

Energy and Extractive Resources  
Department of Environment and Science  
GPO Box 2454  
Brisbane QLD 4001  
Attn: Manager (Assessment)

01/10/2018

Dear Sir

My name is Leanne Brummell. I guess you would classify me as a concerned citizen. I have a background in helping to conduct research in the area of sociology, social planning and development and helping overseas university students in a wide range of subjects (including welfare, MBA, geology) from many years ago. More recently I run my own tutoring business. I have also worked in Local Government as a secretary including forming and updating policy. I have used my acquired skills to delve into this industry for the past few years and have made submissions on a number of other projects.

I would like to point out that I have requested the documents listed as Associated Reference Documents in Section 3.1 from Armour to be told they are in confidence. To my understanding if they are mentioned in the Application they would form part of the application. Corey Groves from your Department was looking into this for me but there is no longer time to wait for a response.

The following is my submission re Armour Energy Application to Vary Environmental Authority EPPG00342913 advertised in the Balonne Beacon on 6 September 2018. It is brief due to the timeframe.

Firstly I would like to state that I vehemently oppose the approval of this amendment.

The CSG industry was rolled out in Qld on the basis that it would be unconventional wells. <https://www.bioregionalassessments.gov.au/assessments/12-resource-assessment-maranoa-balonne-condamine-subregion/12321-coal-seam-gas-projects-under-construction> To now come back and say that it's in the national interest to frack to supply domestic gas at a time when Australia is exporting more gas than we could ever use domestically is just unbelievable. In 2016/17 we produced three (3) times the amount of energy we consumed, there is no need for this project. (<https://www.energy.gov.au/publications/australian-energy-update-2018> )

I object to the fact that Maranoa Regional Council is to supply water for fracking (pg 48) at a time when local residents are on water restrictions and the rivers downstream from the Balonne River are drying up. Our farmers are experiencing drought, they can't water stock, they can't grow crops and yet precious water is earmarked for fracking? Five hundred kilometres (500km) of the Darling River is at risk of being permanently dry due to man made decisions such as the one being made about this application. The water in question should be used to grow stock feed or sent downstream where the rivers are dying. Even if there was the biggest flood you've ever seen I object to one drop of our precious water being used for fracking and the resource industry. Water on our planet is getting scarcer. The drawdown of the aquifers is not being replenished. The gas industry has no idea if it ever will be. There is no support for the local council to supply water to this project (Facebook Poll 398 respondents, 11% Yes Council should, 89% No Council should not supply water for fracking,

indeed there is local outrage) (Appendix 1) From contact with Maranoa Regional Council they were not even aware they were mentioned in the Application document. Their correspondence [here](#) or <https://1drv.ms/b/s!AkIFEtX5891ap3B48ydnvrCORTgk>

The indigenous people want the river managed to achieve medium flow always 365 days a year so that an abundance of fish will be available for them to catch and eat to retain their connection to country ([https://www.dnrme.qld.gov.au/\\_data/assets/pdf\\_file/0004/1385041/indigenous-report.pdf](https://www.dnrme.qld.gov.au/_data/assets/pdf_file/0004/1385041/indigenous-report.pdf)) I have received first hand reports of fishing being negatively impacted as far downstream as St George since the “poison water” has started being reinjected into Chinchilla Weir and of fish with deformities and red eyes. To the best of my knowledge this has not been investigated but I have asked that these fish be kept so that it can be. I live amongst and talk to the indigenous people living in St George and the surrounding area and they are opposed to this project, the Ballun and the water flowing under the earth is sacred.

I object that there is no detail concerning where the fracking waste for this project will end up. Simply stating that it will be transported by an unnamed licensed company to an unnamed licensed facility does not provide enough detail re the safety of doing so. There is no detail of the route that will be taken, whether there is the possibility of spills while driving through communities. There is no mention that the Department of Main Roads and Local Councils will be advised when Regulated Waste is being transported. No mention of Medical and Environmental clean-up crews being on standby waiting for the inevitable accident. I do not think this project should be rubber stamped just because previous similar applications have been. If you look at the regulations regarding waste/beneficial use facilities you will see that there is a lack of detail in their regulations too. We are supposed to trust that ‘a suitably qualified person’ is doing the right thing. There is no government or independent oversight of the activities that take place. There is no longitudinal study on the effects of road spraying and the build up that this creates or the impact on groundwater. I would like you to take into account that there were much stricter controls on waste products before Campbell Newman with a stroke of a pen, solved a very expensive problem for the resource industry and turned it into beneficial waste. If the waste is to go to NuGrow I think that there should be interaction with the facility’s neighbour Mr Brian Monk as he has been having issues with living next door for a number of years. No-one does anything to help. Similarly if waste is to go to a facility at Jackson, the neighbours need to be consulted. I certainly wouldn’t want to live next door to somewhere receiving regulated fracking waste. Salt waste is a problem that has not been properly thought through by this industry. There is no effective whole of industry management plan for the hundreds of thousands of tonnes of salt, including toxic salt, that are to be created. Approving this one part of what is to be a very large and very impactful whole is adding to the waste problem.

