

Freedom Fracked?

The oil and gas industry's campaign to silence academic fracking critics



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About the Public Accountability Initiative

The Public Accountability Initiative (PAI) is a non-profit, non-partisan research and educational organization focused on corporate and government accountability. In addition to publishing research on critical public accountability issues, PAI maintains LittleSis.org, an involuntary facebook of powerful people and tool for power research that was used to compile data for this report. PAI's work is funded by a variety of non-profit sources (all funding sources are listed at <http://public-accountability.org/about/funding>). PAI's research on the oil and gas industry and fracking is funded by the 11th Hour Project of the Schmidt Family Foundation and by the Park Foundation.

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Executive Summary

In May 2015, an extraordinary example of academic intimidation involving the oil and gas industry and a fracking researcher came to light.

According to documents obtained by *Bloomberg*, Continental Resources CEO Harold Hamm had urged University of Oklahoma leadership to fire scientists investigating the role of fracking in causing Oklahoma's recent spate of earthquakes. Earlier in 2015, *EnergyWire* had reported that Hamm and David Boren, a Continental board member and president of the University of Oklahoma, had met with the Oklahoma state seismologist, an OU employee, to talk about the public relations impact of OGS acknowledging the connection. This highly publicized instance of academic intimidation by the oil and gas industry is the latest in a series of cases in which the industry has exerted its power to intimidate, silence, and discredit scientists that have the temerity to issue research critical of fracking.

This trend can be seen as a part of the larger phenomenon known as "frackademia," where the oil and gas industry – aided by friendly scientists, industry-funded academic units, allied consulting companies, and public relations firms – produce and promote research that portrays fracking as environmentally safe and of great economic benefit. PAI has reported extensively on frackademia, revealing shoddy scholarship and undisclosed conflicts of interest as well as a campaign to disseminate this biased and compromised research to policymakers.

The following report covers the flip side of this influence: the industry seeking to silence academics who have been critical of fracking.

The report reviews the circumstances surrounding the Oklahoma case, and examines several other instances of researchers coming under industry pressure as a result of critical research on fracking. The following are brief summaries of these cases:

- **Geologist fired from the Colorado School of Mines and University of Wyoming over criticism of fracking.**

Geologist Geoffrey Thyne was fired from both the Colorado School of Mines and the University of Wyoming after making public comments about hydraulic fracturing that drew the ire of the drilling industry, in 2009 and 2012, respectively. Both CSM and UW have strong ties to the oil and gas industry, hosting industry-funded academic units studying drilling. Furthermore, the president of CSM is a paid director of several fracking companies and sits on the board of the industry group that complained about Thyne.

- **University of Pittsburgh professor resigned over criticism of fracking shortly after industry attacks.**

Conrad "Dan" Volz, formerly the director of the University of Pittsburgh's Center for

Healthy Environments and Communities and founder of the FracTracker Alliance, was a vocal critic of fracking and resigned his posts in 2011 after coming under pressure from university leadership to tone down his criticism of fracking. He announced his resignation shortly after one of his reports came under fire from multiple industry-linked sources, including an attack specialist that has been retained by the tobacco and oil and gas industries to combat critical science on smoking and climate change.

The following cases are less significant in terms of consequences for the researchers, but follow similar patterns:

- **Cornell researchers smeared by industry-backed groups due to high-profile research on fracking.**

Robert Howarth and Anthony Ingraffea, two researchers at Cornell who raised questions about the value of natural gas as a “bridge fuel” in an influential 2011 paper, have been the targets of a smear campaign coming from both fracking lobbying groups and academic fracking backers.

- **Co-authors of University of Texas fracking report pressured by lead author with industry ties.**

Contributors to a 2012 UT report on fracking saw their work mischaracterized and their suggestions ignored by the report’s principal investigator, UT professor Chip Groat. The result was an extremely unbalanced, pro-industry set of findings that were in line with Groat’s personal financial interests, if not the actual text of the report. Groat had failed to reveal to his colleagues or the press that he was a paid director of an oil and gas company at the time of the report’s preparation and publication.

- **Researcher excluded from EDF methane study in Boston.**

A Boston University study of urban methane leaks sponsored by the Environmental Defense Fund excluded an expert researcher who was involved in litigation against National Grid, a sponsor of three other studies in EDF’s series on methane emissions.

With a near universal consensus that the issue of fracking demands more and better science, the trend of the industry intimidation of fracking researchers is extremely troubling. Coupled with the industry’s well-documented effort to promote low-quality research that endorses fracking, the suppression of critical science paints a picture of an industry more concerned with public perception than with developing a complete or accurate scientific record.

The oil and gas industry appears, cynically, to view science as simply a means to their particular end, much in the vein of the tobacco and asbestos industries in the recent past.

I. University of Oklahoma / Oklahoma Geological Survey

Oil and gas CEO Harold Hamm pressured scientists to cover up link between earthquakes and fracking

In the face of mounting evidence that a rapid and dramatic increase in earthquake activity in the state of Oklahoma was being caused by the disposal of fracking wastewater, Continental Resources CEO Harold Hamm pressured the state geological survey to avoid acknowledging the connection. In a series of meetings with the leadership of the University of Oklahoma, where OGS is housed, and Austin Holland, the state seismologist studying the issue, Hamm and Continental Resources relayed concerns about how OGS was handling the issue and sought to have “select [Oklahoma Geological Survey] staff dismissed.”

Amid Hamm’s behind the scenes maneuvering, the Oklahoma Geological Survey (OGS) inched closer to publicly accepting the link between Oklahoma’s increased seismicity and oil and gas activity while avoiding an explicit acknowledgement.

