

PRIVATE PROFITS, PUBLIC RISKS

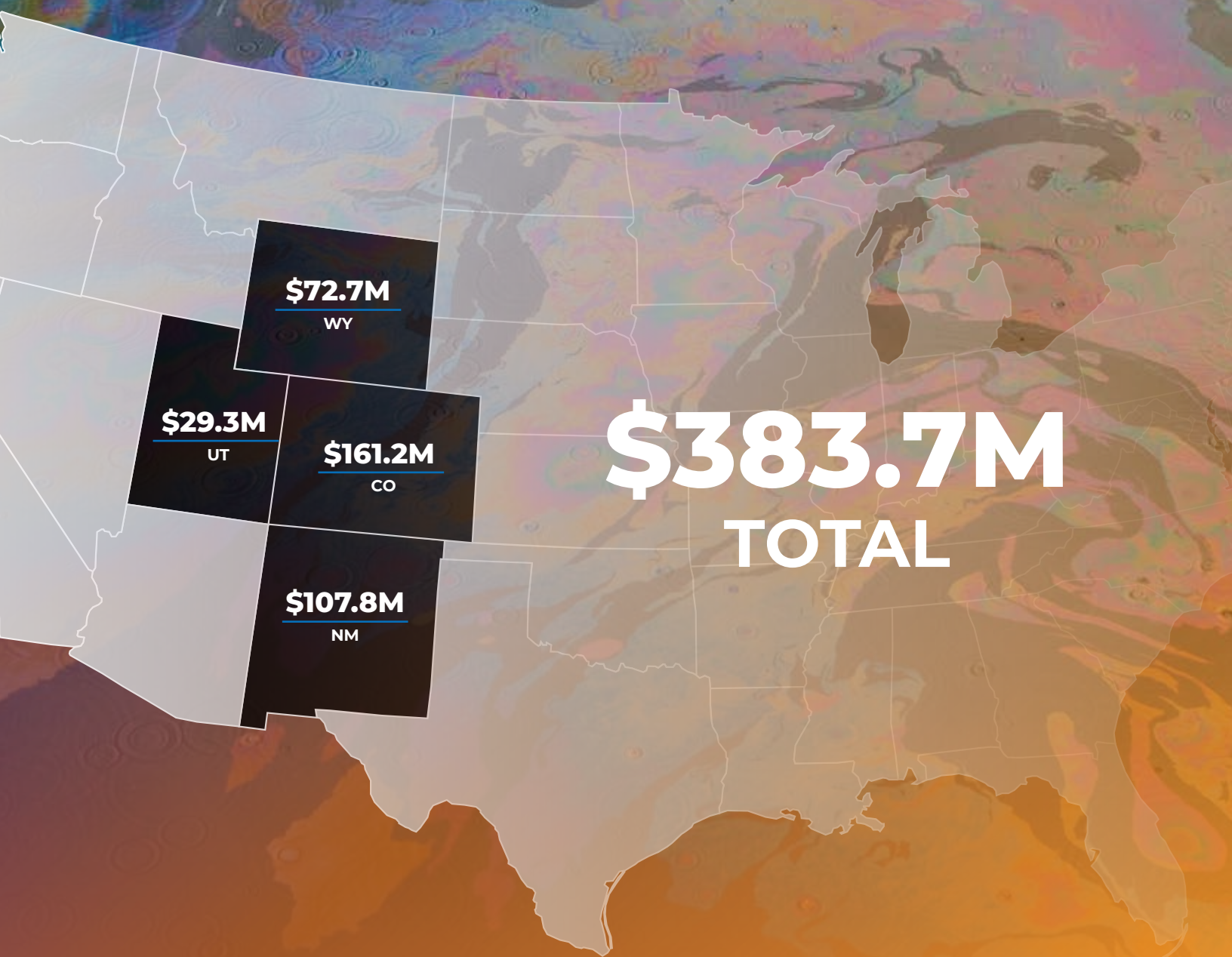
How Wall Street Buyout Firms are Funding Oil and Gas Drilling on Public Lands and Threatening to Leave Taxpayers With a \$380 Million Cleanup Bill

PRIVATE EQUITY
STAKEHOLDER
PROJECT

 PUBLICCITIZEN

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Taxpayers could face up to \$384 million in cleanup costs for wells drilled on federal lands by private equity-backed companies, including \$160 million for Colorado alone.





A drilling rig in the Permian Basin of New Mexico. Photo: WildEarth Guardians

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SUMMARY

Buyout firms seeking to profit from U.S. oil and gas drilling have pumped hundreds of billions of dollars into fossil fuel companies in recent years. These oil and gas investments by private equity firms prolong the lives of drilling operations that leak high levels of climate-damaging methane gas, contaminate groundwater and threaten neighborhoods.

The majority of U.S. onshore drilling occurs on private or state property. However, a subset of drilling operations happens on federal and tribal lands, allowing for a closer examination of private equity-backed oil and gas operations and how much it eventually could cost to clean them up.

The private equity industry has a long history of investing in declining industries, extracting profit

and then, in many cases, filing for bankruptcy after a company has been rendered worthless, avoiding financial responsibility for liabilities. Given this pattern, federal and state officials must ensure that the oil and gas industry bears the financial burden of plugging and cleaning up aging oil and gas wells around the country. Otherwise, taxpayers will be stuck with the bill.



Methane flaring in New Mexico Photo: WildEarth Guardians

KEY FINDINGS

- We identified 19 private equity firms — including Blackstone, Carlyle Group, Apollo Global Management, KKR and Warburg Pincus — that invested in 35 oil and gas companies that received permits to drill on federal lands since 2017.
- The involvement of these private equity buyout players in onshore oil and gas drilling raises the risk that the oil and gas industry will follow the coal industry's playbook and use aggressive tactics to ditch environmental cleanup responsibilities.
- If adequate protections are not put in place, U.S. taxpayers could be stuck with a bill of nearly \$384 million in just eight states for decommissioning and cleaning up nearly 2,700 oil and gas wells on federal and tribal lands operated by private-equity-backed companies. Under current rules, companies are only required to set aside a minimal amount of money to pay for cleanup – only about \$5.7 million, or 1.5% of the cleanup bill likely to be available under current practices.
- Colorado has the largest potential cleanup bill from private equity-backed drillers on federal lands at up to \$161 million, followed by New Mexico at \$108 million.
- Private equity-backed drillers made up 78% of Colorado's approved federal drilling permits since 2017, followed by Utah at 50%.
- Private equity-backed onshore drillers have paid the Interior Department nearly \$2 billion in drilling royalties since 2017. Those royalties, designed to provide taxpayers a fair return, for the use of public lands, are insufficient when compared with higher royalties charged by states.
- Private equity-backed oil and gas companies increasingly use greenwashing strategies to cast themselves as environmentally responsible actors. These tactics seem designed to maintain political and investor support for fossil fuel drilling and exports.



A leaking pipeline carrying water used in oil and gas drilling. Photo: WildEarth Guardians



INTRODUCTION: WALL STREET BUYOUT FIRMS FUND DRILLING ON PUBLIC PROPERTY

The U.S. oil and gas boom of the past 15 years turned the U.S. into the world's largest crude oil¹ and methane gas producer.² This dramatic increase in U.S. production was driven by horizontal drilling and hydraulic fracturing, or fracking, technology, which made it possible to extract oil and gas from shale rock.

The domestic fossil fuel production surge has been bumpy for oil and gas producers and their investors. Through the 2010s, oil and gas executives ramped up production at all costs, even though doing so created a supply glut that depressed prices. Low oil and gas prices then battered the industry in the late 2010s, and the drop in demand caused by the coronavirus pandemic in 2020 caused prices to plunge even further. More than 600 oil and gas companies filed for bankruptcy from 2015 through 2021, including 274 oil and gas producers, according to the energy industry law firm Haynes and Boone.³

Private equity firms have long been big players in the U.S. oil and gas industry⁴ and have invested around \$1.1 trillion into energy assets globally since 2010.⁵ Several

private equity firms were burned badly by the U.S. oil and gas industry's troubles of the late 2010s. Among oil and gas companies that filed for bankruptcy in 2020, nearly 60 percent were backed by private equity firms, constituting 82% of the debt owed, according to Private Equity Stakeholder Project research.⁶

Oil prices have since rebounded from their pandemic-era lows, partly due to the war in Ukraine. Fossil fuel exploration and production companies, including many backed by private equity, have been able to execute consolidation strategies by purchasing drilling operators on the cheap, sometimes out of bankruptcy, and consolidating them into larger companies while cutting costs.⁷ In 2023, with oil prices down from a year earlier but still well above pandemic levels, industry players are again looking at new fossil fuel deals, with some in the sector expecting private equity firms to raise \$10 billion to \$15 billion for new investments.⁸

Wall Street corporate raiders became infamous in the 1980s for debt-financed takeovers of publicly

traded companies. They have since rebranded themselves under a less-threatening name: private equity. These funds are large, privately managed investment vehicles that pitch their ability to provide outsized returns to institutional investors, including pension funds that manage the retirement savings of public employees. In general, private equity firms seek high rates of return and often exit their investments quickly, holding companies for an average of five years.⁹ These acquisitions are typically funded with borrowed money, creating debt that is subsequently transferred onto the balance sheets of acquired companies. They frequently extract substantial value from their takeover targets through debt-financed buyouts, fees, dividends, and stripping out valuable assets such as real estate and often filing for bankruptcy.¹⁰

In 2021 and 2022 alone, private equity firms spent at least \$25 billion taking fossil fuel companies and oil and gas assets private, according to an analysis by the Private Equity Stakeholder Project.¹¹ Unlike publicly traded oil majors such as Chevron and ExxonMobil, the private equity industry's investments in fossil fuel assets are exempt from most public disclosure requirements and thus shielded from public scrutiny. While several large private equity firms are listed on public stock exchanges and make filings with the Securities and Exchange Commission, their financial reports include little about their holdings.

Investments by buyout firms and other private investors allow Big Oil companies to sell off their dirtiest, least-productive assets, attempt to clean up their image and remove future liabilities from their books. These deals often start a chain of transfers in which oil and gas assets move from larger, well-

capitalized companies to smaller companies with fewer resources. "It gets passed on to a smaller company and to a smaller company until someone declares bankruptcy and the public is stuck with the cleanup bill," Steve Bennett, a Democrat who represents Ventura, Calif. in the state assembly, told ProPublica in 2022.¹²

Oil and gas investment in the U.S. faces an uncertain future. Production in the U.S. is expected to peak, then gradually decline in the coming years.¹³ Already, parts of the country that fueled the fracking boom of the early 2010s, such as North Dakota, have gone into long-term decline.¹⁴ Now production in the Permian basin, the largest oil patch in the U.S., may be nearing a peak and could plateau and even decline in the coming years,¹⁵ spurring many public companies to offload their dirtiest assets. An Environmental Defense Fund analysis documented the trends of worldwide oil and gas assets moving from Big Oil to companies with weaker climate commitments and disclosures, finding that nearly 900 global oil and gas merger and acquisition deals from 2017 through 2021 involved the sale of assets to private companies, compared with about 540 deals involving assets sold to public companies.¹⁶ In disposing of such assets, Big Oil companies can claim reductions in greenhouse gas emissions, even though they are merely transferred to a different company. "While fossil fuel asset sales may reduce the supermajors' own emissions, there is little transparency around the post-sale emissions from these assets," wrote researchers at the Columbia Center on Sustainable Investment in a May 2023 paper.¹⁷

The failure of government agencies at the state and federal levels to effectively oversee the oil and gas industry has made it possible for oil and gas



"It gets passed on to a smaller company and to a smaller company until someone declares bankruptcy and the public is stuck with the cleanup bill," — California Assemblymember Steve Bennett, quoted by ProPublica.

“While fossil fuel asset sales may reduce the supermajors’ own emissions, there is little transparency around the post-sale emissions from these assets” — Columbia Center on Sustainable Investment



investors, including private equity firms, to profit from oil and gas drilling operations that would otherwise make little economic sense. These policies include weak cleanup requirements, tax policies that incentivize oil production and bankruptcy rules that allow oil and gas companies to dodge the cost of well cleanup.

The public is already bearing the burden of cleaning up old oil wells. The federal infrastructure bill signed into law in 2021 contained \$4.7 billion in funding for plugging wells.¹⁸ The bipartisan bill, backed by oil industry allies such as Sen. Kevin Cramer (R-S.D.), provides grants¹⁹ to states to fund well cleanup. This federal funding for cleaning up “orphan” wells — ones with no known owner — will benefit local communities and create jobs. However, it incentivizes oil and gas companies to place financial cleanup burdens on the public rather than requiring the industry to pay for its cleanup. As of December 2022, states had already identified more than 120,000 abandoned wells that could be eligible for

federal cleanup money.²⁰ That number is likely to grow considerably.

Studies by the Government Accountability Office²¹ and many others have documented that regulators at both the federal and state levels²² have failed to impose realistic financial requirements to pay for the cleanup of old, decrepit wells. Some states are strengthening rules governing financial assurance plans²³ so oil companies and their owners can cover cleanup costs. More oil-producing states are likely to consider doing so. But these rules may not go far enough. As documented in this report, many oil and gas companies are still trying to dodge accountability.

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PRIVATE EQUITY'S STAKE IN PUBLIC DRILLING

An overhead view of drilling on Bureau of Land Management lands near Artesia, N.M. Photo: Charlie Barrett, Earthworks.

Fossil fuel drilling on public lands makes up 11% of U.S. oil production and about 9% of gas production, according to the Bureau of Land Management, which runs public auctions to lease the right to explore for oil and gas.²⁴ Fossil fuel extraction from U.S. public lands results in considerable climate damage. In 2020, oil and gas extracted from public lands produced nearly 428 million metric tons of carbon dioxide equivalent emissions, equivalent to the emissions from about 92 million vehicles in a year.²⁵

The International Energy Agency, in a landmark report in 2021, concluded that additional oil and gas exploration is incompatible with limiting the most catastrophic climate harm.²⁶ The analysis found new oil and gas exploration must halt, in order to hold global warming to 1.5 degrees Celsius over pre-industrial levels. As a candidate, Joe Biden pledged²⁷ to halt drilling on federal lands and waters and paused the sale of new federal oil leases shortly after coming into office. Those plans fell by the wayside after courts blocked the Biden administration's leasing pause. Energy and climate legislation passed

in 2022 encouraged leasing of federal lands and waters for oil and gas exploration by linking it to the development of renewables.²⁸

Private equity-backed drilling firms were among the oil and gas industry players who benefited from the Trump administration's "energy dominance agenda."²⁹ Under Trump, the U.S. oil and gas industry leased millions of acres of public lands for exploitation, stockpiling thousands of permits for future drilling.³⁰ While oil and gas lobbyists have complained loudly in Washington D.C. about the Biden administration's attempt to reverse Trump-era giveaways to fossil fuel companies, industry executives have been able to maintain and even expand production on public lands in the Biden era.

