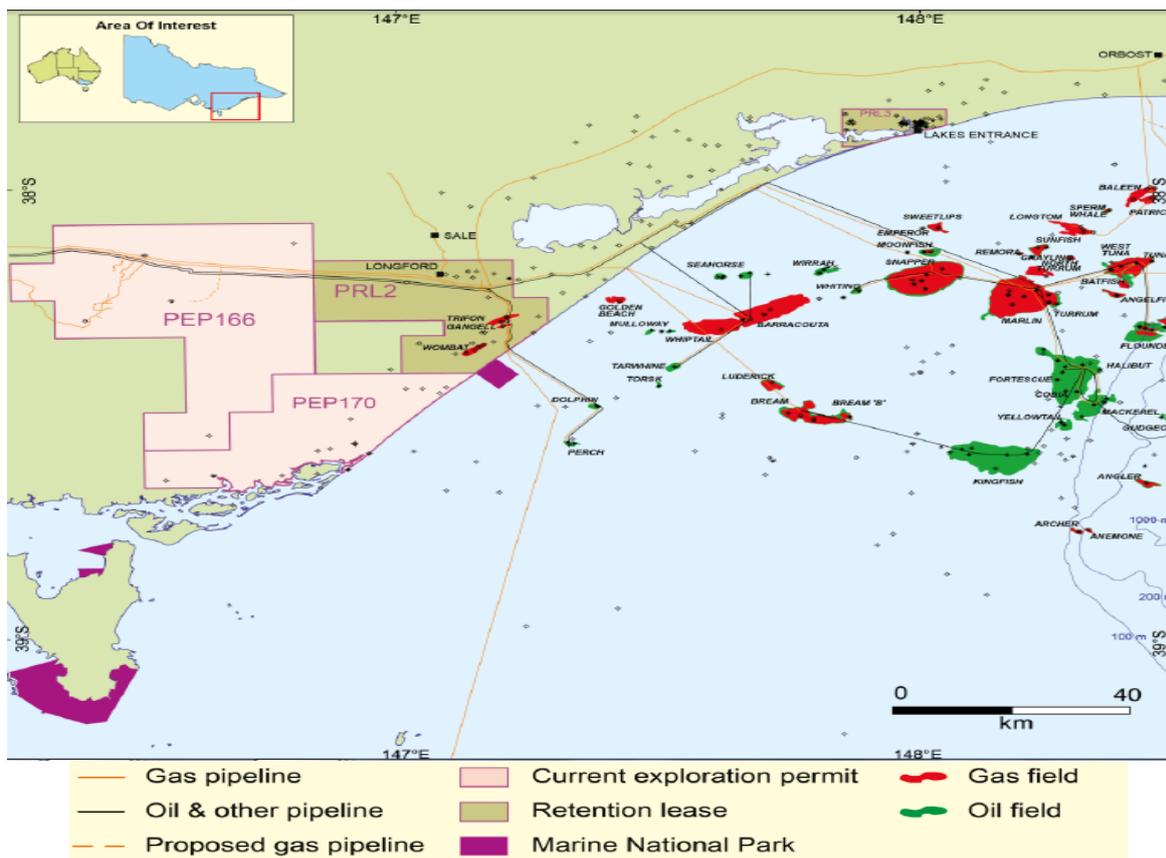


Australian Tribunal into the Human Rights Impacts of Unconventional Gas -

I would like to submit evidence of non-compliance and breaches from unconventional gas mining in Gippsland Victoria to the ‘people’s tribunal into the human rights impacts of unconventional gas.’

As a community and agricultural advocate for mining reform I have been working with many Victoria groups impacted by mining. In recognition of my extensive experience with real life community and environmental impacts I am regularly asked by Government & Ngo’s to submit feedback to any number of mining, pollution, water and engagement reforms.¹



The target area of my concerns is Lakes Oil permit area PRL2 near Seaspray and legacy wells in the nearby PEP170 region of McLoughlins Beach.²

My subject matters relate to -

- Human health impacts and our rights to clean drinking water
- Unconventional gas infrastructure impacts
- Social impacts from poor regulatory guidelines and the Petroleum Act 1998 that underpins this framework.

