From: Eric Sanford
To: <u>fracking inquiry</u>

Subject: Hydraulic Fracturing Study

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https://www.heartland.org/publications-resources/publications/research--commentary-peer-reviewed-study-says-hydraulic-fracturing-not-responsible-for-groundwater-contamination-in-west-virginia

I am not an Australian citizen, but I have followed your process with much interest. The link provided above may be of interest to your process.

Thank you,

Eric T. Sanford

Operations and Land Manager SG Interests I, Ltd.



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RESEARCH & COMMENTARY: PEER-REVIEWED STUDY SAYS HYDRAULIC FRACTURING NOT RESPONSIBLE FOR GROUNDWATER CONTAMINATION IN WEST VIRGINIA

MAY 15, 2017 By Tim Benson

No Groundwater Contamination At 112 Wells In Tyler & Hall Counties



A new peer-reviewed study led by researchers at Duke University and released in Geochimica et Cosmochimica Acta, the journal of The Geochemical Society and The Meteoritical Society, in April 2017 found hydraulic fracturing, commonly called "fracking," has not led to groundwater contamination in 112 drinking-water wells in Tyler and Hall Counties in northwestern West Virginia. Interestingly, the study was partially funded by the anti-fracking Natural Resources Defense Council (NRDC).

"Based on consistent evidence from comprehensive testing, we found no indication of groundwater contamination over the three-year course of our study," said Avner Vengosh, professor of geochemistry and water quality at Duke's Nicholas School of the Environment, in an accompanying press release.

The existing peer-reviewed evidence, which this study adds to, shows hydraulic fracturing processes do not pose a systemic impact on groundwater. Since 2010, at least 18 of these studies have been produced. This is reinforced by the Environmental Protection Agency's own \$29-million, six-year study of fracking's impact on groundwater sources, which failed to find any systemic impact caused by the 110,000 oil and natural gas wells that have been in use across the country since 2011.

As well as being environmentally safe, fracking has had a positive economic impact on those areas that have allowed the practice. A study released in late December 2016 of communities near shale basins – conducted by researchers at the University of Chicago, Princeton University, and the Massachusetts Institute of Technology (MIT) – determined hydraulic fracturing activity brings \$1,300 to \$1,900 in annual benefits to local households, including "a 7 percent increase in average income, driven by rises in wages and royalty payments, a 10 percent increase in employment, and a 6 percent increase in housing prices."

"Our estimates are based on the knowledge that communities currently have ... [and] based on what is currently known, the average community that has allowed fracking has enjoyed substantial net benefits," said lead researcher Michael Greenstone of the University of Chicago.

According to the U.S. Energy Information Administration, only Ohio and Pennsylvania produce more natural gas via fracking than West Virginia. West Virginia University estimates 17 percent of the Mountain State's economy is linked directly to the energy industry.

The fracking process has transformed the energy outlook of the United States over the past decade, and the rise of shale gas as a replacement for coal has been primarily responsible for the United States now enjoying its lowest level of carbon-dioxide emissions since 1989. According to the U.S. Energy Information Administration (EIA), fracking now accounts for 51 percent of all U.S. crude oil production. EIA also estimates the continuing switch of electricity-generation fuels to fracking-produced natural gas is responsible for 63 percent of the drop in U.S. energy-related carbon-dioxide emissions over the past decade. The oil and natural gas hydraulic fracturing has enabled us to exploit are cost-effective and abundant, and they can ensure the United States is the world's largest energy producer well beyond the 21st century.

Drilling is currently being conducted in hundreds of location in West Virginia in a safe and responsible manner, and federal, state, and local governments have tested thousands of sites nationwide for frackinglinked pollution of groundwater or drinking-water resources, as well as for air quality issues. Flatly, there is no scientific justification for banning hydraulic fracturing or overregulating it out of existence.

The following documents provide more information about hydraulic fracturing.

The Local Economic and Welfare Consequences of Hydraulic Fracturing

https://www.heartland.org/publications-resources/publications/the-local-economic-and-welfareconsequences-of-hydraulic-fracturing

This comprehensive study published by the National Bureau of Economic Research says fracking brings, on average, provide \$1,300-\$1,900 in annual benefits to local households, including a 7 percent increase in average income, a 10 percent increase in employment, and a 6 percent increase in housing prices.

