a cumulative 13% year over year. Paired with the significant rise in capital expenditures on mergers and acquisition in 2024, these trends reflect a broader shift in the capital allocation strategy for oil and gas companies.

Large independents spent less on dividends and share repurchases as a percent of netback (revenues less production costs) in 2024 (31%) compared to 2023 (36%).

US – Dividends paid, shares repurchased, and development and exploration costs as a percentage of netback (%) (a), (b)



- (a) Integrated are excluded from this analysis as the reported dividends and share repurchases are for the consolidated company, whereas the development and exploration costs are for US exploration and production operations.
 (b) Netback is calculated as revenues less production costs.
 (c) Dividends and share repurchases reflect the amounts recorded as financing activities within the statement of cash flows.
 (d) Includes capital expenditures noted as "other" (see Capital expenditures table on page 23).

Further, independents also witnessed a slight decline in their proportion of spend on dividends and share repurchases with respect to netback in 2024 compared to the previous year, coming in at 17% for 2024 vis-à-vis 18% a year earlier. A similar trend was also seen in the percent of netback allocated to exploration and development costs, as large independents remained unchanged year over year at 50%, while for independents the percentage declined from 60% to 56%. This slowdown in returning capital to shareholders and exploration and development spend, when viewed in conjunction with the increase in mergers and acquisition spend, further substantiates the increased focus of the study companies on deploying capital for growth in their operations and realizing combined synergies. Notably, the study companies primarily funded these mergers and acquisitions using equity rather than cash, enabling them to maintain returning capital to shareholders, albeit at slightly lower rates compared to previous years. This shift comes on the back of a global reduction in the pace of energy transition coupled with the increased focus on meeting near-term energy demand through commercially viable short-cycle opportunities.

Oil reserves

US – Proved oil reserves (million barrels) (a), (b)

	2020	2021	2022	2023	2024
Beginning of year	31,554	25,684	31,129	33,406	33,107
Additions:					
Extensions and discoveries	2,255	4,449	3,634	3,514	3,687
Improved recovery	143	71	100	50	65
Revisions	(4,938)	1,872	833	(867)	474
Production	(2,802)	(2,939)	(3,148)	(3,360)	(3,471)
Purchases	814	3,351	1,386	2,205	5,247
Sales	(1,431)	(1,508)	(528)	(1,805)	(4,428)
Other	89	149	0	(36)	(17)
End-of-year	25,684	31,129	33,406	33,107	34,664

(a) Includes the 40 largest companies based on 2024 end-of-year oil and gas reserve estimates; activity related to acquired companies has also been reflected as described in the Appendix.

(b) Includes condensate and natural gas liquids (NGLs).

Oil reserves for the study companies increased 5% year over year in 2024. The increase is primarily attributed to additions through purchases compared to the prior year, coupled with positive technical revisions and an increase in extensions and discoveries. These changes were partially offset by a reduction in reserves due to sales and increased production.

2024 year-end extensions and discoveries came in at 3.7 billion barrels, up 5% year over year and the second highest for the study period. Extensions and discoveries continued to outpace production in 2024, in line with each year in the study period except for 2020. However, this organic growth was muted compared to increases in reserves due to mergers and acquisitions (purchases), which grew by 138% year over year to come in at 5.2 billion barrels for 2024. As described earlier, this showcases a calculated shift in the strategy of oil and gas companies to focus on growing their reserves through strategic acquisitions, instead of through extensions and discoveries.

Downward revisions for 2024 were 0.6 billion barrels, offset by upward revisions of 1.1 billion barrels, resulting in 0.5 billion barrels net of positive revisions. The largest positive revisions were reported by ConocoPhillips (317 million barrels), BP p.l.c. (144 million barrels), Ovintiv Inc. (132 million barrels), Occidental Petroleum Corporation (115 million barrels) and EOG Resources Inc. (102 million barrels) driven by revisions due to infill development drilling projects and improvements in reservoir performance forecasts. These companies accounted for 73% of the total upward revisions for the study group.

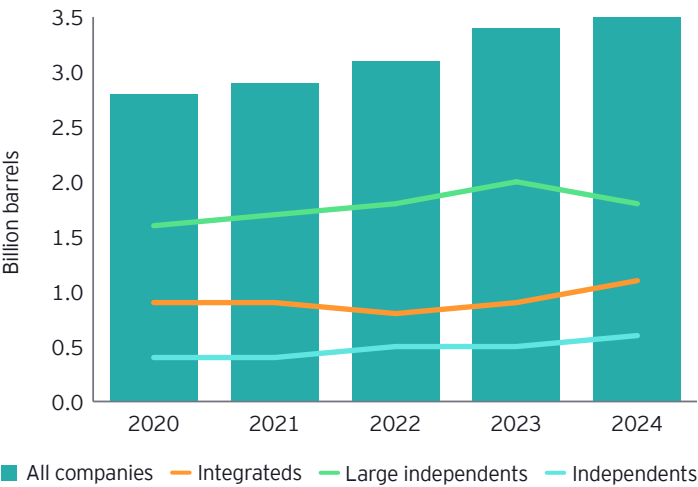
The largest negative revisions were reported by ExxonMobil (176 million barrels) and Diamondback Energy, Inc. (103 million barrels). Revisions by these two companies accounted for 44% of all downward revisions in 2024. All other contributions to the downward revisions were not significant. These downward revisions were primarily due to oil price declines. The SEC requires companies to use the arithmetic average of the first-day-of-the-month price (the SEC price) when determining their proved oil and gas reserves. The SEC price in 2024 for oil (WTI) declined 2% compared to 2023, dropping from US\$78.21 per barrel to US\$76.32 per barrel. This resulted in downward revisions of proved oil reserves that were no longer economic in 2024 using the 2024 SEC price for oil.

Oil production increased marginally compared to 2023, rising by 3% year over year. The largest increases were posted by ExxonMobil (110 million barrels), Chevron Corporation (58 million barrels) and Diamondback Energy, Inc. (43 million barrels) and are likely due to their respective acquisitions of Pioneer Natural Resources Company, PDC Energy, Inc. and Endeavor Energy Resources, L.P.

Overall, oil production increased by 24% from 2020 to 2024, with the independents' production growing 57%, compared to 24% production growth for the integrated and 16% growth for large independents.

Purchases of oil reserves for 2024 were 5.2 billion barrels, while sales were 4.4 billion barrels, a 138% and 145% increase from 2023, respectively. Diamondback Energy Inc. recorded 1,171 million barrels in purchases (22% of total purchases), largely due to its acquisition of Endeavor Energy Resources L.P. ExxonMobil recorded 877 million barrels in purchases (17% of total purchases), largely due to its acquisition of Pioneer Natural Resources Company. A majority of sales (4.1 billion barrels, or 92%) are represented by the following companies that were in last year's study and acquired by companies in this year's study: Pioneer Natural Resources Company (acquired by ExxonMobil), Southwestern Energy Company (acquired by Chesapeake Energy Corporation), Marathon Oil Corporation (acquired by ConocoPhillips), Callon Petroleum Company (acquired by APA Corporation), SilverBow Resources (acquired by Crescent Energy Company) and Enerplus Corporation (acquired by Chord Energy Corporation). All other contributions to sales were not significant.

Oil production

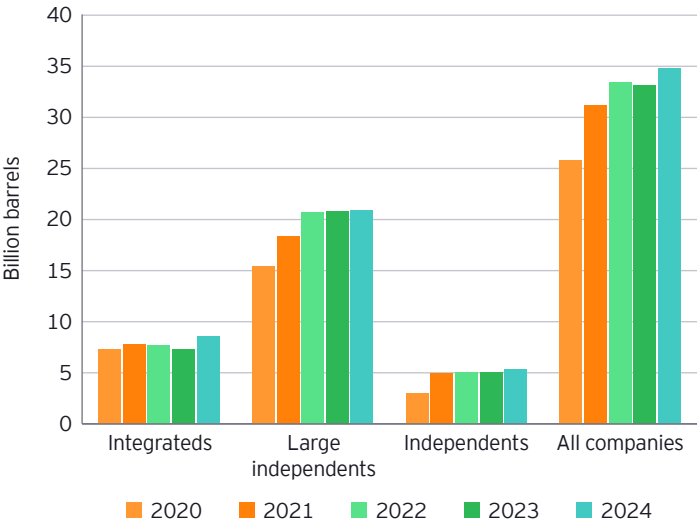


Oil reserves, 2024 – top-ranked companies (million barrels)

Ending reserves	
ConocoPhillips	3,986
ExxonMobil*	3,279
EOG Resources, Inc.	3,226
Occidental Petroleum Corporation	2,892
Chevron Corporation	2,834
Production	
Chevron Corporation	422
ConocoPhillips	381
ExxonMobil*	317
Occidental Petroleum Corporation	311
EOG Resources, Inc.	270

*See company endnotes on page 42.

End-of-year oil reserves



Oil reserves, 2023 – top-ranked companies (million barrels)

Ending reserves	
ConocoPhillips	3,399
EOG Resources, Inc.	3,008
Chevron Corporation	2,966
Occidental Petroleum Corporation	2,402
ExxonMobil*	2,109
Production	
Chevron Corporation	364
ConocoPhillips	361
Occidental Petroleum Corporation	285
EOG Resources, Inc.	256
ExxonMobil*	207

*See company endnotes on page 42.

In 2024, gas reserves and production declined as prices dropped over 10%, marking a divergence from oil reserves and production, which saw modest increases on the heels of more stable prices



Gas reserves

US – Proved gas reserves (billion cubic feet (bcf)) (a)

	2020	2021	2022	2023	2024
Beginning of year	168,051	150,272	192,651	201,464	190,405
Additions:					
Extensions and discoveries	15,696	23,523	21,505	17,639	16,276
Improved recovery	730	255	161	274	44
Revisions	(18,812)	12,264	(1,285)	(14,453)	(6,451)
Production	(13,401)	(14,157)	(16,216)	(16,624)	(15,737)
Purchases	6,745	21,707	7,894	8,284	24,719
Sales	(11,753)	(4,603)	(3,252)	(6,090)	(27,213)
Other	3,016	3,390	6	(89)	(41)
End-of-year	150,272	192,651	201,464	190,405	182,002

(a) Includes the 40 largest companies based on 2024 end-of-year oil and gas reserve estimates; activity related to acquired companies has also been reflected as described in the Appendix.

End-of-year gas reserves for the study companies decreased by 4% year over year in 2024 to 182 tcf, marking the second consecutive year of declines since reaching 201 tcf in 2022. The decline is primarily due to decreasing additions through extensions and discoveries compared to the prior year, coupled with reductions on account of sales of gas reserves. These changes were partially offset by an increase in purchases of gas reserves combined with reduced net negative revisions compared to 2023.