I object that the section relating to Community (pg 37-38) does not even mention the people living in Surat. It does not mention that the fracking is to occur approximately 25km from the Surat School. It doesn’t mention that a lot of the people living in Surat didn’t even know that this company has already begun fracking with Federal Government funding at the location known as PL511 (Facebook Poll end date 15 September 31% Yes knew, 69% No didn’t know). There wasn’t even a copy of the application available in Surat, the only copy was in Roma, 100km away. I spoke at a public meeting in Surat on 27/9/2018 which had 15 attendees all opposed to the project. There was no time to organise a meeting with Armour Energy, the Maranoa Regional Council and the Gas Compliance unit, although I hope to be doing this in the not too distant future. The local Council would not help to publicise the event seeing it as a conflict of interest due to it’s dealings with the gas industry. To my knowledge the indigenous people living in Surat and the tribal groups from

there were not consulted in regards to this application. I might add that a Native Title Claim which includes the area PL71 was rejected on 7 March, 2018 and Federal Funding to fast-track domestic gas was awarded to Armour Energy on 28 March 2018. It is common knowledge in this region that the local tribes were here at white settlement. Many went to the Second World War with my deceased father-in-law. Being offered beads and blankets by the gas industry is an insult.

[http://www.nntt.gov.au/SearchRegApps/NativeTitleClaims/Pages/Determination\\_details.aspx?NNTT\\_FileNo=QCD2018/001](http://www.nntt.gov.au/SearchRegApps/NativeTitleClaims/Pages/Determination_details.aspx?NNTT_FileNo=QCD2018/001)

<https://wcsecure.weblink.com.au/pdf/AJQ/01966392.pdf>

I object that there is no discussion of possible health impacts. I refer you to the following report that contains the very latest research from America in this regard. I request that the entirety of the report in this link be considered. <https://www.psr.org/.../upl.../2018/04/fracking-compendium-5.pdf> The industry is young in Australia. There is insufficient Australian data to make a decision as proper scientific examinations have not been undertaken. Indeed the Qld Government refused to undertake toxicology tests of people living in the gas fields in 2017 even though Australian doctors have recommended that this be done. I know this, because I was the petitioner. I know first hand of people living 20km away from wells who have children with heavy metals in their blood and who have bleeding noses when they wake. In America it affected the kids first. I think this needs to be investigated before any more gas activity, especially fracking, is allowed to occur. I note that CSIRO Research that says air quality, for example, is good, is based on air monitoring station results that were many kilometres from the homes of those affected and were not working for weeks at a time.

I object that there are no Emergency Procedures to be considered in this application. It says that stimulation activities cannot occur until the development of written contingency procedures for emergency environmental incidents. Approving this application without approving these conditions means that the emergency procedure could be to throw a bucket of water on a bushfire, it could mean covering spilt fracking waste with soil. Without detail, the company is being given free reign to develop a plan later that may not have passed scrutiny. The application says that flaring will occur. There are no plans for bushfires. There is no mention of where water to fight bush fires would come from. There is no water to fight bushfires.

I object in regards to Heritage (pg 39-40). The whole of Australia is sacred to the Aboriginal people. The local tribes have maintained a connection with Country. This connection sees every plant, every animal, every drop of water, as sacred. There is an obligation to Protect Country. Fracking destroys the heart of Country. Drilling through sacred waters (the aquifers) and injecting poisons is killing Country that must be protected for those that come after. Just because there's nothing someone in an office can look up on a Register does not mean that the area holds no meaning to the local indigenous tribes. As mentioned, there has been no consultation. The Ballun (Balonne River) is sacred.