The OU leaders who fielded Hamm’s requests had clear conflicts of interest that likely influenced their handling of the situation. The university’s president, former Oklahoma Governor and Senator David L. Boren, happens to be a director of Hamm’s company, and earned \$348,720 in cash and stock from Continental in 2014, compensation which approached his university pay – \$440,000 that year.¹ The total value of Boren’s equity stake in Continental was \$699,388 at the market’s close on May 27, 2015.² Boren joined Hamm in a meeting with Holland in November 2013 that Holland described as “intimidating.” Larry Grillot, the dean of the OU college that includes OGS, also sits on the board of a fracking company, Pioneer Natural Resources, and made \$279,405 in that position last year.³

Hamm’s pressure on OGS to cover up the link between fracking and earthquakes came to bear over several years, and is detailed in a series of press reports in *Bloomberg* and *EnergyWire*. We have summarized key events in the below timeline:

Timeline of Events: The Oklahoma Fracking Earthquake Cover-up

Early 2010: Oklahoma Geological Survey recognizes that an earthquake swarm near Oklahoma City may have been triggered by an oil and gas project.⁴ State seismologist Austin Holland wrote to USGS science advisor Bill Leith in 2013 that OGS had “recognized the potential for the Jones earthquake swarm to be due to the Hunton dewatering,” in early 2010,

¹ Arthur Kane, “Are OU faculty, staff salaries driving student debt?”, Watchdog.org (January 15, 2015). Accessed at: <http://watchdog.org/192336/large-ou-faculty-staff-salaries-driving-student-debt/>

² Form 4, David L Boren (May 26, 2015). Accessed at: <https://www.sec.gov/Archives/edgar/data/0001193458/000120919115047637/0001209191-15-047637-index.htm>. Continental Resources stock was valued at \$45.35 per share at the market’s close May 27, 2015.

³ Form DEF 14A, Pioneer Natural Resources (April 9, 2015). Accessed at: <http://www.sec.gov/Archives/edgar/data/1038357/000103835715000024/a2015pxdproxy.htm>

⁴ Mike Soraghan, “Okla. agency linked quakes to oil in 2010, but kept mum amid industry pressure”, *EnergyWire* (March 13, 2015).

Accessed at: http://www.eenews.net/special_reports/deep_underground/stories/1060014342

“[b]ut until we can demonstrate that scientifically or not we were not going to discuss that publicly.”

March 2011: Continental Resources CEO Harold Hamm donates \$20 million to OU. The donation was for a new diabetes center that bears Hamm’s name.⁵

September 2011: Hamm requests a meeting with OU President Boren regarding OGS research acknowledging the possibility of a connection between oil drilling and earthquakes.⁶ As reported in *EnergyWire* earlier this year, according to Oklahoma Independent Petroleum Association (OIPA) President Mike Terry, Hamm sought to “make sure everyone concerned understands the potential public relations repercussions if we don't handle this issue correctly.”⁷ Dean Larry Grillot also attended the meeting.

Holland, the author of the OGS research, did not attend the meeting, but shortly thereafter revised a portion of a PowerPoint presentation to which OIPA had objected.⁸

October 2013: OGS and the USGS publish a joint statement suggesting that the injection of wastewater from oil drilling likely contributed to the dramatic increase in Oklahoman seismicity.⁹

Soon after, Dr. Holland was summoned to a meeting with a director of the Oklahoma Corporation Commission (which oversees oil and gas drilling in the state) and Continental Resources VP Jack Stark.¹⁰ Writing to his superiors after the meeting, Holland said: “The basic gist [*sic*] of the meeting is that Continental does not feel induced seismicity is an issue and they are nervous about any dialog about the subject.”¹¹

November 2013: Holland meets with President Boren and Harold Hamm. Holland described the meeting as “just a little bit intimidating.”¹² (Continental disputes this interpretation, stating to *Bloomberg Business* that the conversation was “cordial and an information exchange with Austin”.)¹³

⁵ Kristin Miskovsky, “\$20 Million Dollar Gift From Harold And Sue Ann Hamm Launches Five-Year, \$100 Million Dollar Campaign For the Harold Hamm Oklahoma Diabetes Center”, Harold Hamm Diabetes Center (March 13, 2011). Accessed at: <http://haroldhamm.org/news-release/20-million-dollar-gift-from-harold-and-sue-ann-hamm-launches-five-year-100-million-dollar-ampaign-for-the-harold-hamm-oklahoma-diabetes-center/>

⁶ Mike Soraghan, “Hamm sought meeting with OU’s Boren on Okla. quakes in 2011”, *EnergyWire* (April 9, 2015). Accessed at: <http://www.eenews.net/energywire/stories/1060016471>

⁷ *Id.*

⁸ *Id.*

⁹ United States Geological Survey, “Record Number of Oklahoma Tremors Raises Possibility of Damaging Earthquakes”, United States Geological Survey -(October 22, 2013; updated May 2, 2014). Accessed at: http://earthquake.usgs.gov/contactus/golden/newsrelease_05022014.php

¹⁰ Mike Soraghan, “Okla. agency linked quakes to oil in 2010, but kept mum amid industry pressure”, *EnergyWire* (March 13, 2015).

¹¹ *Id.*

¹² Benjamin Elgin, “Big Oil Pressured Scientists Over Fracking Wastewater’s Link to Quakes”, *Bloomberg Business* (May 15, 2015). Accessed at: <http://www.bloomberg.com/news/articles/2015-03-30/big-oil-pressured-scientists-over-fracking-wastewater-s-link-to-quakes>

¹³ Benjamin Elgin, “Oil CEO Wanted University Quake Scientists Dismissed: Dean's E-Mail”, *Bloomberg Business* (May 15, 2015). Accessed at: <http://www.bloomberg.com/news/articles/2015-05-15/oil-tycoon-harold-hamm-wanted-scientists-dismissed-dean-s-e-mail-says>

February 2014: OGS publishes a “position paper” which again acknowledged a possible connection between wastewater injection and earthquakes.¹⁴ OGS ultimately concluded that the majority of the quakes had natural causes.

