



LAKES OIL N.L.

(A.B.N. 62 004 247 214)

(A.C.N. 004 247 214)

Registered Office:
Level 14
500 Collins Street
Melbourne Vic. 3000
Telephone: (03) 9629 1566

Postal Address:
P.O. Box 300
Collins Street West
Melbourne Vic. 8007
Facsimile: (03) 9629 1624

26th August 2015

Mr David Davis
Chairman Legislative Council – Onshore Unconventional Gas Inquiry
Parliament of Victoria
Spring St
Melbourne, Vic 3000

Dear Chairman,

RE: Further submission to address information tendered at the Parliamentary Inquiry hearings and submissions into Unconventional Onshore Gas.

Lakes wishes to thank the Chairman and the Committee for giving Lakes the opportunity to submit this further submission (see list of issues raised below) to the written submissions and the information that has been presented at the public hearings. Lakes is concerned that much of the focus of the information presented is not related to the current situation here in Victoria and too much emphasis is being put on perceived issues relating to CSG and shale developments (as compared to focussing on tight gas) from interstate or overseas that are not relevant to the Victorian situation.

Lakes is concerned that the State is going to miss out on the development of a very important resource that can be of great benefit to the entire State without putting other industries or the environment at risk. Lakes has noted that since it presented to the Committee in Sale the Committee has received a very large amount of information from both sides and that many of the questions the Committee has asked at subsequent hearings were not able to be accurately addressed as the presenter did not have the knowledge of what is proposed for Victoria and spoke in more general terms which were not necessarily relevant to the Victorian situation.

With the State facing difficult economic times and the inevitable rise in unemployment next year, with the final closure of the car manufacturing and associated industries, it is imperative that the State makes the most of its efficient energy opportunities to try and retain what manufacturing remains and to try and induce new industries to the region on the back of lower energy and feedstock costs to help keep Victoria as the manufacturing heartland of Australia.

Please don't hesitate to contact me if you have any queries and we offer our availability to present to the Committee again, at its convenience, to address any other issues the Committee may have.

Yours sincerely,

Tim O'Brien
Operations Manager
Lakes Oil N.L.

The following is a brief list of the issues that have been raised to the Inquiry that Lakes believes have been mis-understood or mis-represented:

- The different resource types (tight/shale gas and CSG) have all been all lumped in together when the concerns of one are not relevant to the other.
- Much of the Inquiries' focus has been with the perceived issues relating to CSG developments when the likelihood of a commercial CSG operation ever occurring in Victoria is very low.
- Despite only coming to most people's attention lately fracture stimulation has been common practice since the 1950's in conventional and unconventional reservoirs
- Over 220,000 known wells (water, mineral, coal, oil & gas) have been drilled across Victoria without any recorded damage to the aquifers.
- The Victorian Auditor General's Report fails to distinguish between the failings of the Minerals Regulations as compared to the Petroleum Regulations as environmental, monitoring, consultation and reporting regulations covered under the Petroleum Regulations don't exist under the Minerals Regulations.
- It reports that DEDJTR does not assess the risks or regulations when in fact it does very comprehensively under the Petroleum Regulations where the majority of work to date has been performed.
- This causes the problem with any risk within the entire unconventional industry being deemed as relevant to every activity when this is not the case and risks should be associated with the activity they are related to.
- The Petroleum Regulations have strict provisions for environmental and health and safety risk assessments to be performed and any risks identified mitigated. It also requires detailed reporting, monitoring and consultation requirements.
- Under the Petroleum Regulations DEDJTR conducts regular onsite audits of all operations from the commencement of site construction until rehabilitation sign off years after it has been conducted. This does not occur under the Minerals Regulations
- DEDJTR has the ability to refer any risk assessments to the relevant department (EPA, Southern Rural Water etc) if there are any risks or concerns that may need to be addressed and mitigated.
- The DEDJTR report, compiled on behalf of the Minister, fails to make a recommendation despite stating that the risks from tight and shale gas operations are low leaving the door open for the final decision to be politically motivated rather than science based.
- This was further emphasised by the fact that they hadn't considered the recommendations of the other inquiries conducted across the country and were instructed not to pre-empt the Government's decision.
- A rehabilitation bond is held against each well site with the monies not released until sign-off from the landowner and the regulator has been received after an appropriate length of post rehabilitation monitoring.
- Companies are required to consult with the surrounding community before any approval is granted and at no time in the past has an objection been made regarding Lakes' activities prior to them commencing.
- Lakes was never advised not to consult with the communities regarding upcoming operations but was asked not to hold public meeting regarding the introduction of the moratorium by the Wellington Shire Council. The Council didn't want to have the meetings hijacked by a small number of protestors preventing those with legitimate concerns from getting the questions answered. Lakes was then requested by the Primary Agency not to conduct any consultation outside of their activities whilst the independent consultation process was being conducted.

