



Origin's Beetaloo Exploration Project FAQ's Answered



What is fracking? Why are you doing it in the NT? We've put together some key info to help answer these types of questions in detail.

Q. What is fracking?

A. Fracking is a process that's undertaken after a well is drilled to release gas trapped in dense rock deep underground. It involves pumping water mixed with sand and thousands of litres of chemical additives under pressure to open tiny pathways in the rock and allow gas to flow into the well and be brought to the surface. The US EPA has found scientific evidence that activities in the hydraulic fracturing water cycle can impact drinking water resources [1]. In Qld, when Origin fracked in 2010, we polluted the local water with dangerous BTEX chemicals and admitted it [2]. But we don't talk about that now.

Origin's exploration program includes drilling wells that target underground shale rock formations in the Beetaloo Basin that will require fracking.

Q. Why are you fracking the in the Northern Territory?

A. Australia potentially has some of the world's largest reserves of gas in the Beetaloo Basin. Gas is a polluting and expensive to extract fossil fuel. It's use drives up emissions and gas exports are the biggest new pollution source in Australia. In the NT, a single new fracked gasfield is estimated to increase Australia's total emissions by 6% per year, destroying any chance the nation has of reaching critical Paris climate targets.

Gas also plays an important role in hindering the growth of renewable energy by undermining investment in renewable energy storage and other firming power. Fracking for shale gas has never been undertaken at a commercial scale in Australia – we are experimenting with the lives of people living in remote NT and hoping our East Coast gas customers don't catch on. Our exploration in the Beetaloo Basin is a multiyear, nine-well project that only started in mid-2014 and has been already been hindered by court challenges by landholders and inspiring local community action ever since.

Q. Where is the Beetaloo Basin?

A. Origin's exploration permit areas in the Beetaloo Basin are located approximately 600km south of Darwin. The permit area covers 18,500km², and is east of Daly Waters in the north and Elliott in the south. Origin Energy permits in the NT cover 11 Native Title determination areas and multiple estate and clan groups, encompassing Native Title holders from many language groups. There are traditional song lines and waterways that connect up country all the way from Elliott to Mataranka and the Roper region and Borroloola in the Gulf Country. To deflect criticism about the impacts our project will have on Indigenous communities and culture, we make maps that show the boundaries of Indigenous homelands in neat square boxes, which is a deeply misleading representation of Indigenous connection to country. We purposely use a graphic which ignores Indigenous people's Native Title rights as a way to silence those custodians who oppose our projects on their land. Just one of the many ways Origin demonstrates its commitment to reconciliation with Indigenous Australia.



“The company has not consulted Alawa people about this proposal, or given us a fair chance to negotiate. They come into our communities and just select a few people to talk to, but they never come to the right people. Our Elders don't really understand what these gas companies are planning on our land.”

- Naomi Wilfred from the Alawa nation.

Q. Do you have the permission of host Traditional Owners to explore and drill on their land?

A. In truth, Origin does not have our own “host” Traditional Owners. By calling some “host”, we can ignore the huge numbers Traditional Owners impacted by our activities. We are ignoring the signatures and petitions of hundreds of Traditional Owners from across the region we are working in, who have a recognised cultural and legal connection to the very same country we want to turn into fracking gasfields. Where Traditional Owners and Native Title holders are entitled to consultation regarding our fracking activity, we ignore them. We attempt to misrepresent their connection to country, and undermine their authority to speak or be consulted in company PR statements and public forums. ‘Mythbusting’ documents are evidence of the fact that the Origin Executive Team and our on-ground community liaison staff are working overtime to misrepresent the ongoing opposition to our fracking projects in the Northern Territory.

During the past 12 months, Origin has worked with the Northern Land Council. Many people who attended those meetings do not want fracking to go ahead, but we didn't give them a legal chance to object – so it was a perfect box ticking exercise for us.

