The Definition

This half century-old technology is used in oil and natural gas production and allows trapped oil or natural gas to move freely from rock pores to a producing well that can bring the oil or gas to the surface.

In order to improve or maximize the flow of fluids many pre-existing fractures and flow pathways within the well are connected in the reservoir rock with a larger fracture. This larger, man-made fracture starts at the well and extends several hundred feet out into the reservoir rock.

The Process

1. A fluid is pumped down the well at a high-pressure for a short period of time (hours) to create the hydraulic fracture. The high-pressure fluid is usually water with specialty high-viscosity fluid additives.
2. A propping agent, usually sand carried by the high-viscosity additives, is pumped into the fractures to keep them from closing when the pumping pressure is released.
3. The high-viscosity fluid becomes a lower viscosity fluid after a short period of time.
4. The injected water and the now low-viscosity fluids travel back through the man-made fracture to the well and up to the surface.

About IOGCC

The Interstate Oil and Gas Compact Commission (IOGCC) represents the governors of 37 states — 30 member and seven associate states — that produce virtually all the domestic oil and natural gas. Seven international affiliates have been accepted into the organization, giving the IOGCC a voice in global energy affairs. The organization's mission is to champion the conservation and efficient recovery of domestic oil and natural gas resources while protecting health, safety and the environment.

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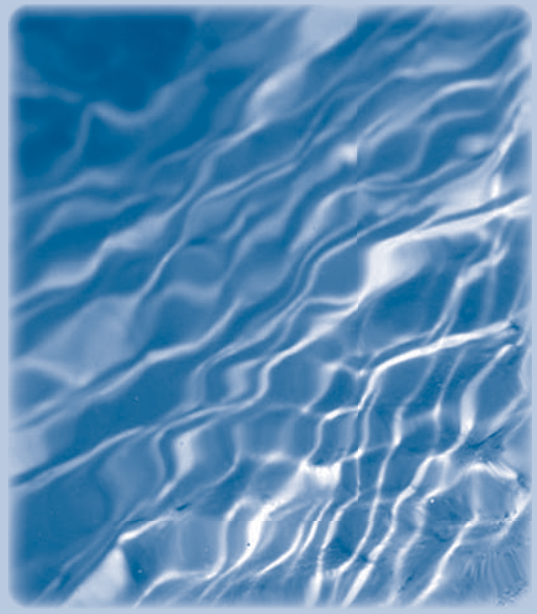
Hydraulic Fracturing



A safe and environmentally sound way to maximize our nation's natural resources

The Issue

Despite any credible evidence, concerns were raised about the environmental impacts of hydraulic fracturing, a process used to increase production of oil and natural gas. Since the process emerged more than 50 years ago, state agencies have developed an impressive record of regulatory success. In fact, there has not been a single incident of hydraulic fracturing damaging a potential source of drinking water.

However, the effectiveness of state programs was challenged by the U.S. Environmental Protection Agency (EPA) and a full scale study was launched funded by federal tax dollars.

The Study

EPA completed its study of the possible impacts of hydraulic fracturing on underground sources of drinking water (USDWs) in 2004.

The goal of the study was to assess the potential for contamination of USDWs due to the injection of hydraulic fracturing fluids.

The EPA researched over 200 peer-reviewed publications, interviewed approximately 50 employees from state or local government agencies and communicated with approximately 40 citizens who were concerned that hydraulic fracturing impacted their drinking water wells. The agency searched for confirmed incidents of drinking water well damage, thoroughly reviewed the information collected and concluded that

The Outcome

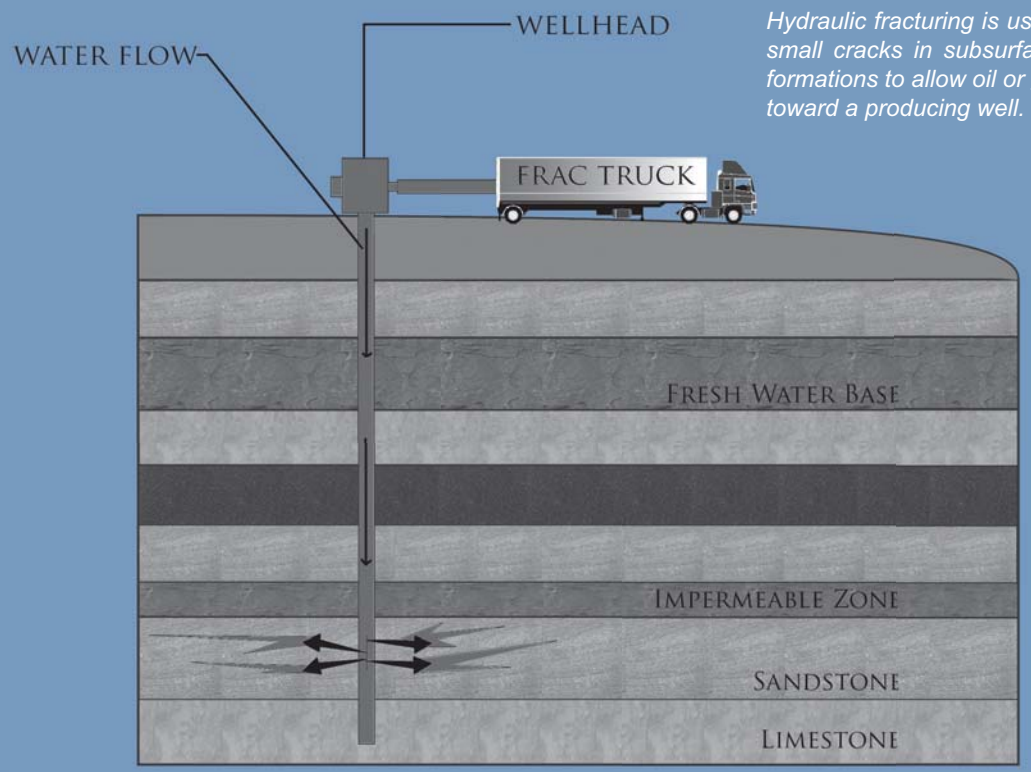
the injection of hydraulic fracturing fluids poses little or no threat to USDWs. This study confirms the success of effective state programs.

EPA found no confirmed cases linked to fracturing fluid injection or subsequent underground movement of fracturing fluids.

Specifically, according to the EPA final report, no hazardous constituents were used in fracturing fluids, and hydraulic fracturing did not result in creating a path for fluids to move between isolated formations. Reported incidents of water quality degradation were attributed to other, more plausible causes, the EPA found.

Although thousands of wells are fractured annually, EPA did not find a single incident of the contamination of drinking water wells by hydraulic fracturing fluid injection.

Properly regulated, hydraulic fracturing is a safe and environmentally sound way to maximize and conserve our nation's natural resources.



Hydraulic fracturing is used to create small cracks in subsurface geologic formations to allow oil or gas to move toward a producing well.