

Independent Scientific Panel Inquiry
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Dear Inquiry Panel members

Submission Supporting Hydraulic Fracturing

I am a Broome resident and I support hydraulic fracturing.

Benefits

The Department of Mines, Industry Regulation and Safety estimates that the Canning Basin contains 1000 trillion cubic feet of gas. With WA gas requirements currently 0.5 TCF per year, Canning Basin natural gas could provide a secure and affordable long-term source of energy for Western Australians, as well as a long term industry (up to 40 years) in the Kimberley that could benefit all residents.

The Kimberley's economy, as with many regional areas, is vulnerable to economic downturns because there are few dominant industries and long term job opportunities are limited compared to major metropolitan areas. When companies are willing to invest and employ locals in the region they should be supported.

The Kimberley faces significant social issues, and one means to address these social issues is by providing people with long term employment. Job creation needs to occur across a number of sectors and the oil and gas industry will be an important contributor to providing jobs to people within Broome and in the remote areas where the onshore oil and gas explorers operate. Without hydraulic fracturing the tight gas cannot be unlocked, and onshore production of gas would not be able to occur.

A long term industry provides long term employment opportunities for locals. Onshore operators pay rates to the local shires and royalties to the state government. The Kimberley is in dire need of opportunity and investment in infrastructure. Fracking provides a key to improving the lives of all residents.

Regulations

I have regular contact with the oil and gas explores who operate in the region and am comfortable with the current regulatory regime governing the sector. I believe the current regulatory environment is appropriate for hydraulic fracturing operations.

The resources industry is governed by more than 22 pieces of state and federal legislation and overseen by at least 8 government regulatory agencies. This has ensured that the industry operates within parameters that protect people and the environment while benefitting Western Australians.

The protection of the environment while undertaking petroleum activities is of importance to the State. The *Petroleum and Geothermal Energy Resources (Environment) Regulations 2012*, the *Petroleum (Submerged Lands) (Environment) Regulations 2012* and the *Petroleum Pipelines (Environment) Regulations 2012*, (the Regulations), are regulations to the main petroleum legislation in Western Australia and provide specific environmental requirements for operators to comply with.

The Regulations require the explorer to gain DMIRS approval for, and comply with, an approved Environment Plan (EP). In order to be approved, an EP must meet legislative requirements and DMP expectations, be appropriate for the nature and scale of the activity, and reduce all potential impacts and risks to as low as are reasonably practical and acceptable levels.

Under regulation 8, an activity must not continue if a significant new or increased environmental impact or environmental risk is identified. In these circumstances a revised EP must be submitted and approved by DMP prior to continuing the activity

It is an offence under the Regulations if an activity is carried out in a way that is contrary to the EP approved by DMP.

Water Regulation

Water usage of hydraulic fracturing is governed by the Department of Water and Environmental regulation.

The *Rights in Water Irrigation Act 1914* provides for a licensing system to take water and construct water wells in proclaimed areas from artesian sources, all water used in the hydraulic fracturing process that is derived from aquifers requires a licence.

The Canning Basin is considered the second largest groundwater resource in Australia after the Great Artesian Basin. It is a large sedimentary basin covering an onshore area of more than 450,000 km². The surface groundwater aquifers which comprise the defined resource and from which all groundwater is presently sourced in the region, varies spatially across the basin. Sustainable groundwater yield from all the surficial potable aquifers in the basin combined has been estimated at between 615,000 mega litres a year and 827,000 mega litres a year.

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.¹ There is enough water for industry to use without effecting or restricting drinking water supplies.

Land Access and Aboriginal Heritage

In the Kimberley most petroleum exploration occurs on pastoral leases and land with native title.

Aboriginal Heritage

The Kimberley Land Council has Heritage Protection Agreements (HPA's) with petroleum explorers that protect aboriginal sites of significance.

These agreements are entered into under the expedited procedure of the *Native Title Act 1993* for the granting of exploration permits under the *Mining Act 1978 (WA)*. These HPA's set out procedures and the requirements for heritage surveys to occur to avoid destruction of aboriginal sites under the *Aboriginal Heritage Act 1972 (WA)*.

A survey with local native title holders occurs prior to any ground disturbing works occurring, with aboriginal monitors present when ground disturbing works actually occur.

Pastoral Leases

Pastoralists are entitled to compensation for damage to their infrastructure and pastoral leases by resource companies pursuant to section 203 of the *Lands Administration Act 1997 (WA)*.

The Yulleroo area where Hydraulic fracturing was proposed to occur near Broome is on Roebuck Plains Station. It is not an area where tourists visit or has tourism value. It is also my understanding that it does not interfere with cattle operations or current infrastructure.

When a well is drilled in the region it typically needs a water bore for ablutions and drilling. An access track is also required for vehicles to reach the site. Once the drilling ends the water bores and access tracks can be left for the use of the pastoralists. The areas where I am aware where drilling has occurred are areas where there has not previously been any access tracks. The access tracks that are created did not require a large amount of clearing and give access to areas that could not be accessed, again making the pastoral station more productive through being able to use areas previously unused.

Chemicals

Regulation 15(9) of the *Petroleum and Geothermal Energy Resources (Environment) Regulations 2012* requires companies to declare chemicals used down wells. The disclosure occurs in an Environment Plan that must be approved by the regulator using a number of assessment methods to ensure activities have a low impact to the environment. This document is available to the public on DMIRS website.

Buru Energy's website listed the chemicals they intended to use. Haliburton's Cleanstim HF Fluid was to be used for into 2014 program. The website mentioned that the fluid and its breakdown products were biologically tested in a nationally accredited laboratory testing program. The tests used rainbow fish from the Fitzroy River and concluded there was no effect on fish even at twice the concentration classified as "very slightly toxic", meaning that the fluid was non-toxic. None of the chemicals were classified as carcinogens or teratogens, and do not accumulate in the environment.ⁱⁱ

On the issue of chemicals, I note the conclusions of the Yawuru expert group reviewing Buru Energy's Environment Plan for the TGS program that:

- The overall conclusion is that the TGS14 EP is comprehensive and meets both the structural and content requirements outlined in the EP Guidelines.
- The overall findings that the impacts and risks associated with down-hole chemicals are limited (and that Buru Energy's controls are sufficiently protective) are reasonable and appropriate.
- Human exposures to the chemical additives, particularly for community members away from the occupational setting where the hydraulic fracturing is being conducted, are limited and would not be expected to produce adverse health impacts.

I am comfortable with the regulatory environment approving chemicals, and do not believe they will cause contamination of aquifers in the Kimberley.

Social Licence

The petroleum companies operating in the Kimberley have proven themselves to be good corporate citizens, providing employment and training for many residents, opportunities for local businesses, and have been very generous sponsoring local events in the region that would not otherwise be able to occur or would have had to be paid for by the ratepayer/taxpayer, including:

- Shinju Matsuri Festival
- Broome Sports Awards

- Broome Fireworks
- Broome Girls Academy
- Kimberley Girl
- Chinatown Christmas Party
- Broome Christmas Lights Competition
- Broome Rodeo
- Fitzroy Rodeo
- Kimberly Photographic Awards
- Derby Art Prize
- Looma Eagles Football team
- Noonkanbah Rodeo
- Noonkanbah blues Football Club
- Derby Boab Festival
- Broome Small Business Awards

Regards

Mel Murphy

ⁱ P 44, Buru Energy EPA referral.

ⁱⁱ Buru Energy EPA referral, attachment II.