The private equity industry's secretive structure makes analyzing private equity's investment in oil and gas challenging. Private equity-backed oil and gas companies operate across most U.S. oil and gas basins on federal, state and private lands with major emissions impacts. Privately held companies are

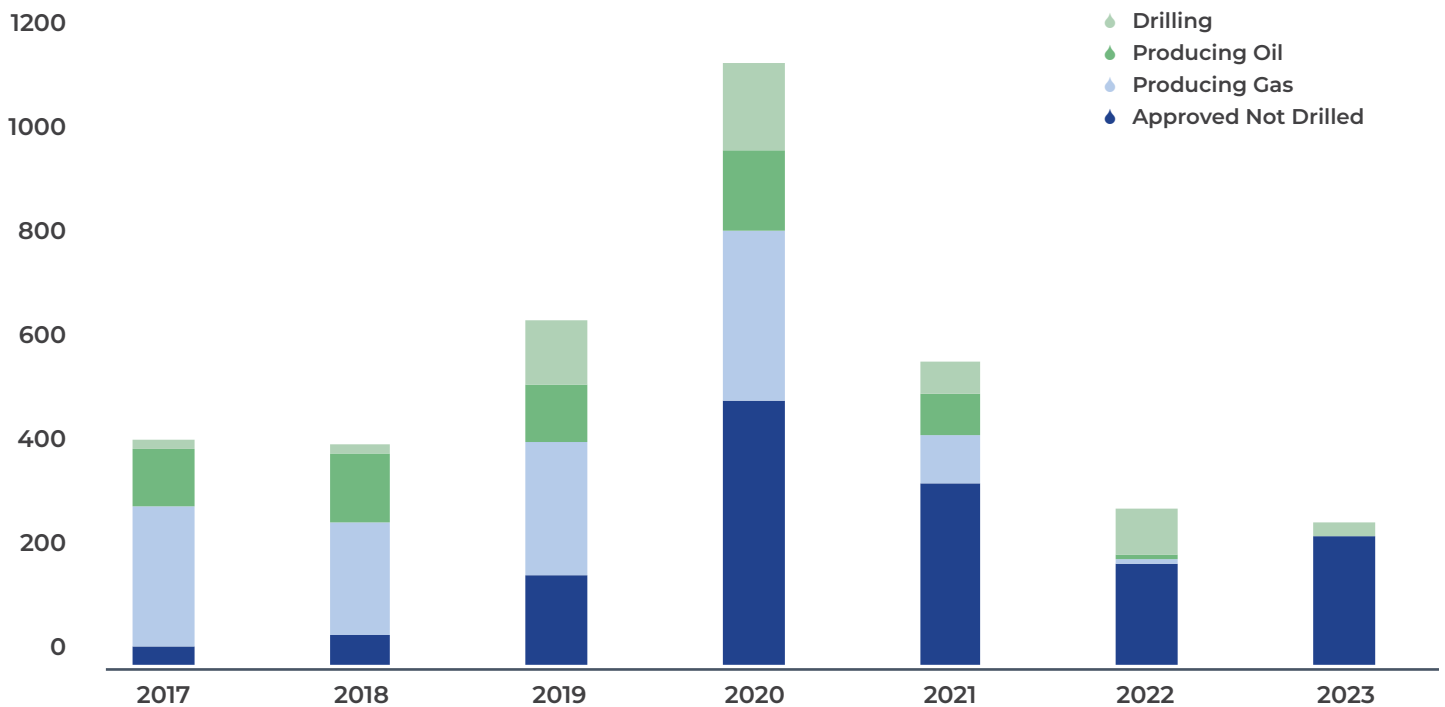
required to disclose scant information to the public. However, by analyzing public records of drilling on federal lands and matching those records with research on private equity portfolio companies, it is possible to get a glimpse at a slice of the industry's activities to begin assessing cleanup costs. The overall problem of cleaning up for oil and gas drilling is enormous: While cost estimates vary widely, a 2020 report by the CarbonTracker Initiative estimated a \$280 billion price tag to plug and remediate 2.6 million onshore oil and gas wells in the U.S.³¹

As shown below in Figure 1, private equity-backed firms identified in this report were approved for about 3,500 permits to drill on federal and tribal lands since 2017. Of those permits, nearly 60%, or

2,060, were listed in a Bureau of Land Management database as either being drilled or producing oil or gas. Another 1,442 drilling permits were listed as approved but not yet drilled.

To calculate the number of approved but not yet drilled permits that will proceed to drilling, we used historical averages for each state and estimated that about 622 permits, or 43% of unused drilling permits, will proceed to be drilled. This analysis captures recent drilling activity by private equity-backed companies but excludes drilling using older permits where drilling has begun due to limitations in federal data. Once wells drilled on federal lands go into production, companies can keep drilling until wells go dry.

FIGURE 1
APPROVED PERMITS TO DRILL ON FEDERAL LANDS GRANTED TO PRIVATE EQUITY-BACKED FIRMS, 2017-PRESENT



Source: Analysis of data from U.S. Bureau of Land Management Automated Fluid Minerals System for permits approved since January 1, 2017 through May 31, 2023. (Note: Well status is as last recorded in database.)

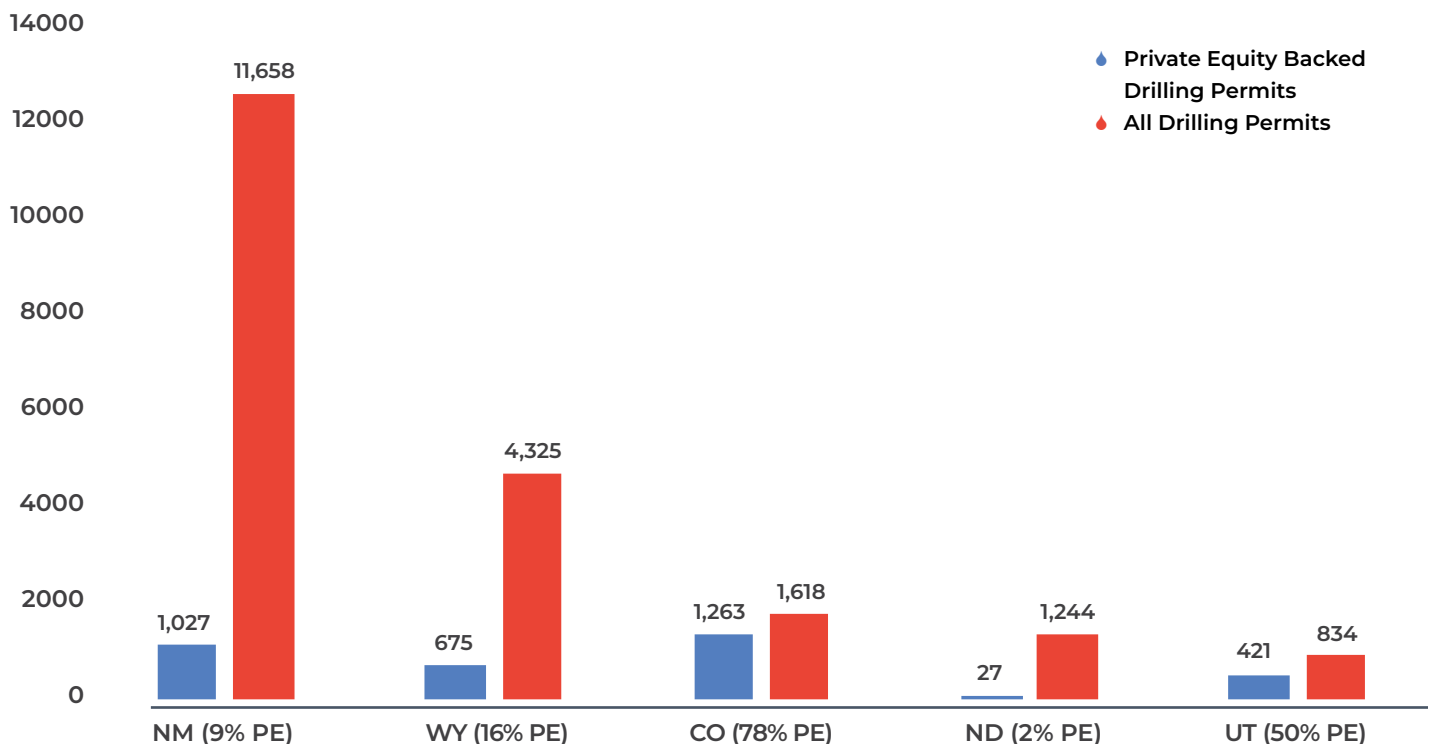
As shown below in Figure 2, Colorado was the most active state for private equity-backed drilling by far, with about 78% of public lands drilling permits going to private equity-backed operators, followed by Utah at 50%. About 18% of public lands drilling permits approved by the federal Bureau of Land Management in Colorado, Utah, New Mexico and Wyoming were from private equity-backed operators.

Estimates of well cleanup costs vary widely, and depend on the depth of wells, with newer, deeper wells tending to be far more expensive to clean up than older, shallow wells common in the Appalachian region. Colorado regulators in 2021 analyzed the costs of well cleanup at 23 sites and calculated an average cleanup cost of \$92,000, ranging between \$25,000 and \$290,000 per site.³² The federal Bureau of Land Management in 2022 awarded a contract to plug 11 wells and restore surrounding lands in Utah at a cost of nearly \$80,000 per well, and a contract of more than \$250,000 to plug and remediate one well in California.³³

A 2021 study of about 20,000 oil and gas wells by Resources for the Future estimated a median cleanup cost of \$76,000 for plugging and decommissioning, environmental remediation and site reclamation.³⁴ California officials estimate an average cost of \$110,000 per well.³⁵ An analysis by the Carbon Tracker Initiative, based on a methodology developed by California officials, used a range of \$55,000 to \$162,000, depending on whether the well was in a rural or urban area.³⁶

The wide range in cleanup costs indicates the complex nature of cleanup work, which can vary widely in cost, depending on the depth of wells and drilling technology. To estimate the potential cleanup liabilities associated with private equity-backed drilling operations on federal lands, we calculated a range based on the GAO's estimates ranging from \$20,000 to \$145,000.

FIGURE 2
APPROVED FEDERAL DRILLING PERMITS GRANTED TO PRIVATE EQUITY-BACKED FIRMS, 2017-PRESENT



Source: Analysis of data from U.S. Bureau of Land Management Automated Fluid Minerals System

Methodology

To determine which private equity firms have funded drilling on federal land, we analyzed two sets of federal data. We examined data published by the federal Office of Natural Resource Revenue on companies that pay royalties to the U.S. government for drilling, from 2017-2022. We also analyzed a federal database that tracks drilling permits for onshore drilling on federal and tribal land. This system is known as the U.S. Bureau of Land Management Automated Fluid Minerals Support System, and we analyzed drilling permits approved from January 1, 2017 through May 31, 2023.

We compared this data to information on private equity deals compiled by Pitchbook, a commercial database, verified this information by checking company press releases and news clips and included our own research on private equity ownership.

To estimate cleanup costs, we used the Government Accountability Office's estimates, which range from \$20,000 to \$145,000. We also subtracted \$2,122 in bond coverage per drilling permit, based on the GAO's average bonding amount per well.

Using GAO's cleanup figures, Figure 3 calculates the potential cleanup cost in the three states with the highest numbers of approved drilling permits submitted by private equity backed exploration and production companies. Table 1 calculates the potential cleanup cost on federal and tribal lands in all eight states with the most private equity operators.

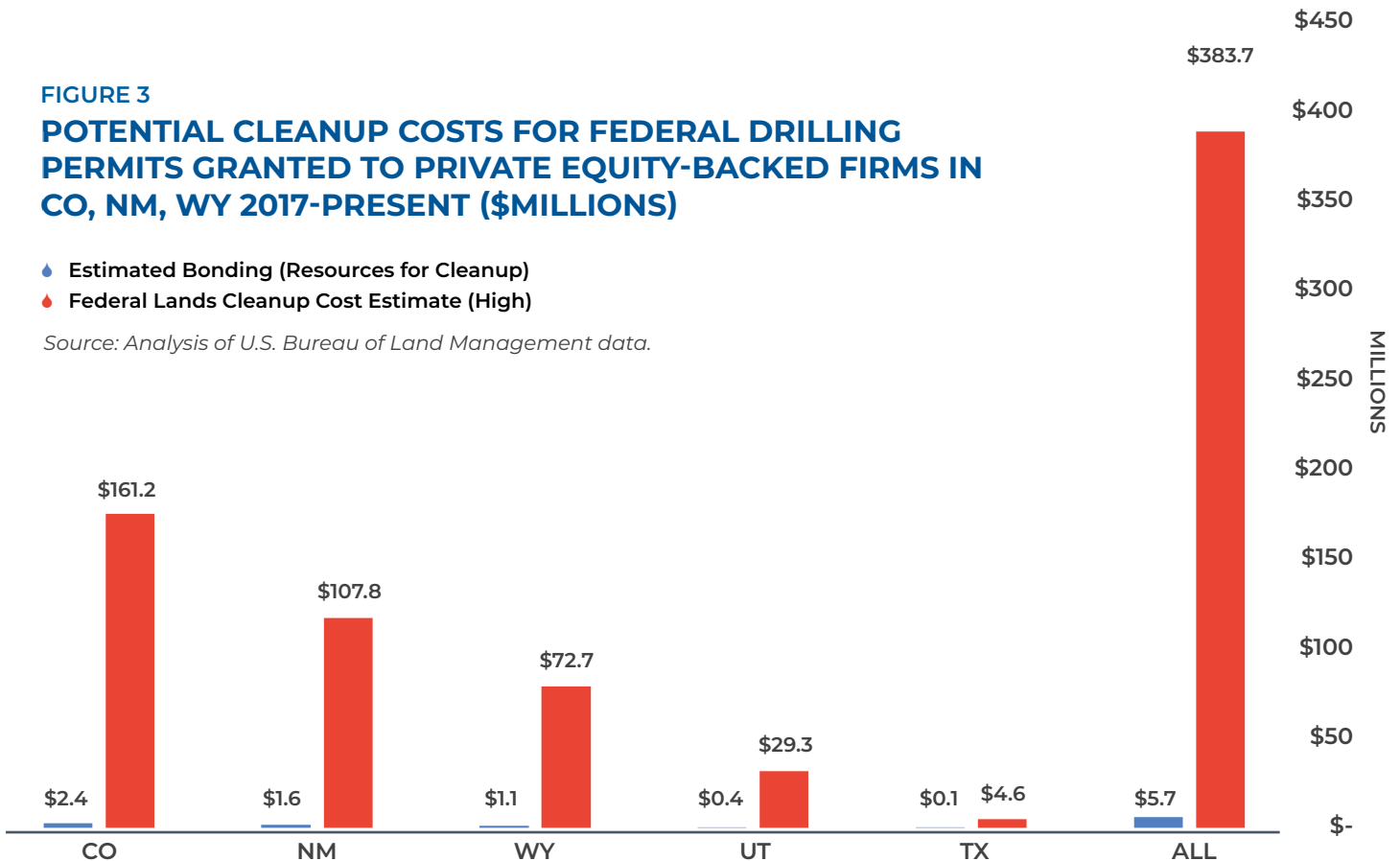
\$160 million in costs to clean up more than 1,100 wells operated by private-equity-backed companies operating on federal lands in Colorado alone. These figures are only a small slice of the overall cleanup bill for federal lands, which have been estimated at more than \$6 billion, according to one study.³⁷ They also exclude the cost of cleaning up drilling on private and state lands.