Extensions and discoveries of gas reserves have declined each year since 2021, in large part due to the continued depression of natural gas prices in the US. Despite the recent, challenging economics, gas reserve adds through extensions and discoveries have continued to outpace production for each year in the study period. In 2024, EQT Corporation (2.9 tcf), ExxonMobil (2.7 tcf) and EOG Resources, Inc. (1.1 tcf) posted the largest extensions and discoveries, accounting for 41% of the total extensions and discoveries for the study group.

Downward revisions for 2024 were 8.8 tcf and upward revisions were 2.4 tcf, resulting in 6.5 tcf net negative revisions. Similar to oil, net downward revisions were primarily driven by a decline in the SEC price for natural gas. The SEC price for natural gas (Henry Hub) declined 20% from US\$2.59 per mmbtu in 2023 to US\$2.07 per mmbtu in 2024, resulting in negative revisions to account for gas reserves that were no longer economic in 2024 using the 2024 SEC price for gas.

The largest upward revisions were reported by Ovintiv Inc. (0.6 tcf), ConocoPhillips (0.5 tcf) and Equinor ASA (0.3 tcf) primarily due to revisions in developmental plans and technical revisions. Revisions by these three companies accounted for 61% of all upward revisions in 2024. The largest downward revisions were reported by Expand Energy Corporation (1.7 tcf), Comstock Resources Inc. (1.2 tcf) and EQT Corporation (0.9 tcf). Revisions by these three companies accounted for 43% of all downward revisions in 2024 and were largely price related.

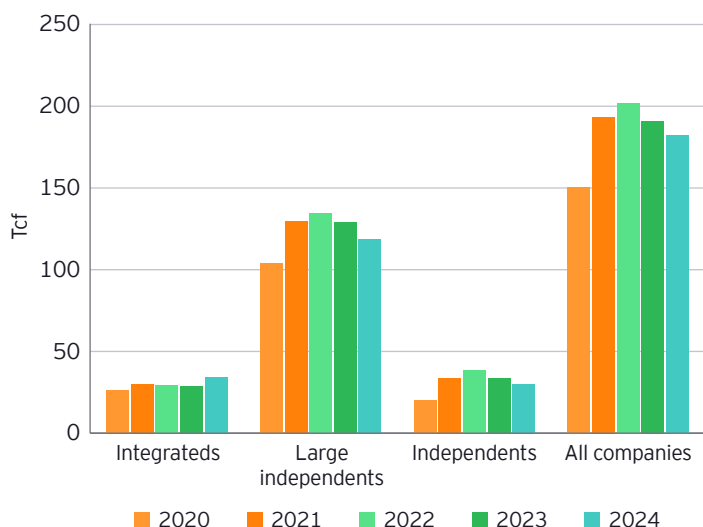
Gas production declined 5% in 2024 compared to the 2023 peak of 16.6 tcf for the study period. Driving the decline was depressed natural gas prices coupled with lower production from primarily the Haynesville region due the relatively higher cost of production in the region. The largest declines were posted by Equinor ASA (35 bcf), Coterra Energy Inc. (28 bcf) and Antero Resources Corporation (22 bcf).

While gas production from 2020 to 2024 has increased 17%, the level of change varied among the peer groups. The large independents increased their gas production from 2020 by 115%, while the increase was a moderate 10% for the integrateds. Independents' production decreased by 48% during the same period. The large independents accounted for 60% of the total gas production in 2024.

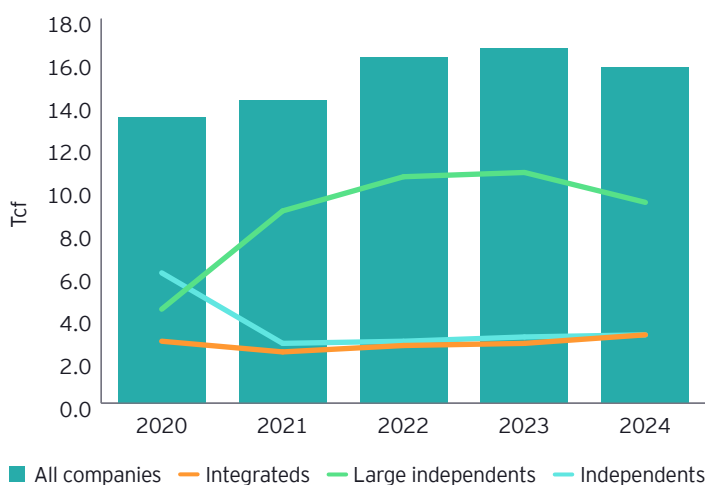
Purchases of gas reserves were 24.7 tcf in 2024. Expand Energy Corporation recorded 10 tcf in purchases primarily due to its acquisition of Southwestern Energy Company. ExxonMobil recorded 4 tcf in purchases primarily due to its acquisition of Pioneer Natural Resources Company. Collectively, these transactions represented 57% of the total purchases.

Sales of gas reserves were 27.2 tcf in 2024. The aforementioned transactions also accounted for the majority (72%) of total sales of gas reserves in 2024, as they involved companies that were in last year's study and acquired by companies in this year's study.

End-of-year gas reserves



Gas production



Gas reserves, 2024 – top-ranked companies (bcf)

Ending reserves	
EQT Corporation	24,545
Expand Energy Corporation*	16,924
ExxonMobil*	16,890
Range Resources Corporation	11,651
Antero Resources Corporation	10,603
Production	
EQT Corporation	2,086
Expand Energy Corporation*	1,321
ExxonMobil*	1,160
Coterra Energy Inc.*	1,025
Chevron Corporation	981

*See company endnotes on page 42.

Gas reserves, 2023 – top-ranked companies (bcf)

Ending reserves	
EQT Corporation	25,795
Southwestern Energy Company*	15,191
ExxonMobil*	12,320
Range Resources Corporation	11,611
Antero Resources Corporation	10,614
Production	
EQT Corporation	1,907
Southwestern Energy Company*	1,438
Chesapeake Energy Corporation*	1,266
Coterra Energy Inc.*	1,053
ExxonMobil*	965

*See company endnotes on page 42.

Performance measures

Proved reserve acquisition costs

US – Proved reserve acquisition costs (PRACs) (a)

US\$ per BOE

	2020	2021	2022	2023	2024	Three-year	Five-year
Integrations	5.12	4.61	4.10	12.61	20.89	17.88	15.40
Large independents	3.21	9.97	8.79	11.86	10.00	10.11	9.90
Independents	7.16	8.47	7.40	9.86	12.63	10.50	9.99
All companies	4.90	9.62	8.06	11.41	12.77	11.81	10.92

(a) Includes the 40 largest companies based on 2024 end-of-year oil and gas reserve estimates and their historical results of operations and production information; as a result, activity related to acquired companies has not been reflected as described in the Appendix.

PRACs were US\$12.77 per BOE in 2024, approximately 12% higher compared to 2023 and up 161% since 2020. ExxonMobil, Diamondback Energy, Inc. and ConocoPhillips accounted for 61% of proved property acquisition costs. The larger acquisitions relating to these companies were discussed earlier in the study. The 2024 PRAC results for ExxonMobil, Diamondback Energy, Inc. and ConocoPhillips were US\$25.32 per BOE, US\$13.56 per BOE and US\$15.50 per BOE, respectively. We note that this measure is a combination of oil and gas property acquisitions and the amount per BOE measure is impacted by the mix of commodities in the acquired reserves.

When calculated by peer group, the three-year average PRAC per BOE of the integrations is over 75% higher than the corresponding PRAC per BOE of the large independents and independents. This increase was realized through the recent megadeals entered into by the integrations in 2023 and 2024, and reflects the premiums paid by the integrations in these transactions.

Lowest three-year (2022-24) PRACs (a), (b)

BKV CORPORATION	1.82
Ring Energy, Inc.	3.72
BP p.l.c.	3.76
Expand Energy Corporation*	4.36
Mach Natural Resources LP	4.47

*See company endnotes on page 42

(a) Amounts presented represent a combination of oil and gas property and development costs. As such, a company with a large concentration of expenditures related to natural gas will likely have a lower US\$ per BOE in these measures.

(b) Based on companies with proved acquisition costs of at least US\$50 million for the three-year period.



Production replacement rates: oil

US – All sources and finding and development (F&D) oil production replacement rates (a)

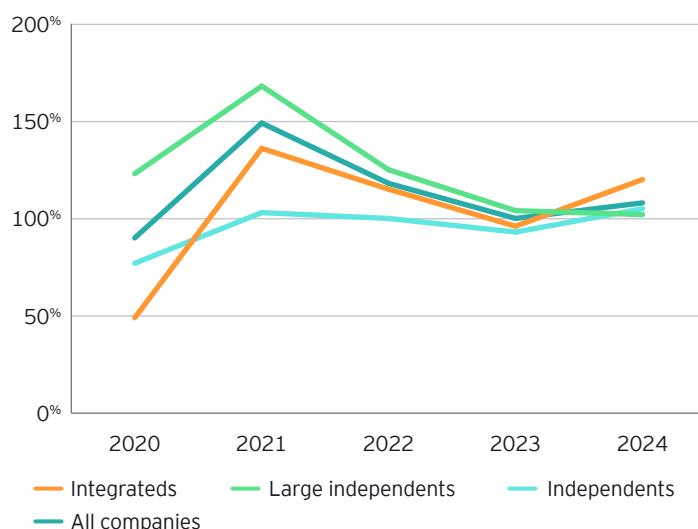
	2020	2021	2022	2023	2024	Three-year	Five-year
All sources	(90%)	288%	170%	122%	263%	190%	161%
F&D, including revisions	(86%)	215%	144%	77%	122%	114%	99%
F&D, excluding revisions	90%	149%	118%	100%	108%	109%	113%

(a) This includes the 40 largest companies based on 2024 end-of-year oil and gas reserve estimates and their historical results of operations and production information; as a result, activity related to acquired companies has not been reflected as described in the Appendix.

A year-over-year increase in oil reserves as a result of increased reserve purchases, positive technical revisions and an increase in additions through extensions and discoveries led to a rise in the 2024 oil production replacement rates. Oil production replacement rates from F&D, excluding revisions for the study companies grew by 8% year over year. This metric largely represents reserve replacement through organic growth, as it only accounts for changes in reserves due to extensions and discoveries and improved recovery. The moderate growth in production replacement from F&D, excluding revisions, is overshadowed by the more than doubling of production replacement rates from all sources, which includes purchases of reserves. As previously discussed, this highlights the recent path taken by the study companies to replenish their reserves through strategic mergers and acquisitions, as opposed to undertaking frontier exploration and the higher risks that accompany it.

