

Founded for the sole purpose of heightening Oil & Gas Lease Values through Landgroup start-ups. Only one item will give landowners power in the Oil & Gas Leasing process and that is acreage position. Building large contiguous acres has proven to increase values significantly.

Many mistakes can be made when signing an Oil & Gas Lease and many individuals and families have already made them. Not only may you be leaving huge amounts of money on the table, there are many other areas that may need to be covered in protecting your families health and well being.

Northeast can and will be very helpful for you and your family even if there is no activity in your region. Our abiltiy to attract offers and drive up prices through the langroup building process are only certain aspects of our knowledge. This process has also proven to increase landowner friendly lease terms. Please understand that we are only one facet of the leasing process and advise all of our clientele to seek legal counsel before completing the Oil & Gas leasing process.

Call today at 724-359-5035 and one of our representatives will guide you through taking the first steps towards obtaining a new lease.





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At Northeast, We Make Gas Leasing Simple...

How Does The Drilling Process Work?

## What is Horizontal Drilling

Most wells drilled for water, oil, natural gas, information or other subsurface objectives are vertical wells drilled straight down into the earth. However, drilling at an angle other than vertical can obtain information, hit targets and simulate reservoirs in ways that can not be achieved with a vertical well. In these cases, an ability to accurately steer the well in directions and angles that depart from the vertical is a valuable ability.

When directional drilling is combined with hydraulic fracturing some rock units which were unproductive when drilled vertically can become fantastic producers of oil or natural gas. Examples are the Marcellus Shale of the Appalachian Basin and the Bakken Formation of North Dakota.

Horizontal drilling has been used to reach targets beneath adjacent lands, reduce the footprint of gas field development, increase the length of the "pay zone" in a well, deliberately intersect fractures, construct relief wells and install utility service beneath lands where excavation is impossible or extremely expensive.

Vertical wells can effectively drain rock units that have a very high permeability. Fluids in those rock units can flow quickly and effectively into a well over long distances. However, where permeability is very low fluids move very slowly through the rock and do not travel distances to reach a well bore. Horizontal drilling can increase the productivity in low permeability rocks (like in the Marcellus & Utica) by bringing the well bore much closer to the source of the fluid.

Groundwater Aquifer
Hydraulic Fractures
Horizontal Well Bore

## What is Hydraulic Fracturing

Hydraulic fracturing is a procedure that can increase the flow of oil or gas from a well. It is done by pumping liquids down a well into subsurface rock units under pressures that are high enough to fracture the rock. The goal is to create a network of interconnected fractures that will serve as pore spaces for the movement of oil and natural gas to the well bore.

Hydraulic fracturing combined with horizontal drilling has turned previously unproductive organic-rich shales into the largest natural gas fields in the world. The Marcellus Shale, Utica Shale, Barnett Shale and Bakken Formation are examples of previously unproductive rock units that have been converted into fantastic gas or oil fields by hydraulic fracturing.

The first use of hydraulic fracturing to stimulate oil and natural gas wells in the United States was in the 1940's. The method successfully increased well production rates and the practice quickly spread. It is now used throughout the world in thousands of wells every year.

Exploded View of a Typical Well-Site & Horizontal Drilling into a Shale Formation



Well-Sites During The Drilling Process



Frac Pond

Well Head

Vertical Well Bore

Shale