

From: [REDACTED]
To: info@frackinginquiry.wa.gov.au
Subject: Response to The Independent Scientific Panel Inquiry into Hydraulic Fracture Stimulation in Western Australia
Date: Sunday, 18 March 2018 8:45:31 PM

To: *The Independent Scientific Panel Inquiry into Hydraulic Fracture Stimulation in WA 2017*

info@frackinginquiry.wa.gov.au

Dear Panel

My name is [REDACTED]

I am sending you this so you can include it in your review of Hydraulic Fractur Stimulation in WA.

As noted in the Panels Background and Issues Paper there have been many Inquiries on this and similar subjects around the world and in Australia in recent times. Virtually all credible (non political) Inquiries have arrived at similar conclusions, in that exploring for and developing gas and oil from unconventional sources (shale and tight gas) with the use of hydraulic fracture stimulation (fracking) is unlikely to pose any significant risk (or significant additional risk compared to conventional oil and gas exploration and production) to groundwater (aquifers) or to human health, providing appropriate robust regulations (including environmental aspects) are in place, which are adhered to and enforced, such that the risk is acceptable and as low as reasonably practical (ALARP).

As you have noted in your Background and Issues Paper, fracking of wells in WA is nothing new! Just as fracking is not a 'new' process. Over the last 65 years (since 1949) over 2 million wells have been fracked. Most have occurred in North America. Given this has occurred for over 65 year in the most litigious country on the planet, there has not been floods of lawsuits over this period, and given the anti fracking positions from some so called eNGOs in North America and here in Australia any evidence of such cases would be at the top of their claims as justification for shutting down fracking all together. Indeed, fracking has been used in California during its recent drought to frack water bearing sands to increase water from bores to provide water for livestock, all without any environmental damage or impacts on animal or human health.

*As noted in your Background and Issues Paper , there is a long history of wells being fracked in WA, all without any significant impact on the environment. Further, over 750 wells have been fracked in the SA portion of the Cooper Basin, again without any significant environmental impact on aquifers, landscape, animal or human health. In fact, in the Cooper Basin area, **a number of cattle stations run their cattle in and around the oil & gas operations, and they have won and still retain accreditation for organically produced beef. This, alone should dismiss any fears about groundwater contamination from fracking operations in WA.***

There are many previous credible inquiries which the Panel can review, and the following are

just a few of which I believe to be the more pertinent ones, which should be part of the building base for the Panel's current work:

A The recent NT Scientific Inquiry on Fracking headed up by Justice Pepper, recently released its draft report into fracking in the NT, and prior to that the findings of the the Hawke Reports (2014 and 2015) as well as the 2016 Hunter Report which also reviewed the issues surrounding fracking in the NT, and steps that could be taken to reduce and minimise risk to achieve a level of risk which would be acceptable and as low as practical (ALARP).

B Prior to the Hawke Report 2014, The Australian Council of Learned Academies (ACOLA) Report "Engineering Energy: Unconventional Gas Production A Study of Shale Gas in Australia" 2013, found that with appropriate safeguards in place shale gas (unconventional) with the use of fracking represents no greater risk than conventional gas. Although certain regulatory oversight needs to be maintained and adhered to maintain a risk profile which is acceptable and as low as practical (ALARP).

C In 2013/14 the then NSW Chief Scientist and Engineer, Professor Mary O'Kane conducted a review of Coal Seam Gas (CSG) and we believe her findings are pertinent to this Panel's deliberations. On page 7 of her Report (30 Sept 2014) "There is a perception in some parts of the community that CSG extraction is potentially more damaging and dangerous than other extractive industries. This perception was heightened following the release of the American movie Gasland in 2010. The Review examined this issue in detail and concluded that while the CSG industry has several aspects that need careful attention, as do almost all industries, it is not significantly more likely to be more damaging or dangerous than other extractive industries". The relevancy is twofold, in that the NSW Chief Scientist and Engineer's Review debunked the hype associated with the movie Gasland, and recognised each extractive industry has its own unique characteristics which must be recognised, managed and regulated appropriately to achieve ALARP.

D The Western Australian Upper House reviewed the issue of fracking, and after two years of examining evidence etc. concluded that fracking can be carried out safely if regulated appropriately. It found the impact on human health and the environment were 'negligible' despite widespread unfounded concerns about the practice.

E The South Australian (SA) Natural Resources Committee recently completed a two year Inquiry into unconventional gas and the use of fracking, and issued its final Report on 30 November 2016. It's key recommendation against its first Term of Reference was that unconventional gas (fracking) is unlikely to have any impact on groundwater (aquifers).