Oil production replacement rates for independents from F&D, including revisions remained below 100% in 2024, as a result of lower oil prices and changes in drilling and development plans. Contrastingly, integrateds and large independents maintained oil production replacement rates greater than 100% from all sources; F&D, including revisions; and F&D, excluding revisions in 2024

Oil F&D, excluding revisions, production replacement rates



Oil production replacement by peer group, 2024

	All sources	F&D, including revisions	F&D, excluding revisions
Integrateds	207%	127%	120%
Large independents	296%	132%	102%
Independents	264%	81%	105%

Production replacement rates: gas

US – All sources and F&D gas production replacement rates (a)

	2020	2021	2022	2023	2024	Three-year	Five-year
All sources	(40%)	343%	146%	64%	201%	139%	145%
F&D, including revisions	(10%)	245%	119%	23%	63%	67%	86%
F&D, excluding revisions	130%	160%	131%	102%	104%	112%	124%

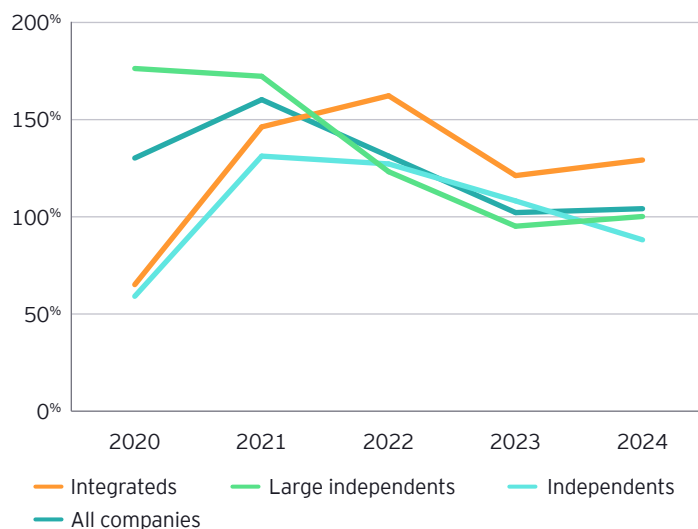
(a) This includes the 40 largest companies based on 2024 end-of-year oil and gas reserve estimates and their historical results of operations and production information; as a result, activity related to acquired companies has not been reflected as described in the Appendix.

Corresponding year-over-year decreases in gas production and reserve additions from extensions and discoveries resulted in minimal growth in gas production replacement rates from F&D, excluding revisions. In contrast, a decrease in net negative revisions combined with increased acquisitions of gas reserves contributed to higher gas production replacement rates from all other sources. Overall, the production replacement rates from all sources for gas saw a higher year-over-year percentage increase (217%) compared to oil (115%). This underscores the increased focus by the study companies and the broader US oil and gas sector to invest in gas resources considering the strong near and long-term demand for US LNG, as well as to cater to the projected rise in domestic gas demand from expanding data centers on the back of the artificial intelligence (AI) boom. The net negative technical revisions caused by sustained year-over-year gas price declines resulted in gas production replacement rates from F&D, including revisions, remaining below 100% for the study companies.

Gas production replacement by peer group, 2024

	All sources	F&D, including revisions	F&D, excluding revisions
Integrations	270%	88%	129%
Large independents	219%	75%	100%
Independents	78%	1%	88%

Gas F&D, excluding revisions, production replacement rates



Production costs

US – Production costs (US\$) (a)

	2020	2021	2022	2023	2024
Integrates	14,958	15,370	17,269	17,068	20,571
Large independents	21,629	26,974	35,297	35,089	38,437
Independents	5,375	6,624	9,935	10,848	13,159
All companies	41,962	48,968	62,501	63,005	72,167

(a) This includes the 40 largest companies based on 2024 end-of-year oil and gas reserve estimates and their historical results of operations and production information; as a result, activity related to acquired companies has not been reflected as described in the Appendix.

US – Production costs (US\$ per BOE) (a)

	2020	2021	2022	2023	2024	Three-year	Five-year
Integrates	11.07	12.25	13.61	12.66	12.79	12.99	12.48
Large independents	9.24	10.24	12.15	11.34	11.36	11.60	10.97
Independents	9.05	10.02	12.05	11.78	11.97	11.93	11.21
All companies	9.79	10.77	12.50	11.75	11.85	12.01	11.41

(a) This includes the 40 largest companies based on 2024 end-of-year oil and gas reserve estimates and their historical results of operations and production information; as a result, activity related to acquired companies has not been reflected as described in the Appendix.

Production costs per BOE remained flat from 2023 to 2024, rising by 1% with the increase in costs mostly offset by relative growth in production. This held true for each of the peer groups as well, with integrates, large independents, and independents witnessing escalations in production costs per BOE of 1%, 0% and 2%, respectively. This marks the first instance in the five-year study period where production cost trends diverged from those of commodity spot prices, indicating efforts to achieve cost efficiencies from recent mergers and acquisitions within the study group are ongoing. Over the last two years, the large independents have emerged as a leader in cost efficiency, showcasing the lowest cost per BOE. These companies have identified core areas to focus on, have seen the benefits of consolidation around those cores, and are leveraging their ability to allocate capital spending over a greater scale of operations.

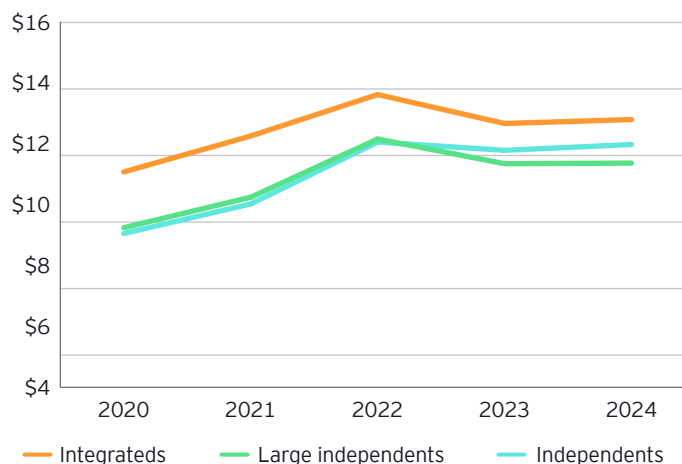
Lowest three-year (2022-24) production costs (US\$ per BOE) (a)

Comstock Resources, Inc.	4.39
Equinor ASA	4.47
National Fuel Gas Company	4.64
CNX Resources Corporation	5.09
Expand Energy Corporation*	6.62

(a) Amounts presented represent a combination of oil and gas production costs. As such, a company with a large concentration of expenditures related to natural gas will likely have a lower amount per BOE in this measure.

*See company endnotes on page 42.

Production costs per BOE



ESG

US – ESG reporting (a)

		Are Scope 1 and Scope 2 greenhouse gas (GHG) emissions reported?	Does reporting include external assurance obtained over Scope 1 and Scope 2 GHG emissions?	Are Scope 3 emissions reported?	Does reporting include any climate-related targets or goals?
2024	Integrations	100%	100%	100%	100%
	Large independents	100%	71%	64%	100%
	Independents	76%	24%	24%	57%
	All companies	88%	50%	48%	78%
2023	All companies	88%	50%	48%	73%
2022	All companies	83%	45%	38%	73%
2021	All companies	73%	35%	33%	65%

(a) Includes the 40 largest companies based on 2024 end-of-year oil and gas reserve estimates. The data presented here is based on a review of company sustainability and ESG reports, as well as a review of information included on company websites.

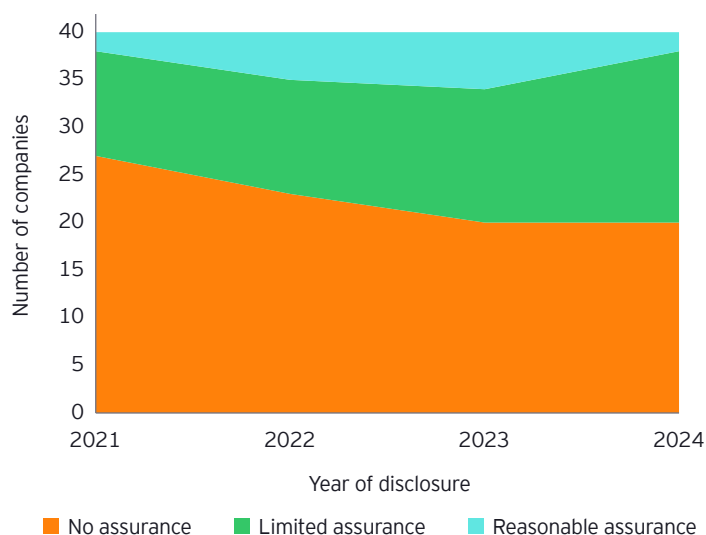
As stakeholder and regulatory demand for ESG information increases, oil and gas companies have responded by enhancing their voluntary ESG disclosures through sustainability reports and information on company websites. This year's report reveals the progression over the last four years, with an increasing number of companies voluntarily disclosing certain ESG information.

The integrations and large independents in the study group continue to provide more climate-related information in their sustainability reports compared to the independents. In 2024, 100% of the integrations reported on the four climate-related metrics shown in the table above. Furthermore, 100% of the large independents reported their Scope 1 and Scope 2 GHG emissions and a climate-related target or goal. In comparison, only 76% of independents disclosed Scope 1 and Scope 2 GHG emissions, and just 57% reported a climate-related target or goal.

Across all companies, there has been an increase in voluntary climate-related disclosures over the past four years. In 2024, 88% of the study companies reported their Scope 1 and Scope 2 GHG emissions, up from 73% in 2021. Additionally, the percentage of the companies studied that obtained external assurance over their Scope 1 and Scope 2 GHG emissions increased from 35% in 2021 to 50% in 2024. Disclosures

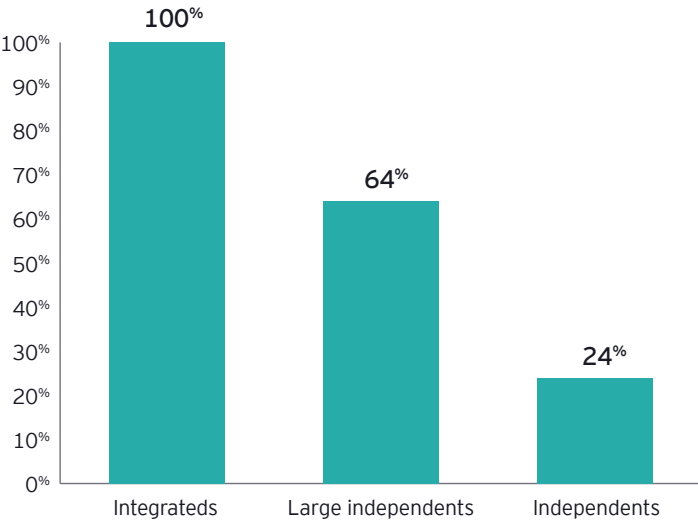
of climate-related targets and goals also saw a marginal increase in 2024, with 78% of companies disclosing compared to 73% in both 2022 and 2023. However, disclosures of climate-related targets and goals was the only metric that saw an increase year over year in the number of companies disclosing, as the percentage of the study companies disclosing the other metrics remained unchanged from 2023 to 2024.

