

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Honors Theses, University of Nebraska-Lincoln

Honors Program

5-2023

Northern Oil & Gas Strategic Audit

Jacob Hansen

University of Nebraska-Lincoln

Follow this and additional works at: <https://digitalcommons.unl.edu/honorstheses>



Part of the [Accounting Commons](#), [Finance and Financial Management Commons](#), and the [Higher Education Commons](#)

Hansen, Jacob, "Northern Oil & Gas Strategic Audit" (2023). *Honors Theses, University of Nebraska-Lincoln*. 609.

<https://digitalcommons.unl.edu/honorstheses/609>

This Thesis is brought to you for free and open access by the Honors Program at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Honors Theses, University of Nebraska-Lincoln by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

Northern Oil & Gas Strategic Audit

An Undergraduate Honors Thesis Submitted in
Partial Fulfillment of
University Honors Program Requirements
University of Nebraska-Lincoln

By Jacob Hansen
Bachelor of Science in Business Administration
Finance & Accounting
College of Business

May 20, 2023

Faculty Mentor:
Marijane Look England, Ph.D., Management

Abstract

Northern Oil & Gas is an energy company that operates in various basins across the United States. The company utilizes a non-operating model, meaning it does not drill wells or operate rigs, but rather partners with operators and acquires fractional working interests in drilling units. This report seeks to understand Northern Oil & Gas' business model by examining its competitive strategy, advantages, and resources. Internal and external environmental factors are also analyzed using both PESTEL analysis and Porter's Five Forces. In addition, key challenges facing the company are explored and recommendations are given on how Northern Oil & Gas can overcome these obstacles and sustain a competitive advantage.

Key Words: Northern Oil & Gas, strategy, PESTEL, Porter's Five Forces, strategic audit, oil and gas

Background of Northern Oil and Gas

Northern Oil & Gas is an independent energy company founded in 2006 by Michael Seger in Wayzata, Minnesota (Forbes, 2023). Its primary focus is on the acquisition, exploration, development, and production of oil and natural gas properties. Northern Oil & Gas is a non-operating company, meaning it owns a minority interest in many oil and gas properties and mineral rights, but does not actively participate in the actual operations of the well. This allows the company to build a portfolio of properties and assets without the large capital requirements needed to operate its own drilling rigs and wells. This non-operating model has also reduced general and administrative costs by 50% compared to its operating peers, as well as allowed for capital allocation flexibility to pick operators across basins and limit costs to drilling, completion, and acreage (Northern, 2023). Prior to 2020, the Company sought to capitalize on the underutilized Bakken Shale Formation in Montana and North Dakota. Since then, it has expanded its minority interests to 8,700 wells across 259,000 acres of oil and gas leases in the Bakken, Permian, and Marcellus basins (Northern, 2023). These accretive acquisitions in various basins have accelerated Northern Oil & Gas' production to more than 79,000 barrels of oil per day. Since going public in 2007, it has grown to become the largest publicly traded non-operating exploration and production company in the United States.

The oil and gas industry in the United States generates revenues of approximately \$212 billion and makes up about 8% of the country's gross domestic product (McClay, 2022). This industry involves the exploration, extraction, refinement, production, and distribution of oil and natural gas, which are used as sources of fuel and energy for various products such as transportation, heating, and electricity generation. Oil and gas is divided into three distinct

sectors: upstream, midstream, and downstream. Upstream refers to the exploration and production of oil and gas and involves activities such as drilling wells and managing reservoirs. The midstream sector involves the logistics of transporting the extracted oil to refineries, while the downstream sector includes the process of refining the oil and gas to actually be used as fuel, as well as products such as lubricants and plastics. While this industry is such a vital aspect to the global population, it faces many challenges and headwinds as economies are beginning the transition to more sustainable sources of fuel and energy (McClay, 2022).

PESTEL Analysis

A PESTEL analysis is a framework that analysts, marketers, and business executives use to monitor and analyze the macroenvironment factors that have an impact on a company. These include political, economic, social, technological, environmental, and legal factors (Libguides, 2022).