As shown, cleanup costs range between \$48 million and \$384 million. Taxpayers could face more than

FIGURE 3
POTENTIAL CLEANUP COSTS FOR FEDERAL DRILLING PERMITS GRANTED TO PRIVATE EQUITY-BACKED FIRMS IN CO, NM, WY 2017-PRESENT (\$MILLIONS)

- ◆ Estimated Bonding (Resources for Cleanup)
- ◆ Federal Lands Cleanup Cost Estimate (High)

Source: Analysis of U.S. Bureau of Land Management data.



Taxpayers could face up to \$384 million cleanup costs for wells recently drilled on federal lands by private equity-backed companies, including \$160 million for Colorado alone.

**TABLE 1
DRILLING PERMITS AND CLEANUP COSTS FOR PRIVATE EQUITY-BACKED PUBLIC LANDS DRILLERS, BY STATE, PER GAO CLEANUP ESTIMATES**

State	Drilling/ Producing	Approved, Not Drilled	Approved Expected To Drill	Projected for Cleanup	Estimated Existing Bonding	Cleanup Estimate (Low)	Cleanup Estimate (High)
CO	957	306	171	1128	\$2,394,380	\$20,172,820	\$161,217,820
NM	532	495	223	755	\$1,601,580	\$13,493,421	\$107,837,171
WY	393	282	116	509	\$1,079,292	\$9,093,108	\$72,670,608
UT	117	304	88	205	\$435,350	\$3,667,850	\$29,312,850
ND	24	3	2	26	\$55,257	\$465,543	\$3,720,543
MT	17	1	1	18	\$37,496	\$315,904	\$2,524,654
TX	15	42	17	32	\$68,371	\$576,029	\$4,603,529
OK	12	0	0	12	\$25,464	\$214,536	\$1,714,536
Grand Total	2067	1433	618	2685	\$5,697,188	\$47,999,212	\$383,601,712

Source: Analysis of U.S. Bureau of Land Management Automated Fluid Minerals Support System data. Cleanup costs assume one well per federal drilling permit, and a low cleanup cost of \$20,000 per well and a high cleanup cost of \$145,000 per well as well as average bond coverage of \$2,122 per well, as estimated by the Government Accountability Office in 2019.³⁸ For permits that were approved but not yet drilled, we used the average percent of permits that proceeded to drill, by state, over fiscal year 2017-2021, based on Bureau of Land Management annual statistics. Those averages are Colorado (56%) New Mexico (45%), Wyoming (41%), Utah (29%), North Dakota (68%), Montana (67%), Texas (41%), Oklahoma (46%).

Liabilities tend to be concentrated in particular counties within western states where drilling is concentrated on federal and tribal lands, as shown in Table 2, with Garfield County in Colorado facing

up to \$91 million in cleanup of federally-approved permits and Lea County in New Mexico with up to \$55 million.

**TABLE 2
DRILLING PERMITS AND CLEANUP COSTS FOR PRIVATE EQUITY-BACKED PUBLIC LANDS DRILLERS, BY COUNTY**

County	State	Drilling/ Producing	Approved, Not Drilled	Approved and Expected To Drill	Number Projected for Cleanup	Estimated Bonding	Cleanup Estimate (Low)	Cleanup Estimate (High)
GARFIELD	CO	565	135	76	641	\$1,359,353	\$11,452,647	\$91,527,647
LEA	NM	257	292	131	388	\$824,185	\$6,943,815	\$55,493,815
EDDY	NM	248	176	79	327	\$694,318	\$5,849,682	\$46,749,682
UINTAH	UT	109	304	88	197	\$418,374	\$3,524,826	\$28,169,826
SUBLETTE	WY	312	70	29	341	\$722,965	\$6,091,035	\$48,678,535
WELD	CO	234	57	32	266	\$564,282	\$4,754,118	\$37,994,118
RIO BLANCO	CO	124	101	57	181	\$383,148	\$3,228,052	\$25,798,052
CONVERSE	WY	28	172	71	99	\$209,059	\$1,761,341	\$14,076,341
CAMPBELL	WY	51	25	10	61	\$129,973	\$1,095,028	\$8,751,278
SHELBY	TX	12	42	17	29	\$62,005	\$522,395	\$4,174,895

Source: Analysis of U.S. Bureau of Land Management Automated Fluid Minerals Support System data. Cleanup costs assume one well per federal drilling permit, and a low cleanup cost of \$20,000 per well and a high cleanup cost of \$145,000 per well as well as average bond coverage of \$2,122 per well, as estimated by the Government Accountability Office in 2019.³⁹ For permits that were approved but not yet drilled, we used the average percent of permits that proceeded to drill, by state, over fiscal year 2017-2021, based on Bureau of Land Management annual statistics. Those averages are Colorado (56%) New Mexico (45%), Wyoming (41%), Utah (29%), North Dakota (68%), Montana (67%), Texas (41%), Oklahoma (46%).

GREENWASHING PROMOTES EXPANDED FOSSIL FUEL PRODUCTION

Flaring at an oil and gas facility near Artesia, N.M. Photo: Charlie Barrett, Earthworks.

Many executives at the largest private equity firms have touted their commitment to environmentally sustainable, or ESG, investing, calling it a business opportunity. “Investors need to be at the vanguard of helping companies decarbonize across all sectors of the economy,” said the former CEO of the Carlyle’s Group, Kewsong Lee, in a 2022 press release.⁴⁰ Apollo Global Management⁴¹ and Blackstone⁴² — have sworn off new investments in fossil fuel drilling. Still, Blackstone and others continue to fund other kinds of fossil fuel infrastructure, such as export terminals and pipelines. In 2020, Warburg Pincus told investors its next flagship buyout fund would not pursue fossil fuel investments.⁴³ However, after this announcement, the firm continued to make fossil fuel investments.⁴⁴

Though private equity investments in renewables are welcome, much of what the industry considers “sustainable” is of dubious value. Climate pledges or “net zero” commitments often rely on carbon offset schemes, such as credits for rainforest preservation that may have little actual benefits for the climate.⁴⁵

Oil and gas companies and their investors often focus on metrics such as methane intensity and so-called scope 1 and scope 2 emissions, which exclude the climate impact of fuel burned by consumers.

In tandem with private equity managers, the oil and gas industry has been working to create a market for “certified gas,” claiming it can sell a product with a smaller carbon footprint.⁴⁶ This dubious claim relies on the ability of unregulated, independent companies to certify gas-producing operations as meeting emissions standards, allowing companies to charge a higher price for methane gas that can be exported around the world, including to Europe, where governments are focused on climate risks. The Biden administration, which has been aligned with the gas export industry, has met with industry players, governments around the world and nonprofits to create a global standard to measure the intensity of greenhouse gas emissions from methane.⁴⁷



A photo and an infrared image showing emissions from a New Mexico gas compressor station. Photo: Charlie Barrett, Earthworks

Field research by Earthworks, over seven months with industry-standard methane detection equipment, raises important questions about the environmental claims of companies selling certification standards. Earthworks found that Colorado-based Project Canary did not capture 14 methane releases over seven months, calling into question the validity of the company’s claim to certify a cleaner variety of gas.⁴⁸ Project Canary disputed the findings published by Earthworks and Oil Change International, claiming that the company’s equipment “performed as designed, detecting emissions and triggering alerts for operators in the vast majority of cases identified.”⁴⁹

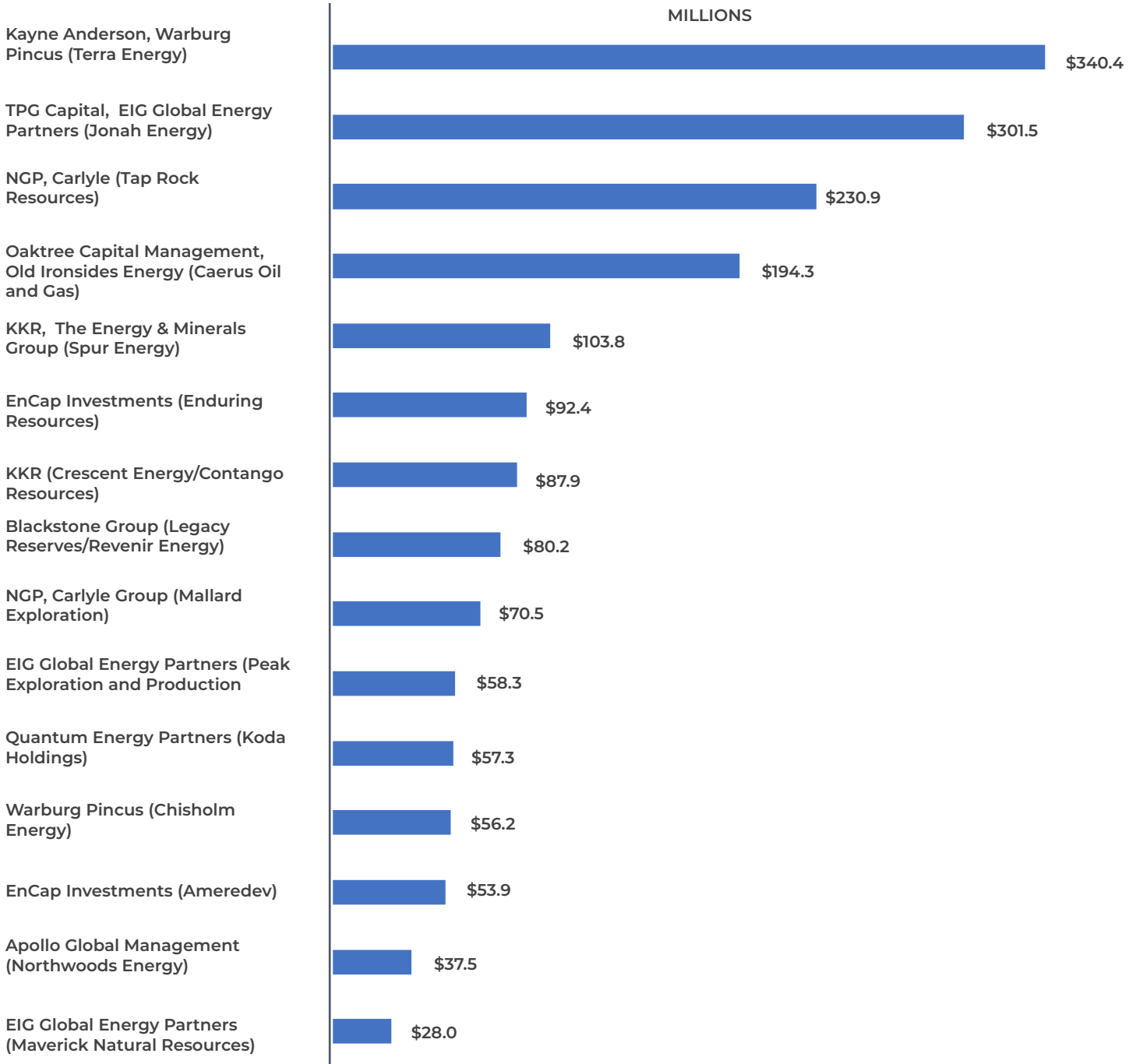
Project Canary, which works with a long list of oil and gas companies around the country, is partly funded by private equity firm Quantum Energy Partners, which focuses on oil and gas investments,⁵⁰ underscoring how certification serves the interest of fossil fuel producers. Quantum founder Wil VanLoh has said the emissions monitoring technology “is crucial to the long-term viability of the oil and gas industry.”⁵¹ The chief executive officer of Project Canary, Chris Romer, has been an outspoken advocate of methane gas drillers and exports, saying in fall 2022: “We need to expand LNG globally by a big number. The U.S. is ready to do that in a very clean way. We would love it to be certified gas. We would love it to be Project Canary-certified gas.”⁵²



Oil and gas drilling equipment adjacent to homes and a high school in Severance CO. Photo: Earthworks

Several private equity-backed oil and gas drilling companies stand out as having significant operations on public lands based on an analysis of federal permitting and royalties data. Fifteen of the higher-producing private equity-backed oil and gas companies, based on royalties paid to the federal government to drill on federal lands, are shown in Figure 4. By contrast, Figure 5 spotlights the potential cleanup liability of active drilling companies backed by private equity firms.