Type of assurance over Scope 1 and Scope 2 GHG emissions



Up until 2024, the companies studied consistently increased the type of assurance obtained over their Scope 1 and Scope 2 emissions. Beginning in 2021, only 28% and 5% of the studied companies obtained limited and reasonable assurance, respectively, over their Scope 1 and Scope 2 GHG emissions. Those percentages grew to 35% and 15%, respectively, of the studied companies in 2023. In 2024, the number of companies that obtained assurance over their Scope 1 and Scope 2 emissions did not change; however, 10% of the companies who obtained assurance downgraded the level of assurance from reasonable to limited. This shift in the type of assurance obtained by the study companies is reflective of larger changes to proposed and forthcoming climate disclosure rules. For instance, included in the European Commission's Omnibus Simplification Package is a proposed change to the requirements of the Corporate Sustainability Reporting Directive (CSRD) that would eliminate the possible transition to reasonable assurance but maintain the requirement for limited assurance. Furthermore, the SEC's climate-related disclosure rules, which would have required large accelerated filers to obtain reasonable assurance over their Scope 1 and Scope 2 GHG emissions in 2033, remain voluntarily stayed and are no longer being defended by the Commission in litigation.

% of peer group reporting Scope 3 greenhouse gas (GHG) emissions



Less than half of the companies studied (48%) voluntarily reported at least one category of Scope 3 GHG emissions in 2024. Unsurprisingly, the larger companies in the study group were more likely to disclose at least one category of Scope 3 GHG emissions, with 100% and 64% of the integrateds and large independents reporting, respectively. The first set of European Sustainability Reporting Standards (ESRS) issued by the European Commission and the climate-related disclosure requirements in the standards issued by the International Sustainability Standards Board (ISSB) both would require disclosure of Scope 3 GHG emissions eventually. We acknowledge many of the companies studied also have operations outside of the US and may be subject to additional rules or standards requiring climate-related disclosures.



Company statistics

US – capital expenditures for the latest fiscal year (a)

US\$ millions

	Proved properties	Unproved properties	Exploration	Development	Other	Total expenditures
Antero Resources Corporation	0	91	0	615	0	706
APA Corporation	3,606	955	150	2,067	0	6,778
BKV CORPORATION	1	0	0	95	0	96
BP p.l.c.	52	21	655	3,829	0	4,557
California Resources Corporation	2,975	0	2	207	0	3,184
Chevron Corporation	11	69	428	9,334	0	9,842
Chord Energy Corporation*	4,347	929	8	1,237	0	6,521
Civitas Resources, Inc.*	1,898	257	14	2,065	0	4,234
CNX Resources Corporation	10	15	4	500	0	529
Comstock Resources, Inc.	0	106	355	548	0	1,009
ConocoPhillips	12,415	10,985	646	9,109	0	33,155
Coterra Energy Inc.*	0	19	25	1,645	0	1,689
Crescent Energy Company*	2,163	219	17	745	26	3,170
Devon Energy Corporation	3,058	1,949	690	2,856	0	8,553
Diamondback Energy, Inc.	21,275	15,568	194	2,992	0	40,029
Diversified Energy Company PLC	469	0	0	5	0	474
EOG Resources, Inc.	33	229	286	4,783	0	5,331
EQT Corporation	411	98	3	1,848	0	2,360
Equinor ASA	2,064	504	150	1,232	0	3,950
Expand Energy Corporation*	10,010	4,393	17	1,420	0	15,840

US – capital expenditures for the latest fiscal year (a)

US\$ millions

	Proved properties	Unproved properties	Exploration	Development	Other	Total expenditures
ExxonMobil*	39,271	45,196	55	10,906	0	95,428
Gulfport Energy Corporation*	90	0	0	373	0	463
Hess Corporation	0	88	203	1,628	0	1,919
HighPeak Energy, Inc.	0	14	162	442	0	618
Mach Natural Resources LP	123	0	0	229	0	352
Magnolia Oil & Gas Corporation*	69	102	0	491	0	662
Matador Resources Company	1,488	575	71	1,287	0	3,421
Murphy Oil Corporation	0	8	85	599	0	692
National Fuel Gas Company	17	20	54	429	0	520
Occidental Petroleum Corporation	8,963	3,178	544	4,584	0	17,269
Ovintiv Inc.*	200	0	6	1,925	0	2,131
Permian Resources Corporation*	895	264	20	1,904	0	3,083
Range Resources Corporation	0	58	39	581	0	678
Riley Exploration Permian, Inc.*	5	17	0	107	0	129
Ring Energy, Inc.	2	0	0	154	0	156
Shell plc	0	68	499	4,302	0	4,869
SM Energy Company	1,622	515	170	1,197	0	3,504
Talos Energy Inc	1,085	380	132	603	0	2,200
Vital Energy, Inc.*	878	83	27	847	0	1,835
W&T Offshore, Inc.	98	0	7	72	0	177
All companies	119,604	86,973	5,718	79,792	26	292,113
Integrates	41,398	45,858	1,787	29,603	0	118,646
Large independents	57,270	36,935	2,677	36,390	0	133,272
Independents	20,936	4,180	1,254	13,799	26	40,195

(a) Amounts are determined from the disclosure of costs incurred and may include amounts that were capitalized and amounts that were charged to expense.

* See company endnotes on page 42.

US – revenues and results of operations for the latest fiscal year (a)

US\$ millions

	Revenues	Production costs (b)	Exploration expense	DD&A	Impairments	Other income (expense) (c)	Income taxes	Results of operations
Antero Resources Corporation	4,115	(3,029)	(3)	(754)	(47)	0	34	316
APA Corporation	4,315	(1,442)	(134)	(1,314)	(315)	(42)	(235)	833
BKV CORPORATION	670	(394)	0	(218)	0	(19)	44	83
BP p.l.c.	14,894	(2,794)	(463)	(4,394)	0	(1,984)	(1,194)	4,065
California Resources Corporation	2,571	(1,190)	(2)	(354)	(13)	(208)	(213)	591
Chevron Corporation	24,700	(6,917)	(352)	(7,231)	(68)	42	(2,238)	7,936
Chord Energy Corporation*	3,836	(1,425)	(15)	(1,082)	0	0	(309)	1,005
Civitas Resources, Inc.*	5,213	(1,333)	(14)	(2,056)	(2)	(79)	(244)	1,485
CNX Resources Corporation	1,527	(480)	(8)	(486)	0	(57)	(10)	486
Comstock Resources, Inc.	1,255	(383)	0	(795)	0	1	149	227
ConocoPhillips	24,007	(7,803)	(159)	(7,597)	(74)	(198)	(1,868)	6,308
Coterra Energy Inc.*	5,482	(1,905)	(25)	(1,840)	0	3	(224)	1,491
Crescent Energy Company*	2,761	(1,168)	(17)	(949)	(162)	13	31	509
Devon Energy Corporation	11,176	(3,183)	(28)	(3,156)	0	(54)	(972)	3,783
Diamondback Energy, Inc.	10,049	(2,280)	0	(2,850)	0	80	(800)	4,199
Diversified Energy Company PLC	732	(358)	0	(284)	0	0	(23)	67
EOG Resources, Inc.	17,362	(4,463)	(155)	(3,765)	(354)	0	(1,887)	6,738
EQT Corporation	4,934	(2,293)	(3)	(2,017)	(97)	726	(316)	934
Equinor ASA	3,957	(495)	(219)	(1,607)	0	(649)	(206)	781
Expand Energy Corporation*	2,969	(1,448)	(10)	(1,673)	0	(18)	42	(138)

US – revenues and results of operations for the latest fiscal year (a)

US\$ millions

	Revenues	Production costs (b)	Exploration expense	DD&A	Impairments	Other income (expense) (c)	Income taxes	Results of operations
ExxonMobil*	26,850	(9,096)	(43)	(11,353)	0	0	(1,502)	4,856
Gulfport Energy Corporation*	929	(451)	0	(324)	(373)	0	56	(163)
Hess Corporation	3,814	(1,177)	(219)	(1,115)	(127)	(1,662)	0	(486)
HighPeak Energy, Inc.	1,069	(192)	(1)	(501)	0	(1)	(79)	295
Mach Natural Resources LP	937	(332)	0	(262)	0	0	0	343
Magnolia Oil & Gas Corporation*	1,316	(293)	(1)	(414)	0	(7)	(96)	505
Matador Resources Company	3,157	(648)	0	(974)	0	(6)	(292)	1,237
Murphy Oil Corporation	2,508	(919)	(90)	(715)	(63)	(34)	(125)	562
National Fuel Gas Company	741	(284)	0	(271)	0	(6)	77	257
Occidental Petroleum Corporation	17,974	(6,206)	(119)	(6,049)	(334)	(1,088)	(885)	3,293
Ovintiv Inc.*	5,612	(1,628)	0	(1,971)	0	(9)	(436)	1,568
Permian Resources Corporation*	5,078	(1,247)	(31)	(1,777)	(10)	(18)	(300)	1,695
Range Resources Corporation	2,646	(1,295)	(27)	(358)	(8)	(37)	16	937
Riley Exploration Permian, Inc.*	410	(101)	(3)	(74)	(41)	0	(43)	148
Ring Energy, Inc.	366	(103)	0	(99)	0	(3)	(37)	124
Shell plc	8,442	(1,269)	(533)	(4,371)	0	(541)	(345)	1,383
SM Energy Company	2,740	(637)	(64)	(809)	0	0	(196)	1,034
Talos Energy Inc	1,978	(567)	0	(1,024)	0	(118)	(5)	264
Vital Energy, Inc.*	1,935	(629)	0	(720)	0	(4)	(22)	560
W&T Offshore, Inc.	519	(309)	0	(143)	0	(32)	10	45
All companies	235,546	(72,166)	(2,738)	(77,746)	(2,088)	(6,009)	(14,643)	60,156

Integrates	78,843	(20,571)	(1,610)	(28,956)	(68)	(3,132)	(5,485)	19,021
Large independents	116,745	(38,437)	(787)	(35,408)	(1,051)	(2,332)	(7,606)	31,124
Independents	39,958	(13,158)	(341)	(13,382)	(969)	(545)	(1,552)	10,011

(a) Amounts are determined from the results of the operations table if it is provided; otherwise, amounts are determined from the income statement. Revenues determined from the income statement include oil and gas sales and realized derivatives gains or losses.

(b) This includes production taxes and transportation costs for companies that separately disclose these expenses.

(c) This includes asset retirement obligations accretion and production-related general and administrative expenses, among other items, for those companies that separately disclose these expenses.