Political

One of the main macroenvironment factors that impacts the oil and gas industry is the regulatory environment. The industry is heavily regulated, which can limit the production and growth of many oil and gas companies. The goal of these regulations includes protecting the environment, cultural resources, and public health and safety, as well as reducing wasted resources (Allison, 2019). State governments typically provide the most oversight of oil and gas companies operating in their respective states, but strict regulations are also imposed from both the federal and local governments (Allison, 2019). Some examples of regulations facing the industry include the minimum distance a well can be developed to other property lines and constraints on the amount of drilling and production on federal land.

Both national and global instability can have huge effects on the oil and gas industry. While the United States is the largest producer of crude oil, producing approximately 12 million barrels of crude oil per day, it also consumes over 20 million barrels per day (JP Morgan, 2022). This leads to the need for the U.S. to rely on outside countries to meet this shortfall. Reliance for oil on countries such as Russia and Saudi Arabia has made the United States susceptible to political instability across the globe. Events such as the Russian invasion of Ukraine cause oil prices to skyrocket as the United States imposed strict sanctions on Russia (JP Morgan, 2022). Republicans and Democrats in Washington D.C. are also divided on the regulation and use of fossil fuels in the country's future, which has led to various shifts in policy and regulation every election cycle (News, 2016).

Economic

Economic conditions have an impact on oil and gas companies' ability to generate profits. The price of crude oil fluctuates greatly and is based solely upon the relationship between the supply of oil produced and the demand for oil by the market. Currently, the price of oil is sitting around \$70 per barrel but has seen variations from \$60 to \$120 per barrel just in the last year (Gharib, 2021). The supply of oil is dependent on companies' ability to find and extract oil, as well as regulations that restrict exploration and drilling. Demand for oil in the United States is fairly strong right now but can vary due to the transition to sustainable methods of fuel and energy and the overall strength of the economy. For example, the Covid-19 pandemic wreaked havoc on oil prices. Since the vast majority of the world population was locked down, the demand for gas used for travel plummeted which caused oil prices to also

plummet. However, as the world opened back up, people who had been forced to stay inside had a strong demand for travel, which shot oil prices up to \$130 per barrel (Gharib, 2021).

Social

The general population's opinion and need for the use of oil and natural gas will play a key role in the coming years. In the past few decades, the public has been made aware of the potential damaging effects of oil and gas on the environment, which has changed many people's perception and opinions on future usage. According to a study, more than two thirds of Americans believe that we should prioritize expanding investments in sustainable alternatives to oil and natural gas, as well as take steps to become carbon neutral by 2050 (Tyson, 2023). However, the same percentage of Americans also believe that the U.S. should keep a mix of both fossil fuels and renewables instead of phasing out fossil fuels completely. The population's appetite for consuming oil and gas weighs heavily on the demand, and ultimately price and profits, of this industry. Consumption patterns also affect the price of oil and gas. Americans tend to drive more during the summer months, which typically leads to an increase in prices during that period (U.S. Energy, 2022). Other activities such as installing solar panels and buying electric vehicles also have an impact on oil and gas companies. Electric vehicles accounted for 6% of all new car sales in 2022, double the amount in 2021, which shows a shift in consumers' social responsibility to combat climate change (Tucker, 2023).

Technology

While advancements in technology could potentially lead to a decrease in oil consumption, there are many other technologies that impact the industry. Different techniques and methods of finding and extracting oil have led to increased efficiency and production while

also finding ways to be less damaging to the environment and surrounding area. New imaging technologies have allowed companies to know precisely where oil is and how much can be extracted (McGrath, 2023). This limits the risk of drilling on land and not finding oil. However, as more technology is implemented into daily operations, it also leaves oil and gas companies at a high risk for cybersecurity threats that could have detrimental consequences (Fortinet, n.d.).

