

Can Fracking Survive at \$50 a Barrel?

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Fracking, or **hydraulic fracturing**, is a method of extracting oil from dense rock or sand where traditional drilling is not an option. Due to the nature of **fracking**, costs are **higher than regular oil extraction**. With falling oil prices dipping below the highs of recent years, can fracking survive?

What Is Fracking?

Traditionally, oil is extracted from natural underground oil reservoirs. These reservoirs are reached by drilling a deep hole into the earth, and the oil is extracted through oil wells and platforms. When oil is in the ground but not in a liquid reservoir, it has to be extracted through other means.

Oil can exist in many underground conditions. Some formations contain shale, a rocky and dense substance, or **oil sands**. This type of oil is referred to as shale oil or tight oil.

Extracting shale oil and tight oil requires hydraulic fracturing. The fracking process is complex. A drilling team drills into the ground until they reach the shale, which is filled with small fissures. The team then injects a chemical fluid into the fissures at very high pressures, causing the shale below to fracture. The fracturing releases the oil from the sand and rock allowing the team to extract the oil and natural gas from the ground.

As one would expect, the cost of the equipment, process and cleanup from fracking is higher than drilling into liquid **crude oil** for extraction.

Oil Price Trends

Oil and natural gas prices fluctuate on a daily basis. These **commodities** are traded on public markets, such as the **NYMEX**, and the price rises and falls with **supply and demand**. As more people in the world own cars and developing countries like China demand more energy, prices are expected to increase.

On the other side of the equation, an increase in supply can push oil prices down. As new sources of **oil and gas** are discovered and accessed around the world, the total supply increases. In the last year, **oil prices have dramatically decreased** because of supply and demand. As of this writing, the **current price** per barrel of oil is around \$70 per barrel.

Breaking Even on Oil Production

In 2011, crude oil was trading at nearly **\$120** per barrel on the NYMEX. High oil prices were sustained until mid-2014, when **prices crashed from \$100 per barrel down to**

less than \$50. While consumers rejoiced at lower gas prices, oil and gas producers scrambled to stay profitable.

At \$120 per barrel, fracking is a very profitable business. At lower prices, companies are forced to weigh the cost of expensive fracking compared to less expensive extraction methods.

The most expensive oil produced in the United States today comes from older wells known as “stripper wells.” These are aging oil and gas wells that only produce a few **barrels per day**. The maintenance cost on the wells does not decline with oil prices, and these wells become unprofitable around \$40 per barrel. Other **high-cost oil comes from** Canada’s tar sands and the United Kingdom’s North Sea **oil fields**; these become unprofitable around \$30 per barrel and \$50 per barrel, respectively.

Fracking is expensive, but still less costly than the methods used to obtain oil from the wells mentioned above. According to Reuters, estimates put the **break-even** point for fracking at around **\$50 per barrel**, but other estimates put it as low as **\$30 per barrel**. This \$30 per barrel figure is much lower than the total cost per barrel more widely published, but there is an important distinction between the estimates that put fracking costs at the \$50 per barrel range.

At less than a price point around \$50 per barrel, oil and gas companies are less likely to explore and drill for new oil accessible through fracking, but existing operations may still be cash-flow positive. Once the expensive exploration and initial drilling are complete, existing wells can continue to operate and stay cash-flow positive even as prices fall below \$50 per barrel.

The Bottom Line

While falling oil and gas prices leave producers scrambling to cut costs, fracking can survive below \$50 per barrel. New exploration and production may decrease, and some higher cost wells have already been shut down. However, fracking as a whole continues to survive, and will do so for the foreseeable future.

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