*See company endnotes on page 42.

US – oil reserves for the latest fiscal year (a)

Million barrels

	Beginning	Extensions and discoveries	Improved recovery	Revisions	Production	Purchases	Sales	Other	Ending
Antero Resources Corporation	1,251	22	0	29	(77)	0	(9)	0	1,216
APA Corporation	382	164	0	(30)	(74)	176	(118)	0	500
BKV CORPORATION	185	10	2	(38)	(10)	0	0	0	149
BP p.l.c.	1,462	146	2	144	(177)	1	(5)	0	1,573
California Resources Corporation	291	0	1	(17)	(33)	235	0	0	477
Chevron Corporation	2,966	309	9	(39)	(422)	41	(30)	0	2,834
Chord Energy Corporation*	507	53	0	(39)	(65)	216	(1)	0	671
Civitas Resources, Inc.*	478	76	0	(10)	(90)	120	(16)	(17)	541
CNX Resources Corporation	136	31	0	(6)	(9)	0	(1)	0	151
Comstock Resources, Inc.	1	0	0	0	0	0	0	0	1
ConocoPhillips	3,399	58	0	317	(381)	597	(4)	0	3,986
Coterra Energy Inc.*	567	103	0	39	(77)	0	0	0	632
Crescent Energy Company*	352	27	0	(29)	(43)	140	(4)	0	443
Devon Energy Corporation	1,286	233	0	11	(197)	193	0	0	1,526
Diamondback Energy, Inc.	1,678	227	0	(103)	(173)	1,171	(81)	0	2,719
Diversified Energy Company PLC	108	0	0	18	(8)	4	0	0	122
EOG Resources, Inc.	3,008	392	0	102	(270)	5	(11)	0	3,226
EQT Corporation	300	34	0	(27)	(24)	3	0	0	286
Equinor ASA	341	7	0	47	(49)	0	(1)	0	345
Expand Energy Corporation*	0	0	0	0	(9)	655	0	0	646
ExxonMobil*	2,109	804	0	(176)	(317)	877	(18)	0	3,279
Gulfport Energy Corporation*	81	25	0	1	(5)	0	0	0	102
Hess Corporation	731	119	0	(36)	(70)	0	0	0	744

US – oil reserves for the latest fiscal year (a)

Million barrels

	Beginning	Extensions and discoveries	Improved recovery	Revisions	Production	Purchases	Sales	Other	Ending
HighPeak Energy, Inc.	140	40	0	6	(16)	0	0	0	170
Mach Natural Resources LP	161	0	0	3	(15)	9	0	0	158
Magnolia Oil & Gas Corporation*	120	29	0	6	(23)	4	0	0	136
Matador Resources Company	272	64	0	(11)	(37)	73	0	0	361
Murphy Oil Corporation	262	13	11	7	(34)	0	0	0	259
National Fuel Gas Company	0	0	0	0	0	0	0	0	0
Occidental Petroleum Corporation	2,402	232	40	115	(311)	454	(40)	0	2,892
Ovintiv Inc.*	897	176	0	132	(93)	3	(1)	0	1,114
Permian Resources Corporation*	631	162	0	(40)	(89)	57	(3)	0	718
Range Resources Corporation	1,084	28	0	10	(42)	0	0	0	1,080
Riley Exploration Permian, Inc.*	87	13	0	1	(7)	3	0	0	97
Ring Energy, Inc.	105	14	0	(3)	(6)	0	(1)	0	109
Shell plc	439	14	0	92	(108)	0	0	0	437
SM Energy Company	350	8	0	18	(40)	85	(1)	0	420
Talos Energy Inc	123	6	0	0	(27)	56	0	0	158
Vital Energy, Inc.*	281	48	0	(27)	(36)	56	0	0	322
W&T Offshore, Inc.	51	0	0	7	(7)	13	0	0	64
Pioneer Natural Resources Company	1,738	0	0	0	0	0	(1,738)	0	0
Southwestern Energy Company	745	0	0	0	0	0	(745)	0	0
Marathon Oil Corporation	923	0	0	0	0	0	(923)	0	0
Callon Petroleum Company	340	0	0	0	0	0	(340)	0	0
SilverBow Resources	166	0	0	0	0	0	(166)	0	0
Enerplus Corporation	171	0	0	0	0	0	(171)	0	0
All companies	33,107	3,687	65	474	(3,471)	5,247	(4,428)	(17)	34,664
Integrations	7,317	1,280	11	68	(1,073)	919	(54)	0	8,468
Large independents	20,776	1,817	40	543	(1,822)	3,138	(3,556)	0	20,936
Independents	5,014	590	14	(137)	(576)	1,190	(818)	(17)	5,260

(a) See Appendix for activity related to acquired companies.

*See company endnotes on page 42.

US – gas reserves for the latest fiscal year (a)

Bcf

	Beginning	Extensions and discoveries	Improved recovery	Revisions	Production	Purchases	Sales	Other	Ending
Antero Resources Corporation	10,614	651	0	265	(793)	0	(134)	0	10,603
APA Corporation	1,103	354	0	(224)	(177)	280	(162)	0	1,174
BKV CORPORATION	2,982	79	38	(485)	(229)	0	(150)	0	2,235
BP p.l.c.	5,901	32	1	(241)	(639)	34	(76)	0	5,012
California Resources Corporation	518	0	0	(72)	(42)	5	0	0	409
Chevron Corporation	7,682	912	2	(572)	(981)	177	(70)	0	7,150
Chord Energy Corporation*	778	62	0	(38)	(122)	596	(1)	0	1,275
Civitas Resources, Inc.*	1,320	155	0	11	(219)	354	(42)	(41)	1,538
CNX Resources Corporation	7,923	1,093	0	(871)	(497)	0	(18)	0	7,630
Comstock Resources, Inc.	4,940	531	0	(1,180)	(528)	0	(2)	0	3,761
ConocoPhillips	6,896	87	0	458	(677)	1,224	(6)	0	7,982
Coterra Energy Inc.*	10,525	516	0	(181)	(1,025)	0	(1)	0	9,834
Crescent Energy Company*	1,176	71	0	(210)	(183)	747	(5)	0	1,596
Devon Energy Corporation	3,182	646	0	58	(438)	328	0	0	3,776
Diamondback Energy, Inc.	2,997	310	0	(158)	(276)	2,391	(240)	0	5,024
Diversified Energy Company PLC	3,200	1	0	(212)	(244)	151	0	0	2,896
EOG Resources, Inc.	8,630	1,098	0	(202)	(644)	10	(14)	0	8,878
EQT Corporation	25,795	2,922	0	(918)	(2,086)	395	(1,563)	0	24,545
Equinor ASA	2,267	460	0	337	(322)	2,119	(281)	0	4,580
Expand Energy Corporation*	9,688	124	0	(1,654)	(1,321)	10,087	0	0	16,924
ExxonMobil*	12,320	2,683	0	(914)	(1,160)	4,044	(83)	0	16,890
Gulfport Energy Corporation*	3,726	398	0	(413)	(354)	0	0	0	3,357
Hess Corporation	992	159	0	59	(104)	0	0	0	1,106

US – gas reserves for the latest fiscal year (a)

Bcf

	Beginning	Extensions and discoveries	Improved recovery	Revisions	Production	Purchases	Sales	Other	Ending
HighPeak Energy, Inc.	87	28	0	75	(13)	0	0	0	177
Mach Natural Resources LP	1,106	0	0	40	(101)	27	0	0	1,072
Magnolia Oil & Gas Corporation*	301	70	0	11	(59)	14	0	0	337
Matador Resources Company	1,127	215	0	33	(156)	279	0	0	1,498
Murphy Oil Corporation	293	17	1	8	(30)	0	0	0	289
National Fuel Gas Company	4,535	602	0	7	(392)	0	0	0	4,752
Occidental Petroleum Corporation	4,235	532	2	215	(548)	1,016	(58)	0	5,394
Ovintiv Inc.*	2,259	346	0	639	(197)	6	(2)	0	3,051
Permian Resources Corporation*	1,766	331	0	(106)	(221)	91	(4)	0	1,857
Range Resources Corporation	11,611	579	0	17	(545)	0	(11)	0	11,651
Riley Exploration Permian, Inc.*	124	17	0	22	(7)	7	0	0	163
Ring Energy, Inc.	146	11	0	(1)	(6)	0	0	0	150
Shell plc	485	46	0	77	(110)	0	0	0	498
SM Energy Company	1,532	19	0	31	(137)	107	(3)	0	1,549
Talos Energy Inc	180	10	0	(30)	(41)	100	0	0	219
Vital Energy, Inc.*	742	109	0	(55)	(79)	78	0	0	795
W&T Offshore, Inc.	434	0	0	(77)	(34)	52	0	0	375
Pioneer Natural Resources Company	4,398	0	0	0	0	0	(4,398)	0	0
Southwestern Energy Company	15,191	0	0	0	0	0	(15,191)	0	0
Marathon Oil Corporation	1,794	0	0	0	0	0	(1,794)	0	0
Callon Petroleum Company	561	0	0	0	0	0	(561)	0	0
SilverBow Resources	1,678	0	0	0	0	0	(1,678)	0	0
Enerplus Corporation	665	0	0	0	0	0	(665)	0	0
All companies	190,405	16,276	44	(6,451)	(15,737)	24,719	(27,213)	(41)	182,002
Integrations	28,655	4,133	3	(1,313)	(3,212)	6,374	(510)	0	34,130
Large independents	128,496	9,394	2	(2,379)	(9,372)	15,548	(23,434)	0	118,255
Independents	33,254	2,749	39	(2,759)	(3,153)	2,797	(3,269)	(41)	29,617

(a) See the Appendix for activity related to acquired companies.

*See company endnotes on page 42.