July 2014: Hamm meets with Boren and then Grillot to further discuss his concerns.¹⁵ In an email to his colleagues, Grillot remarked, “Mr. Hamm is very upset at some of the earthquake reporting to the point that he would like to see select OGS staff dismissed.” Hamm also expressed an interest in sitting on the search committee for a new OGS director, and told Grillot that he would be meeting with Oklahoma Governor Mary Fallin to discuss moving OGS outside of OU.¹⁶

October 2014: Geologist Bob Jackman confronts Holland at a conference and presses him on OGS’ official position on earthquakes. Writing in the *Oklahoma Observer* in October 2014, Jackman explained that a frustrated Holland said to him, “You don’t understand – Harold Hamm and others will not allow me to say certain things.”¹⁷

The State of Oklahoma finished 2014 having experienced 584 earthquakes of magnitude 3.0 or higher, up from 109 the previous year.¹⁸ OGS projects that the state will experience almost a thousand such quakes in 2015.¹⁹

March 13, 2015: EnergyWire publishes first story on industry pressure to quiet earthquake link.²⁰

April 2015: University of Oklahoma announces that it is closing the Leonard Geophysical Observatory, a major earthquake monitoring facility.²¹ Holland characterized the closure as a cost-cutting measure and even went so far as to say that it would “result in improved monitoring and reporting of Oklahoma earthquake activity”.²² A *New Yorker* article on the closure, however, calls into question the expense of keeping the facility open, as the observatory land had been gifted to the university years ago, the equipment was on loan from the USGS, and the facility’s water usage is so low that it did not even generate a bill in the past two years.²³

¹⁴ Oklahoma Geological Survey, “OGS POSITION STATEMENT - OKLAHOMA EARTHQUAKE ACTIVITY”, Oklahoma Geological Survey (February 17, 2014). Accessed at: http://www.ogs.ou.edu/pdf/OGS_POSITION_STATEMENT_2_18_14.pdf

¹⁵ Benjamin Elgin, “Oil CEO Wanted University Quake Scientists Dismissed: Dean’s E-Mail”, Bloomberg Business (May 15, 2015).

¹⁶ *Id.*

¹⁷ Bob Jackman, “Hamm-Made Earthquakes”, *Oklahoma Observer* (October 2014) 9-10. Accessed at: <http://okobserver.net/issues/october-2014-oklahoma-observer/> (subscription required)

¹⁸ Oklahoma Geological Survey, “Earthquakes in Oklahoma of M3+” (April 14, 2015). Accessed at: <http://earthquake.usgs.gov/earthquakes/states/oklahoma/images/OklahomaEQsBarGraph.png>

¹⁹ *Id.*

²⁰ Mike Soraghan, “Hamm sought meeting with OU’s Boren on Okla. quakes in 2011”, EnergyWire (April 9, 2015).

²¹ Mike Soraghan, “Okla. lawmaker questions timing of quake observatory closure”, EnergyWire (May 20, 2015). Accessed at: http://www.eenews.net/special_reports/deep_underground/stories/1060018836. See also, e.g., Randy Krehbiel, “Oklahoma Geological Survey closing Leonard seismic observatory to cut costs”, *The Tulsa World* (April 29, 2015). Accessed at: http://www.tulsaworld.com/news/government/oklahoma-geological-survey-closing-leonard-seismic-observatory-to-cut-costs/article_e0e04385-0696-5357-bd1d-d897363b4f27.html

²² Dee Duren, “Leonard Observatory Earthquake Monitoring Station To Close”, KOTV (Tulsa, OK) (April 18, 2015). Accessed at: <http://www.newson6.com/story/28837556/leonard-observatory-earthquake-monitoring-station-to-close>

²³ Rivka Galchen, “Goodbye to an Oklahoma Earthquake Observatory”, *The New Yorker* (April 22, 2015). Accessed at: <http://www.newyorker.com/tech/elements/goodbye-to-an-oklahoma-earthquake-observatory>

April 21, 2015: Oklahoma's Office of the Secretary of Energy & Environment acknowledges link between wastewater injection and earthquakes.²⁴

May 15, 2015: *Bloomberg Business* reports that Hamm had wanted OGS scientists fired. The article points out that just a few days earlier, *EnergyWire* had published an article quoting Hamm as saying "I'm very approachable, and don't think I'm intimidating."

Hamm to Keynote EIA Conference alongside Moniz, June 15, 2015

In the wake of revelations about his heavyhanded attempts to squelch government-sponsored science on the links between earthquakes and fracking, oil and gas CEO Harold Hamm is set to deliver a keynote address at the 2015 Energy Information Administration conference on June 15, 2015.

The fact that the EIA is giving a platform to Hamm is troubling: EIA is a government agency responsible for the independent stewardship and analysis of data that is extremely important to the oil and gas industry; Hamm is an oil and gas CEO with a record of interfering in government-sponsored scientific inquiries. Secretary of Energy Ernest Moniz, head of EIA's parent agency, will also be delivering a keynote.

The conference, billed as "a unique opportunity to meet and network with fellow energy experts and decision makers," brings together government officials with representatives of energy companies, consultants, and think tanks to discuss "current and future challenges facing domestic and international energy markets and policymakers." Topics this year include greenhouse gas emissions, energy transportation by rail and water, and global and domestic natural gas markets.