¹ <https://independentaustralia.net/profile-on/tracey-anton.560>

² https://www.researchgate.net/profile/Louise_Goldie_Divko/publication/291972395_A_review_of_gas_prospectivity_Gippsland_region/links/56a8086a08aed22e371efd/A-review-of-gas-prospectivity-Gippsland-region.pdf

Under *objectives*³, the Victorian Petroleum Act 1998 is to give regard to economic, social and environmental interests by ensuring—that the impacts on individuals, public safety, public amenity and the environment as a result of petroleum activities will be minimised as far as is practicable; and that there will be just compensation for access to, and the use of land.

The Victorian Resources Minister must also consider other legislative frameworks in granting approvals aside from the issues of land conflict, water availability and adequate policy frameworks to prevent risk to the person and their interests. It is to this point that the government have not been compliant with their own legislation.

Overview

Woodside (Lakes Entrance) Oil Co NL has been operating in Gippsland for over six decades. They have run a successful marketing campaign on hydrocarbons for decades and serviced a legitimate exploration industry in that same time without producing any oil or gas. Instead, they have left a trail of dangerous and unmaintained waste pits and abandoned, corroding wells whose maintenance is binding on subsequent owners and government. One such well at McLoughlins Beach from the '50s is now way offshore due to coastal subsidence.

Abandoned Wells - Dangers of gas infrastructure

#Note, the following is an extract from workshop notes compiled by Chris James 25th April 2012 - *Gippsland Coastal Residents Are Living in Fear of Coastal Subsidence*.

The original Woodside -Lakes Oil wells have since been abandoned and seemingly no maintenance has been done on them. Gippsland Ports and local fisherman have allegedly been concerned about the integrity of one of these wells [no 3] which appears to have fallen over in the sea. In 1993 a few people reported bubbling water and an acrid smell and according to locals, as a result someone had written 'DANGER GAS' in the sand. This caused several families to fear an explosion. As it happens, today the wells have become a local benchmark of rising sea levels along the coast since they are believed to have been built on land several hundred metres from the water. A series of old photographs taken by residents in the 1950s shows quite clearly where the tide was then and where it is now.



Photo taken from top of drill rig of well #3 - 1950s.



The straight pipe in the background on surf edge is the #3 well. Well in foreground is #2



3 well on McLoughlins beach (circa 1980s) is now in the water off the 3rd breaker unmarked even though it is a navigational hazard and legally should be marked.

³ http://www6.austlii.edu.au/cgi-bin/viewdoc/au/legis/vic/consol_act/pa1998137/s3.html

There is almost conclusive evidence that conventional oil, gas and coal extractions have caused coastal subsidence and earth tremors and the fear now for coastal Gippsland residents is that fracking will create a major catastrophe on an already vulnerable coastline. These fears are not unfounded, as such, the Wellington Shire, have told the Yarram Standard [25th April 2012] that they want the State Government to protect it against litigation for planning decisions made in vulnerable coastal towns. Cr Malcolm Hole would take the resolution to the Municipal Association of Victoria [MAV] mayors' conference in May.⁴

Can Hydraulic Stimulation Penetrate an Aquifer?

Since impacts from unconventional gas mining has become more evident, Lakes Oil has stated many times in recent years that hydraulic fracturing poses no risk to the aquifer. However, in their 2009 quarterly report they admit that a fracture *MAY* have penetrated an aquifer. Evidence of water in the well bore is indicative that this, in fact, was the case.⁵

North Seaspray 3: the well was re-entered using coiled tubing unit. Flow-back operations began in mid-July. It appears that the original hydraulic fracture carried out in 2005 may have penetrated upwards into the Latrobe Group aquifer, causing water to enter the wellbore. Operations at the well have been temporarily suspended in order to evaluate the results to date.