US – performance measures (three-year averages)

Costs in US\$ per BOE; production replacement rates in %s

	PRAC	Production replacement rates						Production costs
		Oil			Gas			
		All Sources	F&D including revisions	F&D excluding revisions	All Sources	F&D including revisions	F&D excluding revisions	
Antero Resources Corporation	0.00	81%	86%	33%	117%	122%	58%	14.63
APA Corporation	16.09	169%	129%	142%	52%	30%	107%	13.76
BKV CORPORATION	1.82	46%	(31%)	179%	(74%)	(242%)	107%	8.99
BP p.l.c.	3.76	87%	84%	50%	53%	45%	21%	10.19
California Resources Corporation	12.61	216%	(53%)	30%	(14%)	(16%)	22%	28.91
Chevron Corporation	10.69	96%	54%	92%	153%	65%	132%	13.01
Chord Energy Corporation*	11.24	438%	96%	114%	399%	12%	59%	17.37
Civitas Resources, Inc.*	11.95	266%	58%	59%	250%	41%	51%	11.16
CNX Resources Corporation	0.00	295%	313%	256%	12%	23%	169%	5.09
Comstock Resources, Inc.	10.14	(318%)	(224%)	125%	(52%)	(51%)	141%	4.39
ConocoPhillips	15.62	180%	129%	64%	136%	90%	36%	16.09
Coterra Energy Inc.*	0.00	208%	209%	162%	(63%)	(63%)	95%	7.62
Crescent Energy Company*	8.16	249%	6%	73%	124%	(124%)	33%	17.95
Devon Energy Corporation	12.03	171%	111%	125%	176%	137%	137%	12.16
Diamondback Energy, Inc.	13.68	428%	151%	189%	475%	141%	173%	10.48
Diversified Energy Company PLC	7.69	187%	138%	1%	(47%)	(73%)	2%	7.48
EOG Resources, Inc.	18.35	211%	216%	143%	157%	175%	222%	11.29
EQT Corporation	8.82	181%	7%	100%	118%	101%	149%	6.91
Equinor ASA	6.81	192%	249%	90%	329%	150%	133%	4.47
Expand Energy Corporation*	4.36	872%	68%	8%	334%	16%	15%	6.62

US – performance measures (three-year averages)

Costs in US\$ per BOE; production replacement rates in %s

	PRAC	Production replacement rates						Production costs
		Oil			Gas			
		All Sources	F&D including revisions	F&D excluding revisions	All Sources	F&D including revisions	F&D excluding revisions	
ExxonMobil*	24.41	212%	90%	222%	156%	94%	216%	17.64
Gulfport Energy Corporation*	0.00	327%	327%	353%	88%	88%	162%	7.44
Hess Corporation	0.00	107%	107%	136%	162%	162%	114%	13.80
HighPeak Energy, Inc.	18.69	376%	337%	387%	734%	673%	347%	11.49
Mach Natural Resources LP	4.47	400%	49%	0%	405%	54%	0%	11.00
Magnolia Oil & Gas Corporation*	16.89	168%	135%	118%	149%	138%	136%	9.38
Matador Resources Company	13.06	310%	132%	184%	271%	149%	160%	11.13
Murphy Oil Corporation	28.35	72%	71%	53%	68%	69%	49%	19.55
National Fuel Gas Company	9.34	(1,182%)	65%	18%	193%	194%	191%	4.64
Occidental Petroleum Corporation	14.39	200%	150%	67%	234%	168%	75%	16.05
Ovintiv Inc.*	14.68	147%	93%	152%	191%	167%	129%	13.87
Permian Resources Corporation*	11.75	408%	107%	180%	420%	66%	150%	10.26
Range Resources Corporation	0.00	122%	122%	102%	112%	113%	116%	9.93
Riley Exploration Permian, Inc.*	7.69	319%	181%	269%	611%	334%	322%	12.32
Ring Energy, Inc.	3.72	380%	83%	123%	563%	(84%)	91%	14.73
Shell plc	0.90	49%	81%	26%	67%	75%	28%	10.19
SM Energy Company	15.53	229%	148%	36%	177%	151%	32%	10.66
Talos Energy Inc	16.71	157%	0%	24%	82%	(48%)	54%	15.93
Vital Energy, Inc.*	9.44	222%	9%	117%	214%	40%	109%	11.94
W&T Offshore, Inc.	7.27	141%	44%	0%	(100%)	(156%)	0%	21.57
All companies	11.81	190%	114%	109%	139%	67%	112%	12.01
Integrates	17.88	123%	78%	111%	152%	82%	137%	12.99
Large independents	10.11	214%	143%	110%	150%	79%	106%	11.60
Independents	10.50	239%	82%	100%	92%	17%	107%	11.93

*See company endnotes on page 42.

US – rankings and accounting method

	Rankings for the latest fiscal year					
	All sources	Oil reserves		Gas reserves		
	Total capital expenditures	Beginning	Ending	Beginning	Ending	
Antero Resources Corporation	27	9	9	4	5	Successful Efforts
APA Corporation	8	18	18	28	28	Successful efforts
BKV CORPORATION	40	27	32	19	21	Successful efforts
BP p.l.c.	12	7	7	11	13	Successful efforts
California Resources Corporation	17	23	19	32	33	Successful efforts
Chevron Corporation	6	3	5	9	10	Successful efforts
Chord Energy Corporation*	9	15	14	30	27	Successful Efforts
Civitas Resources, Inc.*	13	16	17	24	25	Successful efforts
CNX Resources Corporation	32	30	31	8	9	Successful efforts
Comstock Resources, Inc.	26	38	39	12	17	Successful efforts
ConocoPhillips	3	1	1	10	8	Successful efforts
Coterra Energy Inc.*	25	14	16	5	6	Successful Efforts
Crescent Energy Company*	18	19	20	25	23	Successful efforts
Devon Energy Corporation	7	8	8	17	16	Successful efforts
Diamondback Energy, Inc.	2	6	6	18	12	Full Cost
Diversified Energy Company PLC	34	33	34	16	20	Successful efforts
EOG Resources, Inc.	10	2	3	7	7	Successful efforts
EQT Corporation	20	22	26	1	1	Successful efforts
Equinor ASA	14	21	24	20	15	Successful efforts
Expand Energy Corporation*	5	40	15	6	2	Successful efforts

US – rankings and accounting method

	Rankings for the latest fiscal year					
	All sources	Oil reserves		Gas reserves		
	Total capital expenditures	Beginning	Ending	Beginning	Ending	
ExxonMobil*	1	5	2	2	3	Successful efforts
Gulfport Energy Corporation*	35	36	36	15	18	Full Cost
Hess Corporation	23	12	12	29	29	Successful efforts
HighPeak Energy, Inc.	31	29	28	40	38	Successful efforts
Mach Natural Resources LP	36	28	29	27	30	Full Cost
Magnolia Oil & Gas Corporation*	30	32	33	35	35	Successful efforts
Matador Resources Company	16	25	23	26	26	Successful efforts
Murphy Oil Corporation	28	26	27	36	36	Successful Efforts
National Fuel Gas Company	33	39	40	13	14	Full Cost
Occidental Petroleum Corporation	4	4	4	14	11	Successful efforts
Ovintiv Inc.*	22	11	10	21	19	Full Cost
Permian Resources Corporation*	19	13	13	22	22	Successful efforts
Range Resources Corporation	29	10	11	3	4	Successful efforts
Riley Exploration Permian, Inc.*	39	35	37	39	39	Successful efforts
Ring Energy, Inc.	38	34	35	38	40	Full Cost
Shell plc	11	17	21	33	32	Successful efforts
SM Energy Company	15	20	22	23	24	Successful efforts
Talos Energy Inc	21	31	30	37	37	Full Cost
Vital Energy, Inc.*	24	24	25	31	31	Full Cost
W&T Offshore, Inc.	37	37	38	34	34	Full Cost

*See company endnotes on page 42.

US – ESG reporting (a)

	Are Scope 1 and Scope 2 greenhouse gas (GHG) emissions reported?	Does reporting include external assurance obtained over Scope 1 and Scope 2 GHG emissions?	If external assurance over Scope 1 and 2 GHG emissions is provided, what type of assurance?	Does reporting include any climate-related targets or goals?
Antero Resources Corporation	Yes	Yes	Limited	Yes
APA Corporation	Yes	No	-	Yes
BKV CORPORATION	Yes	No	-	Yes
BP p.l.c.	Yes	Yes	Limited	Yes
California Resources Corporation	Yes	No	-	Yes
Chevron Corporation	Yes	Yes	Reasonable	Yes
Chord Energy Corporation*	Yes	No	-	-
Civitas Resources, Inc.*	Yes	No	-	Yes
CNX Resources Corporation	Yes	Yes	Limited	Yes
Comstock Resources, Inc.	No	No	-	-
ConocoPhillips	Yes	Yes	Limited	Yes
Coterra Energy Inc.*	Yes	Yes	Limited	Yes
Crescent Energy Company*	Yes	No	-	Yes
Devon Energy Corporation	Yes	Yes	Limited	Yes
Diamondback Energy, Inc.	Yes	Yes	Limited	Yes
Diversified Energy Company PLC	Yes	Yes	Limited	Yes
EOG Resources, Inc.	Yes	Yes	Reasonable	Yes
EQT Corporation	Yes	No	-	Yes
Equinor ASA	Yes	Yes	Limited	Yes
Expand Energy Corporation*	Yes	Yes	Limited	Yes

US – ESG reporting (a)

	Are Scope 1 and Scope 2 greenhouse gas (GHG) emissions reported?	Does reporting include external assurance obtained over Scope 1 and Scope 2 GHG emissions?	If external assurance over Scope 1 and 2 GHG emissions is provided, what type of assurance?	Does reporting include any climate-related targets or goals?
ExxonMobil*	Yes	Yes	Limited	Yes
Gulfport Energy Corporation*	Yes	No	-	-
Hess Corporation	Yes	Yes	Limited	Yes
HighPeak Energy, Inc.	No	No	-	-
Mach Natural Resources LP	No	No	-	-
Magnolia Oil & Gas Corporation*	Yes	No	-	-
Matador Resources Company	No	No	-	-
Murphy Oil Corporation	Yes	Yes	Limited	Yes
National Fuel Gas Company	Yes	Yes	Limited	Yes
Occidental Petroleum Corporation	Yes	Yes	Limited	Yes
Ovintiv Inc.*	Yes	No	-	Yes
Permian Resources Corporation*	Yes	No	-	Yes
Range Resources Corporation	Yes	No	-	Yes
Riley Exploration Permian, Inc.*	No	No	-	-
Ring Energy, Inc.	Yes	No	-	-
Shell plc	Yes	Yes	Limited	Yes
SM Energy Company	Yes	Yes	Limited	Yes
Talos Energy Inc	Yes	No	-	Yes
Vital Energy, Inc.*	Yes	Yes	Limited	Yes
W&T Offshore, Inc.	Yes	No	-	Yes
All companies	88%	50%		78%
Integrations	100%	100%		100%
Large independents	100%	71%		100%
Independents	76%	24%		57%

(a) The 40 largest companies are based on 2024 end-of-year oil and gas reserve estimates. The data presented here is based on a review of company sustainability and ESG reports, as well as a review of information included on company websites.

*See company endnotes on page 42.



Peer groups

Integrateds

BP p.l.c.
Chevron Corporation
Equinor ASA
ExxonMobil
Shell plc

Large independents

Antero Resources Corporation
CNX Resources Corporation
ConocoPhillips
Coterra Energy Inc.
Devon Energy Corporation
Diamondback Energy, Inc.
EOG Resources, Inc.
EQT Corporation
Expand Energy Corporation
Hess Corporation
Occidental Petroleum Corporation
Ovintiv Inc.
Permian Resources Corporation
Range Resources Corporation

Independents

APA Corporation
BKV CORPORATION
California Resources Corporation
Chord Energy Corporation
Civitas Resources, Inc.
Comstock Resources, Inc.
Crescent Energy Company
Diversified Energy Company PLC
Gulfport Energy Corporation
HighPeak Energy, Inc.
Mach Natural Resources LP
Magnolia Oil & Gas Corporation
Matador Resources Company
Murphy Oil Corporation
National Fuel Gas Company
Riley Exploration Permian, Inc.
Ring Energy, Inc.
SM Energy Company
Talos Energy Inc
Vital Energy, Inc.
W&T Offshore, Inc.