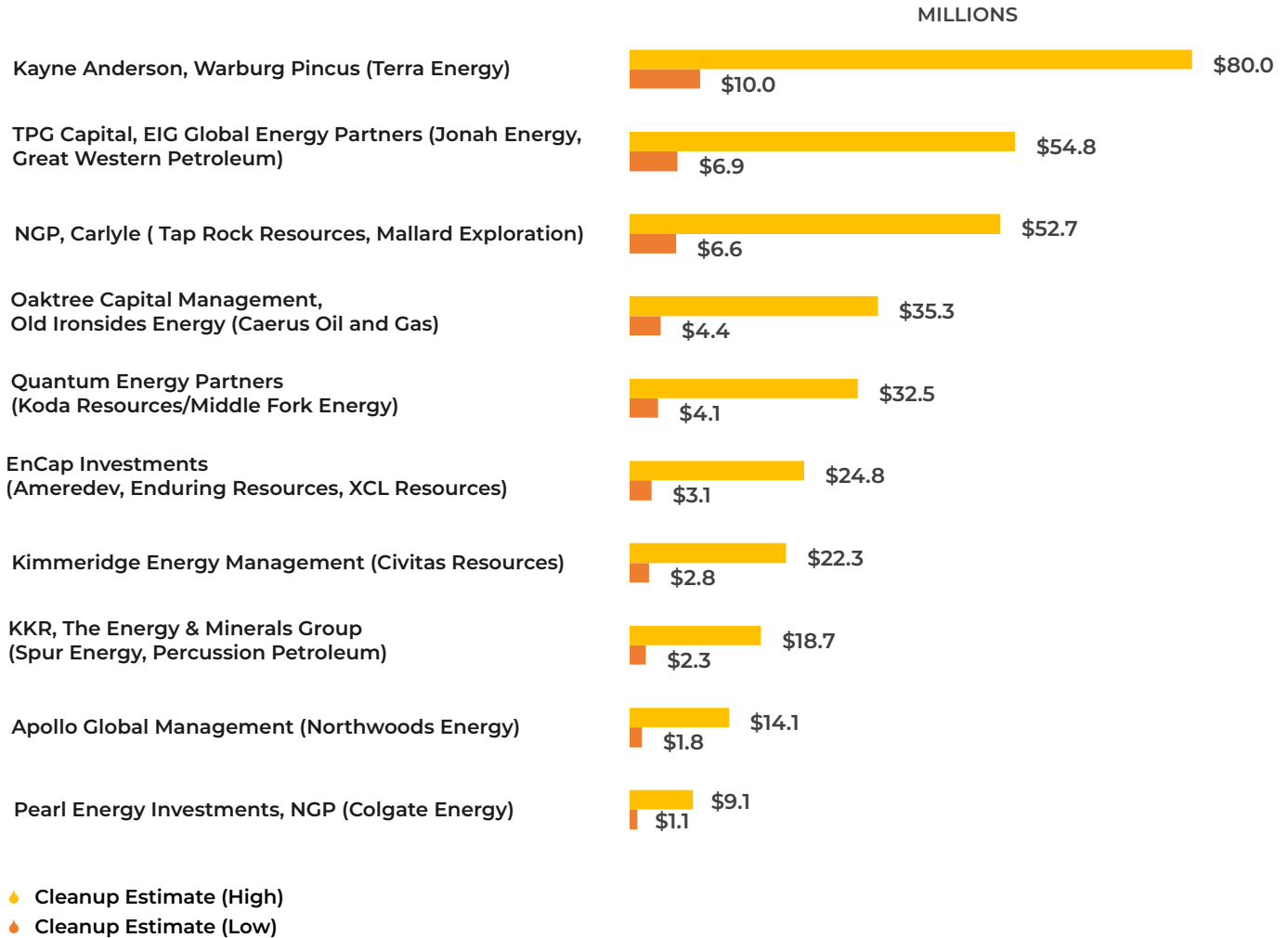
FIGURE 4
TOP PRIVATE EQUITY-BACKED DRILLERS OPERATING ON PUBLIC LANDS,
RANKED BY FEDERAL ROYALTY REVENUE 2017-2022 (\$MILLIONS)



Source: Royalty revenue is derived from the U.S Office of Natural Resources Revenue's **federal revenue by company dataset** as well as Private Equity Stakeholder Project and Public Citizen research.

FIGURE 5

ESTIMATED CLEANUP COSTS FOR 10 MAJOR PRIVATE EQUITY-BACKED OIL AND GAS COMPANIES DRILLING ON FEDERAL LANDS



Source: Analysis of U.S. Bureau of Land Management Automated Fluid Minerals Support System data. Cleanup costs assume one well per federal drilling permit, and a low cleanup cost of \$20,000 per well and a high cleanup cost of \$145,000 per well as well as average bond coverage of \$2,122 per well, as estimated by the Government Accountability Office in 2019.⁵³ For permits that were not yet drilled, we estimated that 43% would proceed to drill, by state, over fiscal year 2017-2021, based on Bureau of Land Management annual statistics.

**TABLE 3
PRIVATE EQUITY INVESTMENTS IN PUBLIC LANDS DRILLERS, BY STATE**

Investor(s)	Oil Co.	States Active (may include non-federal drilling)
Kayne Anderson, Warburg Pincus	Terra Energy	Colorado
TPG Capital, EIG Global Energy Partners	Jonah Energy	Wyoming
NGP	Tap Rock Resources	New Mexico
Oaktree Capital Management, Old Ironsides Energy	Caerus Oil and Gas	Colorado, Utah
KKR	Crescent Energy/Contango Resources	Wyoming, New Mexico, Texas
KKR, The Energy & Minerals Group	Spur Energy	New Mexico, Texas
EnCap Investments	Enduring Resources	New Mexico
Blackstone	Legacy Reserves/Revenir Energy*	New Mexico, Texas
Warburg Pincus	Chisholm Energy	New Mexico
NGP	Mallard Exploration	Colorado
EIG Global Energy Partners	Peak Exploration and Production	Wyoming
Quantum Energy Partners	Koda Holdings**	North Dakota
EnCap Investments	Ameredev	New Mexico, Texas
Apollo Global Management	Northwoods Energy	Wyoming
EIG Global Energy Partners	Maverick Natural Resources	Texas, New Mexico, Oklahoma, Louisiana, Arkansas, New Mexico, Oklahoma
Lime Rock Partners	Lime Rock Resources	North Dakota, New Mexico, Arkansas
Kayne Anderson	HRM Resources	Wyoming

Investor(s)	Oil Co.	States Active (may include non-federal drilling)
Kimmeridge Energy Management	Civitas Resources	Colorado
Kayne Anderson	Kraken Resources	North Dakota, Montana
Quantum Energy Partners	Middle Fork Energy**	Utah
Pearl Energy Investments, NGP	Colgate Energy	New Mexico
Trace Capital Management	Rockies Resources	Wyoming
Warburg Pincus	Citizen Energy	Oklahoma
EIG Global Energy Partners	Great Western Petroleum	Colorado
Pearl Energy Investments, NGP	Avad Energy Partners	Texas, Mississippi
Vortus Investment	Weatherly Oil	Texas, Louisiana
Kayne Anderson	89 Energy	Oklahoma
Kayne Anderson	Flywheel Energy	Arkansas
EnCap Investments	Xcl Resources	Utah
Kayne Anderson	Panther Energy	Wyoming
EnCap Investments	EP Energy	Utah
Warburg Pincus	Ridge Runner	New Mexico
Carlyle Group***	Hilcorp	New Mexico
Oaktree Capital Management***	BKV	Texas
Carlyle Group***	Eog Resources	Oklahoma

Source: Bureau of Land Management, Pitchbook, Public Citizen/Private Equity Stakeholder Project Research. Notes: *Became Revenir Energy in 2023. **Combined into Koda Resources. ***Denotes joint venture to invest in a specific geographic location rather than an investment in the corporation as a whole.

KEY PRIVATE EQUITY FIRMS FUNDING DRILLING ON PUBLIC LANDS

The following section profiles several key companies to illustrate private equity's role in expanding its oil and gas footprint through active acquisitions and dealmaking. The case studies below depict how private equity-backed fossil fuel companies are advocating to increase drilling activity despite the climate risks and using greenwashing tactics to ensure they can still receive funding from investors.

Kayne Anderson Capital Advisors, Warburg Pincus Public Lands Drillers: Terra Energy Partners, 89 Energy, Flywheel Energy, Kraken Resources, Panther Energy, Citizen Energy

Based in Los Angeles, Kayne Anderson is a large alternative asset manager with \$34 billion in assets under management, focusing on infrastructure and energy investing.⁵⁴ Although Kayne Anderson touts its investments in renewables,⁵⁵ the vast majority⁵⁶ are in oil and gas exploration and production. In an interview with CNBC, the company's CEO, Albert Rabil, acknowledged the need to move away from fossil fuels but downplayed the need for an aggressive energy transition. "We've got a climate change issue, [the] transition needs to take place, the question mark is really, over what time can that transition reasonably take place," Rabil said.⁵⁷



*Warburg Pincus president
Timothy Geithner, former U.S.
Treasury Secretary*



In 2015, Kayne Anderson made a \$300 million equity investment⁵⁸ in Houston-based Terra Energy Partners, which has grown to become a major oil and gas driller in the Piceance Basin, located in western Colorado. Terra Energy was formed in 2015 by former Occidental Petroleum executives.⁵⁹ In 2016, Terra Energy acquired drilling assets in the Piceance Basin from WPX Energy for \$910 million,⁶⁰ and in 2020, paid \$60 million for the assets of bankrupt Ursa Energy.⁶¹ In addition to Kayne Anderson, Terra is backed by the New York-based private equity firm Warburg Pincus, which is led by Timothy Geithner, who was U.S. Treasury Secretary under President Barack Obama.⁶² In a case study on its website, Warburg Pincus touted its record as "instrumental" in aiding Terra Energy in the WPX deal, helping Terra negotiate an attractive purchase price.⁶³ Warburg Pincus also said that Terra has been able to drive down costs for operating expenses by about 30% and cut drilling costs by about 10%.⁶⁴

Jayson Boebert, the soon-to-be-ex-husband⁶⁵ of U.S. Rep. Lauren Boebert, (R-Colo.), earned nearly \$1 million consulting for Terra, conducting oversight of the company's drilling rig operations.⁶⁶ Yet Rep. Boebert, a staunch oil industry advocate, did not disclose this information until well into her first term in Congress.⁶⁷

In addition to the Warburg Pincus partnership, Kayne Anderson has invested in several other companies that drill on public lands. In July 2021, Kayne Anderson made a \$400 million investment in Kraken Resources, initially focusing on the Williston Basin in the Dakotas region.⁶⁸ In May 2021, Kayne Anderson merged three drilling companies and committed additional investments to form 89 Energy, based in Oklahoma.⁶⁹ Flywheel Energy, another portfolio company of Kayne Anderson, reached a deal in August 2022 to buy around 5,000 methane gas wells and related infrastructure in Arkansas from Exxon Mobil.⁷⁰ Other Kayne Anderson companies drilling on public lands are HRM Resources in Colorado,⁷¹ and Oklahoma-based Panther Energy.⁷²

Public lands drillers backed by Warburg Pincus include Citizen Energy, which purchased Roan Resources for \$1 billion in 2019.⁷³ As first reported by The Intercept, Oklahoma-based Citizen Energy in 2022 leased a 160-acre plot of land in Oklahoma from the wife of Supreme Court Justice Samuel Alito.⁷⁴ Other Warburg Pincus oil and gas holdings include Ridge Runner Resources, which received a \$300 million investment from Warburg Pincus in 2018,⁷⁵ and Chisholm Energy, which Warburg Pincus sold to publicly traded oil company Earthstone Energy for \$600 million in late 2021⁷⁶ after Chisholm emerged from bankruptcy, having wiped out \$480 million in debt.⁷⁷

TPG Capital, EIG Global Energy Partners **Public Lands Drillers: Jonah Energy, Great Western Petroleum, Peak Exploration & Production**

TPG Capital and EIG have been major investors in public lands drilling. TPG Capital is a large privately-held alternative asset manager with \$137 billion in assets under management across all sectors of the global economy.⁷⁸ Founded as Texas Pacific Group, the company is headquartered in Fort Worth and San Francisco. EIG Capital is a smaller private equity firm focused on energy and energy infrastructure⁷⁹ with around \$23 billion in assets under management.⁸⁰



TPG and EIG invested in Jonah Energy LLC, a Wyoming-focused exploration company based in Denver. TPG formed Jonah Energy LLC in 2014, and the company purchased methane gas drilling properties in Wyoming from Encana Corp. for \$1.8 billion.⁸¹ EIG Global Energy Partners is listed on Jonah Energy press releases as an investor starting in 2017, but the exact date or size of the company's investment could not be determined.⁸²

In 2017, Jonah Energy paid \$582 million for 27,000 acres of natural gas drilling fields in Wyoming.⁸³ During the oil market's pandemic downturn, the company's finances appeared to be in dire shape,



Jonah Energy executive Paul Ulrich testifies at a May 2023 hearing of the U.S. Senate Energy and Natural Resources Committee.

with Fitch Ratings listing Jonah Energy as a bond issuer that could face default in April 2020.⁸⁴ After missing a bond payment, Jonah Energy was able to reach an agreement in late 2020 with its lenders and investors to raise \$85 million in equity and restructure the company's debt.⁸⁵ Jonah is currently listed as a past investment on EIG's website.⁸⁶ Jonah Energy still appeared on as a current investment on TPG's website as of June 2021, but was removed by September of that year.⁸⁷

Jonah has presented its gas operations as environmentally friendly while urging federal officials to expand drilling. In 2022, the company reached a one-year contract to sell premium-priced "certified natural gas" — to an undisclosed major utility.⁸⁸ The company said in a press release that the company's gas "is clearly a premium and differentiated product, with benefits in carbon reduction like other low carbon products on the market." Jonah Energy says it spends about \$1.5 million per year on well-reclamation projects.⁸⁹

