Submission to:
WA Scientific Inquiry into Hydraulic Fracture Stimulation in WA 2017

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I am a marine scientist and mother of two young children. I grew up on a family farm in Dandaragan, and have recently returned to live on the farm with my partner and two young children. We hope to allow our children to experience our abundant natural environment and a farming lifestyle, but the threat of hydraulic fracture stimulation (fracking) and more generally unconventional gas mining is of great concern to us. Of particular concern is its potential to irreversibly alter the landscape, communities, groundwater and ecosystems of Western Australia. Numerous historical occurrences of spills, groundwater contamination and loss of well integrity are documented in the USA[1]. Proponents may argue that 'world's best practice' can reduce likelihood of these practices, but the risks have clearly not been eliminated. Reviewing the available information has led me to the conclusion that the risks associated with unconventional gas mining far outweigh the benefits.

Of similar concern is the contribution of unconventional gas wells to carbon emissions. Methane emissions are of particular concern given the potency of methane as a greenhouse gas. The lack of baseline data preceding coal seam gas mining, and uncertainty of estimates, in Australia is also of concern[2].

In our dry climate, groundwater is a vital resource that is already under pressure. With increasing demand associated with a growing population, combined with the potential for uncertain rainfall associated with climate change, water resources are extremely valuable to all Australians. Any risk of contamination or depletion of our groundwater resources, however remote the likelihood, is unacceptable.

No mining operation is without risks and fracking is no exception. In our crucial agricultural and catchment areas, regulatory frameworks will be insufficient to protect these crucial resources and a ban on unconventional gas mining is the only way to ensure protection for our landscapes, ecosystems and communities.

I urge you to ban unconventional gas mining on our land.

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[1] Jackson 2014. The integrity of oil and gas wells. PNAS. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4121783/#r10
Sherwood et al 2016. Groundwater methane in relation to oil and gas development and shallow coal seams in the Denver-Julesburg Basin of Colorado. Available at http://www.pnas.org/content/113/30/8391.full

[2] Lafleur et al 2016. A review of current and future methane emissions from Australian Unconventional Oil and Gas Production.