But in a Shareholder letter on 7 May 2013, Lakes Oil tried to distance them from any connection with the '*CSG fracking debate*' implying their tight gas fracture stimulation is safe forgetting their previous declaration in 2009 clearly stating the opposite,⁶

It is important to recognise that this stimulation would occur at depths way below the water table. It imposes no threat to aquifers in the overlying Latrobe Group. Induced fractures extend for approximately 150m from the well bore. Moreover, the induced fractures take place horizontally with very little vertical extent.

Despite the fact Lakes Oil continue to counter community assertions as noted in the their response submission '*to inaccuracies made in the submission by Mr & Mrs Boulton,*' the community continue to prove the supposed inaccuracies noted by Lakes Oil are, in fact, true. While drilling muds containing BTEX chemicals were the norm in early 2000's, it does not discount the fact that Lakes Oil used it so they cannot argue to the contrary that community assertions are without basis.⁷

The mention of BTEX again just highlights the ignorance and lack of understanding of what is really happening of the writer. BTEX has never been an additive of any fracture stimulation treatment ever pumped in Australia. The four chemicals that make up BTEX (Benzene, Toluene,

⁴ <http://www.gippslandtimes.com.au/story/2129999/port-albert-planning-changes/>
https://www.parliament.vic.gov.au/images/stories/daily-hansard/Council_2011/Council_Jul-Dec_2011_Weekly_Book_14.pdf pg 3417

⁵ <file:///C:/Users/A660/Downloads/Lakes-Oil-NL-Quarterly-Activites-and-Cash-Flow-Report-31.7.09.pdf>

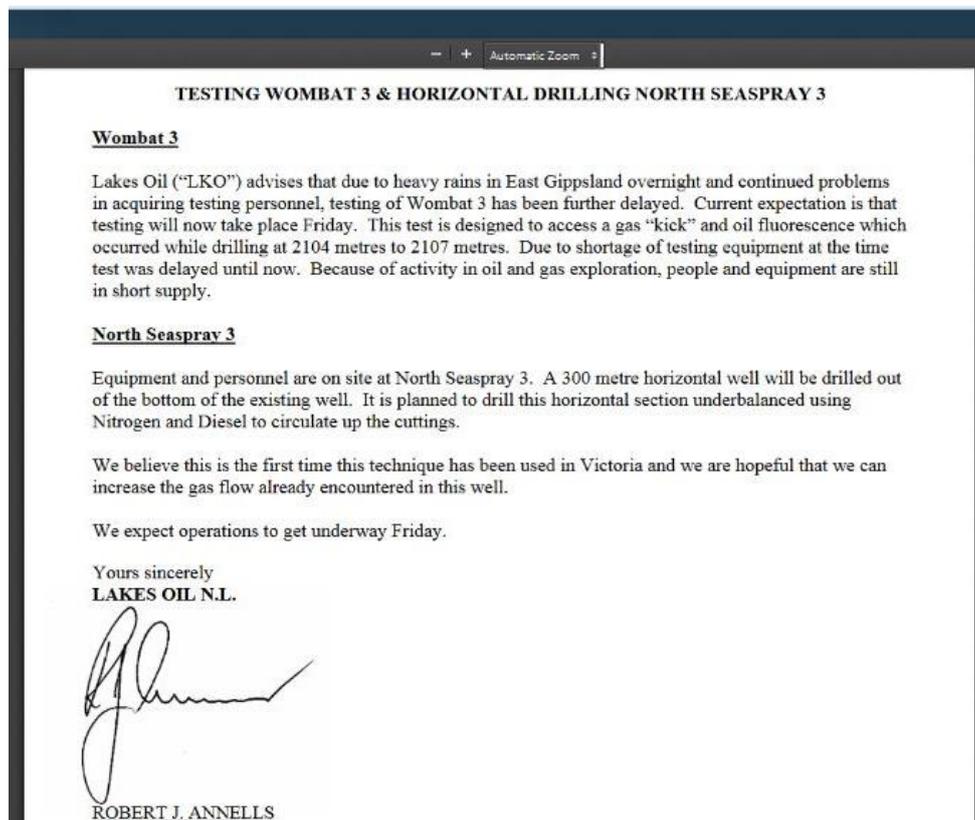
⁶ <https://www.asx.com.au/asxpdf/20130507/pdf/42fr42vhvrd6lg.pdf>

⁷ [file:///C:/Users/A660/Downloads/Lakes%20Oil%20\(1\).pdf](file:///C:/Users/A660/Downloads/Lakes%20Oil%20(1).pdf)

Note below the mention of oil/diesel drilling muds from Lakes own document.^{8 9}

The concern is that all produced water used in their hydraulic stimulating operations has been land farmed as reported to me by the Petroleum Manager of Earth Resources Department in 2012.

