

TRANSCRIPT

STANDING COMMITTEE ON THE ENVIRONMENT AND PLANNING

Inquiry into unconventional gas in Victoria

Hamilton — 23 September 2015

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Mr Barry Richards (sworn), Managing Director, and

Dr Rodney Halyburton (sworn), Senior Petroleum Consultant, Mecrus Pty Ltd.

The CHAIR — I welcome Barry Richards and Dr Rodney Halyburton from the Mecrus group of companies. I ask you to make your presentation now and then we will ask questions.

Mr RICHARDS — I thank the committee for the opportunity to present today. We submitted a submission earlier on, and today our presentation raises some other points that we will talk through as we go. Dr Halyburton is our technical expert, if you like, so more of the technical questions related to the opportunities can be directed to him.

Mecrus is a diverse organisation. We are involved in mining, resources, agribusiness, water and energy. Today we are talking more specifically about our mining and resources activities and being a significant explorer of resources in Victoria. Mecrus Resources activities are centred on Victoria. We have holdings throughout the state of Victoria. It is a mix of hydrocarbons and minerals. We have mineral exploration licences and one petroleum exploration permit. With the selection of locations that we have we have undertaken a lot of work over many years to determine the best locations to further our exploration activities. For the western Victoria region we are specifically focusing on oil shale deposits within that area.

Visual presentation.

Mr RICHARDS — This map demonstrates our licences held and pending, and you can see that the Otway Basin is covered by a number of mineral exploration licences both granted and pending. In the bottom left-hand corner in yellow, which is a little bit hard to see up there, is our petroleum exploration permit. Our other exploration licences throughout the state largely are over in the eastern side of the state in a line down there. They are specifically targeting other minerals in that area.

We will talk firstly about stakeholder and community engagement, and I must point out that Mecrus is a privately held company. We do not and are not required to make public statements for shareholders and those sorts of things, so we do keep to ourselves to a degree, I suppose. However, when it comes to stakeholder and community engagement, we are quite forthright in how we talk to people and we offer ourselves to those people who are interested in talking all the time. However, we are early stage exploration or what we deem is early stage exploration.

We have not conducted any drilling operations, but we have done a considerable amount of sampling — soil sampling, water sampling. We have had an organisation do a groundwater assessment, so we have been out there. To do any of that you have to have landholders' approval, and in all cases they have been granted to us. We take that on a very local level, if you like, where our people get out and talk to the landholders directly, explain what we are doing, and they sign a commitment for us to be able to visit their land and take samples. Then we feed back to them what we have found out from them and we maintain that dialogue, and as the time comes along when we expect to expand that exploration activity further we will make ourselves available to the greater community if and when we decide to move on with those things. We build strong relationships with communities and the people who are out there.

Directly, the Mecrus business employs over 140 employees. A large percentage of that is in Victoria. Our head office is in Victoria of course. We also understand and protect the sites that are related to culture and have heritage significance. We have licences in Victoria that have native title negotiations and agreements in place, and we believe we are a very responsible community member.

I point out at this stage we have made a number of attempts to contact some groups, particularly the Victorian Farmers Federation and the consultants that conducted the previous community consultation in relation to onshore oil and gas, or unconventional oil and gas, but to no avail. They have not taken up our repeated offers to discuss that with them. We have pages on our website that answer some frequently asked questions, and again we respond to any questions that are sent to us through that.

If we may talk a little bit about the legislative aspects of this, we point out there has been some confusion. We believe it is confusion; we are very clear on it, and we think the acts are very clear on it. There is of course a minerals act and there is a petroleum act, but both of those specify that mineral includes oil shale and coal, and hydrocarbons and mineral oils contained in oil shale or coal or extracted from oil shale or coal by chemical or industrial processes. Under petroleum, it specifically excludes any naturally occurring hydrocarbon or mixture of hydrocarbons within a deposit of coal or oil shale, so we are very clear on that. There has been quite a bit of

consternation about that, but we believe the acts are quite clear. That is supported by independent opinions by QCs to verify that, and we just note that oil shale is another term for organic source rock.