F As mentioned, there have been many Inquiries worldwide, but the UK is also very relevant to Australia, as its ownership to mineral rights is similar to Australia. The UK had a very rigorous inquiry carried out by the Royal Society and the Royal Academy of Engineering specifically to do a report on hydraulic fracture stimulation and shale gas. Professor Sir Mark Walport UK Chief Scientist gave a speech predominantly focussed on Risk and Innovation in Germany in September 2014, summed up the findings, with the following

*“There are really 3 science and engineering concerns about hydraulic fracturing (fracking). The first of these is: will it cause earth tremors? The second is: will you get contamination of the water table? And the third is: will there be fugitive release of the methane gas? (In other words if you leak all the gas then you lose the advantage of it as a fossil fuel). And what the science and the engineering tells you is that this is a drilling technology and no drilling technology is completely risk-free. **But if it is done well, if it is engineered well, if it is governed well, then it is as safe as any other form of drilling**, recognising that there is no ‘free lunch’, there is nothing that is completely risk-free.” He went on to note “Those are the engineering concerns, and that’s what the Royal Academy of Engineers’ report said and actually multiple other reports have all essentially said the same thing. But the public or publics who are protesting, at least in some parts of the world, about fracking are coming at in from a different angle. They’re coming at it from the values angle and from the ‘my pain, your gain’ angle. And so there’s a group that dislike fracking because they dislike fossil fuels, there’s another group that dislike fracking because they actually just don’t like big companies, and then there’s a third group who just don’t want the inconvenience of having something industrial happening in their back yard.” The referenced speech can be found here <http://bit.ly/1CVyur7>*

In line with the UK Inquiry and the recommended outcomes, the UK Infrastructure Bill 2014-15, was passed through the UK Parliament, and it, which among other things permits fracking below 300 meters in the UK.

In Summary

- ***Fracking is not new in WA. (over 500 wells fracked) and Just across the border into SA fracking has been used over the last 40 years in the Cooper Basin where the local beef producers are producing certified organic beef.***
- ***Over 2 million wells have been fracked over the last 60 years or so, most in North America, which is the most litigious area in the world. There has not been any substantiation of activist claims as to widespread environmental damage.***
- ***The impact on the land use is negligible when compared to non fracked oil & gas wells.***
- ***The impact upon the land use is small compared to agriculture, and is certainly not competing with agriculture for land use.***
- ***multiple credible inquiries have returned almost the same assessment of unconventional exploration and the use of fracking, that is, if it is engineered well, done well, and the regulatory regime is also robust then it is no different to any other form of drilling.***
- ***2.5 Million fracks worldwide (over 500 so far in WA) without the catastrophic impacts the eNGOs warn against, in fact fracking has been a huge benefit to the USA driving down their emissions by around 20% over the last 10 years or so.***

Based upon the foregoing, on balance, providing the regulatory oversight is robust and adhered to, drilling for unconventional gas and oil and the use of fracking in WA, does not present an increased set of risks compared to any other drilling technique such as conventional wells (or water wells).

As such, I request the that The Panel rely upon the facts and the science and allow

common sense to prevail in its deliberations to recommend that drilling for unconventional gas and oil and the use of fracking in WA can be as safe as any other drilling activity, providing the regulatory oversight is robust, pragmatic and adhered to.

Yours sincerely

[REDACTED]

DISCLAIMER: This email message is intended only for the addressee(s) and contains information which may be confidential and/or copyright. If you are not the intended recipient please do not read, save, forward, disclose, or copy the contents of this email. If this email has been sent to you in error, please delete this email and any copies or links to this email completely and immediately from your system. No representation is made that this email is free of viruses. Virus scanning is recommended and is the responsibility of the recipient.

Additional comments to the Norwood Proforma Submission

These comments have been displayed exactly as they were provided.

I do work in the oil & gas industry, albeit in an upstream capability but, as such, I have been sent the following letter to add my name too, which I have done. My more individual comment, if you wish, is that these things should be viewed with a balanced and open mind. I don't believe that anyone in our industry is saying that fracking is totally safe nor that current controls should be lessened. But the vitriol that we hear from the opposing camps (often misinformed) makes it difficult to have any reasoned discussion. I'm sure this argument is not a binary one..! Thank you in advance.

I have personally been involved in the drilling and fracture stimulation of wells in the Cooper Basin in SA and have evaluated operations in the Bowen Basin in Queensland. In all cases fracture stimulation fluids are for improving hydrocarbon productivity to make gas production projects viable. Frack fluids are expensive so any loss to an aquifer is a waste of an expensive well completion if not the whole well, as well as being environmentally irresponsible. Such waste would be unacceptable to shareholders, company management and the community. That is why failures do not occur in the highly regulated Australian oil and gas industry – please read below.