More information here: <https://www.fbcinc.com/e/eia/>

²⁴ Michael Wines, "Oklahoma Recognizes Role of Drilling in Earthquakes", *The New York Times* (April 21, 2015). Accessed at: <http://www.nytimes.com/2015/04/22/us/oklahoma-acknowledges-wastewater-from-oil-and-gas-wells-as-major-cause-of-quakes.html>

II. Colorado School of Mines & University of Wyoming

Geologist fired twice over criticism of fracking after pressure from industry

Another geologist, Geoffrey Thyne, lost his job twice due to making public statements perceived as critical of the oil and gas industry and fracking. In 2006, the Colorado School of Mines declined to renew Thyne's contract as a research faculty member after he criticized an EPA study of possible water contamination due to fracking and suggested that the oil and gas industry and academia bears the burden of proof to show that fracking is safe.²⁵ In 2012, Thyne was dismissed from the University of Wyoming, this time over comments he made discussing the amount of water used by fracking operations.²⁶

Similar to OU, both the Colorado School of Mines and the University of Wyoming have strong oil and gas ties that raise troubling questions about the circumstances of Thyne's dismissal from each.

Colorado School of Mines

In 2005, Geoffrey Thyne, then a research faculty member at the Colorado School of Mines, began an unfunded review of a 2004 EPA study at the request of Earthworks, an environmental organization.²⁷ At that time, Thyne commented in interviews that the EPA's conclusion that fracking posed no threat of contaminating groundwater was spurious – wrongly equating an absence of data proving water contamination with positive proof of no contamination.²⁸

"What the EPA has said is that in the absence of overwhelming evidence, they will assume there's no problem," he told the *Denver Post*.²⁹

Thyne was warned by a Mines vice president that his comments might be improperly attributed to the school.³⁰ After other comments from Thyne appeared in the media, Thyne's boss told him to drop his fracking research due to "pushback" from alumni and members of the board of trustees.³¹ Thyne says that he found out later that the Colorado Oil and Gas Association, a powerful industry lobbying group, had complained to school administrators about his comments

²⁵ Jefferson Dodge, "Fracking and academic freedom", Boulder Weekly (August 16, 2012). Accessed at: <http://www.boulderweekly.com/article-9467-fracking-and-academic-freedom.html>

²⁶ *Id.*

²⁷ In the "Acknowledgements" section of its report on the EPA study, Earthworks mentioned that, in addition to several named reviewers, the report had also been reviewed "by two other PhD scientists and an oil and gas industry engineer, who wish to remain anonymous for employment reasons." While we cannot be certain whether or not Thyne was one of the anonymous scientists, the circumstances suggest that to be a definite possibility. Lisa Sumi, "Our Drinking Water at Risk", Earthworks (April 7, 2005). Accessed at: <http://www.earthworksaction.org/files/publications/DrinkingWaterAtRisk.pdf>

²⁸ Theo Stein, "Group: Extraction process threatens water", *The Denver Post* (April 14, 2005) B8.

²⁹ *Id.*

³⁰ David O. Williams, "School of Mines claims former prof merely warned about public comments", *The Colorado Independent* (July 9, 2009). Accessed at: <http://www.coloradoindependent.com/32990/school-of-mines-claims-former-prof-merely-warned-about-public-comments>

³¹ Jefferson Dodge, "Fracking and academic freedom", Boulder Weekly (August 16, 2012).

and that the renewal of his contract was contingent on his dropping his research.³² In 2009, Thyne transitioned to a position at the University of Wyoming.³³

The “pushback” described by Thyne’s superiors appears to have been a campaign to quiet the fracking criticism coming from the industry-tied mining school. In addition to extensive corporate sponsorship of its research institutes, the Colorado School of Mines’ president during the controversy over Thyne’s statements also has a significant financial stake in the oil and gas industry, and was a board member of the oil and gas lobbying group that sought an end to Thyne’s research.

Mines President Myles W. “Bill” Scoggins had a long career in the oil and gas industry before he was appointed to his position in 2006.³⁴ Scoggins worked for Mobil Corp and its successor ExxonMobil for 34 years, rising to President of International Exploration & Production and Global Exploration before retiring in 2004.³⁵ Today, Scoggins serves on the boards of directors of Cobalt Energy Inc, QEP Resources, and Laredo Petroleum and holds more than \$3.4 million in stock and derivative shares in the three companies.³⁶ Scoggins received \$800,000 in cash and stock compensation from the three companies in 2014 – more than double his \$380,000 salary from the school that year.³⁷

Perhaps more troubling, Scoggins was a member of the board of directors of the Colorado Oil and Gas Association, the group that Thyne alleges complained to Mines administrators. According to tax returns and archives of its website, Scoggins sat on the COGA board of directors from 2007 through 2011 – *i.e.*, during the period of the “pushback” and administrative threats that led to Thyne’s 2009 departure.³⁸

University of Wyoming

After taking a position at the University of Wyoming in 2009, Thyne was dismissed from *that* job two years later when that school also reported pushback from alumni and trustees. The

³² *Id.*

³³ *Id.*

³⁴ Colorado School of Mines, “President’s Bio”. Accessed at: <http://mines.edu/Bio>

³⁵ *Id.*

³⁶ Form 4, Myles W. Scoggins (May 21, 2015). Accessed at: https://www.sec.gov/Archives/edgar/data/1317008/000152812915000075/xsIF345X03/wf-form4_143221528401272.xml. Laredo Petroleum stock was worth \$13.98 per share at the market’s close on May 27, 2015; Form 4, Myles W. Scoggins (April 3, 2015). Accessed at: https://www.sec.gov/Archives/edgar/data/1317008/000095010315002714/xsIF345X03/dp55023_4-scoggins.xml. Cobalt stock was worth \$9.78 per share at the market’s close on May 27, 2015; *and* Form 4, Myles W. Scoggins (April 2, 2015). Accessed at: <https://www.sec.gov/Archives/edgar/data/1108827/000120919115031434/xsIF345X03/doc4.xml>. QEP Resources stock was worth \$19.12 per share at the market’s close on May 27, 2015. Additionally, in this filing, Scoggins also reported ownership of 86,199 derivative shares in QEP worth \$20.85/share on March 31, the price of which are not tracked in the same way as market shares.

