

## HYDRAULIC FRACTURING: EXPERIENCE SHOWS PROCESS IS FUNDAMENTALLY SAFE

Hydraulic fracturing has been utilized in oil and natural gas development since 1947, when it was first used in the Hugoton Field in Kansas. Since then, the technology has been safely used in more than 1.2 million oil and natural gas wells. As noted below, officials in the Clinton, Bush and Obama Administrations have repeatedly stated that oil and gas development and hydraulic fracturing are fundamentally safe. But they're not the only ones. Take a look at those statements, and others, from some of our country's leading officials, regulators, and academics.

“There’s a lot of hysteria that takes place now with respect to hydraulic fracking, and you see that happening in many of the states. ... My point of view, based on my own study of hydraulic fracking, is that it can be done safely and has been done safely hundreds of thousands of times.”

**Ken Salazar**, U.S. Interior Secretary, former Colorado Senator (February 15, 2012)

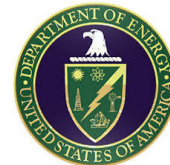


“In no case have we made a definitive determination that the fracking process has caused chemicals to enter groundwater.”

**Lisa Jackson**, U.S. Environmental Protection Agency Administrator (April 30, 2012)

“Hydraulic fracturing ... has proven to be a safe and effective stimulation technique. Ground water is protected during the shale gas fracturing process by a combination of the casing and cement that is installed when the well is drilled and the thousands of feet of rock between the fracture zone and any fresh or treatable aquifers.”

**Modern Shale Gas Development in the United States: A Primer**, U.S. Department of Energy and Ground Water Protection Council (April 2009)



“We know that natural gas can safely be developed, and to the credit of the industry there are many companies that are leaning into this challenge and promoting best practices for safer and more efficient production. That’s not always widely noticed or appreciated, but it’s a fact.”

**Heather Zichal**, Deputy Assistant to President Barack Obama on Energy and Climate (May 15, 2012)

“EPA did not find confirmed evidence that drinking water wells have been contaminated by hydraulic fracturing fluid injection...”

**U.S. Environmental Protection Agency**, “Evaluation of Impacts to Underground Sources of Drinking Water by Hydraulic Fracturing of Coalbed Methane Reservoirs,” (June 2004)



“Hydraulic fracturing has occurred in Colorado since 1947. Nearly all active wells in Colorado have been hydraulically fractured... To date, the COGCC has not verified any instances of groundwater being contaminated by hydraulic fracturing.”

**State Review of Oil and Natural Gas Environmental Regulations Colorado Hydraulic Fracturing State Review** (October 2011)

“ [T]here is substantial vertical separation between the freshwater aquifers and the fracture zones in the major shale plays. The shallow layers are protected from injected fluid by a number of layers of casing and cement — and as a practical matter fracturing operations cannot proceed if these layers of protection are not fully functional.”



**The Future of Natural Gas**, Massachusetts Institute of Technology (June 6, 2011)

\*Ernest Moniz, President Obama's nominee for Secretary of Energy was chair for this report.



“ We've tested 6,000 water wells (in the state), 650 oil wells, and we can't find frack fluid in the water.”

**Colorado Gov. John Hickenlooper** (August 15, 2012)

“ No documented case exists of coalbed methane production wells contaminating drinking water aquifers. ... EPA does not believe that fracturing activities such as those at issue here result in the endangerment of underground sources of drinking water.”

**U.S. Environmental Protection Agency**, Response to Petition for Promulgation of Rule Withdrawing Alabama's Underground Injection Control Program (May 5, 1995)



“ IOGCC member states have all stated that there have been no cases where hydraulic fracturing has been verified to have contaminated drinking water.”

**Interstate Oil and Gas Compact Commission**, a multi-state organization of oil and gas regulators ([IOGCC website](http://IOGCC.org))

“ In the 41 years that I have supervised oil and gas exploration, production and development in South Dakota, no documented case of water well or aquifer damage by the fracking of oil or gas wells, has been brought to my attention. Nor am I aware of any such cases before my time.”

**Fred Steece**, former Oil and Gas Supervisor for the South Dakota Department of Environment and Natural Resources (June 2009)



“ Fracturing fluids have not contaminated any water supply and with that much distance to an aquifer, it is very unlikely they could.”

**Mark Zoback**, Stanford University geophysics professor, Adviser to U.S. Energy Secretary Steven Chu (August 30, 2011)

“ In fact, based on over sixty years of practical application and a lack of evidence to the contrary, there is nothing to indicate that when coupled with appropriate well construction; the practice of hydraulic fracturing in deep formations endangers ground water.”

**State Oil and Natural Gas Regulations Designed to Protect Water Resources**, U.S. Department of Energy and Ground Water Protection Council (May 2009)