Q. What about neighbouring communities?

A. Through the Northern Land Council, we seek invitations to speak directly with some communities outside of our permit areas to reassure them that our exploration will not impact their water or land. But that is a legal requirement under the Native Title and Land Rights Act, not a nicety offered by our company. Where we have been invited to speak to affected communities directly, by lawful Native Title holders, we have ignored those opportunities. In Tennant Creek, we even refused entry and called police on peaceful Traditional Owners at a public forum who wanted to attend and ask questions about our project. [3].

[1] <https://www.epa.gov/hfstudy/questions-and-answers-about-epas-hydraulic-fracturing-drinking-water-assessment#scientific%20evidence>

[2] <https://www.smh.com.au/environment/sustainability/origin-stops-coal-seam-gas-drilling-after-chemicals-found-in-water-20101020-16ud7.html#ixzz1ViEpErIH>

[3] <https://www.katherinetimes.com.au/story/6271126/traditional-owners-banned-from-origin-energy-fracking-meeting/>

Q. Are you going to frack Mataranka Hot Springs, sacred sites or iconic Northern Territory destinations?

A. Our operations will have far reaching impacts downstream, underground and at a regional level considering the millions of truck movements, new roads, pipelines, wells and processing plants needed. The iconic and sacred Mataranka thermal springs sit just north of our Beetaloo permit area, but we're planning to frack right where the groundwater for these springs and surrounding rivers are recharged from. When you think of Origin's plans to frack the Territory, we'd be more comfortable if you didn't associate us with putting iconic and pristine landscapes at risk like Mataranka springs, or Lake Woods, an internationally important migration hotspot for dozens of threatened bird species. We feel the company's view of the Northern Territory as a vast and unimportant sacrifice zone far from the prying eyes of East Coast customers and shareholders is a much more palatable way of considering our plans to frack the place.

Q. What is "liquids-rich gas"? Are you looking for oil?

A. Our public line remains that Origin's exploration activities in the Beetaloo Basin are 'focused on gas'. The term "liquids-rich" refers to some gasses that can become a liquid as underground pressure and temperature changes as they come to the surface. And yes, of course we hope to find oil too. We've mapped it to our investors here. But we don't like to talk about the oil - it's harder to convince climate-savvy investors and customers these days that oil is a clean bridging fuel that's good for the planet.

Q. Won't fracking harm scarce underground water resources?

A. Fracking for shale gas has never been undertaken at a commercial scale in the Northern Territory. The independent Scientific Inquiry into Hydraulic Fracturing in the Northern Territory concluded that the risks identified with fracking could be mitigated or reduced to an acceptable level, and in some cases eliminated, if 135 recommendations were put in place. Needless to say, these recommendations have not been completed, and we're working hard to apply intense industry pressure on governments to ensure they never affect our bottom line. Local pastoralists are taking us to court because we failed to disclose the risks involved with fracking before we set up exploration activity that risks the Territory's farming and cattle industry, and many more are locking their gates to prevent us ever getting the chance to destroy their land and water.

To protect the aquifers, multiple layers of steel and cement separate the producing part of the well from underground layers of rock and water and prevent deterioration over time. Of course, by putting in hundreds of fracked wells, we will create numerous potential pollution migration pathways between these layers – all at a risk to the local people and environment. We hope to be long gone before these pollution events show up though.

Groundwater monitoring, put in place before our current exploration activities commenced, has found no evidence of impacts from current exploration activities. Mostly because we haven't actually done any fracking since the groundwater monitoring went in, but it sounds nice to say doesn't it?

Multi-layer well construction isolates and protects aquifers near the surface. Except that it also creates a migration pathway for contaminants and requires a huge amount of biocide to be pumped down the well to try and reduce the bacteria from eating away at the steel and cement. The biocide is just one of the chemicals that is not meant to be released into the environment during a well failure. We hope to be out of there before that occurs so we're no longer liable for compensation payouts.

Q. Will fracking wells contaminate groundwater recharge zones near Mataranka?

A. We have no idea! The groundwater modelling and measurements haven't been done. The NT Fracking Inquiry stated that they had very little data in this area – but we're fracking there anyway. We don't talk about the fact we are fracking and storing tonnes of chemicals and toxic flow back fluid in open evaporative ponds over the Wet season, that risk flooding and spreading contaminants downstream to the sacred and ecologically significant Lake Woods.