Environmental

As previously discussed, environmental factors will play a large part in the profitability of oil and gas companies in the future. Discovered evidence in the past few decades has shown the potentially damaging effects of oil use on the environment. This had led to public scrutiny of companies operating in this industry, as well as increased regulation. However, the global economy is still very dependent on oil and available alternative sources of fuel and energy have shown to have their own problems. For example, the batteries used in electric vehicles require a large amount of rare earth minerals that are mined, which can also have adverse effects on the environment. Also, most sustainable sources cannot produce enough electricity and fuel to support the global economy. Europe is a prime example of this, as their attempt to back off fossil fuels too quickly led to skyrocketing energy costs and potential energy grid shutdowns (Euronews, 2022). To keep up with environmental standards and an evolving consumer perception, many oil and gas companies are beginning to invest in sustainable substitutes (Beck, 2021).

Legal

The oil and gas industry faces many legal repercussions for their operations, including from environmental groups, cities, and states that hope to stop the further exploration and drilling for oil. Cities are also bringing lawsuits against oil companies, with more than 30 lawsuits being filed in 2022. While claims vary from case to case, most are established on the argument that oil and gas companies fail to recognize the threat of climate change and the direct and detrimental impact their operations are playing on the world's climate outlook. Prosecutors believe these companies need to be held accountable for their actions and role in creating the climate crisis. Cities and states are also suing companies for their role in creating major natural disasters. For example, the city of Hoboken, New Jersey, filed a lawsuit against Exxon Mobil and 12 other entities for what prosecutors believed was the company's role in creating the devastation from Hurricane Sandy in 2012 (Gil, 2022). Lawsuits like this will only increase as the public looks to address the climate crisis.

Porter's Five Forces

Porter's Five Forces is a model that illustrates and identifies five different competitive forces that impact an industry, as well as analyzing an industry's strengths and weaknesses. These forces include threat of new entrants, threat of substitutes, bargaining power of suppliers, bargaining power of buyers, and competitive rivalry (Team, 2023).

Threat of New Entrants

There are many factors that keep the threat of new entrants very low. The oil and gas industry requires significant capital investment and specialized knowledge, which makes it difficult for new operators to enter the market. Energy giants such as Exxon Mobil, Chevron, and BP control a large majority of the U.S. market and are already operate on the basins

located in the country (Pitatzis, 2016). On a global stage, national oil companies such as Saudi Aramco and China National Petroleum Corporation control more than 90% of the proven oil and gas reserves (Pitatzis, 2016). These massive companies can easily increase their research and development costs to boost innovation and technologies and beat out potential entrants to the industry. Several of these companies are fully integrated, meaning they control upstream, midstream, and downstream. This increases the difficulty for a new entrant to compete with their economies of scale. Laws and regulations also make it hard for new oil and gas companies to penetrate the market, and the volatility of oil prices means that newly established oil companies without market share and economies of scale can easily get wiped out (Pitatzis, 2016).

Threat of Substitutes

As the fight against climate change exponentially increases, the threat of substitutes to the oil and gas industry have risen significantly. Alternative energy sources such as wind, solar, and hydropower have become increasingly competitive over the last few decades. However, there are high costs involved in developing these alternative options, and it takes a tremendous amount of input to convert these methods to the same amount of energy produced from oil and natural gas. This has limited their widespread adoption by the global economy. The threat of substitutes will remain moderate for at least a short period of time (Pitatzis, 2016).

Bargaining Power of Suppliers

Many of the big oil and gas companies, as well as national oil and gas companies, are fully integrated, meaning they own and control the upstream, midstream, and downstream operations. The ability of these companies, such as Chevron, Exxon Mobil, and Saudi Aramco to

affect oil prices and the industry are high due to their involvement in all aspects of the oil exploration, transportation, and refinement process. For example, OPEC, which stands for the Organization of Petroleum Exporting Countries, owns at least 70% of the world's proven oil reserves and controls more than 30% of the daily global oil production (Pitatzis, 2016). These oil reserves also have some of the lowest costs of production, which gives the partnering countries the ability to cut and expand production to manipulate oil prices. It is hard for smaller oil and gas companies to compete with these oil giants because buyers can easily switch to a big supplier that is integrated. Based on these powerful countries and oil companies that are fully integrated, the bargaining power of suppliers is high (Pitatzis, 2016).

Bargaining Power of Buyers

The buyers in the oil and gas industry include the people purchasing fuel, petrol, and other petroleum products from oil suppliers. The bargaining power of buyers in the industry is low because suppliers set the price of oil by restricting and expanding production (Kasi, 2018). Since there are a handful of companies and countries that dominate the same oil basins, buyers are forced to consume at whatever price the companies set since there are little options for viable substitutes.