The Hunt drilling rig used for both the Wombat wells will now be moved to the Trifon 2 well site. This well is located approximately 50 metres from the site of the original Trifon 1 well drilled in December 2000. The Trifon Tight Gas Project has been designed to produce gas from the Strzelecki Formation. An engineering study reviewing the old wells has been undertaken by Blade Energy Partners of Dallas, USA and the results suggest that future wells should be drilled underbalanced using either a coiled tubing unit or conventional drilling but using oil based muds. With these underbalanced techniques, it should be possible to substantially lift gas recoveries.



Continuing the problem with complications from gas infrastructure is the use of pipes with significant surface corrosion. Any chemical drilling engineer can see that the following picture would be problematic contributing to negative chemical interaction with the cement casing.



⁸ <https://www.asx.com.au/asxpdf/20040429/pdf/3ldtqwrn06fzr.pdf>

⁹ See appendix 1

Government Negligence for Siting of Gas Wells

The siting of the Wombat (1) gas well 150m from Merrimans Creek and 525m upstream of the townships water supply in Seaspray is extremely irresponsible on behalf of the responsible authority. Under what criteria is a workplan assessed by Government as to its suitability in considerations of risks to the person, environment and the consequential legal and social impacts. It is yet to be seen if the close proximity will cause problems for drinking water quality in the near future.¹⁰



Photo Stephen Issell

Given Lakes has been drilling in the area for many decades under a 'self-regulation' model where minimal records exist, the Seaspray community have initiated rehabilitation talks with government. How the many abandoned and legacy wells can be rehabilitated and monitored into the future is the question that the community must face. I am currently mediating over legal ramifications and have been in discussions with the Earth Resources compliance officer.

The biggest concern now is who will maintain the wells into perpetuity. Currently, the laws states government must sign off that rehabilitation has occurred to an appropriate standard for return of the bond to the licensee. However, it is the landholder who is then responsible for future maintenance of wells and binding on every subsequent landholder.

Under the existing land access agreements between Lakes Oil and the Landowner, they have been drafted in such a way as to deny the Landowner a full disclosure of risks and potential liabilities.¹¹ The doctrine of *contra proferentem*¹² would be a landowner's lifeline and should be used against this company.

¹⁰ <https://www.gippswater.com.au/residential/what-we-do/water-supply>

¹¹ <http://www.asx.com.au/asxpdf/20121023/pdf/429kzh03vm3gl3.pdf> p10

¹² https://en.wikipedia.org/wiki/Contra_proferentem

#The following is a collation of concerns from the document I supplied to Earth Resources

Rehabilitation Onshore Unconventional Gasfields

List of community concerns and expectations

Clarification as to who inspects, assesses and initiates rehabilitation

- There be an expectation that the wells be rehabilitated to a standard that does not pose a threat to community or environment.
- Will govt sign off on rehabilitation to an acceptable standard or will it fall on the landowner to manage maintenance into perpetuity and binding on every subsequent owner?

Evaporation Ponds:

- Removal of water and soil
- Testing performed on removed and remaining soil in pond and around pond minimum of 50m diameter (What should be tested for?)
- Fill in pond with top soil
- Fence off pondage area from stock and wildlife
- Signage
- Revegetation (tree planting)
- Follow up testing (at what intervals and for how long?) every 12months for the next 20 years?

General

As there is a high incidence of seismic activity rehabilitation/decommissioning needs to take this into account > how would this be addressed and monitored.

