

# TRANSCRIPT

## STANDING COMMITTEE ON THE ENVIRONMENT AND PLANNING

### Inquiry into unconventional gas in Victoria

Hamilton — 23 September 2015

#### Members

Mr David Davis — Chair

Ms Samantha Dunn

Ms Harriet Shing — Deputy Chair

Mr Shaun Leane

Ms Melina Bath

Mr Adem Somyurek

Mr Richard Dalla-Riva

Mr Daniel Young

#### Participating Members

Mr Jeff Bourman

Mr James Purcell

Ms Colleen Hartland

Mr Simon Ramsay

#### Staff

Secretary: Mr Keir Delaney

Research assistants: Ms Annemarie Burt and Ms Kim Martinow

#### Witness

Mr Darrell Morrison (affirmed).

**The CHAIR** — I welcome Darrell Morrison. Darrell, can you very briefly introduce yourself and then provide a short statement. We will follow up with some questions.

**Mr MORRISON** — Okay. I will speak loudly, not that I am aggressive but some people have said they cannot hear. I am Darrell. I was born and reside in Portland. I am currently a student, technically unemployed. I do operate a small marketing consultancy. I am not representing anyone here today except myself and my community.

From 1987 until 2014 I was group marketing manager for the Spectator partnership, which has newspapers in Casterton, Hamilton and Portland, which is our immediate area. My ancestors on my father's side moved to the district after emigrating from Scotland in 1840, and they lived and worked at Branhholme, 25 kilometres south of Hamilton, as shepherds at the Arrandoovong Homestead.

I thank the inquiry for this invitation to represent but one view from my community — mine. However, I have recently discovered on average that 95 per cent of regional and rural Victorians share similar views and concerns as myself. My comments today are expressing a view which adds to the written notes that I supplied to the inquiry early in July. As I said earlier, I am not paid by or have any vested interests even though I am involved in marketing. My submission in July centred on opportunities for the future as much as recommending, in my view, the banning of unconventional gas mining and its associated practices in this state. That is my view, but in addition to that in my submission I want to put forward our position because we are unique in the south-west. I will go back to that.

My observation initially was that the geological area is fragile in south-west Victoria. I believe there are less invasive alternatives to energy production — for example, hot rocks or geothermal energy, which produces heat and steam and allows water to be recycled or used for other purposes after the heat is extracted. Portland's geothermal bore operated at 60 degrees Celsius and was decommissioned in 2006 owing to a lack of funds for a new bore and some concerns with Wannon Water about where the water was going to go after the heat was extracted. It had powered the municipal offices of Portland, which are a large complex, the town's swimming pool, which also is a massive complex, had reticulated throughout the CBD to a hotel and motel, the police station, library and civic hall. That has all been returned to a gas-fired heating situation at the moment. We would like to revisit that as a community; it is being talked about. Water at that temperature — 60 degrees — as it comes naturally out of the ground lends itself to boosting, with solar or other means, to bring it up to industrial-strength steam and other purposes. That is my view — that there are alternatives to achieving energy sufficiency or sustainability in the south-west that do not involve unconventional gas mining.

My earlier submission was simply a precis of ideas and my opinions on where we should be heading with energy augmentation or innovation. As a layperson with no particular technical skill I have been involved in championing, with others, geothermal and wind energy in the area since 1985. I was involved as a consultant to the Portland Development Committee and the City of Portland, promoting the effectiveness of and processes involved in geothermal energy. Later, in 1992, I was elected to Portland City Council as a councillor and continued that interest in geothermal energy through a joint position as a councillor and a water board member. In those days, if you were on the council, you were also a water board member. Later the Portland Water Board was absorbed into what is now Wannon Water, post-council amalgamations in 1995.

When wind energy was presented as an opportunity to move away from fossil fuels and create local opportunities in the Portland district I was also involved in submissions prior to that industry opening up. As previously stated, it is my understanding that, while partially volcanic, the region sitting over Portland, Glenelg and Otway Basin is limestone sediment and is referred to in the old literature I have looked at recently as sunk lands, which describes a geology that is honeycombed with fissures, sinkholes and cave structures. These extend into South Australia, geology showing little or no respect for the borders introduced at federation, so what happens in the south-west of Victoria impacts on the south-east of South Australia and vice versa.