Appendix

Acquired companies

Due to the significance of the operations of companies that were acquired during the study period, capital expenditures, revenues and results of operations, oil reserves and gas reserves schedules for the 2020 through 2024 period were updated to include activities prior to acquisition, as described below. This provides a more meaningful comparison throughout the study period.

In April 2024, Callon Petroleum Company was acquired by APA Corporation. Callon Petroleum Company's 2020 through 2023 results have been included in the abovementioned schedules, as applicable. The capital expenditures, revenues and results of operations, oil reserves and gas reserves reported by APA Corporation for 2024 include activity related to the operations acquired from Callon Petroleum Company. Callon Petroleum Company's end-of-year 2023 oil reserves (340 million barrels) and gas reserves (562 bcf) have been included in the 2024 beginning-of-year reserves with an equal volume included as sales in 2024 to reflect the APA Corporation's transaction.

In May 2024, Pioneer Natural Resources Company was acquired by ExxonMobil. Pioneer Natural Resources Company's 2020 through 2023 results have been included in the abovementioned schedules, as applicable. The capital expenditures, revenues and results of operations, oil reserves and gas reserves reported by ExxonMobil for 2024 include activity related to the operations acquired from Pioneer Natural Resources Company. Pioneer Natural Resources Company's end-of-year 2023 oil reserves (1,738 million barrels) and gas reserves (4,398 bcf) have been included in the 2024 beginning-of-year reserves with an equal volume included as sales in 2024 to reflect the ExxonMobil's transaction.

In May 2024, Enerplus Corporation was acquired by Chord Energy Corporation. Enerplus Corporation's 2020 through 2023 results have been included in the abovementioned schedules, as applicable. The capital expenditures, revenues and results of operations, oil reserves and gas reserves reported by Chord Energy Corporation for 2024 include activity related to the operations acquired from Enerplus Corporation. Enerplus Corporation's end-of-year 2023 oil reserves (171 million barrels) and gas reserves (665 bcf) have been included in the 2024 beginning-of-year reserves with an equal volume included as sales in 2024 to reflect the Chord Energy Corporation's transaction.

In July 2024, SilverBow Resources was acquired by Crescent Energy Company. SilverBow Resources' 2020 through 2023 results have been included in the abovementioned schedules, as applicable. The capital expenditures, revenues and results of operations, oil reserves and gas reserves reported by Crescent Energy Company for 2024 include activity related to the operations acquired from SilverBow Resources. SilverBow Resources' end-of-year 2023 oil reserves (166 million barrels) and gas reserves (1,678 bcf) have been included in the 2024 beginning-of-year reserves with an equal volume included as sales in 2024 to reflect the Crescent Energy Company's transaction.

In October 2024, Southwestern Energy Company was acquired by Chesapeake Energy Corporation and the merged entity was renamed as Expand Energy Corporation. Southwestern Energy Company's 2020 through 2023 results have been included in the abovementioned schedules, as applicable. The capital expenditures, revenues and results of operations, oil reserves and gas reserves reported by Expand Energy Corporation for 2024 include activity related to the operations acquired from Southwestern Energy Company. Southwestern Energy Company's end-of-year 2023 oil reserves (745 million barrels) and gas reserves (15,191 bcf) have been included in the 2024 beginning-of-year reserves with an equal volume included as sales in 2024 to reflect the Expand Energy Corporation transaction.

In November 2024, Marathon Oil Corporation was acquired by ConocoPhillips. Marathon Oil Corporation's 2020 through 2023 results have been included in the abovementioned schedules, as applicable. The capital expenditures, revenues and results of operations, oil reserves and gas reserves reported by ConocoPhillips for 2024 include activity related to the operations acquired from Marathon Oil Corporation. Marathon Oil Corporation's end-of-year 2023 oil reserves (923 million barrels) and gas reserves (1,794 bcf) have been included in the 2024 beginning-of-year reserves with an equal volume included as sales in 2024 to reflect the ConocoPhillips transaction.

In August 2023, PDC Energy, Inc. was acquired by Chevron Corporation. PDC Energy, Inc.'s 2020 through 2022 results have been included in the abovementioned schedules, as applicable. The capital expenditures, revenues and results of operations, oil reserves and gas reserves reported by Chevron Corporation for 2023 include activity related to

the operations acquired from PDC Energy, Inc. PDC Energy, Inc.'s end-of-year 2022 oil reserves (618 million barrels) and gas reserves (2,892 bcf) have been included in the 2023 beginning-of-year reserves with an equal volume included as sales in 2023 to reflect the Chevron Corporation transaction.

In October 2023, Earthstone Energy, Inc. was acquired by Permian Resources Corporation. Earthstone Energy, Inc.'s 2020 through 2022 results have been included in the abovementioned schedules, as applicable. The capital expenditures, revenues and results of operations, oil reserves and gas reserves reported by Permian Resources Corporation for 2023 include activity related to the operations acquired from Earthstone Energy, Inc. Earthstone Energy, Inc.'s end-of-year 2022 oil reserves (244 million barrels) and gas reserves (742 bcf) have been included in the 2023 beginning-of-year reserves with an equal volume included as sales in 2023 to reflect the Permian Resources Corporation transaction.

In November 2023, Denbury Inc. was acquired by ExxonMobil. Denbury Inc.'s 2020 through 2022 results have been included in the abovementioned schedules, as applicable. The capital expenditures, revenues and results of operations, oil reserves and gas reserves reported by ExxonMobil for 2023 include activity related to the operations acquired from Denbury Inc. Denbury Inc.'s end-of-year 2022 oil reserves (197 million barrels) and gas reserves (2,892 bcf) have been included in the 2023 beginning-of-year reserves with an equal volume included as sales in 2023 to reflect the ExxonMobil transaction.

In September 2022, Permian Resources Corporation (formerly Centennial Resource Development, Inc.) merged with Colgate Energy Partners III, LLC, with Permian Resources Corporation remaining as the accounting acquirer. The capital expenditures, revenues and results of operations, oil reserves and gas reserves for Colgate Energy Partners III, LLC for 2020 through 2021 are not publicly available and have been excluded from the abovementioned schedules. The capital expenditures, revenues and results of operations, oil reserves and gas reserves reported by Permian Resources Corporation for 2022 include activity related to the operations acquired from Colgate Energy Partners III, LLC.

In July 2022, Chord Energy Corporation (formerly Oasis Petroleum Inc.) and Whiting Petroleum Corporation merged, with Chord Energy Corporation remaining as the accounting acquirer. Whiting Petroleum Corporation's 2020 through 2021 results have been included in the abovementioned schedules, as applicable. The capital expenditures, revenues and results of operations, oil reserves and gas reserves reported by Chord Energy Corporation for 2022 include activity related to the

operations acquired from Whiting Petroleum Corporation. Whiting Petroleum Corporation's end-of-year 2021 oil reserves (255 million barrels) and gas reserves (426 bcf) have been included in the 2022 beginning-of-year reserves with an equal volume included as sales in 2022 to reflect the Chord Energy Corporation transaction.

In December 2021, Crescent Energy Company was formed through the merger of Contango Oil and Gas Company and Independence Energy LLC. The annual report filed by Crescent Energy Company for 2021 included the 2020 capital expenditures, revenues and results of operations, oil reserves and gas reserves for Contango Oil and Gas Company and Independence Energy LLC. These results have been included in the abovementioned schedules.

In November 2021, Civitas Resources, Inc. (formerly Bonanza Creek Energy, Inc.) and Extraction Oil & Gas, Inc. merged, with Civitas Resources, Inc. remaining as the accounting acquirer. Extraction Oil & Gas, Inc.'s 2020 results have been included in the abovementioned schedules, as applicable. The capital expenditures, revenues and results of operations, oil reserves and gas reserves reported by Civitas Resources, Inc. for 2021 include activity related to the operations acquired from Extraction Oil & Gas, Inc. Extraction Oil & Gas, Inc.'s end-of-year 2020 oil reserves (84 million barrels) and gas reserves (370 bcf) have been included in the 2021 beginning-of-year reserves with an equal volume included as sales in 2021 to reflect the Civitas Resources, Inc. transaction.

In October 2021, Coterra Energy Inc. (formerly Cabot Oil & Gas Corporation) and Cimarex Energy Co. merged, with Coterra Energy Inc. remaining as the accounting acquirer. Cimarex Energy Co.'s 2020 results have been included in the abovementioned schedules, as applicable. The capital expenditures, revenues and results of operations, oil reserves and gas reserves reported by Coterra Energy Inc. for 2021 include activity related to the operations acquired from Cimarex Energy Co. Cimarex Energy Co.'s end-of-year 2020 oil reserves (304 million barrels) and gas reserves (1,363 bcf) have been included in the 2021 beginning-of-year reserves with an equal volume included as sales in 2021 to reflect the Coterra Energy Inc. transaction.

In March 2021, Diamondback Energy, Inc. and QEP Resources, Inc. merged, with Diamondback Energy, Inc. remaining as the accounting acquirer. QEP Resources, Inc.'s 2020 results have been included in the abovementioned schedules, as applicable. The capital expenditures, revenues and results of operations, oil reserves and gas reserves reported by Diamondback Energy, Inc. for 2021 include activity related to the operations acquired from QEP Resources, Inc. QEP

Resources, Inc.'s end-of-year 2020 oil reserves (302 million barrels) and gas reserves (368 bcf) have been included in the 2021 beginning-of-year reserves with an equal volume included as sales in 2021 to reflect the Diamondback Energy, Inc. transaction.

In January 2021, Concho Resources Inc. was acquired by ConocoPhillips, Parsley Energy, Inc. was acquired by Pioneer Natural Resources Company, and WPX Energy, Inc. and Devon Energy Corporation merged, with Devon Energy Corporation remaining as the accounting acquirer. As Concho Resources Inc, Parsley Energy, Inc. and WPX Energy, Inc. did not file annual reports for 2020, the activity related to these companies has been excluded from the abovementioned schedules to provide a more meaningful comparison throughout the study period.

In October 2020, Noble Energy, Inc. was acquired by Chevron Corporation. The capital expenditures, revenues and results of operations, oil reserves and gas reserves reported by Chevron Corporation for 2020 include activity related to the operations acquired from Noble Energy, Inc. Noble Energy, Inc.'s end-of-year 2019 oil reserves (640 million barrels) and gas reserves (2,019 bcf) have been included in the 2020 beginning-of-year reserves with an equal volume included as sales in 2020 to reflect the Chevron Corporation transaction.