Numerous industry players have tried to brand methane gas as a “clean” fuel, despite evidence of its climate and health harms.⁹⁰ That argument serves a key industry goal of opening more public lands to drilling and encouraging exports of methane gas. Jonah Energy has argued that U.S.-drilled gas is “some of the cleanest natural gas in the world” and thus environmentally superior to Russian-produced gas.⁹¹ This argument appears designed to appeal to the Biden administration, which has enthusiastically embraced exporting gas to Asia and Europe.⁹² However, liquified gas shipped across the ocean has a climate profile that is barely better than coal. An analysis released by the Natural Resources Defense Council found that the greenhouse gas footprint of U.S.-produced methane gas exported overseas is “at best, only modestly smaller than that of other fossil fuels” due to the energy-intensive process of turning gas into a liquid, transporting it across the ocean and then turning it back into a gas as well as releases of methane that happen along the way.⁹³

In testimony before a Senate committee in May 2023, Jonah Energy executive Paul Ulrich advocated for the relaxation of laws governing energy permitting, increased methane gas exports and drilling on public lands, arguing that “we must acknowledge that all energy sources have an environmental impact and stop the bias against hydrocarbons.” Ulrich also contended that western states, where most drilling is on public lands rather than state or private lands, are at a “decided disadvantage compared to other parts of the country” because public lands drillers must comply with more thorough environmental reviews.⁹⁴ Ulrich also called for pipeline construction to export western-produced gas to Asia,⁹⁵ in line with the fossil fuel industry’s gas export push, which threatens to raise prices for domestic consumers and lock in massive climate damage.⁹⁶

EIG and TPG were also investors in Great Western Petroleum, which was sold to Denver-based PDC Energy in 2022.⁹⁷ Chevron Corp. in May 2023, agreed to buy PDC for \$6.3 billion, in an exception to the trend of Big Oil companies selling off U.S. onshore drilling assets.⁹⁸ Independently of TPG, EIG is an investor⁹⁹ in Peak Exploration and Production, a driller focused on Wyoming’s Powder River Basin.¹⁰⁰

Carlyle Group, NGP

Public Lands Drillers: Tap Rock, Colgate Energy, Mallard, Hilcorp, EOG

NGP Energy Capital Management, also known as NGP or Natural Gas Partners, is a relatively small buyout firm, with a reported \$12.7 billion in assets under



management as of the first quarter of 2023.¹⁰¹ NGP is majority-owned by the Carlyle Group, one of the world’s largest buyout firms with \$381 billion¹⁰² in assets under management. Carlyle has held a majority stake in the company since 2012, according to NGP’s Securities and Exchange Commission filings.¹⁰³ Carlyle is entitled to 55% of revenue from NGP’s investments, an ownership stake that resulted in more than \$660 million in investment income, around half of Carlyle’s overall net income, in 2022.¹⁰⁴

NGP-owned Tap Rock Resources, founded in 2016, is one of the top five drillers¹⁰⁵ in the vast Permian Basin, which consists of more than 7,000 oil fields.¹⁰⁶ Since 2020, Tap Rock has reported more than 600¹⁰⁷ “major” environmental incidents to state regulators meaning unauthorized releases sufficiently large to endanger human health, threaten water sources or result in a fire.¹⁰⁸

NGP has been exiting some Permian Basin investments, announcing a deal in June 2023 to sell Permian Basin assets of Tap Rock Resources and Hibernia Energy to Civitas Resources for \$4.7 billion.¹⁰⁹ In 2022, NGP exited another Permian Basin investment, merging Colgate Energy with a publicly traded oil company, Centennial Resources, to form Permian Resources in 2022.¹¹⁰ NGP also owned Denver-based Mallard Exploration, which was sold to Bison Oil and Gas in early 2023.¹¹¹

Carlyle’s extensive investments in fossil fuels have substantial and growing carbon emissions, in part driven by upstream investments of which NGP makes up a large share.¹¹² Carlyle’s portfolio has

approximately \$22.4 billion in fossil fuel-based energy companies and only an estimated \$1.4 billion committed to renewable and sustainable energy companies—less than 1% of total assets under management.¹¹³ From 2011 to 2021, Carlyle invested in 91 energy companies that owned 972 energy-related assets, with 90% of these investments in fossil fuels. Research by the Private Equity Stakeholder Project, Americans for Financial Reform and Global Energy Monitor estimated that Carlyle’s investment in fossil fuel assets produced an estimated 277 million metric tons of CO2 emissions over a decade.¹¹⁴

Though competitors such as Apollo and Blackstone have been scaling back or limiting their fossil fuel investments, Carlyle has said its continued fossil fuel investments help oil and gas companies reduce their climate impact. “We can contribute to the energy transition both by investing and bringing more low-carbon energy on one side and, on the other, by using our skill set and expertise to accelerate decarbonization of traditional energy assets,” Macky Tall, head of Carlyle’s global infrastructure group, told the Wall Street Journal.¹¹⁵

It is not clear how Carlyle will achieve decarbonization of oil and gas assets. Carlyle excluded NGP’s emissions from its reporting on climate-warming emissions made to the Task Force on Climate-Related Financial Disclosures,¹¹⁶ an international task force born out of a 2015 summit of world leaders to look at climate issues in the financial sector.¹¹⁷ “They are telling one story to investors and doing something else that gets results,” Sean Field of the Centre for Energy Ethics at the University of St. Andrews in Scotland told the Associated Press.

Additional Carlyle oil and gas investments include a \$400 million four-year joint venture with publicly traded EOG Resources Inc, a major publicly traded oil and gas producer, to fund oil development in Ellis County, Oklahoma. Carlyle also partnered with Hilcorp Energy in 2015¹¹⁸ to purchase the oil drilling assets of ConocoPhillips in the San Juan Basin of Colorado and New Mexico for up to \$3 billion.¹¹⁹ Hilcorp is a large, privately owned oil producer run by billionaire Jeffrey Hildebrand, a former Exxon

executive. Hilcorp is the largest methane emitter in the country and, thus, the oil and gas driller with the largest impact on climate change, according to research by the Clean Air Task Force and Ceres.¹²⁰ In 2022, Hilcorp agreed to pay a \$930,000 penalty to settle allegations by New Mexico officials that the company failed to properly remediate six wells in New Mexico.¹²¹

Oaktree Capital Management, Old Ironsides Energy Public Lands Drillers: Caerus Oil and Gas

Los Angeles-based Oaktree Capital Management, co-



founded by billionaire investors Howard Marks and Bruce Karsh,¹²² is an alternative investment manager with about \$156 billion in assets under management, which includes 25 energy companies.¹²³ The firm is owned by the Canadian private equity firm Brookfield Asset Management, which acquired a majority stake in Oaktree in 2019.¹²⁴

Denver-based Caerus Oil and Gas, named for the Greek god of opportunity, was formed by Oaktree and Anschutz Investment Company in 2009¹²⁵ and has grown to operate more than 7,400 wells on 680,000 acres in the Piceance and Uinta Basins of Colorado and Utah.¹²⁶ Caerus has grown through numerous acquisitions of assets, from companies including ConocoPhillips, EOG Resources, PDC Energy and Occidental Petroleum.¹²⁷ Caerus’ \$737 million acquisition of Encana Oil & Gas in 2017, which included over 500,000 acres and 3,000 wells,¹²⁸ was partly financed with an investment from another private equity firm, Old Ironsides Energy.¹²⁹ Four hundred of the wells acquired during the Encana purchase produce less than two barrels of oil equivalent a day,¹³⁰ making them low-producing wells that generally emit large quantities of methane and produce little fuel.¹³¹

Caerus has been fined in environmental enforcement cases in both Colorado and Wyoming, paying a fine in Colorado of \$208,000 in 2021,¹³² and a \$140,000 penalty in 2022.¹³³ In Wyoming, the company agreed to pay \$87,500 to settle

state allegations of air quality violations in 2015.¹³⁴ Caerus said it aims “to support the prevention and mitigation of spills in our operations” in its 2022 sustainability report.¹³⁵ A company executive told the Colorado Sun in 2017 that Caerus evaluates all of its wells every year to identify wells suitable for retirement and supports financial assurance rules to ensure well cleanup.¹³⁶

In its 2022 sustainability report, Caerus says that “natural gas can play a critical role in replacing energy from solid fuels in developing countries, saving untold lives in the process.” It also argued that the U.S. should ramp up exports of LNG in the wake of the war in Ukraine, saying that “U.S. LNG can and should supply our European allies, replacing oil and gas produced by countries lacking the U.S.’s regulatory safeguards.”¹³⁷ In a 2021 opinion piece, Caerus CEO David Keyte touted Colorado’s orphaned well rules and his company’s environmental record, writing that, “I view it to be better to produce oil and gas here in Colorado under our strict environmental regulatory guidelines than import those same energy products from oppressive, foreign regimes that have poor human rights records and lack our environmental safeguards.”¹³⁸

In 2021, Oaktree entered into a \$1 billion partnership with Diversified Energy,¹³⁹ the largest well owner in the United States.¹⁴⁰ Diversified’s business model involves acquiring “long-lived, low-decline, low-cost assets.”¹⁴¹ Diversified’s business of acquiring aging oil wells, which started in Appalachia, has attracted intense scrutiny, with critics raising questions about whether the company has used misleading accounting¹⁴² to underestimate its own future¹⁴³ well cleanup costs. With funding from Oaktree, Diversified has expanded its operations into Louisiana, Oklahoma and Texas, which represents about 40% of the company’s production.¹⁴⁴

KKR & Co.

Public Lands Drillers: Crescent Energy, Spur Energy

Kohlberg Kravis & Roberts, also known as KKR & Co. Inc., is the New York private equity firm synonymous with the leveraged buyout boom of the 1980s. With

\$510 billion in assets under management,¹⁴⁵ KKR is developing oil and gas assets throughout the United States. The firm’s oil and gas investments attracted protests from climate activists in spring 2023, with protesters calling on the Museum of Modern Art in New York to remove its board chair, Marie-Josée Kravis, who is married to KKR co-founder Henry Kravis.¹⁴⁶

In 2019, KKR announced plans for a “multi-billion-dollar investment” in oil and gas exploration in partnership with Houston-based Spur Energy Partners, purchasing approximately 380 wells from Percussion Petroleum,¹⁴⁷ and another purchase of \$925 million worth of assets from Concho Resources¹⁴⁸ both in New Mexico.

Spur lists a small private equity firm, the Energy & Minerals Group, as a partner with KKR.¹⁴⁹ Spur has reported more than 2,600 “major” pollution releases to the New Mexico Oil Conservation Division since 2020.¹⁵⁰ New Mexico defines major pollution incidents as unauthorized releases sufficiently large to endanger human health, threaten water sources or result in a fire.¹⁵¹

Another KKR holding, Crescent Energy, was formed after a reverse merger with KKR-backed Independence Energy and publicly traded Contango Oil and Gas in 2021.¹⁵² Around the same time as the merger, Crescent Energy acquired ConocoPhillips’ gas assets in the Wind River basin of Wyoming for \$67 million.¹⁵³ Crescent Energy was able to amass more energy holdings in 2022 after the Federal Trade Commission forced¹⁵⁴ another private equity firm, EnCap Investments, to sell off drilling assets it had acquired from EP Energy in Utah for \$690 million due to concerns about EnCap’s dominant market share in Utah’s Uinta basin.



Much like Carlyle Group, KKR defends its decision to continue investing in fossil fuels. Ken Mehlman, former White House political director under George W. Bush, who leads KKR's public affairs operation, told Insider that KKR "can contribute to producing better outcomes than if we exited the space — and therefore transferred emissions — to other operators who may not share our commitment to stewardship."¹⁵⁵ Crescent Energy's 2021 sustainability report says the company wants to reduce "scope 1" emissions by 50% from 2021 levels, a measurement of direct emissions connected to the oil driller's own operations, rather than the far more significant emissions created when fossil fuels are burned.¹⁵⁶

Blackstone

Public Lands Driller: Legacy Reserves/Revenir Energy

Led by multi-billionaire Stephen Schwarzman,¹⁵⁷ Blackstone Inc. is the world's largest private equity manager with \$991 billion in assets under management, including real estate, private equity, hedge funds, lending and insurance.¹⁵⁸ Blackstone was a major backer of the U.S. oil and gas boom a decade ago, and its holdings have included onshore and deep-sea drilling, coal power plants, gas pipelines, LNG export terminals and pipelines. Blackstone was bullish on U.S. oil and gas drilling in the late 2010s but wound up being stung by losses during the late 2010s¹⁵⁹ oil bust.



One of Blackstone's U.S. investments, drilling firm Gavilan Resources, filed for bankruptcy in May 2020, citing a sharp decline in oil prices and a global price war among oil suppliers¹⁶⁰ and was ultimately sold at the fire-sale price of \$50 million.¹⁶¹ Blackstone's credit business was a major lender to Texas-based Legacy Reserves, an oil drilling limited partnership.¹⁶² The Texas-based company took on \$500 million in debt to make two acquisitions in 2015, was hit by the slump in oil prices and filed for bankruptcy in June 2019, handing control to lenders

including Blackstone and Wells Fargo & Co.¹⁶³ The company exited bankruptcy in December 2019, with a fresh investment of \$256 million and a new board of directors.¹⁶⁴ In March 2023, the company announced it would change its name to Revenir Energy, and is run by the former managers of Rolute Energy Corp.¹⁶⁵ The privately held company drills on more than 80,000 acres in Texas and New Mexico. It could not be determined whether Blackstone still has a stake in the company.

