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Fuelling the Future: Energy Giants Enter the Mining Sector


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Introduction

The global energy transition is not just altering how we produce and consume energy – it is also redrawing the boundaries between industries. Perhaps nowhere is this more evident than in the increasing interest of oil and gas companies in the critical minerals sector, particularly in lithium extraction. As the demand for critical minerals grows, energy majors are exploring how their existing skills and resources can be leveraged in this area. This chapter explores this evolving trend, its drivers, and its implications for both sectors.

What Are Oil and Gas Companies Saying and Doing?

A number of major oil and gas companies have already taken steps into the critical minerals sector. At this stage, their interest appears primarily focused on lithium and Direct Lithium Extraction (or "**DLE**") technologies. DLE is designed to extract lithium from brine sources faster, more efficiently, and with less environmental impact than the traditional evaporation and processing method, by bypassing the evaporation step. Instead, it uses chemical, physical, or biological processes to selectively remove lithium ions from brines.

The energy companies entering this space include some of the world's largest:

- ExxonMobil has stated that it aims to become a leading lithium supplier in the US by 2030, using DLE technology to extract lithium from deep brine reservoirs in the Smackover Formation in Southern Arkansas. The project is targeting commercial production by 2028.
- Equinor has partnered with Standard Lithium to develop subsurface lithium resources, also in the Smackover Formation. It has also invested in France's Lithium de France to develop DLE and geothermal projects in France.
- Chevron recently entered the US domestic lithium sector, announcing its acquisition of two acreage positions in the Smackover Formation on 17 June 2025.
- Occidental Petroleum is pursuing lithium extraction through a joint venture with BHE Renewables, a Berkshire Hathaway company. This venture aims to extract lithium from geothermal brines in California.
- SLB (previously Schlumberger), one of the major oilfield services companies, is developing a DLE system in Nevada, with commercial production projected for 2027.

This trend is not just limited to the US. National oil companies from around the globe have also commenced investing in DLE technology and processes:

- YPF, the national oil company of Argentina, is collaborating with Israel-based XtraLit on DLE projects in Argentina.
- Saudi Aramco and ADNOC are exploring lithium extraction from their regional oilfield brines in Saudia Arabia and the UAE.
- Saudi Arabia's Manara Minerals also invested US$2.6 billion for a 10% stake in Vale's base metals unit in 2024, signalling Saudi Arabia's wider strategic intent to diversify its investments into the mining sector.

Energy companies in the mining space is not as unique as it might sound to younger readers. Historically, ExxonMobil, Chevron, BP, Shell and Total all had some form of mining divisions, often focused on energy-related minerals such as uranium and coal. Although they largely exited their mining operations by the late 1990s, the recent trends can be seen as a return to the sector rather than a new development.

Is the Convergence Trend Limited to Lithium?

So far, most of the interest from energy companies has been limited to projects that involve lithium extraction from brines via DLE, where their expertise aligns. Many oilfield brines are naturally rich in lithium, and the core capabilities (such as drilling, pumping, processing and reinjection) mirror those of oil production.

The Smackover Formation, where much of the US interest in lithium extraction has so far focused, was once the largest producing oilfield in the world, offering both a familiar setting for oil companies and legacy infrastructure. Energy companies are uniquely placed to deploy DLE technologies alongside their existing operations, and could leverage existing land rights in regions where there have already been operations to explore for and produce hydrocarbons.

DLE also offers a new revenue stream from what was once a waste product – produced water. Hundreds of millions of barrels of water are produced daily from upstream oil and gas operations, most of which is discharged, reinjected, or recycled, with only a tiny percentage yielding any form of economic benefit to operators. If proven effective, DLE could be used to monetise what has traditionally been an expensive operational burden.

Beyond lithium extraction, there has not yet been any notable movement into other critical minerals like cobalt, rare earths, or copper, at least in terms of extraction, nor into traditional hard rock mining. However, there may be growing interest in processing these materials, where chemical and refining expertise is transferable. ExxonMobil, for example, has stated publicly that it sees an opportunity in the market for synthetic graphite for EV battery anode materials, and is looking at ways to produce graphite from byproducts of their oil refinery operations (which, again, leverages existing operational capabilities).