³⁷ Form DEF 14A, Cobalt Energy Inc. (March 20, 2015). Accessed at: <https://www.sec.gov/Archives/edgar/data/1471261/000104746915002504/a2223022zdef14a.htm>; Form DEF 14A, QEP Resources Inc. (April 1, 2015). Accessed at: <https://www.sec.gov/Archives/edgar/data/1108827/000110882715000018/qep-proxy2015xfinal.htm>; Form DEF 14A, Laredo Petroleum, Inc. (April 2, 2015). Accessed at: <https://www.sec.gov/Archives/edgar/data/1528129/000104746915003101/a2223966zdef14a.htm>; *and* Steve Lynn, “Campus Payrolls Defy Recession”, BizWest. Accessed at: <http://bizwest.com/special-report-campus-payrolls-defy-recession/>

³⁸ Form 990, Colorado Oil & Gas Association (May 9, 2012). Accessed at: <https://www.guidestar.org/FinDocuments/2011/742/373/2011-742373229-084e089d-9O.pdf> *and* “Colorado Oil & Gas Association” at the Internet Archive (archived May 4, 2008). Accessed at: <https://web.archive.org/web/20080504155940/http://www.coga.org/mc/page.do?sitePageId=61191&orgId=coga>

comments that drew the industry's ire this time had to do with the amount of water required to frack a well.

On May 4, 2011, the *Wyoming Tribune-Eagle* ran an article about concerns with the effect of the expansion of oil and gas drilling in Wyoming's Niobrara shale on the area's groundwater, already a relatively scarce resource.³⁹ Identified as a "senior research scientist at the University of Wyoming Enhanced Oil Recovery Institute," Thyne told the *Tribune-Eagle* reporter that it was not clear whether instances of groundwater contamination were due to fracking itself, or "part of the entire process," a distinction commonly made by experts discussing fracking.

In another article by the same author and an unsigned editorial that ran the same day, the *Tribune-Eagle* reported that, over an oil well's entire life, 48 to 70 million gallons of water were required for the average 20 times drillers frack the well.⁴⁰ The Petroleum Association of Wyoming (PAW) took issue with these figures, which were published without attribution, but traced them back to Thyne and UW.⁴¹

Thyne was told by a government affairs officer at the school that he had to meet with PAW members.⁴² In that meeting, Noble Energy public relations representative Jonathan Ekstrom and Levin Strategic Resources managing partner Jody Levin demanded that he issue a written retraction of the water use numbers.⁴³ One of Thyne's superiors at the Enhanced Oil Recovery Institute (EORI) also told him to write to the *Tribune-Eagle* to clarify that he was not speaking for the university, which he did, though he did not disavow his numbers.⁴⁴

After that, UW declined to renew Thyne's contract. Then-EORI director David Mohrbacher told *Boulder Weekly* that it was not industry pressure, but rather "EORI achieving their technical, strategic objectives" that led to Thyne's firing.⁴⁵

Like Mines, the University of Wyoming has deep ties to the oil and gas industry. In addition to receiving industry funding, the school's myriad energy institutes are advised by technical boards dominated by oil and gas interests.

UW's School of Energy Resources, where the EORI is housed, receives support from 11 petroleum and coal companies, including BP, Shell, Anadarko Petroleum, and Marathon Oil.⁴⁶ Moreover, the school is governed by an Energy Resources Council, created by the Wyoming legislature.⁴⁷ That body is required by law to include a majority (seven of its 11 members) "represent[ing]...the diverse components of Wyoming's energy industries."⁴⁸

³⁹ Shauna Stephenson, "Water Worries", *Wyoming Tribune-Eagle* (May 4, 2011) A1. See also Jefferson Dodge, "Fracking and academic freedom", *Boulder Weekly* (August 16, 2012).

⁴⁰ "Water may be top concern in oil play", *Wyoming Tribune-Eagle* (May 4, 2011) C4 and Shauna Stephenson, "How Much Water Are We Talking?", *Wyoming Tribune-Eagle* (May 4, 2011) A8.

⁴¹ Jefferson Dodge, "Fracking and academic freedom", *Boulder Weekly* (August 16, 2012).

⁴² *Id.*

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ University of Wyoming, "SER Partners". Accessed at: <http://www.uwyo.edu/ser/about-us/partners.html>

⁴⁷ University of Wyoming, "Energy Resources Council". Accessed at: <http://www.uwyo.edu/ser/about-us/energy-resources-council/>

⁴⁸ W.S. 21-17-117(e). Accessed at: <http://legisweb.state.wy.us/statutes/titles/Title21/T21CH17.htm>

The eight-member Enhanced Oil Recovery Commission, created by an act of the Wyoming legislature to govern the EORI where Thyne worked, is mandated by its originating statute to also include outsized industry influence.⁴⁹ Two EROC members must represent the oil and gas industry and one must be a member of the public at-large with experience in the oil and gas industry. Other EROC members are a member of the state oil and gas commission, likely to have worked in oil and gas at some point, and a representative of the University of Wyoming, which, as discussed above, is heavily industry funded. The remaining three members, serving *ex officio*, are the governor, the state geologist, and a member of the state legislature.⁵⁰

Though the EROI director insisted that industry pressure played no role in Thyne's dismissal, he did say, "The input that I got regarding the direction of our research program came from many sources, our technical advisory board, our commission," both of which were likely to be as dominated by industry voices at that time as they are today.⁵¹

⁴⁹ W.S. 30-8-101. Accessed at: <http://legisweb.state.wy.us/statutes/titles/Title30/T30CH8.htm>

⁵⁰ *Id.*

⁵¹ Jefferson Dodge, "Fracking and academic freedom", Boulder Weekly (August 16, 2012).

III. University of Pittsburgh

Researcher resigned over differences with university related to criticism of fracking shortly after industry attacks

Conrad “Dan” Volz, a professor at the University of Pittsburgh’s Graduate School of Public Health and director of Pitt’s Center for Healthy Environments and Communities (CHEC), resigned in 2011 under pressure to refrain from speaking publicly about his research on fracking and public health.

