

**Written Summary
of
Public Comments by Jim Zernell
Vice President of Completions, Newfield Exploration Company**

**before the EPA Chartered Science Advisory Board's Public Meeting June 14, 2016
for the Review of EPA's Draft Assessment Report on Hydraulic Fracturing**

Mr. Chairman and Members of the Advisory Board, thank you very much for this opportunity to provide observations and comments from Newfield Exploration Company on this very important subject.

My name is Jim Zernell and I work for Newfield Exploration where I am the Vice President of Completions. I am also the Company Officer responsible for managing Newfield's Safety, Environmental and Regulatory compliance programs. Newfield is a Fortune 500 Company (<http://www.newfield.com>) with both domestic and international oil and gas operations. Since its establishment 28 years ago, Newfield has successfully explored for and developed oil and natural gas resources in six different countries on four continents, the Gulf of Mexico, and in nine different U.S. states. In the Gulf of Mexico, Newfield was twice awarded the coveted Minerals Management's "SAFE Award" (Safety Award for Excellence). Newfield's Utah operations also were acknowledged twice by the state of Utah with its "Earth Day Award" in 2011 and again in 2013, where we were specifically recognized for our successes in water conservation and recycling. Our employees, from field workers all the way to the CEO, have a component of their compensation tied to the company's safety and environmental operational performance. We are good stewards of the environment and show this same commitment in the communities where we operate and our employees and their families live and work. Corporate responsibility is in Newfield's DNA and we are proud of our deep culture of executing in a safe and environmentally-responsible manner.

Newfield's current areas of focus are in Oklahoma, Utah, Texas and North Dakota where we are an active developer of unconventional oil resource reservoirs. Newfield employs over a thousand employees of whom more than 200 are degreed engineers and geoscientists. More than 80% of our geoscientists have advanced degrees in their field of expertise. Oil and gas drilling, completion and production operations are sophisticated, technical activities based on science and the technical advancements that have been developed over the course of the past 150 years.

On a personal note, I am from St. Marys, Pa., and a graduate of The Pennsylvania State University with a bachelor's degree in Petroleum and Natural Gas Engineering. Coming from a small rural town in the northwestern part of the state, I grew up as an outdoor enthusiast and to this day, my family and I still enjoy hunting and fishing, along with many other outdoor activities. We consider ourselves avid conservationists and stewards of the lands that we enjoy—much of which is on property with ongoing oil and gas operations, including Pennsylvania.

I am here to testify as to my experience and hands-on knowledge in drilling, completing and producing wells spanning a 37-year career in the industry, including thousands of hydraulic fracturing operations in more than eight states, including Alaska, and offshore operations in the Gulf of Mexico, North Atlantic, and Beaufort Sea. In all that time, I have never personally experienced or seen any credible evidence in the areas I have worked, of any groundwater contamination caused by the physical operation of hydraulic fracturing. And I would propose to this Panel that if there were “widespread” and “systemic” impact on drinking water resources of the United States—even without the comprehensive studies completed by the EPA, academia, and numerous government agencies; and after hundreds of thousands of horizontal wells with millions of individual hydraulic fracturing operations undertaken across the U.S. in 27 states, over the course of 70 years, from the east coast to the west coast, from our northern border to Mexico—it certainly would have been readily evident by now.

To this point, as a prudent operator, Newfield, and I personally, support the scientific findings by the EPA that there has not been, nor does the operation of hydraulic fracturing pose “*widespread, systemic impacts to drinking water resources in the United States.*”

While localized pollution events do regrettably occur in our industry, as in most industrial operations, oil and gas operators have done as well or better than any industry at continual improvement through the application of the most advanced and best available technologies. The industry has continued to advance its recommended practices (such as API RP 100-1, RP 100-2 & RP 100-3) to address public concerns around wellbore integrity, environmental exposure and the impacts of hydraulic fracturing operations on local communities. At the same time, the state and federal regulatory agencies charged with the management of oil and gas operations, including hydraulic fracturing and the protection of groundwater resources, are continually updating the existing regulatory framework to ensure protection of the environment.

Of the very few oilfield-related pollution events that I am personally knowledgeable of, all have had very localized impacts, and certainly fall short of any imaginable definition of “widespread” or “systemic.” Absolutely no incidents in Newfield’s operations, or any other incidents of which I am aware of, occurred due to the actual hydraulic fracturing operation, but were the result of other processes typical of most oil and gas operations. These events, and their impacts, can continue to be reduced through ongoing efforts by the industry and regulators as we all strive for continual improvements in our operations.

To discredit the EPA’s conclusions because of how the findings were summarized within an Executive Summary or because the words “*widespread*” and “*systemic*” used in their conclusion seem somehow vague, would appear to be driven by emotion or pressure from special interest groups rather than by scientific fact. To proceed in this manner is to dismiss the numerous peer-reviewed studies, supported by their wide body of scientific evidence, that have reached the same conclusion as the EPA.

I have read volumes surrounding the highly publicized investigations around groundwater contamination at Dimock Pa., Parker County, Tx. and Pavillion, Wy. They have been studied by numerous governmental and non-governmental bodies. The one closest to my heart is Dimock, Pa., but it is also the one that I find to be the most amazing because it is still so contentious—even after numerous scientific studies. I would submit that even a simplistic knowledge of oil and gas wellbore construction and a cursory reading of Molofsky, et. al's, work titled "Evaluation of Methane Sources in Groundwater in Northeastern Pennsylvania" (published in *Groundwater* in 2013); —a study where more than 1,700 water wells were sampled and verified the ubiquitous existence of naturally occurring methane in groundwater in northwest Pennsylvania—should convince everyone that the methane in the water in Dimock is not a result of hydraulic fracturing operations in the Marcellus shale. For the Panel to propose that the EPA continue to study this incident seems to be more of an effort to keep hydraulic fracturing in a negative spotlight for the purpose of advancing political or special interest group agendas, and is not based on fact or science.

This negative attention has resulted in a campaign of misinformation by fossil fuel opponents who have distorted the facts around the entire oil and gas industry, and created a level of hysteria around hydraulic fracturing purely for the purpose of branding all oil and gas activity as negative or harmful. A perfect example of this is in New York where these same fossil fuel opponents are seeking to prevent the construction of natural gas transmission pipelines. The state is embroiled in a debate over the Constitution Pipeline as if groundwater contamination is expected to ensue in a widespread manner because of this alleged frac-related activity. Few seem to have the common sense to realize, or openly admit, that the state of New York, like most all of its neighbors, already has thousands of miles of natural gas pipelines that have been crisscrossing through it for decades—long before today's sophisticated hydraulic fracturing processes were being employed. The same process, I might add, has served to unlock an abundance of oil and gas energy reserves within the United States with the potential to propel the country to complete energy independence.

I'll close by saying that we believe, Newfield and I, that the Panel should accept the summary findings of the EPA, which are based on sound fact and scientific studies. To advise the EPA otherwise and discount the results of the technical data, would only serve to bolster anti-fossil fuel activists who continue to make wild claims of rampant environmental damage based on a lack of knowledge, conjecture and un-truths—not on years of scientific analysis. We cannot just castoff science because it does not serve to feed our fears, politics, or the agenda of special interest groups.

Thank you for your time in allowing me to share my knowledge and voice my opinion and observations.

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