I object in regards to the location of the site. This company already has fracking and wells to the North of Surat (as noted earlier, no-one knew or similar submissions and public outcry would have occurred back then). Indeed they have activities less than 3.5km from the mighty Balonne River. This river is a wonder of nature and feeds into and is fed by underground streams and aquifers. This river is the source of life. Wells are to be 1.1km from Kyeen Creek and 400m from Christmas Creek (pg 43). In flood these are more like small rivers than creeks (local knowledge). The submission

states this is unlikely. As a resident of St George for over 20 years I can tell you that in normal years with normal rainfall we experience three big floods a year. Periods of drought are followed by much bigger floods than these. I note that the flood marker closest to the area at Warkon is no longer on reports. I know this because in the last few big floods I have reported on flood levels for our community. Parknook is below where the Condamine River merges and turns into the Balonne River. I saw first hand the flood heights at Mitchell where water raged through trees 20 feet into the air. This is not impossible. It is becoming more and more probable. The old people will tell you (my deceased mother in law taught me) that every big drought is broken by a big flood. She was given this knowledge by the tribes living here when she was younger. To give the risk of Flood a 1 is laughable. The whole town of St George was evacuated in February 2012 and it is just inconceivable that these huge floods will never reoccur.

I object because Armour Energy holds more tenements surrounding the town of Surat. Treating all these applications in isolation is not taking into account the cumulative impact. The town of Surat is to be surrounded on all sides by gas/petroleum infrastructure according to Armour Energy's website <https://www.armourenergy.com.au/> There has been no study to determine what the impact of this will be. Surat is a sleepy little town with great fishing. Farmers drop in for a beer or a coffee, or to get some bread or milk. Tourists stay in the free camp ground next to the river close to town. I have searched for and found only one tourist facility advertised in the entire world that's located in a gas field (and it's run by people who are employed by the gas industry). <https://www.booboocotours.com.au/tours/wheat-wells-wildlife/> This seeming paradise is a far cry from the lived reality of those living in the Queensland gas fields. Unfortunately these type of perfect examples of coexistence are the only tours the gas company takes our politicians and decision makers on. It is common knowledge that flares are turned off to coincide with such visits.

I object to the application on the basis that there has been no Environmental Impact Study done regarding either this application nor the original application. Indeed just writing that a desk top study of fauna and flora that suggests that there may be koalas or black cockatoos (pg 31) at the site is taking for granted that approval will be granted. Koalas are at risk of becoming extinct. If they see Black Cockatoos they had better pack up quick and leave, cause they mean big rain. Just because they aren't there today doesn't mean they don't live there.

I object that there has been no on the ground survey of flora and fauna. The area in question would have abundant bird life, possums, lizards, poisonous and non-poisonous snakes, kangaroos, feral pigs, mice to name a few. Koalas are not able to be relocated without a large proportion of them dying. There has been no gas industry study done on the impact on wildlife and vegetation near high and low point vents or wells. FLIR camera technology shows that invisible emissions spew from these vents. There is no study on emissions.

I object that radioactive tracers will be used (pg 56). The application states that fissures are modelled to be 17m wide and 173m long. There is no mention as to the height. I object that approval will allow for the use of Regulated Chemicals.

I object that the wells are to be constructed and abandoned in accordance with the Code of Practice for the construction and abandonment of coal seam gas and petroleum wells, and associated bores in Queensland [https://www.dnrme.qld.gov.au/\\_data/assets/pdf\\_file/0011/119666/code-of-practice-csg-wells-and-bores.pdf](https://www.dnrme.qld.gov.au/_data/assets/pdf_file/0011/119666/code-of-practice-csg-wells-and-bores.pdf) Pipes and casings fail. The application notes that this could lead to HFS fluids and/or flowback impacting the environment (pg 47). Where is the data that shows the

impact of this happening? Why isn't Armour Energy supplying pictures of what will occur if the amounts of hazardous substances they are requesting for allowable limits do spill. Why isn't the person making the decision on this application given the worst case scenario of what could potentially happen (with pictures from incidents here or overseas) so that this person knows what they are signing to allow to happen?

I note here that I asked Richard Fenton from Armour Energy three times if he can 100% guarantee that water will not be impacted. He didn't answer (and I'm new at this so I didn't record the conversation).