What If ... Hydraulic Fracturing Was Banned?

https://www.heartland.org/publications-resources/publications/what-if-hydraulic-fracturing-was-banned This study is the fourth in a series of studies produced by the U.S. Chamber of Commerce's Institute for 21st Century Energy. It examines what a nationwide ban on hydraulic fracturing would entail. The report's authors found by 2022, a ban would cause 14.8 million jobs to "evaporate," almost double gasoline and electricity prices, and increase natural gas prices by 400 percent. Moreover, cost of living expenses would increase by nearly \$4,000 per family, household incomes would be reduced by \$873 billion, and GDP would be reduced by \$1.6 trillion.

What If ... America's Energy Renaissance Never Happened?

https://www.heartland.org/publications-resources/publications/what-ifamericas-energy-renaissance-neveractually-happened

This report by the U.S. Chamber of Commerce's Institute for 21st Century Energy examines the impact the development of shale oil and gas has had on the United States. The report's authors found that without the fracking-related "energy renaissance," 4.3 million jobs in the United States may not have been created and \$548 billion in annual GDP may have disappeared since 2009. Electricity prices would also be 31 percent higher and gasoline prices 43 percent higher.

Hydraulic Fracturing a Game-Changer for U.S. Energy and Economies

https://www.heartland.org/publications-resources/publications/hydraulic-fracturing-a-game-changer-for-usenergy-and-economies?source=policybot

In this Policy Study from The Heartland Institute, Heartland Research Fellow Isaac Orr explains the advantages and disadvantages of smart drilling and its alternatives. Orr reviews the background and potential of hydraulic fracturing in the United States and puts that potential in the context of the supply of and demand for oil and gas. He addresses the environmental impacts of hydraulic fracturing, both positive and negative, as well as the public safety issues raised by activists, such as potential harm to drinking-water supplies. Orr also discusses how oil and gas production is regulated at the state and national levels and suggests appropriate policies for the industry.

Bill McKibben's Terrifying Disregard for Fracking Facts

https://www.heartland.org/publications-resources/publications/bill-mckibbens-terrifying-disregard-forfracking-facts?source=policybot

This Heartland Institute Policy Study, written by Research Fellow Isaac Orr, examines how methane emissions are measured, reports the effect those emissions may have on global warming, and discusses several falsehoods journalist Bill McKibben repeats from the discredited movie Gasland. It also evaluates the available fracking alternatives and discusses the relatively small impact new methane-emissions rules enacted by the Environmental Protection Agency will likely have on Earth's climate.

Research & Commentary: Study on Fracking-Related Air Pollution in Ohio Retracted Due to Errors https://www.heartland.org/publications-resources/publications/research--commentary-study-on-frackingrelated-air-pollution-in-ohio-retracted-due-to-errors?source=policybot

Tim Benson, policy analyst at The Heartland Institute, writes about a joint study from researchers at Oregon State University and the University of Cincinnati – originally published in the peer-reviewed journal Environmental Science and Technology in March 2015 – claimed hydraulic fracturing, also called "fracking," of the Utica shale in Carroll County, Ohio is causing significant air pollution. But the researchers have retracted the controversial study due to its numerous miscalculations and errors. When much of the erroneous data was corrected, the researchers found they "significantly" changed "air concentrations ... relative to those reported in the published article."

Fracking Facts: The Science, Economics, and Legal Realities

https://www.heartland.org/publications-resources/publications/fracking-facts-the-science-economics-andlegal-realities?source=policybot

Hydraulic fracturing, commonly known as fracking, has been employed in the United States since the 1940s. Although innovation has improved the precision of the process, the essentials are the same. Utilizing horizontal drilling, a mixture of mostly water, sand, and trace amounts of chemicals, are used to create fissures in underground shale deposits to allow oil and natural gas trapped in hard rock to move toward the surface to be collected. Activists have blamed fracking and the processes associated with it for emissions of pollutants, earthquakes, and even groundwater contamination, though independent evidence consistently shows these allegations to be false. Leigh Thompson of the Texas Public Policy Foundation argues the evidence supporting fracking bans looks slim when attention is drawn to the facts.

Nothing in this Research & Commentary is intended to influence the passage of legislation, and it does not necessarily represent the views of The Heartland Institute. For further information on this subject, visit Environment & Climate News, The Heartland Institute's website, and PolicyBot, Heartland's free online research database.

The Heartland Institute can send an expert to your state to testify or brief your caucus; host an event in your state; or send you further information on a topic. Please don't hesitate to contact us if we can be of assistance! If you have any questions or comments, contact John Nothdurft, Heartland's director of government relations, at john@heartland.org or 312/377-4000.

ARTICLE TAGS

ENERGY

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SUB-TOPICS

Energy: Hydraulic Fracturing "Fracking"

Energy: Oil

Energy: Natural Gas

Environment: Water Quality

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