

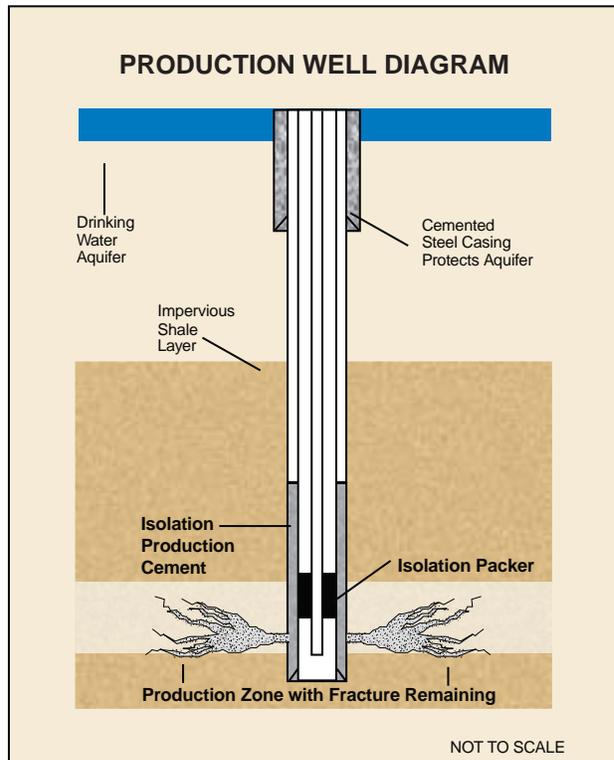
# Safe Technology Critical to Producing America's Natural Gas and Oil Resources

**H**ydraulic fracturing is an important part of energy production in the United States. It is safe, effectively regulated by the states and any efforts to remove the exemption should be opposed. The National Petroleum Council has estimated that in the next ten years up to 80% of all wells drilled in the United States will require fracturing in order to be economically productive. Hydraulic fracturing is essential to efforts to assure an adequate supply of clean burning natural gas, which plays a critical role as a bridge to a low carbon energy supply.

Recently a number of special interest groups and policy makers have initiated efforts to eliminate provisions in the federal laws that exempt hydraulic fracturing from the Underground Injection Control ("UIC") provisions of the Safe Drinking Water Act. They reference questionable reports and make anecdotal claims of numerous incidents of ground water contamination. These groups fail to mention studies by the Ground Water Protection Council and the U.S. EPA that find no evidence to support claims that public health is at risk as a result of hydraulic fracturing. The U.S. EPA reviewed a number of allegations of impacts to drinking water associated with coalbed methane ("CBM") well development. The report stated that although thousands of CBM wells are fractured annually, U.S. EPA did not find confirmed evidence that drinking water wells have been contaminated by the injection of fracturing fluids into CBM wells.

The construction of an oil and gas well is rigorously regulated by state agencies. Each well is constructed pursuant to an approval of an application for a Permit-to-Drill that sets forth the drilling, casing and cementing program for the proposed well. Typically, the steel pipe known as surface casing is cemented into place at the upper portion of the well. The required depth of the surface casing is governed by state regulations and is extended below the depth

of any shallow aquifers that would be tapped by any private drinking water wells and to or below some type of impervious layer such as a shale that would inhibit any migration of fluids up into the shallow drinking water aquifers. Production casing is used at depths below the surface casing, keeping any fluids or other material in the well bore from entering the surrounding formations. In addition, the cementing, or so-called zonal isolation of the well, is a critical part of the well construction that protects not only any water zones but also the integrity of the production zone. Good engineering practices and design result in well construction that prevents communication between the production zone and drinking water sources.



Hydraulic fracturing is utilized during the completion process of an oil or gas well. Prior to stimulating a reservoir a fracture design is performed. Fracture designs incorporate state of the art computer

modeling to ensure safe, effective and highly successful fracture stimulations. During the fracturing process, injection volumes and pressures are closely monitored to ensure fracture fluids reach the intended producing zones. The fluid that flows back from the formation is collected at the surface and recycled or disposed of at state regulated disposal facilities.

Water and proppant (normally in the form of sand) typically make up over 95% of the fracturing fluid system. Proppant is the material that remains in the formation that allows oil and gas to flow into the well bore. Because water alone is not the most effective carrier of the sand into the well bore and fractures, the water must be made more viscous or gel-like. The most common material used to gel the water is guar, a material made from guar beans that is also used

as a gelling agent found in food. In addition to the guar, additional materials may be added to the water to aid its ability to gel, reduce friction and to ensure its compatibility with the receiving formation fluids. In the sixty years of fracturing, there has been no evidence of adverse health effects to workers directly exposed to fracturing additives.

Removing the exemption for hydraulic fracturing should be opposed. In an era of increasing demand for clean burning natural gas, AXPC member companies are committed to supplying the nation with this low carbon energy source to secure energy independence and help maintain a cleaner environment. Adding unnecessary regulations will reduce access to domestic natural gas and oil supplies and further America's economic challenges. ■



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