

Independent Scientific Panel Inquiry
Locked Bag 33
Cloisters Square
PERTH WA 6850

Dear Inquiry Panel.

I AM SUPPORTIVE OF HYDRAULIC FRACTURE STIMULATION

My name is Kael Stein and I support the use of hydraulic fracturing in Western Australia.

I am a full time resident of Broome and was born here. I work in the Kimberley and am confident that the use of hydraulic fracturing will have a positive community impact in the region through increased employment and economic activity, without any negative environmental impacts.

I make the submission following for your review into the use of hydraulic fracturing in Western Australia.

Science

There have been many Inquiries on this and similar subjects around the world and in Australia in recent times. Virtually all credible inquiries have arrived at similar conclusions, in that exploring for and developing gas and oil from unconventional sources with the use of hydraulic fracturing is unlikely to pose any significant risk to groundwater 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 are some of the recent outcomes of such credible Inquiries:

ACOLA

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.

NEW SOUTH WALES

The NSW Chief Scientist and Engineer, Professor Mary O'Kane conducted a review of Coal Seam Gas (CSG) and while we note that CSG is not the same as tight gas hydraulic fracturing, I 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 as minimal impacts.

WESTERN AUSTRALIA (2015)

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

NORTHERN TERRITORY 2014

In November 2014 the Report of the Independent Inquiry into Hydraulic Fracturing in the Northern Territory handed down its report into hydraulic fracturing.

The report concluded

- This Inquiry's major recommendation, consistent with other Australian and International reviews, is that the environmental risks associated with hydraulic fracturing can be managed effectively subject to the creation of a robust regulatory regime.
- The relatively recent move to horizontal as well as vertical fracturing for unconventional gas resources seems to have triggered some latent community concerns. By way of an aside, the industry has not helped itself through the use of terms such as "unconventional", "abandoned" wells and "fracking" itself, which provoke people's emotional responses, confounding rational discussion of hydraulic fracturing technology and related issues.
- It was apparent from submissions, public meetings and discussions that there is confusion or poor understanding within the community about some aspects of hydraulic fracturing. For example, there is considerable confusion between Coal Seam Gas (CSG) extraction (which frequently does not involve fracturing) and fracturing for the extraction of shale gas, which is the main target of hydraulic fracturing for hydrocarbons in the NT.
- CSG exploitation has attracted the ire and attention of the Lock the Gate movement and kindred spirits, and the high profile of this issue has led to public concern about "fracking" in any form.

NORTHERN TERRITORY 2017

A second inquiry was held by the Northern Territory Government in 2017, with its draft report made available in December 2017. The Inquiry concluded that

"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..."

Community Impacts

Amenity of Land

I drive around the Kimberley often and am aware of the areas where the hydraulic fracturing process was proposed to and has occurred. These areas are not visible from highways, are not in areas where tourists would visit, and are generally plain and featureless.

The Kimberley has a long history of oil and gas activity. Wells have been drilled in the Kimberley since the 1920's and the industry has been an important contributor to the region for almost 100 years.

As stated in the Inquiry's background papers, more than 600 wells have undergone hydraulic fracture stimulation in Western Australia in conventional reservoirs since 1958. The first hydraulic fracture stimulation in Western Australia was conducted in that year on the Goldwyer 1 well, 100 km southeast of Broome. Fracture stimulation or re-fracturing has been conducted on 563 wells on Barrow Island since 1965.

Water Resources

Water is a resource that should be regulated, but this does not mean that it cannot be utilised for industry. The reality in the Kimberley is that water is not a scarce resource, it receives an extraordinary amount of rainfall each year and aquifers are replenished.

Current consumption of groundwater in the Canning basin, primarily by the township of Broome and Derby, is estimated to be 33,134 mega litres a year which is less than 4% of the annual sustainable yield.

Benefits

Diversification of the Region's Economy

The economies of towns like Broome are usually dependent upon one or two major industries. This heavy reliance on a few industries increases the region's exposure and risk to economic shocks when they occur. As a remote town, Broome is reliant on the tourism industry which has a 4 month boom period and is quiet for the rest of the year. It does not sustain long term employment, nor does it provide jobs with certainty.

In recent times there has been much talk about diversification of economies, however the reality is that unless individuals and companies are willing and able to carry out their business, diversification will not occur. So when an industry is willing to invest in a region or town, provided it complies with adequate legislation, it should be welcomed and encouraged.

Community Benefits

Should the onshore gas industry establish itself it would contribute to economic prosperity for decades to come through direct jobs on a range of skill levels and indirect jobs through the multiplier effect when a new industry is created. Production from onshore gas would provide substantial revenue to

the state government through royalty payments, which is unique to the onshore industry as the state government can miss out on these revenues if the production of gas is located offshore.

Broome benefits from the presence of the oil and gas industry. The operators sponsor many community based events such as local festivals, rodeos and awards. Goods and services are purchased in Broome which sustains employment and livelihoods. If the moratorium is lifted and hydraulic fracturing is permitted to occur, an onshore industry that could be sustained for decades could exist, with many benefits for people living within the Shire of Broome.

It is on the above 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 unconventional gas and oil, 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 minimised.

Yours sincerely

Kael Stein