Volz was an outspoken critic of fracking during his tenure at Pitt and became a target of industry attacks as a result. These attacks intensified in March 2011 when he published a report arguing that a fracking-waste processing facility in Josephine, PA was discharging pollutants into a nearby creek at concentrations that could be hazardous to the public.⁵² The report prompted extensive pushback from industry and from industry-tied sources, which criticized him for inaccuracies, for making revisions to the report after its initial release, and for his advocacy on the issue:

- **Pennsylvania Brine Treatment**, the owner of the plant, responded by threatening litigation unless Volz publicly apologized and issued a full, written retraction.⁵³
- **Steve Milloy and JunkScience.com** published extensive criticism of the report, citing an anonymous “group of professionals.”⁵⁴ This research was cited by the *Pittsburgh Tribune-Review* in its article on Volz’s resignation.⁵⁵ Throughout his career, Milloy has taken funding from the tobacco and oil and gas industries while attacking research critical of those industries – on the science of climate change and the dangers of secondhand smoke, most notably. JunkScience.com has roots in the tobacco industry: according to internal tobacco industry documents, RJ Reynolds prepared materials for inclusion on JunkScience.com.⁵⁶ Milloy was also a member of a team convened by the American Petroleum Institute to coordinate a public relations campaign against climate science.⁵⁷
- **Energy In Depth and the Commonwealth Foundation** amplified this criticism of Volz in articles and reports.⁵⁸ Energy In Depth is an industry public relations group launched

⁵² Conrad D. Volz, Kyle Ferrar, *et al.*, “Contaminant Characterization of Effluent from Pennsylvania Brine Treatment Inc., Josephine Facility”, (March 23, 2015). Accessed at: http://www.marcellus-shale.us/pdf/Wastewater_Josephine_3-25-11.pdf

⁵³ Andrew Conte, “Apology sought from Pitt researcher”, *Pittsburgh Tribune-Review* (April 14, 2011). Accessed at: http://triblive.com/x/pittsburghtrib/s_732175.html

⁵⁴ Steve Milloy, “Pitt prof caught off base in new frack attack”, JunkScience.com (March 27, 2011). Accessed at: <http://junkscience.com/2011/03/27/pitt-prof-caught-offbase-in-new-frack-attack/>

⁵⁵ Luis Fábregas, “Drilling opponent to leave Pitt post”, *Pittsburgh Tribune-Review* (April 10, 2011). Accessed at: http://triblive.com/x/pittsburghtrib/s_731592.html#axzz3c6VpeNnq citing Steve Milloy, “Pitt prof caught off base in new frack attack”, *Canada Free Press* (March 28, 2011). Accessed at: <http://canadafreepress.com/index.php/article/34937>

⁵⁶ “Activity Report R.J. Reynolds Tobacco Co. December 1996”, Powell Tate (December 1996). Accessed at: <http://legacy.library.ucsf.edu/tid/syq70d00/pdf;jsessionid=2466D6D1348384C51CB49CBD6B3EBA09.tobacco04>

⁵⁷ “Global Climate Science Communications Action Plan”, American Petroleum Institute (April 3, 1998). Accessed at: <https://www.documentcloud.org/documents/784572-api-global-climate-science-communications-plan.html>

⁵⁸ Paul Chesser and Mark Newgent, “The Great Frack Attack: The War on Natural Gas”, Commonwealth Foundation (July 2011). Accessed at: http://www.commonwealthfoundation.org/doclib/20110726_pb2307frackattack.pdf

in 2009 by the Independent Petroleum Association of America. The Commonwealth Foundation is a Pennsylvania think tank that receives more than 10% of its budget from a source, Donors Trust, that has been linked to funders of climate change denial like the Koch Brothers.⁵⁹ The Commonwealth Foundation has also received funding from the Pennsylvania Independent Oil and Gas Association (PIOGA).⁶⁰ PIOGA advocated on behalf of Pennsylvania Brine, a member, on issues related to fracking and water treatment in 2010.⁶¹

In mid-April, Volz announced his resignation from Pitt, telling an interviewer that the university discouraged him from speaking publicly on public health issues. “There is a basic philosophical difference,” said Volz. “What the university is saying is that they don’t want people to talk about things. They want to do scholarly research and publish it in journals and have it go out into the world.”⁶²

A few days later, Volz elaborated, saying “I was told not to talk about a lot of Marcellus Shale issues that are very politically sensitive, and I wasn’t willing to do that.”⁶³ At the time, a university spokeswoman stated that Volz, “like any other researcher or faculty member, has the academic freedom to study and research anything he’d like and to express his views based on that research and study.”⁶⁴

It is unclear if there is any connection between the series of attacks on Volz’s work in March 2011 and his resignation the following month, though industry pressure likely played a role in creating the conditions that led to his departure. His industry-linked critics, for their part, celebrated: when Volz announced his resignation, industry attack specialist Steve Milloy claimed victory for the “ouster,” noting that the *Pittsburgh Tribune-Review* cited JunkScience.com’s critique, and the Commonwealth Foundation credited Milloy for having “outed” Volz.⁶⁵

There are also some signs that CHEC was in a precarious funding position when Volz stepped down. The most significant outside funder of CHEC’s fracking research had been the Heinz Endowments, which had donated \$1.8 million to CHEC in 2010 – the largest grant in its

⁵⁹ “Donors Trust: The shadow organization that has laundered \$146 million in climate-denial funding”, Greenpeace (2013). Accessed at: <http://www.greenpeace.org/usa/Global/usa/planet3/PDFs/DonorsTrust.pdf>

⁶⁰ Form 990, Pennsylvania Independent Oil and Gas Association (November 15, 2013). Accessed at: http://pdfs.citizenaudit.org/2013_12_EO/25-1815131_990O_201212.pdf