We note the suggestion of some industry groups that the Mineral Resources (Sustainable Development) Act and the Petroleum Act need to be changed. We do not believe that is the case; they are quite clear, and any changes to those will raise questions of sovereign risk for our state.

We move to the point of: do unconventional resources exist in Victoria? I will ask Rodney to talk to this, as he is best experienced to do so.

Dr HALYBURTON — About five years ago I started my association with Mecrus and I carried out a detailed assessment of both the Gippsland and Otway basins, but came to the conclusion that the Otway Basin was the most prospective for significant hydrocarbon resources hosted within oil shale. The study was focused primarily on a well that was drilled earlier in the area — I believe somewhere around 2006. It was the only petroleum well on onshore Australia from which oil has been produced from oil shale. The well actually contains oil and gas in natural fractures that are currently open in the Laira oil shale formation. The amazing thing about this formation is that it is over 1500 metres thick in this well. It is the thickest section of the Laira formation in all of the Otway Basin. But we do believe that in our area there will be some thicker sections as well.

Just as an aside, if you are familiar with the oil shale scene in the United States, they get very excited when they have 50 to 100 metres of shale-bearing hydrocarbons. This zone is 1500 metres thick — one and a half kilometres thick.

We are not interested in exploring for or producing coal seam methane for a vast variety of reasons.

The next slide is an extract from what is called the mud log from this well at Glenaire with one outside track. It cannot be seen very well on the screen, but if you look at the hard copy of the presentation there is an indication that oil started flowing from that depth whilst the well was being drilled. It is amazing, but there were open fractures out there and oil started to be produced from that section. So there are unconventional oil and gas resources in Victoria.

I will pass the next slide on to Barry.

Mr RICHARDS — I think you can imagine that as a privately held company we always have concerns about how wisely we spend our money. We have been spending a considerable amount of money on this exploration process for many years, and on finding this within our own group, we then sought to have that confirmed by an independent party. We engaged a company called RISC, which is regarded very highly in the world as an independent review organisation of petroleum-based resources. They are a company based out of Western Australia and they provided us with an independent verification of the findings we had found. Again, this has been kept confidential information and we are happy to release information associated with that to the committee on a confidentiality basis. Whilst it is quite a conservative, and an intentionally conservative, review — and that is what we asked for — it does indicate significant resources within the area that we are looking at.

This is an extract from that report. Specifically the figures in here that are of interest, and Rodney will explain those, are the two that are highlighted red, which are highlighted for a reason.

Dr HALYBURTON — The items that have been highlighted are the estimates of stock tank oil initially in place in millions of barrels.

The CHAIR — Just to be clear, this is from that RISC study? And what is RISC?

Mr RICHARDS — RISC is a company.

The CHAIR — What sort of company?

Dr HALYBURTON — RISC is a group of ex-oil industry people who formed a consultancy. They do a lot of work for different companies all over the world.

The CHAIR — Okay. Thank you.

Dr HALYBURTON — These figures that have been provided have been based on very conservative numbers off the parameters above, including what we call the net-to-gross ratio — the porosity, et cetera. One of the most conservative things that they (RISC) used was the recovery factor; the recovery factor is the fraction of oil or gas that you could recover out of everything that is in place. They used, for the most likely case, a 4.5 per cent recovery factor. This work was done about four years ago. They were very conservative at the time, but since the industry has progressed in the United States, we see that recovery factors of about three or four times that amount are possible. So potentially — I say potentially — there is a fairly large resource in western Victoria, particularly in the two exploration licenses, EL 5297 and 5298.