The rules for abandonment state that an anti-corrosive liquid is to be left concreted up inside the wells. There is no mention of how this substance will impact water and soil once the concrete well casings crumble and the steel pipes rust away. Approving the application is leaving future generations with a mess that was not of their own making. The many thousands of pipes that will be left in the ground by this industry are going to cause significant environmental harm in future years. This company is not going to monitor abandoned wells in perpetuity. Is the state government? I note that the current version of the Code was only released on 1 September 2018, there has been insufficient time to look at it in its entirety.

I object that the application says there is very low risk of anything going wrong. It says it will be physically impossible for anything to contaminate the aquifer owing to the distance between the water and where the fracturing of seams will take place. That nothing will be able to go up. To me it is pretty much common sense that in coming years, once the concrete and steel pipes fail that water will be able to seep **down** through the pathways created by drilling. Filling the wells with twice as much of the really good concrete is only a stop gap measure. In time it will all decay and precious water will be lost.

I object to the application on the basis that existing wells have previously been shut-in (Appendix 2). This information is not available publicly. Here is Australian evidence that wells fail. Imagine the damage if fracking flowback or fluids was being used. The environmental damage already done will not be rehabilitated by the introduction of fracking. I would imagine the likelihood of explosion would be significant.

I object on the basis that the Cumulative Water Impact Report 2016 <http://bit.ly/2pg7q5a> shows there is insufficient monitoring of water quality and water pressure in relation to wells. Only 109 water monitoring points (this figure may have recently gone up by 1 or 2 WQM wells) for the entire Qld gas fields is contemptable. That water quality is only tested twice a year in these few wells borders on criminal. It is little wonder that there is never any impact to water quality reported by the gas industry with the paucity of monitoring. The person signing approvals should be made aware of this information.

I object on the basis that there has not been enough time for people to be informed of, to read and to digest the information relating to the application and to make submissions. The application refers to a rural area. The Submission period was 4 September to 3 October 2018 (20 Business Days). People are busy trying to keep stock alive in drought. Even in good times they only go to town maybe once a week to pick up newspapers and supplies. They might get a chance to read the newspapers the following week. No one knows the Application to Vary Environmental Authority

EPPG00342913 exists. There is no effective mechanism for alerting people to resource industry activity in their area so they may exercise their right to make a submission.

I object that the submission quotes APPEA as follows and makes no mention of the intention to comb every square inch of the site with a FLIR camera prior to any further activity taking place so that any existing emissions may be discovered and documented. Any new emissions could then be attributed to Armour Energy.

*Historical data indicates the presence of fugitive gas emissions from natural gas seeps in and around Surat and the broader Roma region as early as 1889 (well before the expansion of the natural gas industry in the region) (APPEA, 2016).*

This submission would be longer and much more comprehensive, if more time for properly made submissions was allowed. I was verbally given another 20 days by Armour Energy, but not having it in writing I believe I need to have a properly made submission emailed before the closing date. I hope you carefully consider all the points that I have made. All are valid.

I have been unable to include everything that I wanted as I have no more time to devote to this. I hope that others were able to cover the points that I have missed. In the event that a much longer time period for submissions is allowed (3 months) I will make a more detailed one.

I have touched mainly on fracking in this submission. I also oppose the drilling of more wells as proposed (infill drilling?). I attach a link to my submission re the Narrabri Gas Project as similar concerns will apply here. <https://1drv.ms/b/s!AkIFEtX5891ap2881tIhr4jgabAT> I ask that you read this submission, especially in regards to the unsuccessful rehabilitation of contaminated land.