In November 2020, Montage Resources Corporation merged into Southwestern Energy Company. The capital expenditures, revenues and results of operations, oil reserves and gas reserves reported by Southwestern Energy Company for 2020 include activity related to the operations merged from Montage Resources Corporation. Montage Resources Corporation's end-of-year 2019 oil reserves (99 million barrels) and gas reserves (2,138 bcf) have been included in the 2020 beginning-of-year reserves with an equal volume included as sales in 2020 to reflect the Southwestern Energy Company transaction.

For the purposes of peer group analysis, Pioneer Natural Resources, Southwestern Energy Company and Marathon Oil Corporation are large independents while Callon Petroleum Company, SilverBow Resources and Enerplus Corporation are independents.

Performance measures

The performance measures presented herein were calculated based on the companies' oil and gas reserve disclosure information. The EY methodology for calculating the performance measures is defined below:

- Plowback percentage represents total capital expenditures as a percentage of netback (revenues less production costs).
- PRACs are calculated as proved property acquisition costs divided by proved reserves purchased.
- Production replacement rate (all sources) is calculated as the sum of extensions and discoveries, improved recovery, revisions, purchases and sales of proved reserves divided by production.
- Production replacement rate (F&D, including revisions) is calculated as the sum of extensions and discoveries, improved recovery and revisions of proved reserves divided by production.
- Production replacement rate (F&D, excluding revisions) is calculated as the sum of extensions and discoveries and improved recovery of proved reserves divided by production.
- Production costs are calculated as production costs, including production taxes, and transportation costs divided by production.

Many individual companies calculate and report their own performance measures, and companies may use different methods that produce results different from those shown in this study.

Data limitations

Users of this study should keep in mind the following limitations of the data presented:

- This study excludes privately and government-owned companies and smaller public companies.
- This study excludes companies whose primary business is to own and acquire mineral and royalty interests in oil and gas properties.
- Individual companies did not prepare or review the compiled data presented in this report.
- Oil and gas companies that follow US generally accepted accounting principles (GAAP) are allowed to select either successful efforts accounting or full cost accounting for their oil and gas activities. Some companies included in this study follow US GAAP, while others follow International Financial Reporting Standards (IFRS) as adopted by their applicable country. These variations in standards can result in different results for some companies.
- Data for all companies may not be comparable because of differing interpretations or applications of reporting requirements.
- Oil and gas reserve estimates are imprecise and are revised as additional information about reserves becomes known.

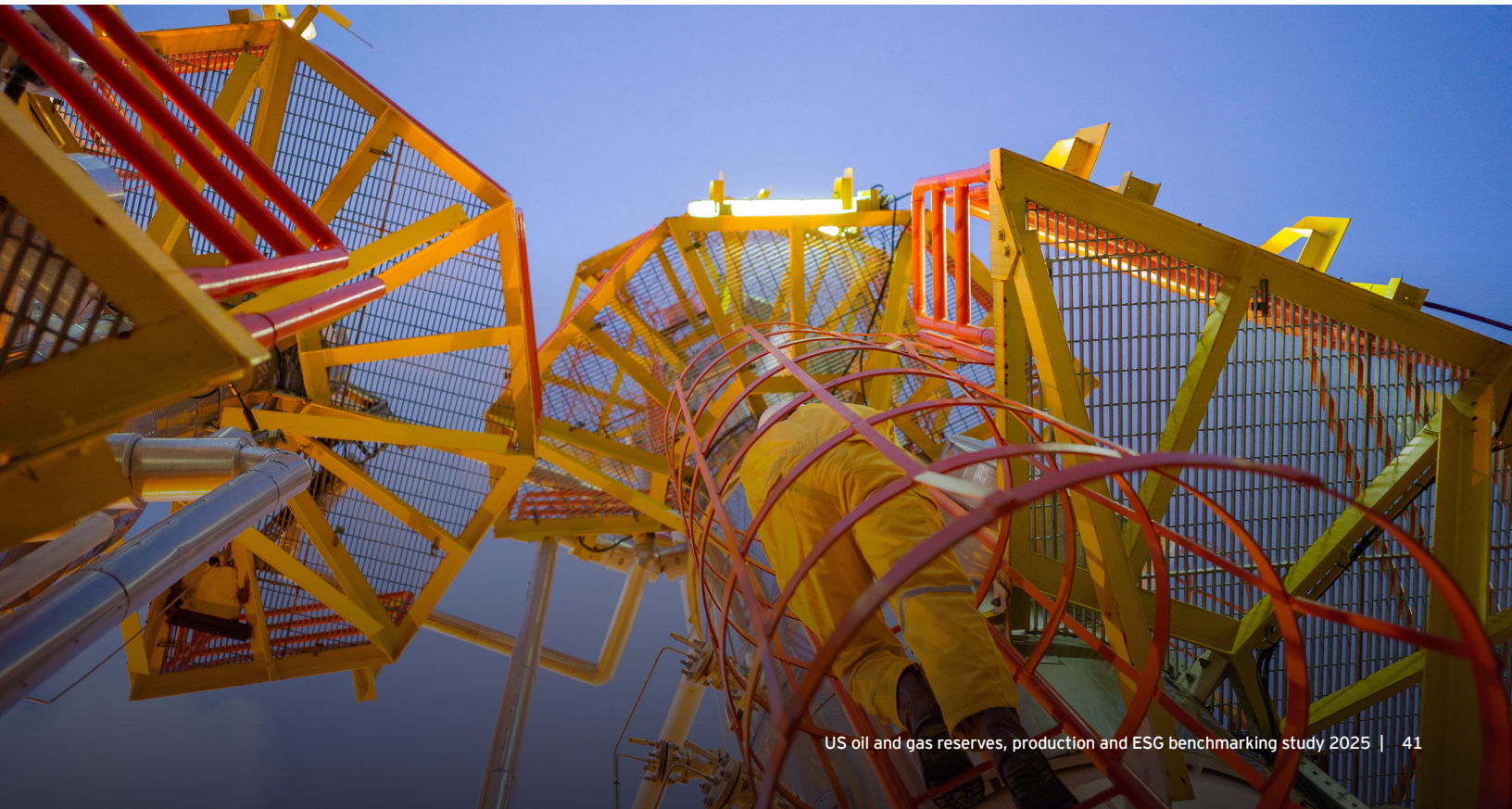
Other

The data included herein for the 2020-24 study period is obtained from the individual companies' published annual reports and press releases. The study companies generally were determined based on data available as of April 1, 2025. Restatements and other adjustments made to capital expenditures or revenues and results of operations data in subsequent years generally have not been incorporated herein. Unless otherwise indicated, restatements and other adjustments made to oil and gas reserve data are included in the "Other" component of the reserve tables, but these amounts are not included in the performance measure calculations.

Totals presented may not add due to rounding. All amounts are reported in US dollars.

Natural gas prices are quoted on an mmbtu basis, while gas reserves in this study are presented in billion cubic feet (bcf) and trillion cubic feet (tcf).

Certain amounts in this study are presented on a per BOE basis. Natural gas volumes are converted to barrels at a ratio of 6,000 cubic feet (mcf) to one barrel of oil. This ratio is generally viewed as reflecting an approximate thermal equivalence between the two commodities; however, some individual companies may use a different ratio for their internal performance metrics.



Company endnotes

Gulfport Energy Corporation filings include only acquisition costs without further breakdown between proved and unproved properties. For our study purposes, Gulfport Energy Corporation acquisitions were included in the proved properties acquired category.

Amounts presented for ExxonMobil include investments accounted for by the equity method. Oil rollforwards and computations based on oil volumes exclude NGLs, which are only reported on a worldwide basis.

Magnolia Oil & Gas Corporation's filings include exploration and development capital expenditures without further breakdown between exploration and development. For our study purposes, Magnolia Oil & Gas Corporation's exploration and development capital expenditures were reflected as development costs.

Bonanza Creek Energy, Inc. changed its name to Civitas Resources, Inc. following the merger of Bonanza Creek Energy, Inc. and Extraction Oil & Gas, Inc. Civitas Resources, Inc. filed an annual report for 2021 that included the operations owned by Bonanza Creek Energy, Inc. For consistency, results for prior periods include the results of Bonanza Creek Energy, Inc. See the discussion above for the treatment of the merger with Extraction Oil & Gas, Inc.

Cabot Oil & Gas Corporation changed its name to Coterra Energy Inc. following the merger of Cabot Oil & Gas Corporation and Cimarex Energy Co. Coterra Energy Inc. filed an annual report for 2021 that included the operations owned by Cabot Oil & Gas Corporation. For consistency, results for prior periods include the results of Cabot Oil & Gas Corporation. See the discussion above for treatment of the merger with Cimarex Energy Co.

Crescent Energy Company was formed through the merger of Contango Oil and Gas Company and Independence Energy LLC in December 2021. See the discussion above about how the results for prior periods are used in the study.

Centennial Resource Development, Inc. changed its name to Permian Resources Corporation following the merger of Centennial Resource Development, Inc. and Colgate Energy Partners III, LLC. Permian Resources Corporation filed an annual report for 2022 that included the operations owned by Centennial Resource Development, Inc. For consistency, results for prior periods include the results of Centennial Resource Development, Inc. See the discussion above for the treatment of the merger with Colgate Energy Partners III, LLC.

Oasis Petroleum Inc. changed its name to Chord Energy Corporation following the merger of Oasis Petroleum Inc. and Whiting Petroleum Corporation. Chord Energy Corporation filed an annual report for 2022 that included the operations owned by Oasis Petroleum Inc. For consistency, results for prior periods include the results of Oasis Petroleum Inc. See the discussion above for the treatment of the merger with Whiting Petroleum Corporation.

Riley Exploration Permian, Inc. changed the company's fiscal year period from October 1 through September 30 each year to January 1 through December 31 each year commencing with the 2022 calendar year. As a result, the company's 2022 fiscal year was the period from January 1, 2022, to December 31, 2022. For our study purposes, we did not include activity reported by the company during the period from October 1, 2021, to December 31, 2021, except for changes in reserves. We presented the net changes in oil and gas reserves reported by the company from October 1, 2021, to December 31, 2021, in "Other" within the oil reserves and gas reserves schedules.

Laredo Petroleum changed its name to Vital Energy, Inc. in January 2023. For consistency, we refer to the company as Vital Energy, Inc. in this study.

Expand Energy Corporation was formed through the acquisition of Southwestern Energy Company by Chesapeake Energy Corporation and subsequent renaming in October 2024. Expand Energy Corporation filed an annual report for 2024 that included the operations owned by Southwestern Energy Company. For consistency, results for prior periods include the results of Southwestern Energy Company.

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