Without going into the specialised area of the geologist or indeed speleologist, I observed that Russian geologist Dr Nicholas Boutakoff, and possibly Boutakoff and Reginald Sprigg, a South Australian geologist, in one of their numerous surveys in Portland, as early as 1949, 1952, 1953, 1963, and between the 1940s and the mid-1960s, described in one of their reports a sinkhole fault — a geological fault, as opposed to a tectonic plate fault — running approximately diagonally from Portland, Lawrence Rocks, which is a gannet colony, through where Portland harbour is situated, right through the cliff face, through Portland and out as far as Dartmoor. Again, in the literature, some of it is referred to as the sunk lands; it is a term they use.

One imagines a honeycomb structure floating on other layers of various components of rock, sand and shale — that is, you have got the Princess Margaret Rose Cave along the Glenelg River, and numerous sinkholes and caves in and around Portland. We are protected somewhat by a basalt coastline and volcanic structures. There are drawings produced by the engineers, which I have seen but was unable to relocate expediently in time for today's hearing. I am willing to pursue that.

My overriding point today is that, unlike Melbourne, we do not have a desal plant or substantial above-ground catchments, like Maroondah dam, Thomson, Sugarloaf Reservoir or any of the other 12 to 15 catchments around the state. In our locale we are almost wholly reliant on groundwater provided by the basins mentioned, but mostly the Otway Basin. The Otway Basin is both onshore and offshore, as was presented pictorially in my submission, covering a large area of residential, farmlands, business, industries and of course a significant marine park, with the blue whales and things off the coast of Portland.

In 2013 I stood as an independent candidate for the Senate in a federal election. In that I advocated decentralisation as a key innovation to both alleviate numerous problems facing the metropolis, but boosting the regions and their economy. For this sustainable population growth and opportunity to be managed in Australia, the regions of the state — like ours — must be partners to underpin the economy of the state as a whole. If the water resource in our particular area is damaged, there are no viable alternatives, and a wasteland devoid of people — and in some cases wildlife — would ensue. That is a rather bleak but not unrealistic outcome of a catastrophic contamination of the rivers, streams or the underlying watertables. The deep aquifers are vast, but they are linked in some cases, and cross-contamination cannot be ruled out.

In my view, where there is sufficient doubt, risk or better alternatives, unconventional gas mining or associated or similar practices should be permanently ruled out. It is also my understanding that some of the volcanoes in the vicinity are considered dormant but not extinct. Earlier this month a small earthquake occurred offshore from Warrnambool, in the Otway Basin near our coastline, and Geoscience — I looked it up — recorded a quake not far from that spot 10 years prior, so it is not a one-off occurrence in the scale of things.

We do live in a pristine environment, but one that is fragile and interdependent. Tinkering with unproven and dangerous technologies is a recipe for disaster. In 2005–06 a small tremor occurred 10 kilometres north of Heywood, which is 25 kilometres north of Portland, at a depth of 30 kilometres, owing to blasting at Broken Hill, which I think it was. Geoscience informed me that they could not triangulate to get a clearer indication of what had occurred just north of Heywood. From memory, it was around 2.4 on the Richter scale, which is incredibly small, but it registered. Quite possibly it could have been an underground cave-in, but they were not sure, and not what you might imagine an earthquake to be. There was a tremor, and they suspect it was an underground collapse of some sort.

Geoscience also has maps — which have been published and I can find — which show a small fault line running north from Cape Bridgewater for some distance. I am not sure what that is. It is definitely not the limestone one I mentioned earlier, but Geoscience published a list of faults in Victoria, and one of them is quite a significant length, and it emanates from Cape Bridgewater heading north inland.

My presentation today is that of a layperson with a keen local interest, and many geology reports, surveys and seismic tests have been conducted over 60 years, as we have heard. In these myriad reports lie clues as to the points I have been making. I would like to raise these doubts for further analysis as an adjunct to the very real threats not only to fresh food and produce but also the basic habitability of the south west. Without the aquifers we would be back to the 1800s for our water supply.

In closing, I suggest that the onus to prove safety claims should fall to the miners and not the public. This may be required for each licence owing to the diverse geology throughout Victoria.

**The CHAIR** — Darrell, thank you. I am going to make two very short comments. Firstly, I disagree with you on one matter. I do not think many Melbourne Water ratepayers are happy with the desal plant — at \$1.8 million a day.