Competitive Rivalry

The oil and gas industry is highly competitive with many companies competing for market share. Major oil and gas corporations such as Saudi Aramco, Chevron, and Exxon Mobil compete for a limited number of contracts and exploration rights, which forces them to reduce profit margins in order to match their competition's pricing. This rivalry also drives innovation and efficiency in the industry to differentiate from competitors (Kasi, 2018).

Competitive Strategy

A competitive strategy is a plan or approach that a company uses to gain a competitive advantage. It involves identifying and exploiting the strengths and weaknesses of a company relative to its competitors in order to achieve superior performance and gain a larger market share (Bertele, n.d.). Northern Oil & Gas prides itself on a combination of cost leadership and differentiation strategies, which means it strives to keep costs low as well as deliver superior value compared to its competitors. The company seeks to generate long-term value by “the continued capital allocation process that has been fine-tuned over the last several years seeing a high volume of acreage and well participation opportunities with which to make capital allocation decisions” (Northern, n.d.).

Competitive Advantage

Northern Oil & Gas has numerous competitive advantages that have allowed the company to gain market share in a very saturated market. The company uses a non-operating model, meaning it does not own or operate drill wells or oil rigs, but rather partners with operators across the United States to acquire fractional working interests in drilling units (Northern, n.d.). This model allows Northern Oil & Gas to establish cost leadership by keeping operating costs low and controlling capital expenditures. Being a non-operator also creates differentiation by allowing the company to maintain financial flexibility and liquidity to find projects with the highest rates of return and deploy capital quickly. This approach has contributed to Northern Oil & Gas’ outperformance vs. the S&P Oil & Gas ETF by 70% since 2018 (Northern, n.d.).

Resources

In order to sustain its competitive advantage, Northern Oil & Gas has many resources on which it must depend. Since the company is a non-operator, its most valuable resource is the relationships they create with operators in various core basins across the United States.

Northern Oil & Gas' strong reputation has given the company access to the highest-efficiency partners and exposure to working interest opportunities with high rates of return (Company, 2023). These relationships allow for both organic growth, as well as growth through acquisitions. Another resource of the company that will lead to a sustained competitive advantage is its proprietary database. The system, called "Drakkar," is an internal data science system that allows the company to make informed investment management decisions and optimize daily operations. It was designed with leading technology companies to improve monitoring of well performance and operator behaviors, as well as provide real-time data analytics and streamlined communication (Company, 2023).

Challenges and Future Positioning

The biggest challenge facing Northern Oil & Gas is environmental concerns. The entire industry has been on the receiving end of a tremendous amount of scrutiny in the last few decades for its alleged role in climate change and overall adverse impact on the environment. Another challenge is fluctuating oil and gas prices. These prices are very volatile and can be dramatically affected by world events such as natural disasters, geopolitical tension, and war (Moritsch, n.d.). An example of this is the ongoing war between Ukraine and Russia. Russia is a huge exporter of oil, so prices skyrocketed when countries placed sanctions on Russian oil

(White House, 2022). Since Northern Oil & Gas' revenues are directly related to oil and gas prices, this volatility is a large challenge facing the company. Regulatory challenges are also a looming obstacle for oil and gas companies. The industry is highly regulated, so Northern Oil & Gas must comply with numerous federal, state, and local regulations related to drilling, safety, and environmental protection (Team, 2022). The oil and gas industry is also highly competitive, with many established players and new entrants struggling for market share. This puts pressure on Northern Oil & Gas to innovate and improve operational efficiency to stay competitive.