⁶¹ Luis D’Amico, “RE: Ambient Water Quality Criterion-Chloride, 25 PA Code, Chapter 93, Section 93.7”, Pennsylvania Independent Oil & Gas Association (June 14, 2010). Accessed at: http://www.irrc.state.pa.us/docs/2841/COMMENTS_PUBLIC/2841%2006-15-10%20PIOGA.pdf

⁶² Luis Fábregas, “Drilling opponent to leave Pitt post”, *Pittsburgh Tribune-Review* (April 10, 2011). Accessed at: http://triblive.com/x/pittsburghtrib/s_731592.html

⁶³ Daniel Malloy, “Some water treatment plants refuse to take fracking fluid”, *Pittsburgh Post-Gazette* (April 13, 2011). Accessed at: <http://www.post-gazette.com/news/nation/2011/04/13/Some-water-treatment-plants-refuse-to-take-fracking-fluid/stories/201104130129>

⁶⁴ Luis Fábregas, “Pitt: Departing shale drilling opponent free to speak his mind”, *Pittsburgh Tribune-Review* (April 12, 2011). Accessed at: http://triblive.com/x/pittsburghtrib/news/s_731825.html

⁶⁵ Steve Milloy, “Winning! JunkScience.com knocks off anti-fracking professor”, JunkScience.com (April 10, 2011). Accessed at: <http://junkscience.com/2011/04/10/victory-lap-junkscience-com-knocks-off-another-junk-scientist/> and Paul Chesser, “Volz, Pitt Part Ways”, Commonwealth Foundation (April 15, 2011). Accessed at: <http://www.commonwealthfoundation.org/policyblog/detail/volz-pitt-part-ways>

environmental portfolio that year.⁶⁶ But the foundation essentially did an about face on its support of CHEC in August 2011, and announced that it was cutting funding to CHEC.⁶⁷

Heinz seems to have shifted towards more of a pro-industry, pro-fracking approach around the same time. The next year, Heinz began funding the Institute for Gas Drilling Excellence, which eventually became the Center for Sustainable Shale Development (CSSD). CSSD is an industry effort to certify fracking operations as environmentally friendly and has been criticized as an industry greenwashing operation.

Though it went unreported at the time of Volz's dismissal, Heinz had its own oil and gas industry ties – most notably, its president, Robert Vagt, was a paid director of gas pipeline giant El Paso Corp, which is now owned by Kinder Morgan. In 2013, PAI reported on Vagt's ties to the oil and gas industry in the context of a report on CSSD, and he and several other officials subsequently resigned.

Heinz's transition towards a more pro-industry, pro-fracking approach around the time of Volz's resignation suggests that allies of the industry like Vagt began exerting more influence over the foundation's fracking portfolio during this time period.

⁶⁶ Annual Report, The Heinz Endowments (2011). Accessed at: http://www.heinz.org/UserFiles/Library/2010-11_AnnualReport.pdf

⁶⁷ Chris Potter, "Citing philosophical differences, foundation, university part ways on Marcellus Shale online project", *Pittsburgh City Paper* (August 17, 2011). Accessed at: <http://www.pghcitypaper.com/SlagHeap/archives/2011/08/17/citing-philosophical-differences-foundation-university-part-ways-on-marcellus-shale-online-project>

IV. Other examples

There have been other instances of intimidation that, while less severe than the cases detailed above, indicate some of the ways oil and gas interests apply pressure to academics who do not toe the industry line on fracking.

Robert Howarth and Anthony Ingraffea, Cornell University

Howarth and Ingraffea shone a critical spotlight on fracking and the oil and gas industry when, in 2011, they published a study finding that the climate benefits of fracking were not what fracking proponents were making them out to be because of the climate dangers associated with methane emissions.⁶⁸ Though this is now widely accepted as a serious issue, even by fracking advocates, the industry was so threatened by Howarth and Ingraffea's study that they launched a campaign to smear the scientists.

The lobbying group America's Natural Gas Alliance set up a website, which has since been taken down, specifically seeking to discredit Howarth, and the Independent Petroleum Association of America front group Energy in Depth published a series of posts attacking the two.⁶⁹ Even now-Secretary of Energy Ernest Moniz joined the attack as the lead author of an influential industry-funded report put out by the MIT Energy Initiative, "The Future of Natural Gas." Moniz and the authors of the report took the extraordinary step of adding an appendix, after the report was already finished, disputing Howarth and Ingraffea's claims.⁷⁰

Hanna Wiseman and Ian Duncan, University of Texas

Contributors to a study released by the University of Texas had their comments and suggestions ignored by the report's principal investigator, who had an undisclosed paid position on the board of an oil and gas company.

In 2012, the University of Texas Energy Institute released a report, "Fact-Based Regulation for Environmental Protection in Shale Gas Drilling," with much fanfare for its purported conclusion that fracking has never contaminated groundwater.⁷¹ After PAI reported that principal investigator Chip Groat had not disclosed that he was a board member of an oil and gas

⁶⁸ Robert Howarth, Renee Santoro, & Anthony Ingraffea, "Methane and the greenhouse-gas footprint of natural gas from shale formations: A letter", *Climactic Change Letters* (May 2011) 105:5. Accessed at: <http://www.acsf.cornell.edu/Assets/ACSF/docs/attachments/Howarth-EtAl-2011.pdf>. See also Stacey Shackford, "Natural gas from fracking could be 'dirtier' than coal, Cornell professors find", *Cornell Chronicle* (April 11, 2011). Accessed at: <http://news.cornell.edu/stories/2011/04/fracking-leaks-may-make-gas-dirtier-coal>