Blackstone executives say they are committed to funding renewable generation as the world moves off of fossil fuels. Blackstone started telling clients in 2022 that it would no longer make new private equity investments or loans to oil and gas exploration projects, instead focusing on other energy investments that have a more attractive risk-return profile. "It's not a moral or ethical stance. It is reading the signals in the market," Jean Rogers, Blackstone's head of environmentally and socially responsible investing, told Bloomberg News. "We're undergoing the transition to net zero and need to be responding assertively if we are going to capture the opportunity."¹⁶⁶

Apollo Global Management

Public Lands Driller: Northwoods Energy

Apollo Global Management is one of the world's largest private fund managers, with \$598 billion in assets under management.¹⁶⁷ In 2018, Apollo invested \$850 million in Northwoods Energy, which purchased onshore oil drilling assets of SM Energy for \$500 million, including more than 112,000 acres in Wyoming's Powder River Basin.¹⁶⁸ Northwoods Energy is one of several oil and gas companies that received Interior Department approval in the waning days of the Trump administration to drill 5,000 wells on a 1.5-million-acre site in Wyoming — a site about the size of Delaware. Environmental groups have sued to challenge the approval of the project, known as the Converse County Oil & Gas Project, citing harm to wildlife and greenhouse gas emissions.¹⁶⁹





A Civitas drilling rig adjacent to residential communities in north of Denver. Photo: Andrew Klooster, Earthworks

Apollo said in 2022 that it would stop investing in fossil fuels in its next buyout fund after sustaining heavy losses in the sector. Bloomberg reported that five out of nine natural resources investments Apollo made in its 2013 investment fund were losing money as of the end of the third quarter of 2021.¹⁷⁰

One of Apollo's missteps came from a 2012 deal to pay \$7.15 billion for EP Energy, the former oil and gas drilling operation of El Paso Corporation, along with private equity firm Riverstone Holdings and other investors.¹⁷¹ That deal failed,¹⁷² as EP Energy filed for bankruptcy in 2016 amid a slump in energy prices.¹⁷³ During the early days of the Covid pandemic, EP Energy's initial plan to exit bankruptcy collapsed¹⁷⁴ amid a sharp drop in oil prices. With oil prices starting to recover by the summer of 2020, EP Energy then executed a second exit strategy that slashed \$4.4 billion in debt¹⁷⁵. A year after exiting bankruptcy, EP Energy was purchased by another private equity firm, EnCap Investments, which was then forced¹⁷⁶ by the Federal Trade Commission to sell off drilling assets it had acquired from EP Energy in Utah due to concerns about EnCap's dominant market share in Utah's Uinta Basin.¹⁷⁷

Kimmeridge Energy Management **Public Lands Driller: Civitas**

The private equity firm Kimmeridge Energy Management, backed by Canada's largest public pension fund,¹⁷⁸



rolled up several Colorado oil and gas companies to form a new publicly traded company, Civitas Resources, in May 2021.¹⁷⁹ Most recently, the company announced a deal in June 2023 to pay \$4.7 billion for Permian Basin assets of Tap Rock Resources and Hibernia Energy, both of which are portfolio companies of NGP Energy.¹⁸⁰

Since the creation of Civitas, named for the word 'community' in Latin — the company has sought to rebrand as an environmentally conscious operator, saying it aimed to "become Colorado's first net-zero oil and gas producer" by reducing emissions and purchasing emissions offsets¹⁸¹ and pledged to plug 42 wells left abandoned by their prior owners and work with Project Canary to monitor emissions.¹⁸²

The prior oil and gas operators now owned by Civitas have a checkered environmental compliance history, including a nearly \$325,000 environmental penalty paid by Bonanza Creek Energy¹⁸³ in spring 2019 and two penalties worth nearly \$160,000 against Crestone Peak Resources in fall 2020.¹⁸⁴

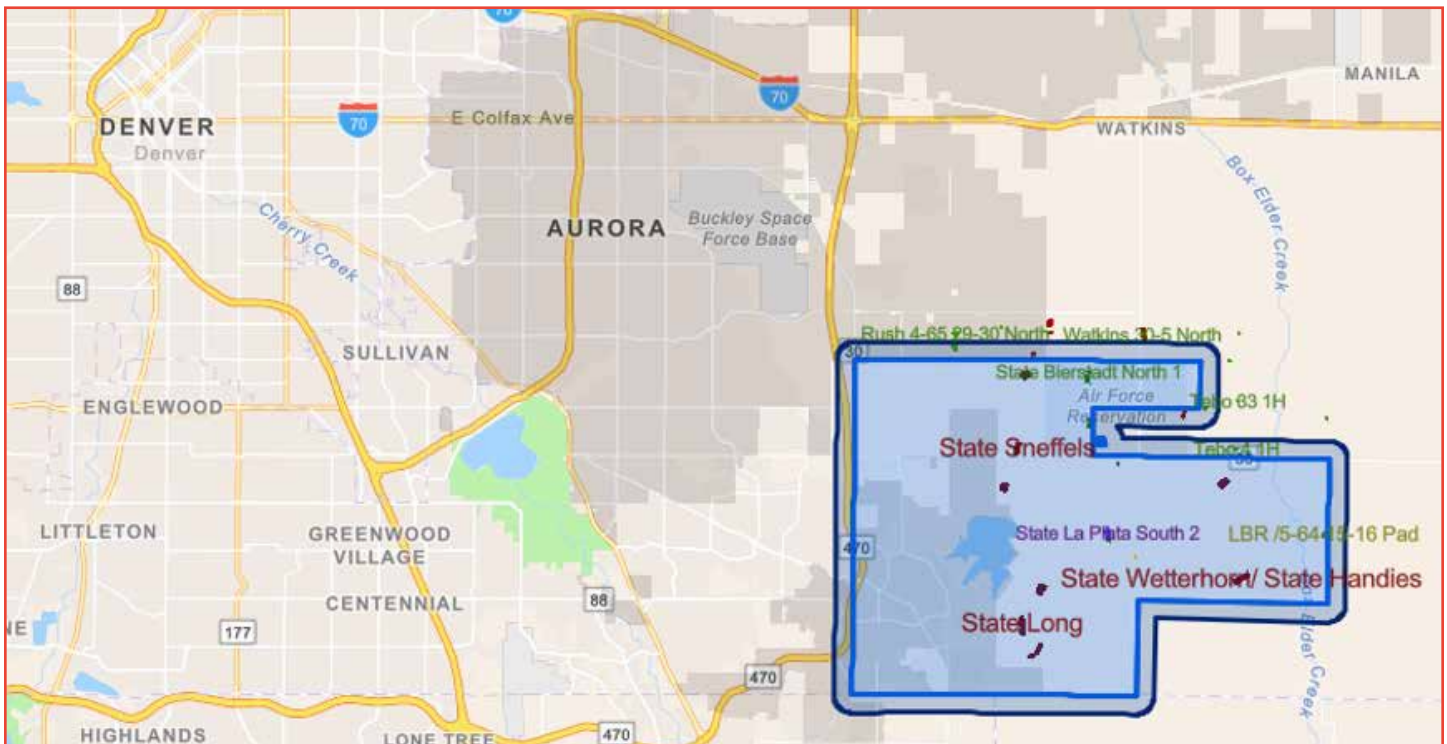
Another predecessor company, Extraction Oil and Gas, was at odds with Colorado neighborhood groups and local governments over drilling in residential areas and associated environmental and noise complaints.¹⁸⁵ In December 2021, after the Civitas acquisition, Extraction agreed to pay the U.S. Department of Justice \$462,000 to resolve allegations that it operated three oil wells on federal public lands without permission to do so, on top of more than \$880,000 paid over a similar infraction in 2020.¹⁸⁶

Extraction Oil and Gas also was an aggressive participant in Colorado politics, supporting the pro-fossil fuel group Protect Colorado, which worked to defeat anti-drilling initiatives in the state, by giving about \$4 million to the group since 2014, according to campaign finance records. After filing for bankruptcy, Extraction refused to identify the recipients of \$10 million¹⁸⁷ in political donations,

arguing that doing so would harm the company's business relationships.¹⁸⁸

Kimmeridge has worked to establish a reputation as an environmentally sensitive player, investing \$200 million in a company that generates carbon offset credits from forests.¹⁸⁹ The private equity firm's chairman, Ben Dell, has been critical of oil and gas industry practices, writing in an op-ed that "The industry has buried its head in the sand while the rest of the world evolved its stance on emissions, and continued to justify flaring and loose operating practices."¹⁹⁰

Nevertheless, Civitas has continued to push expanded drilling around Colorado, including beneath a reservoir in Aurora, an area east of Denver where residents of suburban homes have been battling against drilling in their neighborhoods, arguing partly that the use of large amounts of water for fracking makes little sense, given widespread concerns about sustainable water consumption in the west.¹⁹¹ County officials considered, then rejected a six-month moratorium on oil drilling in the area where Civitas plans to drill more than 170 oil and gas fracking wells.¹⁹²



Area in Arapahoe County, Co where Civitas is planning to drill more than 170 oil and gas fracking wells. Source: Rocky Mountain Wild

INEFFECTIVE OIL WELL REGULATIONS MAKE UNPROFITABLE INVESTMENTS PROFITABLE

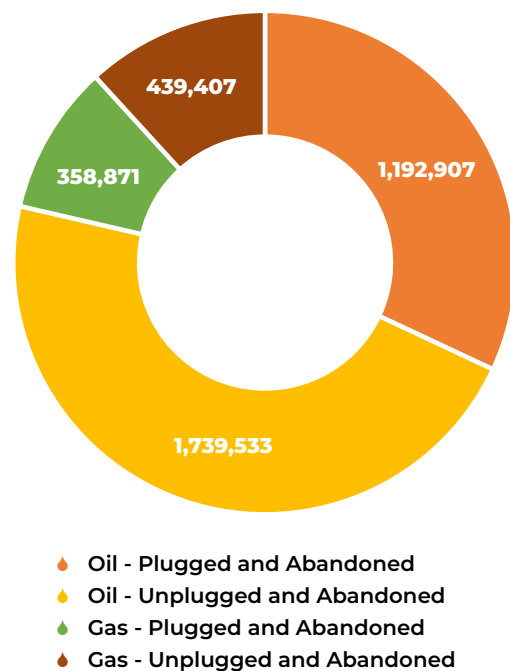


A Contango Resources facility in New Mexico. Photo: Charlie Barrett Earthworks

Around the country, oil wells and extraction equipment have long been abandoned by oil and gas drillers, left rusting and often unsealed.¹⁹³ Inactive wells can leak pollutants like methane and brine, and can contaminate water and release methane into the atmosphere.¹⁹⁴ As shown in Figure 6, the U.S. Environmental Protection Agency estimates there are about 3.7 million abandoned oil and gas wells nationwide, including about 2.2 million that have yet to be plugged.¹⁹⁵

Considerable uncertainty exists about the number of abandoned wells, and other research puts the number even higher. McGill University researchers estimated in 2021 that there are at least 4 million abandoned wells in the U.S.¹⁹⁶ Recent research identified more than 123,000 “orphaned” wells — wells with no known — owner as of April 2022, across the U.S., with the highest numbers in Ohio, Pennsylvania, Oklahoma, Kentucky and Texas.¹⁹⁷ These wells are a significant source of climate-warming emissions, emitting about 294,500 tons of methane in 2021 — as much annual climate-warming emissions as produced by about 1.5 million cars.¹⁹⁸

FIGURE 6
U.S. ABANDONED OIL AND GAS WELLS, 2021



Source: Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2021. U.S. Environmental Protection Agency

Even wells that have been inactive for extremely long periods of time can pose a threat to the climate and public health.¹⁹⁹ In the mid-2010s, academic researchers tested abandoned oil and gas wells in Pennsylvania²⁰⁰ and found that many leaked large quantities of methane.²⁰¹ Low-producing wells release significant climate-warming emissions — an issue that has come to light in recent years. A 2019 study based on two years of sampling in Pennsylvania found that a small portion of “super emitter” wells — 10% — accounted for 77% of methane emissions from those sites.²⁰² Another study published in 2022 found that low-producing oil and gas wells represent about 50% of methane emissions from all U.S. oil and gas well sites, even though those wells make up only about 6% of total oil and gas production.²⁰³ Such wells are hazardous to local communities. Leaking wells have been found across the country in rural and suburban areas alike in states including Kentucky,²⁰⁴ Texas,²⁰⁵ Louisiana,²⁰⁶ California²⁰⁷ and many more, even including a schoolyard in Wyoming.²⁰⁸

Most U.S.-produced onshore oil and gas comes from a small number of highly productive wells. Since 2013, more than half of U.S. oil and gas production has come from the small number of wells that produce more than 100 barrels per day. However, most operating wells — about 80% — produce less than 15 barrels per day, according to the U.S. Energy Information Administration.²⁰⁹ Efforts to reduce greenhouse gas emissions, if successful, are likely to increase the number of wells that the public could be required to clean up. A rapid shift to renewable energy and electrification would depress demand for fossil fuels and result in few buyers for older, low-producing oil wells.²¹⁰

Federal and state governments require oil and gas companies to pay for oil well plugging and remediation. Additionally, operators are required to post bonds to ensure that regulators have the funds to complete plugging if the operator goes out of business. However, these bonding rules do not typically mandate that companies set aside funds for the full cost of well cleanup. “Fundamentally flawed regulations, lax tracking and enforcement, and decades of corporations abandoning their obligations combine to create a perfect storm of conditions. Hundreds of thousands of oil and gas wells, tanks, pipelines, pits, and roads across the country have been built without adequate assurances that they will ever be cleaned up,” wrote the Western Organization of Resource Councils in a 2021 report.²¹¹

The Biden administration has acknowledged these problems. In a 2021 review, the Interior Department found that the federal oil and gas drilling program “fails to provide a fair return to taxpayers, even before factoring in the resulting climate-related costs that must be borne by taxpayers; inadequately accounts for environmental harms to lands, waters, and other resources; fosters speculation by oil and gas companies to the detriment of competition and American consumers; extends leasing into low potential lands that may have competing higher value uses; and leaves communities out of important conversations about how they want their public lands and waters managed.”²¹²

The lack of effective regulations for the cleanup of oil and gas wells provides a powerful economic incentive for deep-pocketed investors — including private equity firms — to defer paying the bill for the cleanup of old, polluting oil and gas wells,



“Hundreds of thousands of oil and gas wells, tanks, pipelines, pits, and roads across the country have been built without adequate assurances that they will ever be cleaned up” —
Western Organization of Resource Councils

sometimes indefinitely. Many wells produce only small quantities of fuel and are no longer attractive for major oil and gas companies to operate. As a result, the largest oil and gas companies have increasingly sold off older wells to other investors, especially in places such as California where the political climate is unfavorable to fossil fuel drilling.²¹³

To ensure the cleanup of hazardous and environmentally harmful sites, producers are required by state and federal laws to post collateral or purchase a surety bond before drilling costs. If the company abandons its wells or goes bankrupt, the bond is used to cover the cleanup expenses. Several studies of federal and state regulations have shown that oil drillers are not required to post enough in financial assurances or bonds to cover the cost of cleaning up old wells if an owner files for bankruptcy or is unable to pay the bill.²¹⁴ When a drilling company files for bankruptcy, state or federal officials may need to go to court to ensure they receive a payout from an already purchased cleanup bond.