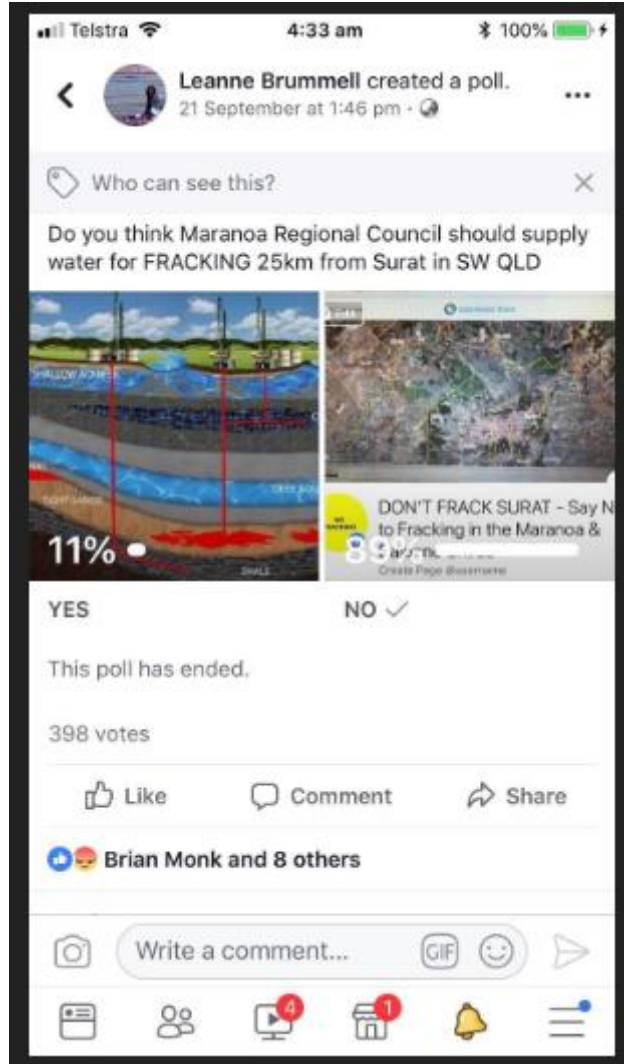
In closing, I strongly recommend that this application be denied on the grounds that fracking is harmful to the environment and to health. I would implore the person making the decision on this application to ask themselves would I approve this if I was going to be held personally responsible and liable for the consequences? And would I go and live amongst this, as the residents of Surat must? Would I enrol my child in a school where fracking is only 25km away? My personal opinion after much research into this industry is that Australia should join the ever growing list of nations who have banned fracking. Banning the CSG industry altogether would be a good move too.

You will find more useful information in the following link [https://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Gasmining/Gasmining/Submissions](https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Gasmining/Gasmining/Submissions) I especially request that you read the entirety of the submission by Helen Bender.

Sincerely

Leanne Brummell  
30 Victoria Street  
ST GEORGE 4487  
0455344862  
[leannebrummell@ourfishingshack.com](mailto:leannebrummell@ourfishingshack.com)

**Appendix 1 Facebook Poll Results re Water Use for Fracking**



Appendix 2 - Well Integrity Report Parknook PL71 1993

	A	B	C	D	E	F	G	I
223	Parknook 1	PL71	25-Dec-78	-27.3246	149,2771	No flow	P&A complete verified	P&A on drill. Details in WCR.
	Parknook 2	PL71	18-Oct-88	-27.3356	149,2940	Gas	Shut-in	Well inspected 14/10/2014. Swab valve, lower master and upper master all leak with loss of well-head pressure = 1min. Other integrity issues identified are: flow line PSV isolated on well head side; and flow line 2" valve seized open. Line pressure 0.8 psi. Flow line connected and under pressure.
224	Parknook 3	PL71	26-Jul-93	-27.3133	149,2865	Gas	Shut-in	Well inspected 19/9/2014. Lower master valve leak approx 200psi in 2 min; 400 psi in 5 min; 1000 psi in 13 min; full pressure in 15 min. Unable to blow down A annulus. Production wing valve stiff in operation and minor stem seal leak when operated under pressure and cannot be depressurised via 1/2" needle valve. Meter run and flow line at 1.5psi. Flow line isolated.
225	Parknook 4	PL71	8-Dec-93	-27.3468	149,2956	Gas	Shut-in	Well inspected 14/10/2014. Production wing valve stem seal leak under pressure. Swab valve is seized and unoperable. SITHP could not be taken. LP 0.8 psi. Flow line is connected.
226	Parknook 5	PL71	26-Mar-95	-27.3333	149,3208	Gas	Shut-in	Well inspected 14/10/2014. No valve leaks. Annulus pressures could not be taken due to poor state of thread and unable to blow down due to liquid in the line. Poor access to lease area. Flow line is connected.
227	Parknook 6H	PL71	15-May-97	-27.3302	149,2871	Gas	Shut-in	Well inspected 19/9/2014. No major valve leaks on WH. Minor leak on A Annulus valve of 23psi in 4 min. Flow line is connected. No pressure on production flow line to tie in with Parknook 3 flow line.
228								