**Ms SHING** — Not that we would use this as a political process, Chair.

**The CHAIR** — No, no. I just thought I would correct that point. The second point I would make is I do agree with — —

**Mr MORRISON** — I was not advocating it; it is already there.

**The CHAIR** — But we are still paying for it for 27 years.

**Mr MORRISON** — It is an asset.

**Ms SHING** — You would object to paying insurance premiums, wouldn't you Chair?

**The CHAIR** — No. The second point I want to make is I agree with you about the strangeness of the decision to stop use of geothermal energy in Portland. I think it is a very important part of the mix, but I will leave it to the Deputy Chair. That is all I want to say.

**Ms SHING** — So just one political comment and then an observation. Thank you, Chair.

**The CHAIR** — That is right.

**Ms SHING** — Darrell, in light of your submission and your connectedness to the community, I would like to get your views of how you feel that conversations, consultation, information and access or availability to industry have rolled out in the course of this particular issue gathering momentum in the lead-up to the moratorium and the parliamentary inquiry that we are now participating in.

It seems that people have a range of different views about the extent to which consultation has taken place and the extent to which consultation has been successful or otherwise. We have also had evidence that we may have passed the point of no return for the purposes of getting the community on board in relation to any unconventional gas industry in Victoria. What are your thoughts on that given the experience that you have had that has led to your contribution today?

**Mr MORRISON** — If I may, I will compare it to when Portland was a candidate for the Portland aluminium smelter. At that time, the aluminium industry, notably Alcoa, spent a considerable amount of time negotiating with landholders — the Indigenous community — because there were significant sites on their chosen location. They also entered into a very detailed rehabilitation plan, going on what was asked of the previous speaker, as opposed to whether an accident happens. The Portland smelter has to rehabilitate the whole site — the heathlands and everything — to as they found it if they pack up and go. It is not just a case of if there is an accident; they have to reinstate it.

Using Alcoa as an example, they and others spent millions of dollars on education programs, and that included exhibitions, displays, Q and A, and I have not seen any of that from the mining industry other than the odd grab on the *7.30 Report* or ABC Rural or something like that, and at events like this, which largely are accessible but not well attended. I would have to say that the community — communities, if you count the protest rally in Melbourne on the weekend — are doing all the lifting and the inquiry.

I would say that Portland — I cannot speak for everywhere else — because of the geothermal issue is very well educated on what geothermal can do and has done, because it also heated our hospital for a time, which was a significant saving. People learnt a lot about the simplicity of geothermal energy. If funding was available, the south west would revisit that. The geothermal is here in Hamilton, but a lot further down, so is achievable and not a pipedream. I would like to see what is known being tackled rather than what is unknown.

To answer your question, I think the mining and the miners, as was stated again by the previous speaker, are minuscule in the state. They probably have not got the marketing or public relations resources. They certainly have not got the will. On this idea about being transparent about chemicals and all the rest of it, I have got an article here published in the Australian issue of the *Guardian*, which suggests — and I will pass this on; this was published in July out of New York and republished in the *Guardian* of Australia, online and available. It suggests that there are some 1076 chemicals — potentially, not all in the one drill or one site, but a mix or a recipe — so to have a blanket assurance that fracking is okay, is a bit risky. I have learnt a lot just being here today, and I would suggest that a drill in Gippsland and a drill in the Grampians could present a whole different range of scientific and chemical analyses which require a different use of chemical mixture. If the industry is able to obtain a blanket approval, I think that is asking for trouble, because Portland's aquifers —

Portland's population is about 10 000 or 12 000 people in immediate Portland. The greater community is about 20 000, but the watertable that feeds off that, or potentially could — —

With decentralisation, if we can populate the regions as Australia's population grows, this area has real potential for growing a real population with innovative industries and jobs.

The water bothers me, because if the drinking water is effected, we cannot pipe it in. There are no dams. We cannot build any dams. The rivers are small; they are great, but they are not potable water in vast supply. That was my reference to Melbourne. They have got alternatives, plan B, plan C, if something goes wrong. We have no plan B for our water.

**Ms SHING** — Just finally, could you read the title of that article onto the record, please.

**Mr MORRISON** — Yes. The article is titled 'Secrecy over fracking chemicals clouds environmental risks, advocates say'.

**Ms BATH** — I am just interested a little bit more in the geothermal. I am not greatly familiar with it, other than it seems like a very good idea. But you mentioned that there was some underground seismic activity in years past, small disruptions. If we are looking at risks, if we are looking at alternative energy sources, is there a risk relating to this industry in terms of water or seismic activity?