There are a few things that Northern Oil & Gas could do to position itself for sustained success. As discussed, the largest challenge facing the industry is pressure from environmental activists. To mitigate this risk, the company should invest in research and development initiatives to find more environmentally friendly methods of oil extraction and refinement. Developing new technologies and processes that allow the company to minimize its footprint while also not reducing the amount yielded oil will establish sustained competitive advantage (Revealed, 2022). Northern Oil & Gas can also ease outside pressure by being transparent through the use of ESG reports and scorecards that allow consumers and activists to see how the company's operating partners are being conscious about their environmental impact (12:eleven, 2023). Lastly, as more consumers begin to turn from oil and gas to more sustainable energy alternatives, Northern Oil & Gas should diversify its product offering and begin investing in alternative energy sources. Not only could this lead to an increase in revenue for the company, but pressures from climate activists will subside and its competitors will be forced to follow in Northern Oil & Gas' footsteps.

References

- 12:eleven Production Equipment. (2023, March 7). *The importance of ESG in the oil and Gas Industry*. 12:eleven. Retrieved April 29, 2023, from <https://www.12eleven.com/news/the-importance-of-esg-in-the-oil-and-gas-industry#:~:text=As%20a%20result%2C%20ESG%20is,themselves%20at%20a%20competitive%20disadvantage.>
- About Us*. Northern Oil and Gas, Inc. (n.d.). Retrieved April 29, 2023, from <https://www.northernoil.com/about#:~:text=Ensuring%20reliable%20performance%20and%20diversification%20of%20operational%20risk.>
- Allison, E., & Mandler, B. (2019, June 18). *U.S. regulation of oil and Gas Operations*. American Geosciences Institute. Retrieved April 29, 2023, from <https://www.americangeosciences.org/geoscience-currents/us-regulation-oil-and-gas-operations>
- Beck, C. (2021, March 10). *The big choices for oil and gas in navigating the energy transition*. McKinsey & Company. Retrieved April 29, 2023, from <https://www.mckinsey.com/industries/oil-and-gas/our-insights/the-big-choices-for-oil-and-gas-in-navigating-the-energy-transition>
- Bertele, C. (n.d.). *Competitive strategy*. Competitive Strategy - an overview | ScienceDirect Topics. Retrieved April 29, 2023, from <https://www.sciencedirect.com/topics/computer-science/competitive-strategy>
- Company Information*. Northern Oil and Gas, Inc. (2023, March 6). Retrieved April 29, 2023, from <https://www.northernoil.com/investors/company-information>

- EIA. (2023, April 19). *U.S. Energy Information Administration - EIA - independent statistics and analysis*. Gasoline price fluctuations - U.S. Energy Information Administration (EIA). Retrieved April 29, 2023, from <https://www.eia.gov/energyexplained/gasoline/price-fluctuations.php#:~:text=Historically%2C%20retail%20gasoline%20prices%20tend,generally%20lower%20in%20winter%20months>
- Forbes Magazine. (n.d.). *Northern Oil and gas | NOG stock price, company Overview & News*. Forbes. Retrieved April 29, 2023, from <https://www.forbes.com/companies/northern-oil-and-gas/?sh=2c646c7a674c>
- Gharib, C., Mefteh-Wali, S., Serret, V., & Ben Jabeur, S. (2021, October 4). *Impact of covid-19 pandemic on crude oil prices: Evidence from Econophysics approach*. Impact of COVID-19 pandemic on crude oil prices: Evidence from Econophysics approach. Retrieved April 29, 2023, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8507600/#:~:text=The%20price%20of%20oil%20experienced,cuts%20in%20crude%20oil%20production>
- Gil, B. (2022, August 1). *U.S. cities & States are suing big oil over climate change*. PBS. Retrieved April 29, 2023, from <https://www.pbs.org/wgbh/frontline/article/us-cities-states-sue-big-oil-climate-change-lawsuits/>
- J.P. Morgan. (2022, March 10). *How are sanctions against Russia impacting oil and gas prices?: Energy outlook: J.P. Morgan*. How are sanctions against Russia impacting oil and gas prices? | Energy Outlook | J.P. Morgan. Retrieved April 29, 2023, from <https://www.jpmorgan.com/insights/research/oil-gas-energy-prices>

Kasi, A. (2018, December 15). *Porter's five forces of Oil Industry*. Porter Analysis. Retrieved April 29, 2023, from <https://www.porteranalysis.com/porters-five-forces-of-oil-industry/>