- Lakes has happily accepted and attended every public meeting, debate, interview, panel and inquiry that it has been invited to.
- Lakes regularly and happily answers calls from any concerned party and except for the short flow test conducted in 2013 has never had any public objections to their operations.
- Lakes has a very good relationship with all of the landowners whose properties it has operated on as shown in the Weekly Times letter and article from the landowner of our most recent well Moreys-1 (previously supplied to the committee)
- There are very large employers across Victoria who are on the verge of shutting their operations if they cannot secure a long term gas supply arrangement.
- Lakes has already signed provisional gas sales agreements to supply gas at lower than the market price as it is confident it can produce the gas onshore much cheaper than the offshore competitors a fact that has lead them to actively inhibit Lakes' progress.
- The gas content is perfect for its use as a feed stock for value adding industries which will provide more jobs and investment in Victoria.
- The deeper onshore tight gas resources do not contain the impurities which are common in the offshore gas resources and greatly increase the production costs and environmental risks.
- Exploration is conducted by smaller, generally locally based companies as the multi-nationals are too inefficient to effectively explore for unconventional resources so profits are enjoyed locally.
- An increase in gas supply cannot increase the gas price as stated by some. It may not lower the price, depending on volumes, but it certainly will not increase the domestic price. Economics 101 states that an increase in supply will put downward pressure on prices as increased competition takes over.
- There is a maximum capacity of LNG exports from Australia and no new plants are likely to be built in the foreseeable future due increasing difficulties and costs in developing major projects in Australia so there is not an infinite capacity to export LNG. Once the contracted volumes are satisfied the remaining gas can only be sold on the domestic markets at lower prices.
- There is generally no water production with tight gas extraction beyond what is pumped during the fracture stimulation treatment.
- There is a much larger volume of water produced (greatly affecting the onshore aquifers) from conventional offshore activities than will ever be produced from onshore tight and shale gas activities.
- The onshore tight gas potential across Victoria is very high
- The onshore shale oil/gas potential across Victoria is moderate
- The onshore CSG potential across Victoria is low
- Renewable energy technologies cannot currently provide Victoria with its energy needs.
- There are significant volumes of gas onshore in tight formations which should be able to be produced without having to stimulate them.
- There are very significant volumes of gas onshore in tight formations which will need to be stimulated to flow commercially.
- The coals seams which are hoped to contain biogenic gas are not suitable for stimulation.
- With tight gas and shale wells if water is encountered it flows preferentially to the gas and the well fails whereas with CSG large volumes of water must be produced to de-pressure the coal seam.
- As no formation water is produced with tight gas there is no aquifer depletion and therefore no chance of subsidence occurring.