⁶⁹ "Howarth: A Credibility Gap", America's Natural Gas Alliance (2011). Accessed at: <http://energyindepth.org/wp-content/uploads/marcellus/2012/04/Howarth-Rebuttal-ANGA.pdf>; and see e.g. Jeff Eshelman, "Ithaca Is Gorges (But Cornell's Position on HF IS the Pits)", *Energy in Depth* (April 2, 2010) and Bill DesRosiers, "Tony the Tiger Breaks Out the Lions in PSU Presentation", *Energy in Depth* (May 11, 2011). Accessed at: <http://energyindepth.org/marcellus/terrible-tony/>

⁷⁰ "The Future of Natural Gas", Massachusetts Institute of Technology (June 2011). Accessed at: http://mitei.mit.edu/system/files/NaturalGas_Report.pdf

⁷¹ Charles G. Groat and Thomas W. Grimshaw, "Fact-Based Regulation for Environmental Protection in Shale Gas Development", University of Texas at Austin (February 15, 2012). Accessed at: http://energy.utexas.edu/images/ei_shale_gas_regulation120215.pdf

company, UT constituted an independent panel that released a critical review of the report's preparation and distribution.⁷²

The panel found that a contributor to the report, Hanna Wiseman, had suggested significant changes to the report to soften the pro-industry framing of its conclusions, but had been ignored. She and another contributor, Ian Duncan, had also been pressured to meet an aggressive timeline for release, and Wiseman had protested that timeline to no avail. As a result, the report was released in an incomplete, draft format. The panel's review also found that the report's summary "failed to reflect either the tentative nature of the conclusions reached in white papers or the often strong caveats conveyed by their individual authors."⁷³ For example, while the senior contributor for the health and environment impact section of the report, Ian Duncan, "stressed throughout his white paper that there is very limited scientific evidence in these areas," the paper was released with the headline: "New Study Shows No Evidence of Groundwater Contamination from Hydraulic Fracturing."

In essence, Groat and project manager Thomas Grimshaw had ignored the contributors' caveats and "suggestions to enhance balance" when drafting the paper's summary, media releases, and presentations in favor of headline-grabbing proclamations friendly to Groat's business interests.

Bob Ackley – Researcher excluded from Environmental Defense Fund & Boston University study

In 2013, the Environmental Defense Fund launched a series of 16 studies seeking to quantify the methane emissions attributable to the natural gas industry.⁷⁴ Though the methane study initiative would likely not have launched were it not for Howarth and Ingraffea's 2011 work, Howarth told *Inside Climate News* that he believed EDF was "unwilling to work with strong industry critics."⁷⁵ Nathan Phillips, a scientist at Boston University who co-authored a study in EDF's series examining methane emissions in the Boston urban area told *Inside Climate News* that "I think in a way [Howarth and Ingraffea's] position was made clear in the 2011 paper, and that's not what EDF was looking to really support."⁷⁶

Bob Ackley, a gas leakage specialist, was also excluded from the Boston study, despite his expertise tracking methane leaks and frequent collaboration with Phillips. *Inside Climate News* pointed out that Ackley is currently involved in litigation against National Grid, a partner in three of the studies in EDF's series.⁷⁷

⁷² Norman Augustine, Rita Colwell, and James Duderstadt, "A Review of the Processes of Preparation and Distribution of the Report "Fact-Based Regulation for Environmental Protection in Shale Gas Development", University of Texas at Austin (November 3, 2012). Accessed at: <http://www.utexas.edu/opa/wordpress/news/files/Review-of-report.pdf>

⁷³ *Id.*

⁷⁴ "Methane Research: The 16 Study Series", Environmental Defense Fund. Accessed at: https://www.edf.org/sites/default/files/methane_studies_fact_sheet.pdf

⁷⁵ Lisa Song and Katherine Bagley, "EDF Sparks Mistrust, and Admiration, With Its Methane Research", *Inside Climate News* (April 8, 2015). Accessed at: <http://insideclimatenews.org/news/07042015/edf-sparks-mistrust-and-admiration-its-methane-leaks-research-natural-gas-fracking-climate-change>

⁷⁶ *Id.*

⁷⁷ *Id.*

V. Conclusion

The institutional backlash experienced by researchers who have expressed critical opinions of fracking raises serious concerns about academic freedom and the influence that the oil and gas industry wields over the universities it sponsors.

Between championing industry-sponsored research that reaches pro-fracking conclusions and pulling strings behind the scenes to silence critics, the industry has manipulated the scientific debate around the issue, prioritizing optics over the development of a complete scientific record.

The experiences of Austin Holland and Geoffrey Thyne shed light on academic intimidation efforts at schools with close ties to the industry and provide important context for Dan Volz's resignation from Pitt.

Thyne ended up in hot water not because of his scholarly work, but rather after making statements in the media that were critical of fracking. Likewise, Continental Resources stepped up its pressure on Austin Holland and the Oklahoma Geological Survey after they published their findings in the media.

The fact that the oil and gas industry tends to respond quickly and forcefully to media statements while largely ignoring scholarly research published in journals provides an insight into what the industry perceives to be a greater threat to its bottom line. Recall the statement from OIPA spokesman Mike Terry about "potential public relations repercussions if we don't handle this issue correctly" – the industry does not seem concerned about dry technical papers, damning as they might be. Its concern lies with media that the general public reads, and which thus carries greater potential for influencing the public view of an issue.

Moreover, the complicity of the various universities in fracking industry intimidation of critical academics raises questions about the level of independence that schools maintain from their industry funders and about schools' management of administrative conflicts of interest. When administrators' fiduciary duty to their shareholders conflicts with the results of their university employees' research, an incentive to quiet or distort that research is created. As can be seen in the examples of Chip Groat at the University of Texas, Bill Scoggins at the Colorado School of Mines, and David Boren at the University of Oklahoma, this incentive can result in, at the very least, the appearance of impropriety.

These instances of the intimidation, silencing, and smearing of fracking critics highlight the importance for universities to diligently manage industry conflicts of interest. They also show the importance of independent objective research in hotly contested policy debates.