Kelley Blue Book. (2023, January 17). *New car sales fell in 2022, but new electric car sales rose ...* New Car Sales Fell in 2022, But New Electric Car Sales Rose Dramatically. Retrieved April 30, 2023, from <https://www.kbb.com/car-news/new-car-sales-fell-in-2022-but-new-electric-car-sales-rose-dramatically/>

McClay, R. (2022, September 28). *How the oil and Gas Industry Works*. Investopedia. Retrieved April 29, 2023, from <https://www.investopedia.com/investing/oil-gas-industry-overview/>

McGrath, J. (2023, March 8). *Top 5 innovations in oil drilling*. Top 5 Innovations in Oil Drilling. Retrieved April 29, 2023, from <https://science.howstuffworks.com/environmental/energy/5-innovations-oil-drilling.htm>

Moritsch, S., & Mayor, R. (n.d.). *Top risks facing the oil and gas industry in 2022 - and what you can do about it*. KPMG. Retrieved April 29, 2023, from <https://kpmg.com/xx/en/home/insights/2022/04/top-risks-facing-the-oil-and-gas-industry-in-2022.html>

Petro Online. (2016, November 15). *How do elections affect oil?* Petro Online. Retrieved April 29, 2023, from <https://www.petro-online.com/news/analytical-instrumentation/11/breaking-news/how-do-elections-affect-oil/41014>

Pitatzis, A. (2016, May 23). *Porter's Five Forces Model for Oil and Gas Industry*. Energy routes. Retrieved April 29, 2023, from <https://energyroutes.eu/2016/05/23/porters-five-forces-model-for-oil-and-gas-industry/>

Team, D. J. (2022, April 20). *Revealed: The oil & gas companies leading the way in ESG*. Offshore Technology. Retrieved April 29, 2023, from <https://www.offshore-technology.com/features/revealed-the-oil-gas-companies-leading-the-way-in-esg-2/>

Team, T. I. (2022, July 18). *How do government regulations impact the oil and gas drilling sector?* Investopedia. Retrieved April 29, 2023, from <https://www.investopedia.com/ask/answers/012715/how-does-government-regulation-impact-oil-gas-drilling-sector.asp>

Team, T. I. (2023, March 31). *Porter's 5 forces explained and how to use the model*. Investopedia. Retrieved April 29, 2023, from <https://www.investopedia.com/terms/p/porter.asp>

Tyson, A., Funk, C., & Kennedy, B. (2023, March 1). *Americans largely favor U.S. taking steps to become carbon neutral by 2050*. Americans Largely Favor U.S. Taking Steps To Become Carbon Neutral by 2050. Retrieved April 29, 2023, from <https://www.pewresearch.org/science/2022/03/01/americans-largely-favor-u-s-taking-steps-to-become-carbon-neutral-by-2050/#:~:text=But%20just%2031%25%20want%20to%20phase%20out%20use%20of%20fossil%20fuels%20completely,-Orlando%20Utility%20Commission's&text=Pew%20Research%20Center%20conducted%20this,10%2C237%20U.S.%20adults%20from%20Jan>

Understand the cyber risks facing the oil and gas industry. Fortinet. (n.d.). Retrieved April 29, 2023, from <https://www.fortinet.com/solutions/industries/oil-gas>

The United States Government. (2022, March 8). *Fact sheet: United States bans imports of Russian oil, liquefied natural gas, and coal.* The White House. Retrieved April 29, 2023, from <https://www.whitehouse.gov/briefing-room/statements-releases/2022/03/08/fact-sheet-united-states-bans-imports-of-russian-oil-liquefied-natural-gas-and-coal/>

Why is there an energy crisis in Europe? euronews. (2022, February 10). Retrieved April 29, 2023, from <https://www.euronews.com/2022/02/03/europe-s-energy-crisis-why-are-natural-gas-prices-soaring-and-how-will-it-affect-europeans#:~:text=There%20are%20also%20several%20issues,domestic%20production%20of%20natural%20gas>

WSU Libraries. (n.d.). *Libguides: Industry Research: Pestel Analysis.* LibGuides at Washington State University. Retrieved April 29, 2023, from <https://libguides.libraries.wsu.edu/c.php?g=294263&p=4358409>