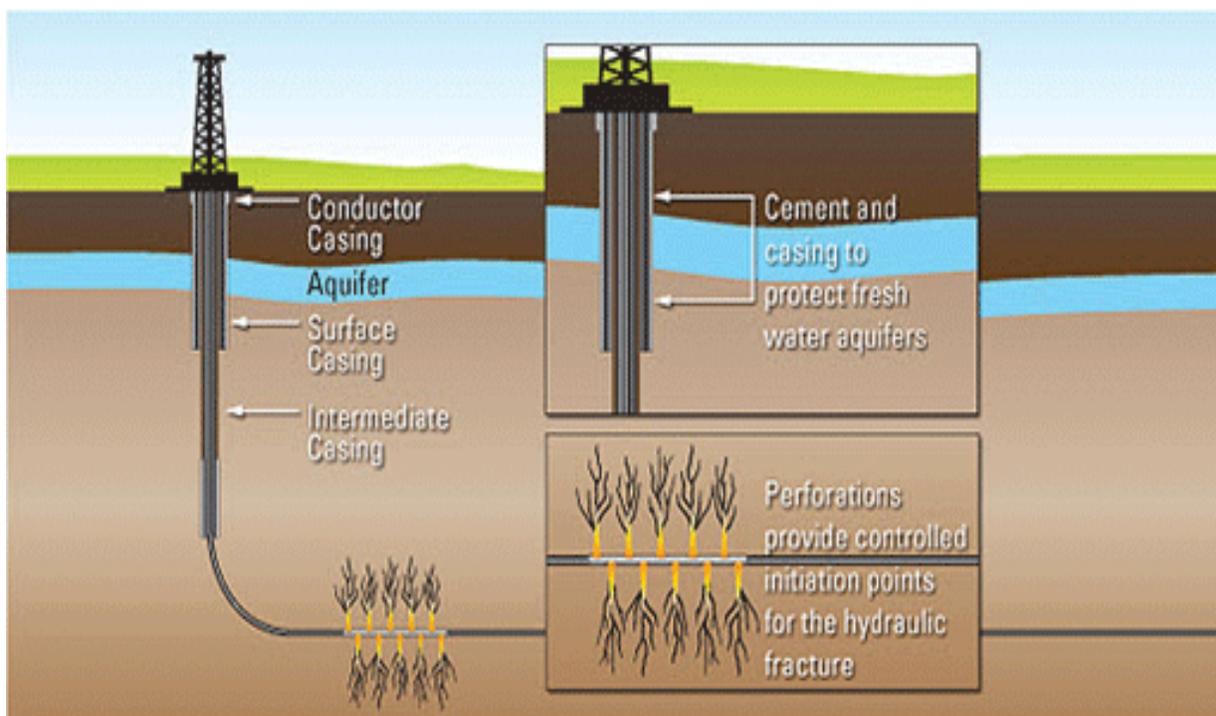




HYDRAULIC FRACTURING (FRACKING)

Hydraulic fracturing, also known as “fracking”, is the process of fracturing rock by a pressurized fluids. The fracking fluids are composed of water, sand, and additives. The fracking process creates small fractures within a rock formation. The small fractures (typically less than 1 millimeter) allow larger amounts of oil and natural gas to flow to the well bore and then to the surface.



SAN JUAN BASIN FRACKING FACTS

- The Mancos/Gallup Formation is 5,000 feet below the surface and is several thousand feet below the fresh water aquifers.
- Water and sand make up approximately 99.5% of fracking fluid.
- Water used for the fracking process is produced from State-approved water sources such as water wells and water associations.
- Some operators are now in the process of obtaining approval to recycle and use produced water for fracking operations.
- Nitrogen (N₂) foam may be used to reduce the amount of water required during the fracking process and can reduce the amount of the required water by 70%.
- The large amounts of sand (as much as 4 million pounds) are used to keep the fractures open.
- Chemical additives may be used to reduce friction, additives typically make up just 0.5% of the fracking fluid. Examples of these additives are swimming pool chemicals, disinfectants, bleach, table salt, citric acid, and sodium carbonate.
- The hydraulic fracturing process has been used for over 60 years.
- Fresh water aquifers are protected by the proper casing and cementing process of the well. Casing is the multiple layers of steel and cement inside the drilled hole. The Bureau of Land Management (BLM) and New Mexico Oil Conservation Division (NMOCD) regulate and inspect the casing and cementing process for every well drilled. The BLM has Petroleum Engineering Technicians (PETs) who inspect the cement job to verify that the casing was cemented properly to ensure that the fresh water aquifers are protected.