Wells:

- Independent inspection of well casing integrity (petroleum engineer?)
- Soil and water testing to determine if any toxics present
- Cement fill and capping to what standard?
- Removal of any above ground infrastructure
- Fence off area from stock and wildlife
- Signage
- Follow-up testing of soil and water by who

Area:

- Long term commitment to testing and inspection re-visits will these be mandatory and by who?
- Reports from all testing to be carried out by independent testers and labs. Reports to be made available to the public (at no cost and without a FOI)
- General area habitat revegetation

Community:

Note: Currently the rehab process can be triggered by the (resource) minister, the department and/or the company. It's unclear as to whether the landowner can trigger the process. There is no provision for the community to do so.

There is also no provision for testing of soil and/or water in the act.

- Community should be able to trigger the rehab process
- Community access to all reports, including an allocated company and government department contact.
- Drinking water and waterways testing (Merrimans creek) Eg. Every 12mths for next 20years?
- Dept to release information about what 'bond' they hold. Currently only the department or the minister's office can increase the rehab bond for surrender. Community input is required.
- Community input into the experts that will assess test results and rehab standards (eg Gavin Mudd?)
- Public access to the 'Rehab Plans' that the gas companies were required to submit to the department when submitting a works plan for exploration.

Note: There is currently no timeframe for commencement or completion of rehabilitation works. This needs to change (Mining Act Reform) Long term strategy for better rehab requirements

Infrastructure:

- Removal of pipes from sites
- Removal and rehab of flaring off pits (as per evaporation ponds)
- Removal of all rubbish from site

1. **What is the guidance and regulation for water monitoring / bore and well integrity?**
2. **Does the Earth Resources dept have suitably qualified, experience personnel in govt depts. to inspect and address the rehabilitation of gas wells in Gippsland.**

Production, treatment and disposal of produced water.

This area is unclear as EPA do not regulate mining waste for exploration activity therefore produced water from one site was allowed to be used as irrigation water for a farmer as stated by ERR Petroleum head in 2012 to Tracey Anton without any testing as to suitability.

This issue should rightly fall within the jurisdiction of the Victorian EPA, who regulate the management, disposal and (if necessary) clean-up of any wastes and/or pollution.

Why is exploration mining different.

Bore integrity

Victoria currently has a water bore construction and licencing system administered by Rural Water Corporations with standards set by the Minimum Construction Standards for Water Bores in Australia. ... In cases where the bores are ageing and/or abandoned, decommissioning by way of cementing the bore is typically the recommended action, so that the bore cannot provide a contamination pathway in the future.

Groundwater monitoring bore locations and baseline sampling

The Gippsland groundwater sampling report also shows where **groundwater monitoring bores would be desirable but do not exist at present**. These areas include the Strzelecki group within the Seaspray depression, near the Lake Bunga 1 historic oil production bore near Lakes Entrance, near the interpreted hydrocarbon seeps to the north and southeast of Sale, within the Balook Formation near Rosedale, covering the Cretaceous and Lower Tertiary aquifers in all prospective areas near the Wombat, Trifon, Gangell, Echidna, Steele and Carrs Creek gas exploration fields.

In both the Gippsland and Otway regions **there is a lack of groundwater monitoring bores in the deeper Cretaceous geological layers** (which are potential gas development targets). This means that as well as a lack of baseline water quality data, there is insufficient data to assess the vertical connectivity between the upper Cretaceous rocks (targets for gas) and overlying water supply aquifers in the lower tertiary (lower Tertiary aquifer) in both basins.

In consideration of discovery of Lakes Oil document noting **a hydraulic fracture penetrating the Latrobe Aquifer in 2005**, **was the dept aware of this and what does it mean for the status of this well.**

North Seaspray 3: the well was re-entered using coiled tubing unit. Flow-back operations began in mid-July. It appears that the original hydraulic fracture carried out in 2005 may have penetrated upwards into the Latrobe Group aquifer, causing water to enter the wellbore. Operations at the well have been temporarily suspended in order to evaluate the results to date.

