



CRESTONE PEAK
RESOURCES

Drilling and Completions

FACT SHEET

Oil and gas operations are composed of two parts:

Drilling: Drilling operations typically last 15 to 20 days per well depending on the well depth, and are continuous until the well reaches its total depth. Crestone utilizes several mitigation strategies based on experience in the DJ Basin, latest technologies and industry best practices and is committed to improving and adjusting operations as needed to minimize the impact on nearby residents.

Completions: Once the wells are drilled, the completion process begins. This phase can last 10 to 15 days per well. The completion process includes running production casing; simulating and fracturing the well; and installing equipment to facilitate the flow of natural gas and oil out of the well.



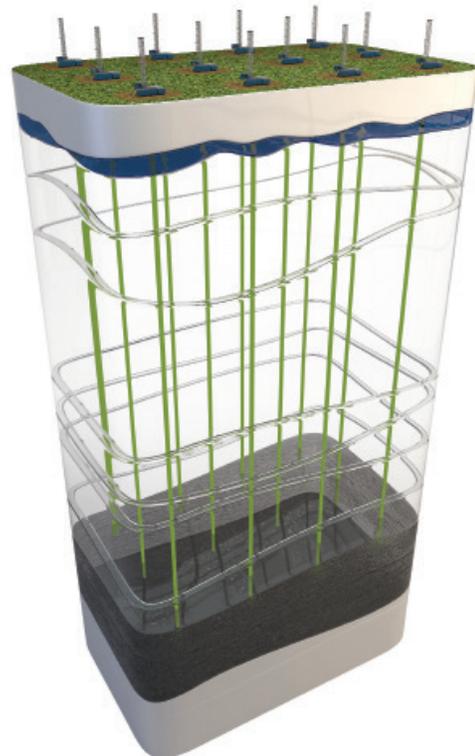
What's the difference? Horizontal vs Vertical Drilling

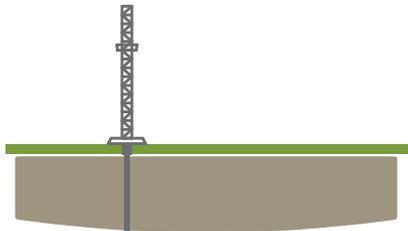
Horizontal drilling, or drilling at an angle parallel to the natural gas or oil zone, allows access to reservoirs that are less obtainable through vertical drilling, which is when the well is aimed directly at a target beneath it. Horizontal drilling minimizes the number of wells drilled and surface disturbance above ground. This allows better resource extraction with decreased disturbance over time. Today, horizontal wells can produce natural gas or oil for up to 40 years.

Horizontal Drilling



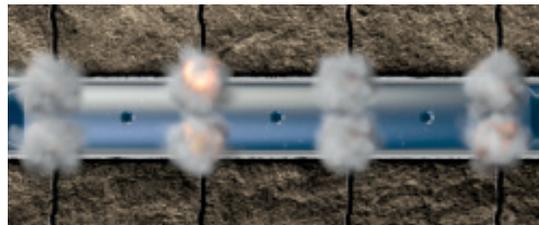
Vertical Drilling





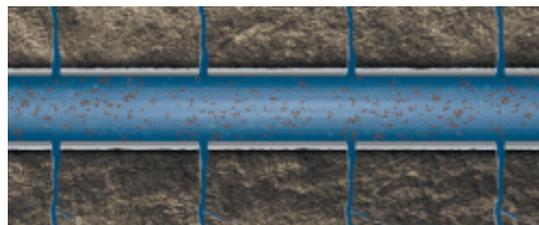
Why is hydraulic fracturing necessary?

Hydraulic fracturing is essential to the successful development of North America's abundant unconventional natural gas and oil resources. Shale rock has natural gas and oil resources trapped in its pores smaller than the width of a hair. Through the use of hydraulic fracturing, a controlled network of small fissures is created in the rock to release the gas and oil into the wellbore, or the drilled hole. Once complete, the plugs are then drilled out so that natural gas and oil may begin flowing to the surface.



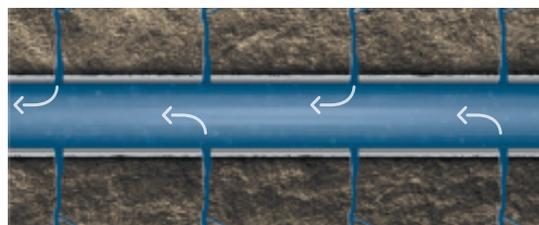
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Perforating: Once the path is complete, a perforating gun is inserted into the well and electrical charges are ignited along the way, creating a series of holes through the casing, cement and rock formation.



02

Fracing: After the holes have been blasted, a mixture of water, sand, and fluid additives are pumped down the production tubing, forcing it through the cracks and creating tiny fissures in the rock. This process is called fracing, and allows gas and oil to flow more easily into the well.



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Production Pathway: After fracing, the cracks allow the gas and oil to flow from very low permeability reservoirs toward the wellbore.

Gas & Oil Deposits

Niobrara: 6,800 - 7,100 ft

Codell: 7,100 - 7,300 ft



Questions

Isn't hydraulic fracturing relatively new and untested?