Q. Does fracking use dangerous chemicals?

A. Fracking uses a mix of 98 per cent water and sand, with a small percentage of additives that are also found in everyday items we use around the house that could make you seriously ill if you drink them. We like to compare the percentage of chemicals to water used in fracking because it sounds less scary than saying these volumes amount to millions of litres of chemicals injected through groundwater and into every well, then stored in open ponds on site afterwards. We've helpfully included a list of some of the dangerous chemicals we just got approval to use in our Kyalla frack well in the Northern Territory. Fracking chemicals made safe and family-friendly? We'd toast a tall, ice-cold glass of Tributyl tetradecyl phosphonium-chloride to that!

Q. Does fracking contribute to global emissions?

A. Absolutely! In fact, the life cycle emissions from gas fracking across the Northern Territory could contribute the same amount of emissions as cranking up 50 new coal fired power stations and operating them for 30 years. Australia's greenhouse gas emissions are growing, in large part to the highly polluting new gasfields and gas export terminals. While solar power is now the cheapest new build form of energy generation, expensive and polluting gas makes zero sense. But while taxpayers like you are subsidising most of our activity, we'll have a crack. How good's fracking?

Q. Will there be thousands of wells drilled across the Northern Territory?

A. Our future large-scale development scenario, presented in our submission to the Northern Territory's Scientific Inquiry, says we will drill and frack about 500 wells to get us started. In Qld we've drilled thousands of wells, many that have forced farmers and families off their land because of the environmental, water and health impacts of living near polluting gasfields.

Other companies are also getting on the frack train, and together, we are planning to drill and frack thousands of wells across the NT to make this investment economically viable. While we like to suggest the footprint of our operations will be small so it sounds less scary, our guy in the Federal Parliament, Resources Minister Matt Canavan recently let the cat out of the bag by saying, "We are going to need to support a large gas (fracking) industry to get costs down to a competitive rate in the NT."

Right now, 51% of the NT is earmarked for fracking gasfields. So, book your holidays now, as it won't be worth visiting after we're done with it.

A selection of patently toxic chemicals to be used in the Origin Kyalla well include:
DIETHANOLAMINE - Animal studies showed renal and liver cancers, testicular degeneration. 5,000 litres to be stored on site.
BE-9 BIOCID E – (Tributyl tetradecyl phosphonium chloride) - Classified as very toxic material, corrosive material. Canadian authorities: "The database does not contain the standard required studies for assessing potential toxicity to infants and children." <i>Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</i>
DCA-13003 (Chlorous acid, sodium chlorate) - Severe skin irritant, is toxic if swallowed and may cause damage to the thyroid, contact with acids liberates very toxic gas. <i>Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.</i>
BARACOR 100 (Morpholine process residues, Methanol, Nitrilotriacetic acid, trisodium salt monohydrate) - Severe acute and chronic toxicity. Animal studies show kidney damage, haematuria, hydronephrosis and tumours of the urinary and haematopoietic system. <i>Aquatic hazard. Harmful to aquatic life with long-lasting effects.</i>
ALDACIDE G (Glutaraldehyde) - Animal studies showed a statistically significant increase in the incidence of large granular cell lymphatic leukaemia. Occupational exposure to glutaraldehyde has resulted in occupational asthma, significant skin, respiratory system and eye irritation. <i>Moderate hazard to the aquatic environment.</i>
GLYOXAL (ETHANEDIAL) - Hazardous for human health. Mutagenic (chemical agent that changes the genetic material, usually DNA, of an organism). Skin and eye irritant. <i>If released to soil, glyoxal is expected to have very high mobility.</i>



This document produced by the Protect Country Alliance in response to claims made by Origin Energy about its fracking activity in the Northern Territory. It is not intended to represent the views of Origin Energy. For more information visit protectcountrynt.org.au/pledge_origin