What is Driving the Push?

The primary driver is the global energy transition. As the world shifts from fossil fuels to renewables and electric vehicles, the demand for critical minerals has soared. Energy majors want a role in this new energy value chain, especially where it fits neatly with their existing resources and core capabilities.

Investing in critical minerals provides opportunities to secure new revenue streams and to hedge against oil price volatility and the longer-term anticipated decline in demand for fossil fuels (where the International Energy Agency ("**IAE**") predicts that oil and gas demand will peak and plateau over the next five to 10 years and then slowly decline over the following 20 years). The mining industry, particularly for critical minerals, presents a potentially attractive investment opportunity for energy companies with the potential for high returns, especially compared to some renewable energy investments.

As part of the energy transition, a significant number of oil and gas-focused companies (including all of the European majors) have already made material investments in the renewable energy sector. Although a number of the supermajors, including BP and Equinor, have announced a renewed focus on their traditional income streams, those with significant renewables operations will nevertheless be increasingly motivated to secure critical minerals for those activities – whether that is wind and solar projects, battery storage or carbon capture solutions. In addition to alignment with decarbonisation goals, vertical integration offers potential for operational synergies and cost control across the entire value chain, and helps to manage security of supply in the context of ongoing geopolitical tensions and price volatility. It is also possible that oil and gas companies see the mining sector as one where they can participate in the energy transition effectively, more closely replicating the risk-reward balance offered by oil and gas exploration production, with more significant potential returns on offer than may result from direct ownership of the power-generating assets that often generate a more modest utility-style return.

What Could Oil and Gas Companies Bring to the Table?

Energy majors – especially the integrated companies that have capabilities across the entire oil and gas value chain, from upstream exploration and production all the way through to the downstream refining, chemicals and marketing arms – could bring several distinct advantages to mining ventures.

Capital strength

Energy majors operate with very large balance sheets, robust cash flow, and access to global capital markets, which enables them to underwrite large, capital-intensive projects. This is particularly valuable in the mining sphere, where the jurisdictions or commodities involved can otherwise face financing hurdles. Where junior miners or smaller developers may struggle to raise funds, energy companies can provide early-stage equity, structured finance, or even offtake-backed capital solutions. This de-risks project development and enables enhanced development time. Energy companies also benefit from a long history of navigating fluctuating commodity cycles and structuring financial instruments for hedging and insurance.

Project execution and geopolitical experience

Energy majors are well versed in managing large-scale infrastructure projects in remote and often geopolitically complex regions. Their experience in exploration, engineering, supply chain and logistics – especially in challenging environments – could translate well into mining operations. Their existing relationships, working history and reputation in jurisdictions across, for example, South America and Africa (where many critical minerals are located) can aid in managing the politics associated with mining projects.

ESG and stakeholder engagement

Energy companies and mining companies face similar public perceptions on exposure to environmental and social risks. As a consequence, the oil majors have developed very advanced environmental, social and governance ("**ESG**") frameworks, including community consultation models, environmental monitoring systems, and transparent reporting structures. They bring in-house legal, compliance, and sustainability teams that are accustomed to engaging regulators, non-governmental organisations ("**NGOs**"), local communities and investors across jurisdictions. Whilst the large mining companies also obviously have sophisticated teams that have done this, few have the scale of the energy supermajors, and a combination of these skillsets could elevate standards in mining projects and assist mining projects in reducing legal risk and maintaining their social licence to operate.

Is This a Threat or Opportunity for the Mining Sector?

For many in the mining sector, energy company interest is seen as a net positive – especially in the lithium space, those companies have made their initial foray. Smaller players can leverage on energy companies' operational expertise to make improvements in drilling and processing standards from both a safety and efficiency perspective. In addition, increased investment in DLE, which is still a nascent technology, whether such investment comes from energy majors or other stakeholders, will inevitably increase technology advancements in that area.