June '09 Quarterly Activities Statement

Water management and monitoring

The Committee received extensive evidence relating to CSG and produced water. Victoria's Auditor General's Office contends that the impacts and challenges to groundwater and surface water supplies that an unconventional gas industry would raise are inadequately regulated under the Water Act 1989.

The current framework is unclear regarding licencing of activities that extract water from coal seams and there is uncertainty surrounding future water use requirements ...

Well integrity

Chapters Four and Six identified the integrity of gas wells as critical in the protection of water resources. **Victoria currently has no code of practice or guidelines for well integrity and there are no explicit requirements surrounding supervision of well construction.** DEDJTR gave evidence to the Committee that: 'Well integrity and aquifer protection is quite critical to the safeguards that need to be put in place to extract gas out of the ground.'

VAGO recommends the introduction of a Code of Practice, similar to those in Queensland and New South Wales, that details the design, construction, operation, maintenance and decommissioning of wells and includes the requirement for independent supervision of well construction. The Gas Market Taskforce report highlighted the need to ensure a high level of competency in the workers performing any drilling thus recommends the imposition of accreditation, qualification and experience standards. <http://earthresources.vic.gov.au/earth-resources-regulation/information-for-community-and-landholders/petroleum>

Will equipment be removed from my land once authority ceases?

Yes. The company must remove all equipment brought on to the land under the authority, within 60 days after the authority ceases to apply. Where an underground well bore cannot be physically removed, it has to be properly plugged.

Will my land be rehabilitated?

The company must rehabilitate any land that is used in carrying out any operation under the authority and must, as far as is practicable, complete the rehabilitation of the land before the authority ceases to apply to the land.

It is sufficient compliance if the company fully complies with the rehabilitation measures in the operation plan.

What if the company does not undertake sufficient rehabilitation?

The Minister may do anything necessary to rehabilitate land that has been used for a petroleum operation if:

(a) not satisfied that the land has been rehabilitated as required by section 170 of the Act; or (b) satisfied that further rehabilitation of the land is necessary; or (c) the Minister has been asked to do so by the owner of the land.

The Minister may only do this if she or he has asked the company to rehabilitate the land and it has failed to do so within a reasonable period after the request.

The Minister will use the rehabilitation bond if required in these circumstances. If the rehabilitation bond is insufficient the Minister may recover as a debt due to the Crown any amount incurred.

If the Minister refuses to act on a request to rehabilitate the land, she or he must inform the owner of the land of the reasons for that refusal.

What if I notice damage after the operation has been completed?

You can seek compensation up to three years from the time the damage occurred.

I thank the organisers (Western Downs and Wider Unconventional Gas Group – WDWUGG) for hosting this event and allowing the people and broader communities the opportunity to contribute their stories.

Yours sincerely

Tracey Anton
162 Hendersons Road
Toongabbie VICTORIA 3856

Appendix 1



LAKES OIL N.L.

(A.C.N. 004 247 214)

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8 December 2004

The Manager - Companies,
Australian Stock Exchange Limited,
Stock Exchange Centre,
530 Collins Street,
MELBOURNE VIC. 3000

Dear Sir,

TESTING WOMBAT 3 & HORIZONTAL DRILLING NORTH SEASPRAY 3

Wombat 3

Lakes Oil ("LKO") advises that due to heavy rains in East Gippsland overnight and continued problems in acquiring testing personnel, testing of Wombat 3 has been further delayed. Current expectation is that testing will now take place Friday. This test is designed to access a gas "kick" and oil fluorescence which occurred while drilling at 2104 metres to 2107 metres. Due to shortage of testing equipment at the time test was delayed until now. Because of activity in oil and gas exploration, people and equipment are still in short supply.

North Seaspray 3

Equipment and personnel are on site at North Seaspray 3. A 300 metre horizontal well will be drilled out of the bottom of the existing well. It is planned to drill this horizontal section underbalanced using Nitrogen and Diesel to circulate up the cuttings.

We believe this is the first time this technique has been used in Victoria and we are hopeful that we can increase the gas flow already encountered in this well.

We expect operations to get underway Friday.

Yours sincerely
LAKES OIL N.L.

ROBERT J. ANNELLS
Chairman

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