RISC went through a study and looked from a screening point of view that if this whole field was actually there and was developed, you could produce a significant amount of oil. Gas will be produced along with the oils. RISC did not include the amount of gas or the value of the gas when they conducted all their studies. If oil is produced there, gas will also be produced and that will be the cream on top of the cake. The other interesting thing is that with unconventional resources the wells tend to have a fairly long producing life. They start off fairly high, decline fairly rapidly, but then you have lower production rates for a significant period of time.

I will just go on to the next slide. Mecrus fulfilled all their requirements and we have an area work plan for a well in 5298 — for the drilling and testing of that. We have submitted an operations plan, an environmental management plan and a groundwater-contingent plan. None of these are legislative requirements, but we still did that. At this stage it is a project called GISTA. If you are interested in the background, I can talk to you about that outside this Inquiry. We will brief the regulatory authorities on our operational plans, and we welcome witnesses from the DEDJTR to observe the way in which all our operations are conducted. Whilst the operations will be conducted under the minerals act, we will also recommend that petroleum experts from the department be involved to actually witness our operations and tell us where they think we are doing the right thing or the wrong thing.

How can the resources be developed? The initial plans are to drill a well to collect data. When we collect that data we will evaluate the resource and consider production testing across a well that is vertical and then we will consider drilling one horizontal offset. What we will do is drill one of those wells horizontally, initially for about 2 kilometres. But these days, with improvement in the technology, people have been able to drill horizontal wells for up to 3 or 3.5 kilometres. How old is horizontal drilling technology? The Russians drilled horizontal wells in the 1950s, when I was a little kid. By the way, just as an aside, fracking has been conducted for 50 years. It is nothing new. People have to be careful; when cowboys come in, things can go wrong. Sorry, I have used the wrong word, 'cowboys'. But when people do not care about things and go about it in a manner without any code, things can go wrong. But we will do everything according to the book, in accordance with good-class oilfield practice.

If we have success in this well, we can evaluate the resource from a single-hub pilot plant. From that plant, within an area of about 1 hectare, we will be able to drill around 16 wells, possibly more. It is not wells dotted all over the countryside, it will be wells from a single hub. We can have 16 wells, and if by some good fortune this is successful and commercial, these can be cloned and duplicated and improved along the way in small steps, which the Japanese refer to as kaizen. In addition, we believe we will need another three wells to assess the shale oil potential, not only in this formation but in a few other formations in the area. The resources that could be present could be a multiple of what we have shown in our previous slide. One thing I would like to say is that our surface operations to produce the unconventional hydrocarbons are identical to those used for conventional hydrocarbons. All operations to explore for and produce hydrocarbons will be in accordance with world-class, good, best oilfield practice.

Mr RICHARDS — Can just talk about multiple land use. The resource is hosted in sediments at least 1.5 kilometres thick at depths greater than 2500 metres. Accordingly, as we have just discussed about the field plan, about vertical and horizontal drilling, it is estimated that a surface footprint of 1 hectare will be required to access the resources within the area of 800 to 900 hectares in the subsurface. By that layering effectively you cover a huge amount of area from effectively one hole, or one hub, as we call it. This ensures that valuable agricultural land will be preserved and undisturbed usage above the area of the resource. It is a very small portion of land, not much bigger than a rural house lot, to host the hub.

Dr HALYBURTON — There are a few perceived risks with hydrocarbon exploration and production, whether it is conventional or unconventional. Tongue-in-cheek I like to say what is unconventional today will be conventional tomorrow. There have been many things that have changed along the way. When the Wright brothers first flew their plane somebody said, ‘ If God had wanted us to fly, he’d have given us wings’. Now we fly without second thoughts. But there are risks, and they can be mitigated. Groundwater and surface contamination: there are 2.5 kilometres of vertical separation between the aquifers near the surface and the oil. We will use good oilfield practice, including proper well design, to ensure that these risks are mitigated. The use of groundwater: there is always a fear that we will compete with farmers and other people who use groundwater. But Mecrus has some proprietary technology with its company Desaln8, and we will look at using water from deeper saline water, saline aquifers, which are not currently used, and use that as our process water. That will not compete with other users.