- There is no communication between the formation water in the tight gas formations (Strzelecki/Eumeralla) and the overlying formations containing aquifers as the tight formations are regarded as aquitards which prohibit flow and the formation water is saline whereas the overlying aquifers have very low salt levels.
- The integrity of the wellbore prevents any gas migration into overlying formations/aquifers and in areas where gas has been generated naturally there is generally gas present in the aquifers as a result of natural migration over geologic time (eg Latrobe Aquifer & Great Artesian Basin)
- Existing faults do not provide conduits for deeper saline waters to flow into overlying formations so even if a fracture stimulation treatment encountered an unexpected fault the fluids would not be able to migrate up the fault into overlying formations.
- The number of wells required to develop the tight gas resources is much less than for CSG developments and requires 10's of wells not 100's or 1000's as is required for CSG and is being suggested by the anti-gas groups.
- Multiple wells can be drilled from a single drillpad so the surface footprint is much smaller than for CSG operations.
- The volume of water used is much lower than stated by the activist groups with drilling activities using <1ML per well and fracture stimulation activities using up to 0.5ML per frac stage (up to 10ML per well for a 20 stage treatment which is much larger than anything pumped to date in Australia).
- The tight gas industry would not use more than 500ML per year whereas current agricultural practices use over 2,500,000ML per year.
- There is no water trigger for tight and shale gas as compared to CSG as water is not produced with tight and shale gas operations.
- As there is no extraction of water a water licence is not required to be issued by water authorities so they are not involved in the approval process as just drilling through the aquifer does not put it at risk.
- Less chemicals are used in stimulation activities than are used in everyday farming practices. You can drink frac fluid whereas you would not want to drink pesticides or herbicides that are freely sprayed all over farms without any consideration to waterways into which they flow.
- There is disclosure of any chemicals and their components that make up the drilling or fracing fluid but the exact ratios are propriety data similar to the ingredients of Coca Cola and may other everyday propriety products.
- Tight gas and shale oil/gas wells have their maximum production at the start of their life whereas CSG flow rates are greatest once the water has been produced. This greatly improves the development economics for tight and shale developments and puts much more commercial risks on the CSG developments.
- The drilling of the wells through the surface aquifers is performed to a much higher standard than the water bores drilled through the same aquifer so the risk is less.
- Well integrity is the most important factor in reducing the risk to aquifers and it is also the most important factor in ensuring the well lasts well beyond its predicted productive life so it is the single most important thing for the company to ensure is correct. To ensure this the well is over engineered and the design incorporates a large safety factor to ensure that loss of well integrity is not going to be an issue.
- The reported 5% immediate well failure and 50% failure after 40 years is grossly false and is based on a discredited report from over 30 years ago.

- Leak off or formation integrity tests are a critical safety control procedure performed in every single drilling operation to ensure that the integrity of the well bore is suitable to handle any potential well control issue that may arise and are not a mini-frac.
- Fugitive emission data is grossly misrepresented by the anti-fossil fuel groups.
- The CSIRO study indicates that fugitive emission per well are equivalent to the emissions from 4 cows.
- If it were true that companies were losing 10-40% of their gas as fugitive emissions as some reports say they are losing up to 40% of their production and would do whatever could be done to prevent that.
- Leaks and equipment failure can and do occur but rarely result in a catastrophic failure resulting in damage to the environment and usually just require the replacement of the affected part which does not compromise the wellbore integrity or result in a loss of containment in any way.
- Except for two known examples (one in the UK and one in Switzerland) induced seismicity is caused by the injection of waste water into deep saline aquifers and not from fracture stimulation treatments.
- For seismicity to be induced the stress regime of the area has to be altered for a long enough time for the rocks to fail and move causing the event. Pumping during the stimulation treatment only lasts for up to a few hours and once finished the well is flowed allowing the formation to return to close to its original stress state and therefore the stress regime is not permanently changed preventing the build-up of pressure which results in seismic activity.
- Micro-seismic activity occurs during pumping and the monitoring of this is an essential tool in determining the extent and effectiveness of the generated fracture system.
- The risk to the surrounding environment/community is no greater for an unconventional resource targeted well than it is for a conventional resource targeted well.
- Onshore conventional activities have co-existed with existing land uses for decades and unconventional is no different.
- Dairy operations have coexisted with onshore gas developments for decades with no adverse effect to their international export reputations (eg Port Campbell Gas Fields) and new developments will be different.
- Dairy operations are very energy intensive (50% of dried milk costs are energy related)
- The mining and agricultural industries contribute a similar amount to the Victorian GDP with mining using 1/1000th the amount of land so it is a very productive use of the land.
- Wells are generally positioned on cleared farming land along fence boundaries preventing any risk of biodiversity fragmentation.
- There has been no confirmed evidence of any health effects (except for anxiety based ailments) as a result of any onshore gas developments (the surface infrastructure requirements are similar for conventional and tight gas developments).
- There is no evidence of onshore gas operations reducing the value of land and in fact the evidence in Queensland indicates that it adds value to the land as off farm income is very beneficial during times of hardship and properties are advertised for sale highlighting this off-farm income.
- When the anti-gas presenters were pushed whether they would support the industry if it was proven that it could operate safely they ultimately said they would never support the industry regardless of the safeguards. This indicates that their objection is based more on their anti-fossil fuel ideology rather than a concern for the science and this is not how legislation should be determined.