Oil and gas reclamation bonding requirements vary considerably by state²¹⁵ and at the federal level.²¹⁶ The common practice in many states and at the federal level of allowing fossil fuel operators to post a “blanket bond” for all wells in a particular jurisdiction rather than individual bonds covering each well, acts as an extraordinary incentive for oil and gas companies to behave irresponsibly.

At the federal level, required bond minimums have not been updated in 60 years and do not cover the full cost of cleanup. Bonds can be as little as \$150,000 for all wells on all federal leases held by a company nationwide. According to the Government Accountability Office, the average value of bonds held by the Bureau of Land Management in 2019 was only \$2,122 per well whereas well reclamation costs can range from \$20,000 per well to \$145,000 per well.²¹⁷ In fact, GAO found that 84% of bonds, which cover 99.5% of federal wells, are insufficient to cover even the lower estimate of \$20,000 per well.



Civitas drilling operations near a residential community in Windsor, CO, Photo: Earthworks

TAX SUBSIDIES FAVOR OIL DRILLERS AND INVESTORS

In addition to the lack of effective safeguards ensuring that oil companies pay for well cleanup, tax breaks and other pro-fossil fuel policies subsidize investors who buy aging oil and gas wells. These subsidies are just a part of a broad constellation of fossil fuel subsidies in the U.S. that incentivize the development of fossil fuels and make new drilling — and keeping older wells pumping — more economically attractive than otherwise would be the case. A 2021 analysis by the Stockholm Institute found that 16 U.S. subsidies for fossil fuels could increase the profitability of U.S. oil and gas drilling by up to 68% over unsubsidized levels, based on 2019 oil and gas prices.²¹⁸ “If these support mechanisms encourage more exploration and extraction than would otherwise be economically viable, they lock in higher greenhouse gas emissions and perpetuate health, environmental, and financial risks to local communities and the wider public,” the paper’s authors wrote.

A key piece of the tax code that provides enormous benefits to the U.S. fracking industry and its investors is a tax code provision created nearly

100 years ago called the percentage depletion allowance. This tax provision lets smaller oil and gas producers deduct 15% of their revenue from their pretax income, cutting their tax bill. Up to 25% can be deducted for low-producing marginal wells.²¹⁹ This tax break is expected to cost about \$14 billion²²⁰ over the next decade, according to U.S. Treasury Department estimates. The Biden administration has proposed eliminating this tax break along with others that benefit the oil and gas industry,²²¹ and industry groups have mobilized in D.C. trying to protect it. “This provision supports the development of U.S. oil and natural gas, along with other mineral resources, that would otherwise be uneconomic to produce,” the National Stripper Well Association, which represents the industry, says on its website.²²² Congress in 2004 enacted another break designed specifically to prop up oil and gas production from marginal wells when prices are low. That tax break is expected to cost \$570 million over the next 10 years, according to U.S. Treasury projections.²²³



If these support mechanisms encourage more exploration and extraction than would otherwise be economically viable, they lock in higher greenhouse gas emissions and perpetuate health, environmental, and financial risks to local communities and the wider public — Stockholm Institute

DITCHING CLEANUP OBLIGATIONS THROUGH BANKRUPTCY



Roadside garbage and oil and gas infrastructure in the Permian Basin of New Mexico: Photo: WildEarth Guardians

The typical private equity business structure creates an enhanced risk of bankruptcy, as the industry's business model is based on high levels of debt. Private equity firms have continued to increase their debt loads. As recently as 2020, 80% of the private equity deals were highly leveraged, borrowing at more than six times a key measure of financial performance of a company's financial performance.²²⁴

The sale of marginal wells to private equity firms and other investors raises the prospect that these wells may spend several years in a limbo state as they are transferred one or more times to entities with increasingly shaky finances. By the time wells stop producing entirely, they may be held by poorly capitalized companies that have a high risk of filing for bankruptcy, leaving taxpayers on the hook for the cost of well cleanup.

Companies that fail to comply with environmental cleanup laws tend to be smaller players with shaky finances rather than oil and gas giants, which often seek to sell off low-production wells due to their lower profit margins.

Lee Fuller, executive vice president of the Independent Petroleum Association of America, acknowledged this dynamic in an interview with the Washington Examiner, saying that oil and gas is a "food chain industry" in which smaller players do not have the resources for regulatory compliance. While Fuller complained about "huge regulatory costs" for smaller oil and gas companies,²²⁵ the solution is not to relax regulations. Rather, policymakers must ensure that cleanup costs are funded long before oil and gas wells are sold off to owners with ever-shakier finances.

Bankruptcy law can in some situations allow corporate owners of oil and gas assets to dodge responsibility for cleanup. The lack of effective regulation serves as a tacit subsidy for oil and gas companies and investors, allowing them to profit from public resources while externalizing their costs and responsibility for the consequences. Firms that are more financially constrained or close to bankruptcy fail to prioritize pollution mitigation projects, as they face higher capital costs and debt

obligations and other financial priorities. Companies close to bankruptcy are also incentivized to reap the benefits of polluting because most of the costs of pollution are often discharged through the bankruptcy process, thereby shifting those environmental cleanup costs and risks to nearby communities and taxpayers.²²⁶

Bankruptcy judges are also mainly focused on restructuring companies to maintain their operations and thus are able to give lower priority to environmental and public health interests — such as well cleanup obligations. The federal bankruptcy code gives short shrift to environmental protection obligations during bankruptcy, as many cleanup obligations are not legally categorized as debts.²²⁷ “There is no guarantee an insolvent oil company’s (plugging and abandonment) obligations will survive a bankruptcy proceeding,” wrote Nicole Layton and Ginger Sprong in the *LSU Journal of Energy Law and Resources*. “Well-plugging obligations are seldom classifiable as claims a bankruptcy court must prioritize over other classes of debtor obligations.”

The case of Fieldwood Energy, an offshore drilling company started by private equity firm Riverstone Holdings, shows that it is indeed possible to hold oil and gas companies accountable if laws are put in place to do so. Fieldwood, a Houston-based Gulf of Mexico offshore drilling operator, rapidly expanded, buying Apache Corp.’s Gulf of Mexico drilling assets in 2013 for \$3.8 billion.²²⁸ The company then ran into trouble amid weak oil prices, filing for bankruptcy twice in 2018 and 2020.²²⁹ Under federal laws²³⁰ previous operators of offshore drilling rigs can be held liable for environmental cleanup costs. A

federal judge ruled in June 2021²³¹ that Fieldwood could pass along some of the \$7.2 billion in environmental cleanup costs to prior operators and insurance companies, over the objections of major oil companies including Chevron, Marathon Oil, Hess and BP. Fieldwood was able to exit bankruptcy in August 2021, through a complex restructuring transaction in which it sold off its assets for \$1 billion to a group of its lenders, who received control of a new company, QuarterNorth Energy.²³²

Federal law also gives the U.S. government the ability to hold drilling companies accountable for cleanup on federal lands. An Interior Department memorandum in 2021 noted that “all previous” oil and gas companies that held an interest in an oil lease “since the surface disturbance occurred or the well was drilled” may be held liable for cleanup obligations on federal lands.²³³ At the state level, laws vary on whether it is possible to hold predecessor owners of oil and gas wells accountable for environmental damage.

The coal industry’s record of dodging cleanup costs in recent decades highlights the need for strict regulations to ensure that extractive industries pay for cleaning up their operations. Coal companies over the past decade used federal bankruptcy law to their advantage, acquiring other companies’ bankrupt mines to turn a profit in periods where coal prices are high, then declaring bankruptcy, where environmental liabilities take a back seat to banks and other creditors.²³⁴



“There is no guarantee an insolvent oil company’s (plugging and abandonment) obligations will survive a bankruptcy proceeding,” — Nicole Layton and Ginger Sprong, *LSU Journal of Energy Law and Resources*

PROBLEM OPERATORS, INDUSTRY PUSHBACK BEDEVIL STATES

Several oil-producing states are grappling with oil and gas companies that abandon wells and leave a mess for taxpayers to clean up.²³⁵ In general, state agencies have been deferential to the oil and gas industry, which often plays a large role in state politics and fights against reforms. In several states, the consequences are already becoming clear. Below are some notable examples:

TEXAS

The lack of cleanup of oil and gas wells is an enormous problem in Texas, the largest oil producer in the U.S., a state that, combined with New Mexico, produces more crude oil than the rest of the U.S. put together.²³⁶ The Texas state agency that regulates oil, gas and pipelines estimates that there were nearly 7,900 “orphaned” wells — abandoned wells with no known owner — in Texas in fiscal 2022, up by 944 from a year earlier. The state lists more than 22,000 known wells that are out of compliance with state cleanup rules.²³⁷

A comprehensive look at the state’s oil and gas cleanup program by the Texas-based advocacy group Commission Shift found in 2022 that the state’s oil and gas drillers have avoided plugging their wells by keeping them producing low volumes to dodge cleanup requirements.²³⁸ Making matters worse, Texas offers tax incentives for low-producing wells, allowing drillers to profit from wells that make little economic sense.²³⁹ In a state where officials pride themselves on adhering to “free” market principles and politicians loudly complain about support for renewable energy,²⁴⁰ this sort of dirty energy corporate subsidy program attracts little attention.

In Texas, a private equity-backed firm, Weatherly Oil & Gas, filed for bankruptcy in February 2019, leaving more than 170 wells to be cleaned up at an estimated cost of more than \$13 million.²⁴¹ The bankrupt company, backed by private equity firm Vortus Investment, could only pay \$3.4 million of the cleanup bill, according to a bankruptcy document²⁴²

unearthed by the investigative group Documented, leaving a cleanup bill of \$10 million.

Though Texas has long had cleanup compliance requirements on the books, they have not been updated in decades, and officials at the state’s oil and gas regulator — the Texas Railroad Commission — are notoriously deferential to industry. In May 2020 after a dramatic plunge in oil prices at the start of the pandemic, Texas oil and gas regulators even suspended key oil and gas industry rules, including environmental cleanup requirements, without public notice.²⁴³ Public Citizen sued²⁴⁴ the Texas oil and gas regulator over the issue.

Even in oil-friendly Texas, the state’s lax attitude toward regulating oil and gas drillers has become a political issue. Elected members of the state’s powerful, industry-allied Republican-controlled oil and gas regulator facing both primary²⁴⁵ and general election²⁴⁶ challenges from critics who have demanded a tougher stance to enforcing and tightening well-cleanup rules. Those challenges, however, have been unsuccessful so far.

COLORADO

State officials have been battling for several years with oil and gas companies. K.P. Kauffman, an oil drilling company was repeatedly cited²⁴⁷ by state officials for allegedly failing to follow the state’s instructions to clean up numerous hazardous oil spills. An analysis by Rocky Mountain Wild found that K.P. Kauffman has more than 1,200 wells in Colorado averaging less than 1 barrel of oil per day in production and 279 spills since 2020.²⁴⁸ In February 2023, state officials revoked the company’s license to drill oil and gas.²⁴⁹ A month later, K.P. Kauffman sued the state, seeking to overturn the state’s order.²⁵⁰

Colorado’s long-running battle with K.P. Kauffman was preceded by the 2019 bankruptcy of a small drilling firm, PetroShare.²⁵¹ The company, run by former Denver Broncos star Steve Foley, left



Alleged unauthorized gas flaring at an Ameredev site in New Mexico. Photo: State of New Mexico.

Colorado taxpayers on the hook for millions to clean up about 55 wells.²⁵² The company only posted bonds worth \$325,000, and the company and creditors tried to claim that money during bankruptcy proceedings. To obtain this money, state officials had to give up on collecting more than \$725,000 in fines assessed to the company and allowed the company that bought PetroShare's assets out of bankruptcy to abandon wells it did not want to operate.²⁵³

Seeking to tighten oversight of irresponsible drillers, Colorado lawmakers passed legislation in 2019 requiring state oil and gas regulators to establish more robust cleanup requirements.²⁵⁴ These new mandates were enacted as part of a broad set of reforms that changed the mission of the state's oil and gas regulator from explicitly fostering oil and gas development to regulating the industry.²⁵⁵ However, some oil and gas operators — especially smaller companies — fought the changes and many are still resisting.²⁵⁶ In spring 2023, the state received proposals from the oil and gas industry to put up about \$460 million in financial guarantees for cleanup,²⁵⁷ but

some operators are trying to skirt the state's rules by filing financial assurance plans that provide far less than what will be necessary for cleanup.²⁵⁸

An analysis by Rocky Mountain Wild found operators that had proposed to post as low as 3% of cleanup costs estimated by Colorado officials.²⁵⁹ The Colorado Sierra Club, in a report analyzing the state's reforms to oil and gas laws, found that the state's oil and gas industry "still largely gets its way with the agency and residents near oil and gas facilities are still suffering from negative effects to their health, safety, and welfare," and concluded that the state's oil regulator "operates from an outlook that presumes permitting of new facilities and the continued operation of existing facilities rather than first determining whether those activities are truly protective of people, the environment, and wildlife."²⁶⁰

NEW MEXICO

Home to the vast Permian Basin shared with Texas, New Mexico became the second-largest state for crude oil production in the U.S. in 2021.²⁶¹ The state's

oil production boom has meant a windfall for the state's budget, but environmental enforcement has been chronically underfunded and has not been able to keep up with the rapid pace of drilling.²⁶²

In the San Juan basin, in the northwest corner of New Mexico, more than 85% of oil wells controlled by the top 10 oil and gas operators are controlled by private equity firms, an investigation by Searchlight New Mexico found in 2022.²⁶³ New Mexico officials in June 2023 ordered drilling firm Ameredev, backed by the private equity firm EnCap Investments, to pay a \$40 million fine over allegations that the Austin, Texas company drilled for oil and gas without any connection to a gas pipeline, burning off the gas instead.²⁶⁴ "We are very concerned with the pattern and practice we are seeing in Ameredev's operation given the fact that the operator and its facilities are relatively new in New Mexico," said Dylan Fuge, director of the New Mexico Oil Conservation Division, in a press release.²⁶⁵

New Mexico passed legislation in 2021 to combat oilfield spills, but environmental groups in the state say enforcement has not kept pace.²⁶⁶ Conservation and environmental advocates in New Mexico have been pushing for legislation that would toughen oversight of the state's oil and gas industry, hiking penalties and denying permits for companies that break the law under a comprehensive rewrite of the state's 1934 oil and gas law.²⁶⁷ A 2021 study found that drillers in New Mexico had only secured about \$201 million in financial coverage to cover the cost of well cleanup, compared with a projected cleanup cost of nearly \$8.4 billion for wells on state and private lands.²⁶⁸

CALIFORNIA

The Golden State faces staggering cleanup costs for decades of oil and gas drilling. According to a May 2023 study by Carbon Tracker Initiative, California faces a bill of at least \$13.2 billion for decommissioning onshore oil and gas drilling infrastructure and concluded that even if the state's oil companies directed all future profits to oil well cleanup — an unlikely scenario — California taxpayers would still be on the hook for \$6.9 billion.²⁶⁹

Oil and gas production in California has slowed dramatically over the past decade, and new drilling has also slowed. Major oil producers have exited the state, selling or spinning off operations amid growing political pressure to move away from fossil fuels. The state's largest oil driller, California Resources Corp., created as a spinoff²⁷⁰ of Occidental Petroleum assets, filed for bankruptcy in 2020. California Resources later emerged, but serious concerns remain about the company's ability to handle cleanup costs.

