

I am writing to express my concerns regarding unconventional gas mining after having toured the gas fields of Queensland and my own research.

Unconventional gas mining is all about methane gas, now the highest contributor to climate change. Hydraulic fracturing, or fracking is the process of high pressure injection of water, sand and chemicals into the well to release gas flow to the surface. These methods involve the use of between 20,000 to 75,000 litres of water per day and are renowned for well casing failures. The industry itself admits to 20% gas wells leaking now, with 60% in the well lifespan. This results in contaminants going freelance above and below the ground. All gas drilling casings inevitably all deteriorate over time (<http://oilprice.com/Energy/Energy-General/Shale-Gas-Casing-and-Cementation-Will-Fail-but-When.html>). Initially, gas well accidents will cause depressurisation to the Basin causing private bores to cease, meaning an end to the properties and communities it sustains. But with the casing deterioration, the Basin will be irrevocably contaminated which spells disaster to a water poor environment. The earth releases many naturally occurring contaminants - Volatile Organic Compounds, BTEX, and NORMs, or naturally occurring radioactive materials. The release of these chemicals can cause eye/nose and skin irritation, severe headaches, loss of coordination, and respiratory impacts. More chronically, we're talking leukemia, lymphoma and a wide variety of cancers (<http://www.psr.org/resources/fracking-compendium.html>).

As NASA found (<http://www.news.com.au/technology/environment/nasa-study-says-the-canning-basin-in-wa-is-being-depleted-too-fast/story-fnjwvztl-1227438071442>), the Canning Basin is being depleted faster than the recharge can replenish it. When each well uses millions of litres of water, it's levels will become critical very rapidly. Also, the sharp increase in the number of earthquakes in the United States has been absolutely linked with the injection of wastewater into disposal wells (<https://earthquake.usgs.gov/research/induced/myths.php> ).

The industrialisation of the land is also very concerning:

- Firstly are the high voltage power lines (usually paid for by the tax payer);
- Then the well pads themselves;
- Thousands of kilometres of pipelines with with high point vents and low point drains, all releasing toxins, and some requiring 40 or more metre wide easements which blast through all landscapes in their way;
- Compressor stations transport the gas through pipelines by pressurisation at points every 35-180kms - turbines, motors and diesel fuelled engines make this LOUD and dirty plus they need flaring points which burn off excess gas and all the other poisons that go with it like aluminium, lead, acetone, hydrogen sulphides and super sulphates. These are also released at the high point vents scattered throughout the countryside;
- Processing plants - massive industrial complexes that also flare a strong cocktail of contaminants.;
- Reverse Osmosis plants which are supposed to purify water for re-use, but they are expensive (therefore few in number) and inadequate to the job;
- Man Camps and all their associated waste equivalent to a small town.

There is so much energy that goes into the infrastructure, mining and production of methane gas (never call it natural gas!), that it beggars belief that it can be economic at all unless they cut some severe corners...and they do. Plus governments give them a great deal of assistance with subsidies, royalty exemptions and discounts, providing infrastructure such as high voltage power lines and so on. It's redistributing public funds to the private purse with wildlife, farmers and Sacred Sites paying the ultimate price. It's also a human rights issue - the Yawuru and others have rights as Traditional Owners on their own Country and should not be evicted from crown land.

Tourism is a sustainable and vital industry in the iconic Kimberley. Unconventional gas methods threaten tourism, natural ecosystems, properties, communities and Indigenous rights.

“The results of hosting unconventional gas on farms are properties are devalued, mortgages refused, insurance covers rejected, destroys families, divides communities, drains aquifers and turns land into dead zones, sick children, suicide and mental breakdowns”. Libby Laird (Farmer), Maules Creek, NSW.

On that note, I learnt much from talking to farmers in the Surat Basin:

- The pipes destroy any possibility of broadacre farming and movement of livestock;
- The low point drains often spew toxic water onto agricultural land while high point vents release harmful chemicals from above. The MLA commissioned a report into the contaminants in livestock in the Qld gas fields. They refuse to release the findings to their own MLA members who paid for it as it is considered too legally sensitive because it addresses liability. Whose liability? And for what?
- The dewatering of wells has caused subsidence, meaning contaminants spill into nearby land. And it has caused depressurisation and even gassification of domestic bores. This has destroyed industries and households;
- Gas companies bully non-disclosure agreements from farmers so they can't discuss the hell that these companies put them through. But from those who have spoken out, we hear of rubbish being left everywhere by mining workers, fences cut, all agreements about dust and noise monitoring completely ignored. We saw a gate with huge writing on them begging to leave the gates shut. They were wide open with the prize cattle on the other side next to a compressor station spewing toxins;
- CSG companies have threatened landowners with police arrest if they put padlocks on their gates. Outspoken landholders have been put under surveillance, had cameras put outside their gates to monitor their movements and their visitors intimidated;
- They lie about the cleaning certificates on their machinery and track in declared weeds and contagions that by law, the farmers have to keep out;
- Farmers have all their capital, assets and superannuation tied up in their property which cannot be resold.

Thank you for the opportunity to contribute to this Inquiry.

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