**Mr MORRISON** — No. I can speak for Portland. We are always at risk of seismic activity, as has been evidenced by the earthquake off the Warrnambool coast between here and King Island — it is fair way away — and the small tremor at Heywood, which will never be proven what that was. But to answer your question, the water in Portland comes out of the ground hot, full stop. We actually have to cool it down to drink it. They decided back in the day, 'Well, the steam's just going up in the air, let's do something with it'.

In our water bores — the serious water bores as opposed to some on the farms — the water is already 60 degrees. We are not talking about anything to be done other than drill what we have to drill for water anyway. Whereas in Hamilton with their hot rocks, my understanding is up here, because it is a different granite — you have got the Grampians and so on — it is a lot deeper. I do not have any history or understanding of that, but I know they are aware of the availability of volcanic thermal properties up here, whereas in Portland we are obviously closer to sea level. I think the depth of our normal bores is something like 1000 metres at the most. They do not always pump from the bottom, they might have semi-submersible pumps somewhere on the shaft down.

Just for the record, I have not been involved in the water board since 1995. I am not au fait with what Wannon Water has achieved or is doing, except to maintain the existing bores in Portland. But in winter, more noticeably, you notice there is steam rising at the bore sites. There are a couple of bore sites, and they pump the water up into Bald Hill, which I think holds a gigalitre or something. It is a huge underground tank in a hill. Obviously that is to provide a gravity feed then back into the reticulation system in the city.

So our water is already hot in Portland, and that heat is being wasted as we speak. It is 60 degrees, and 100 degrees is boiling. It is not hard to get it to steam. In New Zealand, from my past 30 years in newspapers, the mills over there, they use geothermal energy, because of New Zealand's significant hot rocks. They use it in their pulp and paper mills to steam and bleach the paper and to generate electricity to run the plants (using the trees from) commercial forests that they make the paper out of. It is not inconceivable that this area cannot have other industries that are clean and green, using the commercial forests as opposed to woodchipping.

I am pretty excited about the alternatives. I wanted to make a submission in July that we are not about just closing the gate. We are closed to mining companies who have not done their homework and unconventional as opposed to conventional. But we have so many more opportunities down here with wind, tidal energy and geo. This is just a waste of time. I reckon they are just trying to get the dregs of what is there, and unless they can get it out through conventional methods, I am here today to say I object.

**Mr LEANE** — Thank you. I appreciate that it was a while ago you were a councillor as well, so say if it is unfair to ask you to comment on this. I was a little bit surprised that the four councils we had in this morning did not have a uniform position on onshore gas exploration. They have varying positions. Do you find that surprising?

**Mr MORRISON** — As I say, I have enjoyed today — the comments from Moyne shire about how they are coexisting with the gas plants and things. Each council has its own unique proposition economically speaking.

Portland has been perceived as an industrial centre, and we have been down that road with establishing the smelter, the powerline. In Portland we use about 25 per cent of the state's electricity out of Gippsland, and it is like running an extension cord across the lounge room. It is really stupid — quote me on that. But the wind towers do offset something like 110 000 homes and so on. No, I am not surprised that councils have different views, only because of the unique propositions they all have.

Warrnambool, for example, when amalgamations happened, because they had a population density of about 30 000 people, they were able to put a fence around Warrnambool, and they did not change. Nothing happened for them. Whereas Portland, we were the City of Portland, then had to absorb Heywood, Casterton, Merino and Nelson, down on the border, into this super-shire thing. That has hindered Portland somewhat. The amalgamation process has hindered Portland from its destiny of being a geothermal and wind, responsible industrial town with a fishing fleet and a clean green farming district. You have Cashmore potatoes and Portland Strawberries, fantastic produce. We had a good mix and a good thing happening. The fact that the council has signed the declaration recently, the week before last, means they have led the charge somewhat. So if we are out of step with some of the other neighbouring shires, I think it is a shame, but it is not an unmanageable situation. I did not sense any hostility. I was not here for the very early part of their discussion. But again, they have got their own ratepayers and their own charter to answer to I suppose.

**Mr RAMSAY** — Thank you, Darrell, for your submission. It is interesting, we have Wannon Water here I think as a witness after lunch, and they might go through some of the history, but from memory that geothermal plant was closed down in 2006 by the Bracks government on the advice of Wannon Water because of bore failure and potential contamination of water.