Another opportunity for mining companies could be to utilise energy companies' decarbonisation expertise, which is becoming increasingly vital in the mining sector. Many energy companies that are under pressure to reduce their own carbon footprints have already invested heavily in renewable energy, electrification, and carbon capture, utilisation, and storage ("**CCUS**") technologies. These capabilities can directly benefit mining operations, particularly in reducing emissions intensity and transitioning to off-grid renewable energy solutions to power mining operations.

However, increased interest from companies outside the traditional mining space does bring competitive pressure, especially for prospective acreage and licence areas. Even among energy majors, legal disputes have begun to emerge, such as Standard Lithium's failed challenge to Exxon's Smackover rights. For so long as energy company interest remains limited and focused on lithium and DLE, it is unlikely that larger mining companies will see their involvement as a material threat, but that landscape could obviously change if energy companies seek to become more broadly involved or to use their large balance sheets to strategically acquire mining companies.

What's Next for Convergence (or Divergence)?

In recent years, we have seen many of the major oil and gas companies rebrand themselves as "energy" companies in response to the global push for decarbonisation. It seems

unlikely that we will see any drastic strategy shifts from these companies to re-position themselves as mining companies.

BP's recent pivot away from renewables – driven by poor returns and activist investor pressure – serves as a cautionary tale. Their "Fundamental Reset" in early 2025 prioritises oil and gas production and radically scales back on low-carbon investments. It is possible that other oil and gas companies may see BP's decision as an indication that large-scale investments outside of their core fossil fuels business are not yet financially viable or, worse, are potentially damaging to shareholder value. This may cause peers to reevaluate ambitions in sectors like lithium or renewables. Even so, the convergence, particularly in lithium, will likely continue, albeit cautiously.

For lithium in particular, there are two factors that are key in driving further investment. The first of these is the technological (im)maturity – DLE remains unproven at commercial scale. Success (or failure) of pilot projects will dictate future investments. However, as a counterbalance, there is a significant geopolitical dimension, as lithium serves as a flashpoint. China dominates lithium processing and battery manufacturing and there is a consequential incentive for Western governments and companies to address that stranglehold. That means that financial incentives or subsidies may also be available to justify the investment. The Equinor/Standard Lithium project in Arkansas has already received fast-tracked permitting status and a US$225 million federal grant.

In contrast, the reverse trend of mining companies entering the energy industry is not being observed in the same way. Most mining companies are not entering, nor contemplating entry into, the oil and gas industry. They *are* investing in renewable energy, but primarily to power their own operations and reduce carbon footprints of existing mining operations rather than as a standalone enterprise.

Conclusions

The convergence of the oil and gas and mining sectors is one of the most intriguing developments in the energy transition era. Lithium represents the frontier of this transformation, where the capabilities of energy majors, including operational synergies, capital strength, project expertise, and stakeholder engagement, can be leveraged to advance new forms of resource development.

For mining companies, the entry of energy players may bring competition, but also capital, technology, and shared risk. For energy majors, the pivot to mining is not a replacement of their core fossil fuels business, but a diversification strategy aimed at securing long-term relevance in a low-carbon future.

Both industries have much to learn and gain from each other. Their convergence, while cautious, will be a meaningful trend that contributes to the shape of the next decade of global resource strategy.

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Bracewell LLP is a leading international law firm in the energy and infrastructure sector, headquartered in Houston, Texas, with offices across the U.S. and in London, Paris and Dubai. Our lawyers have extensive experience in matters related to mining and have represented mining clients in M&A, project development and finance, private equity, environmental issues, litigation, financial restructuring, capital markets, and intellectual property. Bracewell has represented clients in the mining sector in jurisdictions right across the globe. Our team has experience acting for developers, lenders, royalty providers and other stakeholders in the mining industry. We deliver commercially oriented legal excellence on every project and transaction. Our extensive experience results in a pragmatic, constructive and commercially oriented approach that will assist our clients in identifying issues, finding practical solutions, analysing risk allocation, preparing competitive bids, thoroughly diligencing potential acquisitions and successfully developing or acquiring projects.

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