Aera Energy, a jointly owned Shell-Exxon Mobil business that produces nearly 25% of California's oil output, was sold to the German asset manager IKAV in September 2022.²⁷¹ In announcing the deal, the company's chairman emphasized a "continued need for oil and gas and for these assets to be operated safely and responsibly to facilitate a smooth and sustainable transformation of our energy supply." The managers of Canada's \$536 billion pension fund, CPP Investments, purchased a 49% stake in the venture and asserted that "enabling emissions reduction and business transformation in the energy sector can drive strong returns for long-term investors as part of the whole economy transition."²⁷² However, it remains to be seen whether these promises will be fulfilled in the long run.

APPALACHIAN STATES

In the Appalachian states of West Virginia, Ohio and Pennsylvania, the birthplace of the modern oil and gas industry, Diversified Energy has built up an empire of aging gas wells, becoming the largest well owner in the country and triggering serious questions about whether it can cover the eventual cleanup bill. Diversified Energy, a Birmingham, Ala.-based company founded in 2001 by West Virginia native Rusty Hutson, Jr.,²⁷³ was the subject of a groundbreaking Bloomberg News investigation²⁷⁴ in 2021, in which reporters visited more than 40 Diversified well sites with methane-detection equipment and found methane leaks at most sites they visited. The Bloomberg report also raised questions about Diversified's accounting practices, highlighting evidence that Diversified estimated its cleanup liability for wells at a far lower level than the prior owner of the same wells. Diversified has a \$1 billion partnership with private equity firm Oaktree Capital that has financed additional acquisitions of wells.²⁷⁵

In a series of reports, the Ohio River Valley Institute has raised probing questions about Diversified's finances, including the company's projections that it has enough cash flows over the next 50 years to retire 72,000 wells while also paying out dividends and retiring its debt over the next decade. By stretching out its projections for how long its wells can produce and using a lower-than-typical assumption for well-plugging costs, the company can reap cash from acquisitions of new wells while pushing out cleanup costs long into the future.²⁷⁶ Diversified also has benefited from the federal marginal wells tax credit, according to its financial filings²⁷⁷ and stands to benefit from federal well cleanup spending as well. A Diversified subsidiary, Next LVL Energy, has won bids on federally funded well-cleanup grants in Ohio and West Virginia.²⁷⁸

In Pennsylvania, the birthplace of the global oil industry, state lawmakers have done the industry's bidding and barred state environmental regulators from tightening requirements for the cleanup of

many wells. Legislation passed in 2022 left bonding requirements for existing wells at \$2,500, compared with an average cleanup cost of about \$68,000 per well in Pennsylvania, and precluded state regulators from raising bond amounts for the next ten years.²⁷⁹

Pennsylvania environmental regulators have identified more than 3,300 violations by oil and gas drillers who attempted to abandon wells since 2017.²⁸⁰ The state's top environmental regulator criticized the state's oil and gas industry in sharp terms after Republicans passed legislation freezing bonding rates, writing a report that: "The conventional oil and gas industry's recent record of compliance with Pennsylvania law is simply not good, particularly with regard to improper abandonment of wells... A significant change in the culture of non-compliance as an acceptable norm in the conventional oil and gas industry will need to occur before meaningful improvement can happen."²⁸¹



Drilling in the Powder River Basin of Wyoming. Photo: Powder River Basin Resource Council

CONCLUSION

Despite record-high oil and gas profits in 2022,²⁸² there are numerous signs that the business model for domestic onshore production of oil and gas will become more challenging in the coming years. Many oil and gas executives acknowledge that the U.S. oil and gas boom is winding down. In November 2022, John Hess, CEO of oil producer Hess Corp, told investors that U.S. oil production would likely peak at 13 million barrels per day in the coming years and plateau from there.²⁸³

New government rules and investments promoting decarbonization and renewable energy, such as federal climate and energy legislation signed by President Joe Biden last summer, California's ban on the sale of gasoline-powered cars by 2035,²⁸⁴ and potential bans on new methane gas hookups in new buildings²⁸⁵ could lower consumer demand for oil and gas. That means considerable risk for investors in fossil fuels: One study found that \$1.4 trillion in oil and gas drilling assets around the globe are at risk of being stranded.²⁸⁶ According to U.S. government projections,²⁸⁷ renewables are projected to make up 26% of U.S. power generation in 2024 — twice as high as in 2013,²⁸⁸ while the use of gas or power production is expected to decline slightly in that same timeframe.²⁸⁹

With the long-term future of the oil and gas industry uncertain, federal and state governments must work to make sure that non-producing oil and gas wells are properly decommissioned, and that funding is put in place in advance to ensure that wells at high risk of being abandoned can be decommissioned properly.

At the federal level, the Biden administration in July 2023 proposed a long-awaited rule to tighten requirements for oil and gas well cleanup.²⁹⁰ These rules for federally owned land are sure to generate pushback from oil and gas companies, but the Biden administration must aggressively crack down on long-standing oil and gas giveaways and make the industry pay its own way.

Rules for federal wells alone, even if robust and aggressively enforced, are not enough. For states such as West Virginia and Texas, where most drilling is on private lands, a broader approach is needed. One approach would be to set up a national trust fund to pay for the cleanup of abandoned wells, funded by an industry-wide production fee.²⁹¹ Other pieces of reform can include requirements that state officials examine whether a company is financially solvent — and has enough financial capacity to plug a well — before it starts drilling.

States should impose such requirements to verify that financial assurances for cleanup have been provided when a well is transferred to a new owner. They should also establish strict timelines to ensure that wells are plugged quickly, and surrounding land is restored. At the federal level, Congress should consider changes to the bankruptcy code to give higher priority to oil well decommissioning and environmental remediation claims.

As the global economy transitions to a low-carbon energy future, continued long-term investments in fossil fuels could wind up being worth significantly less or nothing at all. Private equity firms and other fossil fuel investors must take seriously the risk of pouring money into what could become worthless assets due to the global push to transition to a decarbonized economy.

Though the Biden administration has made progress on many fronts to tackle the climate crisis, it has enabled more drilling on public lands and waters, sparking strong opposition to the administration's plans for drilling in the Arctic and Gulf of Mexico. Restrictions on new oil and gas drilling and infrastructure on public lands and waters are crucial to reducing carbon pollution. The Biden administration must update outdated federal fossil fuel leasing and permitting programs to align with the nation's climate commitments and ensure that polluters, rather than the public, pay to clean up the industry's mess.

APPENDIX

APPENDIX TABLE 1

PRIVATE EQUITY FIRMS INVESTING IN ONSHORE OIL AND GAS DRILLING ON PUBLIC LANDS, BY ROYALTIES PAID TO US GOVERNMENT (2017-2022)

Sources: Department of Interior, Bureau of Land Management Pitchbook, PESP/Public Citizen Research

Investor(s)	Oil Co.	PE investment timeline	Federal Royalty Rev While PE-backed
Kayne Anderson, Warburg Pincus	Terra Energy	2016-current	\$340,375,522
TPG Capital, EIG Global Energy Partners	Jonah Energy	2014-2021	\$301,468,063
NGP	Tap Rock Resources	2016-current	\$230,944,634
Oaktree Capital Management, Old Ironsides Energy	Caerus Oil and Gas	2017-current	\$194,341,035
KKR, The Energy & Minerals Group	Spur Energy	2019-current	\$103,840,170
EnCap Investments	Enduring Resources	2017-current	\$92,445,146
KKR	Crescent Energy/ Contango Resources	2021-current	\$87,861,510
Blackstone	Legacy Reserves	2019-current	\$80,161,531
NGP	Mallard Exploration	2017-current	\$70,496,076
EIG Global Energy Partners	Peak Exploration and Production	2018-current	\$58,273,757
Quantum Energy Partners	Koda Holdings	2018-current	\$57,269,490
Warburg Pincus	Chisholm Energy	2016-2021	\$56,223,117
EnCap Investments	Ameredev	2017-current	\$53,923,011
Apollo Global Management	Northwoods Energy	2018-current	\$37,549,979
EIG Global Energy Partners	Maverick Natural Resources	2015-current	\$27,969,015
Lime Rock Partners	Lime Rock Resources	2019-current	\$27,352,770
Kayne Anderson	HRM Resources	2018-current	\$26,835,201
Kimmeridge Energy Management	Civitas Resources	2021-current	\$25,632,659
Kayne Anderson	Kraken Resources	2012-current	\$16,149,433
Quantum Energy Partners	Middle Fork Energy	2017-2020	\$15,859,492
Pearl Energy Investments, NGP	Colgate Energy	2016-2022	\$13,445,642
Trace Capital Management	Rockies Resources	2020-current	\$11,074,478

Investor(s)	Oil Co.	PE investment timeline	Federal Royalty Rev While PE-backed
Warburg Pincus	Citizen Energy	2018-current	\$4,827,086
EIG Global Energy Partners	Great Western Petroleum	2018-2021	\$4,179,652
Pearl Energy Investments, NGP	Avad Energy Partners	2017-current	\$2,669,908
Vortus Investment	Weatherly Oil	2017-2019	\$2,161,071
Kayne Anderson	89 Energy	2021-current	\$2,011,908
Kayne Anderson	Flywheel Energy	2018-current	\$819,834
EnCap Investments	Xcl Resources	2018-current	\$650,029
Kayne Anderson	Panther Energy	2013- current	\$503,224
EnCap Investments	EP Energy	2021-current	\$194,172
Warburg Pincus	Ridge Runner	2018-2021	\$24,561
Carlyle Group	Hilcorp	2015-2021	n/a
Oaktree Capital Management	BKV	2020-current	n/a
Carlyle Group	Eog Resources	2017-2021	n/a
Total			\$1,947,533,178

APPENDIX TABLE 2

ESTIMATED CLEANUP COSTS FOR PRIVATE EQUITY-BACKED OIL AND GAS DRILLERS OPERATING ON PUBLIC LANDS

Sources: Department of Interior, Bureau of Land Management, Pitchbook, PESP/Public Citizen Research. Analysis of U.S. Bureau of Land Management Automated Fluid Minerals Support System data. Cleanup costs assume one well per federal drilling permit, and a low cleanup cost of \$20,000 per well and a high cleanup cost of \$145,000 per well as well as average bond coverage of \$2,122 per well, as estimated by the Government Accountability Office. For permits that were not yet drilled, we estimated that 43% would proceed to drill, by state, over fiscal year 2017-2021, based on Bureau of Land Management annual statistics.

PE Investor(s)	Operator(s)	Approved Federal Permits Since 2017	Projected for Cleanup	Estimated Bonding	Cleanup Estimate (Low)	Cleanup Estimate (High)
Kayne Anderson, Warburg Pincus	Terra Energy	597	560	\$1,188,214	\$10,010,786	\$80,004,536
TPG Capital, EIG Global Energy Partners	Jonah Energy, Great Western Petroleum	438	384	\$814,530	\$6,862,470	\$54,843,720
NGP, Carlyle	Tap Rock Resources, Mallard Exploration	450	369	\$783,145	\$6,598,055	\$52,730,555
Oaktree Capital Management, Old Ironsides Energy	Caerus Oil and Gas	360	247	\$524,431	\$4,418,369	\$35,310,869
Quantum Energy Partners	Koda Resources/ Middle Fork Energy	383	227	\$482,522	\$4,065,278	\$32,489,028
EnCap Investments	Ameredeve, Enduring Resources, XCL Resources	266	174	\$368,507	\$3,104,693	\$24,812,193
Kimmeridge Energy Management	Civitas Resources	169	156	\$330,799	\$2,787,001	\$22,273,251
KKR, The Energy & Minerals Group	Spur Energy, Percussion Petroleum	185	131	\$277,664	\$2,339,336	\$18,695,586
Apollo Global Management	Northwoods Energy	197	99	\$209,993	\$1,769,207	\$14,139,207
Pearl Energy Investments, NGP	Colgate Energy	80	63	\$134,683	\$1,134,717	\$9,068,467

PE Investor(s)	Operator(s)	Approved Federal Permits Since 2017	Projected for Cleanup	Estimated Bonding	Cleanup Estimate (Low)	Cleanup Estimate (High)
Warburg Pincus	Chisholm Energy, Ridge Runner Resources	82	63	\$134,089	\$1,129,711	\$9,028,461
EIG Global Energy Partners	Peak Exploration and Production, Maverick Natural Resources	82	61	\$130,461	\$1,099,139	\$8,784,139
Blackstone	Legacy Reserves	97	57	\$121,166	\$1,020,834	\$8,158,334
Kayne Anderson	Kraken Oil & Gas, Panther Energy, 89 Energy, HRM Resources	47	44	\$93,686	\$789,314	\$6,308,064
Trace Capital Management	Rockies Resources	18	15	\$32,148	\$270,852	\$2,164,602
Carlyle/Hilcorp Joint Venture	Hilcorp	19	11	\$23,384	\$197,016	\$1,574,516
Lime Rock Partners	Lime Rock Resources	11	10	\$20,923	\$176,277	\$1,408,777
KKR	Crescent Energy	16	8	\$17,018	\$143,382	\$1,145,882
Oaktree/BKV Joint Venture	BKV	3	3	\$6,366	\$53,634	\$428,634
Carlyle/EOG Joint Venture	EOG	2	2	\$4,244	\$35,756	\$285,756

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