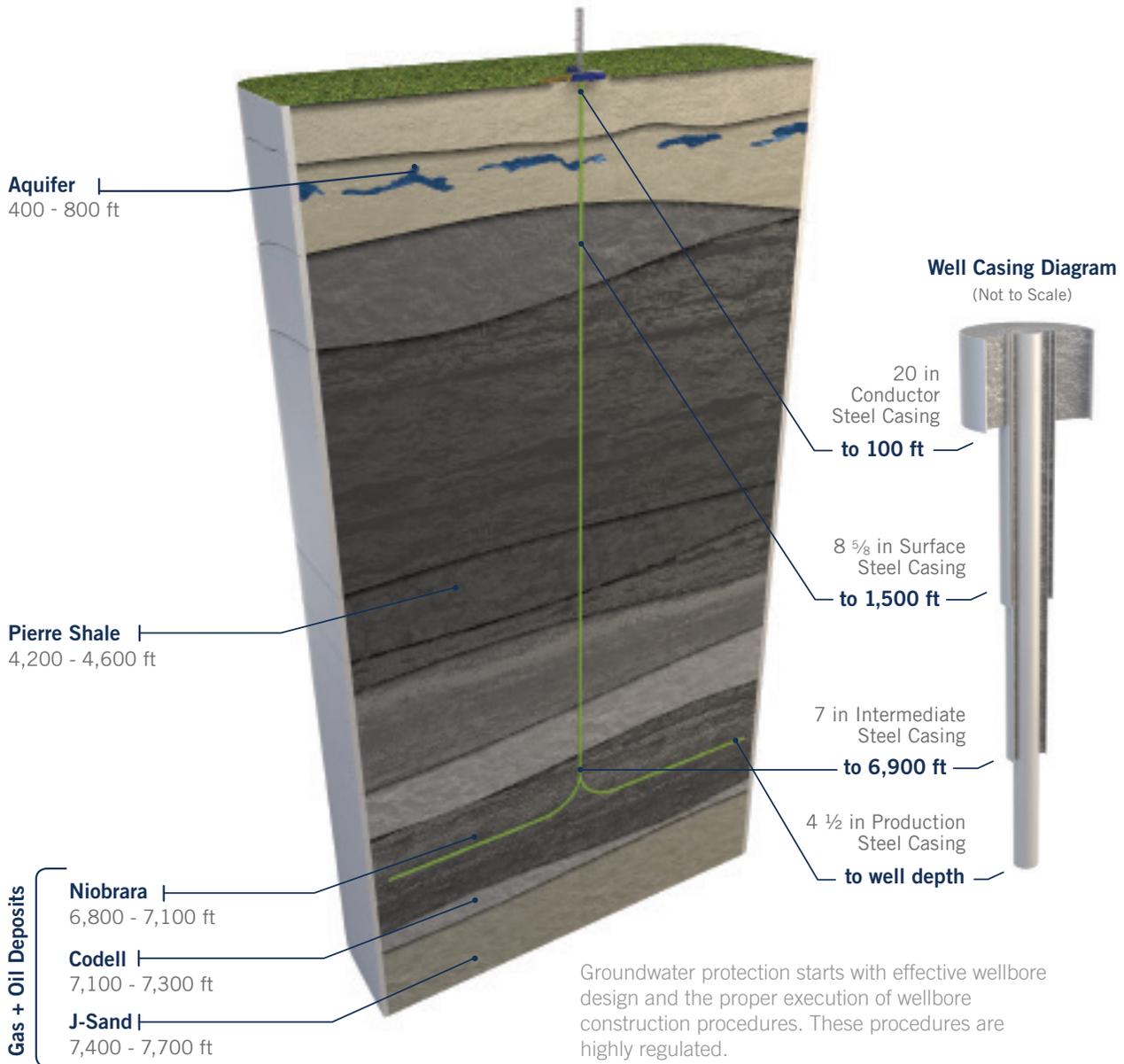
Hydraulic fracturing is a well-proven technology that has been used for almost 70 years. The first commercial hydraulic fracturing treatment was performed in 1949, and by 1988 it had been applied more than one million times. Today, operators hydraulically fracture approximately 35,000 wells each year in the United States.

Why is hydraulic fracturing necessary in Colorado?

Most of the hydrocarbon-bearing formations in Colorado have low porosity and permeability, meaning these formations would not produce economic quantities of hydrocarbons without hydraulic fracturing. Hydraulic fracturing treatment in Colorado began in the 1970s and the technology has advanced since then.

Protecting groundwater during drilling and completions

Crestone, other industry operators, state and local regulators, and residents alike want to ensure that underground drinking water sources are not impacted by the drilling and completion processes. Every well has an engineered steel casing system that is cemented externally to prevent any fluids from moving from the wellbore to groundwater aquifers. The casing design and cementing program conform to a written, engineered design, which is specific to each well. This design is prepared by Crestone and installed by independent qualified specialist contractors. The integrity of the casing and cement system are evaluated through field inspection and wellbore logging throughout the life of the well.



Are you fracturing close to groundwater?

Oil and gas extraction, which is where the hydraulic fracturing occurs, takes place thousands of feet below the deepest aquifer. Groundwater protection starts with effective drill hole, or "wellbore," design. The casing and cementing program, like the one detailed above, is engineered by Crestone specifically for each site and installed by qualified specialist contractors under Crestone supervision.

How is groundwater protected?

The wellbore, or the drilled hole, is the most important factor in preventing the migration of hydrocarbons into nearby water sources. Layers of steel casing and cement prevent extracted gas from escaping, with up to 6 combined layers of steel and cement between groundwater and the wellbore structure. Crestone ensures groundwater is protected by applying engineered design that is specific to each well, leaning on collaboration between geologists and drilling teams, and employing specialized contractors for well construction.