**Mr MORRISON** — And the cost of replacement, yes.

**Mr RAMSAY** — Yes, about \$2.5 million I think of new bore casing.

**Mr MORRISON** — Can I clarify the contamination comment? The bore you talk of was close to the canal. The fishing fleet sort of docked at that time near the canal, so they were worried about the water. There was nothing wrong with it, but they were worried about the lukewarm water that was left over going into the canal, and that was the extent of the contamination if you like.

**Mr RAMSAY** — I assume new technology would overcome some of those issues way back then.

**Mr MORRISON** — Correct.

**Mr RAMSAY** — In 1983 I think.

**Mr MORRISON** — That is right.

**Mr RAMSAY** — I just want to be clear. You do not support unconventional gas exploration under any circumstance, and you see greater economic value and less environmental impact by a whole lot of renewable projects that could be invested into south-west Victoria?

**Mr MORRISON** — Yes.

**Mr RAMSAY** — That is your position, is it?

**Mr MORRISON** — That is.

**Mr RAMSAY** — Geothermal is one, wind farming, solar.

**Mr MORRISON** — Tidal is happening. There are experiments now.

**Mr RAMSAY** — You have spent a lot of money on tidal down there. It has not proved a great success.

**Mr MORRISON** — It goes into the sea in November, it is happening.

**Mr RAMSAY** — Thank you. I just wanted to make it clear that that was your position.

**Ms DUNN** — Thank you, Darrell, for your submission and your complete passion for your region and the ability and potential of geothermal. I do not need to ask you about that because I think you have actually covered off on that really well, and I will probably talk to the water authority about water issues. But I was interested just in a couple of comments. One, you talked about how 95 per cent of regional/rural communities share your concerns. The other was you also talked about how catastrophic contamination cannot be ruled out. I just wondered if you could flesh those two issues out a bit more for the committee.

**Mr MORRISON** — On Sunday there was the Lock the Gate rally in Melbourne. The front number of people all carried a little triangle with the percentage of their community that they had surveyed, researched in detail, and had been sort of audited off by their local councils I understand, as the percentage of people in those areas who supported the anti-unconventional gas position. Some were 100 per cent. Wallacedale, I think, around this area, was 100 per cent community support. In other areas it was 93 per cent, 98 per cent. But the average as I understand it is 95 per cent. That is regional and rural Victoria, 95 per cent. From what I could tell, when the Melbourne community or greater populations understand the issues, they probably already support it without even realising it because of the big swing to organic shopping and so on. The rally on Sunday was part of selling that message and reminding the government of the wider community's acceptance of the anti-unconventional gas position. What was the other part of your question?

**Ms DUNN** — It was around catastrophic contamination. You talked about how it cannot be ruled out.

**Mr MORRISON** — A very short analogy would be the fire at the coal site at Yallourn near Moe. It was unforeseen. In hindsight perhaps they could have planned for it. Anyway it happened. It lasted many weeks. There are apparently still some health issues alleged to be associated with it. My concern is for the Portland and district population of some tens of thousands of people. If there was a catastrophic failure, by the time the players swung into action, even if they had the resources to swing into action, where do we truck the water in from? Yes, you could have drinking water and bottled water and all sorts of things, but then there is washing. I am exaggerating slightly, but I am talking about a major accident. If there is a blanket approval of unconventional gas mining and then after a while the operators say, 'Oh well, under section 5 we can do this', I think every bore is going to need to be scrutinised because of the unique geology in Kerang versus Portland. I do not think there is such a thing as blanket acceptance. I think every one is going to have to have an environmental impact study, and if the industry pays for it, they probably will not be able to afford it. That is why I have come forward today saying that the renewables are probably not the cure-all, but they are certainly the more viable direction that we should be going in.

As I say, our aquifer, if it is contaminated, would possibly impact on Mount Gambier because of the cave structures and the underground set-up. As was said earlier by someone else and as is evidenced in some of Boutakoff's papers that I have not got, the network of underwater rivers, caves, aquifers and deposits is too interconnected and too unmapped for any definitive protection. Compare it to Moe. If there is an accident — and I am talking 10 or 15 years from now when all this is forgotten, what then? There is no plan B for the water. People would have to leave and, for goodness knows, how long. It could be a month, or it could be forever. That sounds melodramatic, and I do not want to be melodramatic or emotional, but in reality I think they are messing with something that they have not got the resources to remedy should an accident occur. I do not think any government would have the resources to remedy it.

**The CHAIR** — Darrell, thank you for that. I appreciate that very much. It has been very helpful.

**Mr MORRISON** — Thanks for the invitation.

**Witness withdrew.**