I am a retired geologist with over 30 years in the oil and gas industry. During that time I was the GM Exploration for Origin Energy, one of Australia's largest gas producers as well as a senior exploration manager with Santos prior to that. My experience in gas exploration and production is thus professionally recognised and established in the field of study into which this inquiry is delving.

I am the New Ventures manager for Quadrant Energy, a passionate earth scientist with a PhD in geology and, I am an ecologist at heart. Today, I am writing to you to voice my opinion on the application of hydraulic fracture stimulation in WA and globally in general.

Although the below discussion was prepared by Norwood Resource, it is a factual and accurate representation that I endorse. In addition to the below discussion, I would like to express my disappointment in the media for allowing the uneducated voices of anti-fracking groups to dominate the news. By far, the vast majority of anti-fracking claims are nonsensical and lack a basic understanding of geomechanics and physics. It is unfortunate that the public is not easily able to discern such lies from fact and assume that media reports must be factual. Such proliferation of misinformation throughout humanity is of serious concern and causes irreversible damage to many aspects of society. And with that in mind, I ask you to let science prevail as you are considering all of the information on this matter.

I have 35 continuous years of hands-on exploration and production experience in 20 different countries globally.

I have 46 years of experience in the oil and gas industry including 6 years as adviser to Buru Energy Limited, leading their unconventional exploration programme in the Canning Basin of northern Western Australia in the period 2010-2014.

I am sending you this so you can include it in your review of Hydraulic Fracture Stimulation in WA. Although it is a copy of the Norwood Resource prepared letter of support distributed via the Petroleum Exploration Society of Australia (PESA), this should not be used to devalue my submission as I vehemently believe in its content and strongly believe that a ban on fracking in Western Australia is unnecessary and would be detrimental to the economic prosperity of the state and the nation.

Virtually all credible (non political) Inquiries have arrived at similar conclusions, in that exploring for and developing gas and oil from unconventional sources (shale) with the use of hydraulic fracturing (fracking) is unlikely to pose any significant risk to groundwater (aquifers) or to human health, providing appropriate robust regulations (including environmental aspects) are in place, which are adhered to and enforced, such that the risk is acceptable and as low as reasonably practical. The following is some of the recent outcomes of such credible Inquiries

The NSW Chief Scientist and Engineer, Professor Mary O'Kane conducted a review of Coal Seam Gas (CSG) and while I note that CSG is not the subject of the panel's Inquiry, I believe her findings are pertinent to this Panel's deliberations.

The Western Australian Upper House reviewed the issue of fracking, and after two years of examining evidence etc. concluded (Nov 15) that fracking can be carried out safely if regulated appropriately.

The 2017 Scientific Inquiry into Hydraulic Fracturing in the Northern Territory concluded " No industry is completely without risk. And the development of any onshore shale gas industry in the NT is no exception. But having considered the most current available scientific literature and data from a wide range of sources, and noting the recent and continuing technological improvements in the extraction of onshore shale gas, the conclusion of this Inquiry is that the challenges and risks associated with any onshore shale gas industry in the NT are manageable...".

The panels concluding remark was "In short, the Panel is of the opinion that with enactment of robust and rigorously enforced safeguards, the waters shall continue to flow "clear and cold out of the hills" and the "dawn chorus of" Magpie Geese, Brolgas, Budgerigars, Black Kites, Blue-winged Kookaburras "and scores of other bird voices" shall continue to reverberate across the NT landscape notwithstanding the development of any onshore shale gas industry."

It is on this basis that I urge the Panel to adopt a factual and evidence based approach toward assessing the potential risks regarding the exploration for and the development of onshore gas, and the use of hydraulic fracturing to enhance its production, providing at all times, there is a robust regulatory regime which through strong enforcement enables the risk to be reduced to be as low as reasonably practical.

References:

Royal Society report on fracking in the UK Independent report by the Royal Society and Institute of Engineers in the UK re shale gas production and fracking.

<http://royalsociety.org/policy/projects/shale-gas-extraction/report/>

Australian Council of Learned Academies (ACOLA) "Engineering Energy: Unconventional Gas Production A Study of Shale Gas in Australia" Final Report.

<https://acola.org.au/wp/project-6/>

My name is Peter Stephenson, a petroleum engineering and consultant with over 30 years in the oil and gas industry.

I agree with the arguments drafted by PESA below.

My name is Joe Collins, a petroleum engineering and consultant with over 10 years in the oil and gas industry. I agree with the arguments drafted by PESA below.

Thank you for your ongoing support