Seismicity caused by fracking: that has been a concern in some areas. But the interesting thing is that the formation we are dealing with is naturally fractured, and these fractures are actually open still, and that is because of the geological regime in the area. Fracture stimulation will not be an enabling technology. But certainly it will add value by keeping those fractures open and actually allowing possibly higher rates of oil and gas production. The interesting thing is that the existence of open fractures reduces or negates the probability of seismicity caused by fracking. We have actually done a baseline study of the seismicity in the area, and that will constantly be monitored if and when we drill our wells and frack them, if the moratorium is lifted. Surface contamination by spillage of drilling and production products: like I say, all our operations to explore for and produce hydrocarbons will be in accordance with world-class good oilfield practice. That will certainly be minimised and as far as possible eliminated. Barry, I think it is up to the next point. Do you want me to talk about that?

Mr RICHARDS — No, I think we can move on. Just one point I would make. A comment was made by the state health officer to this inquiry. I would say to you that state workplace regulations require transparency of all hazardous substances or dangerous goods on any workplace. That is a requirement under WorkSafe Victoria, and we have the reference there for you to check on that. The transparency of chemicals and the ingredients enclosed in those must be made available, and are made available, by law. I do not see how one department can know and another cannot.

The value to the economy is of great interest to everybody, I am sure. We are talking here in this conservative mid-case production forecast. But the expected benefits from the development of half of the Laira formation, and just the Laira formation, as we have talked about, capital expenditure is quite massive in the initial component; operating expenditure, revenues after tax, income tax paid to the state, royalties to the Victorian government are all quite substantial. I think, as you have heard, many of you, in these committee hearings, the economy is struggling in manufacturing, and we can be testament to that too. For example, one of our operations last year used \$300 000 of gas in its process. You can imagine if we doubled the price of gas what that would do to our bottom line. Because that is the only place it would come. We provide fresh produce into the markets. As you well know, those supermarket chains are driving the price of fresh produce down, so we would feel it out of our bottom line. A \$300 000 increase in costs of operating that business would be devastating, I can assure you. We have here identified a significant resource. It does require further exploration, and we need to be enabled to do that, but the upside of it is massive to the state of Victoria.

In our conclusions, the existence of what is classed as free oil in natural fractures has been proven and we have that evidence to do that. As I said, we need to do a lot more work. It has been said by a lot of people that we need to continue on with exploration. There are some requirements for businesses to do that of course: if we are going to invest money in exploration, we need to see the future. I believe this committee holds in its hands the future of the state of Victoria and a significant opportunity throughout our great state to move on and create economic benefit to this state and to the people within this state. We thank you for that opportunity, and we are more than happy to take questions.

The CHAIR — I thank you both for your submission and the detail in the submission. In a sense I am going to cut to the chase on a couple of key points within our inquiry. The assertion by some is that there is no available gas in particular, but you are arguing in terms of petroleum and gas that that is not correct. There is very likely, according to your tests, both gas and oil in a number of those tenements.

Mr RICHARDS — Yes, gas and oil. Gas is petroleum, so petroleum, or hydrocarbons as we call them, is available. In our case there has been a free flow in that well. It was drilled back in the days searching for conventional gas, so they went straight past that stuff and were not really interested in it because it was in shale deposits effectively. But now the world has changed, and that is the future.

The CHAIR — I am just trying to get this absolutely clear for Hansard and so forth. There is hydrocarbon, gas and oil in this case, that is likely there and likely recoverable. It is your view that it is economically recoverable too.

Mr RICHARDS — I would just temper that with yes, we believe that it will most likely be economically recoverable. We need to advance those next stages, and our next step would be to put a vertical well in and then put a horizontal well in to confirm all of that. That would give us yield and quality, and from those we would be able to determine the economic viability. Of course that is all subject to world gas prices, oil prices and those sorts of things, but that is just business; that is how it is. Right now, however, there is a significant deposit here in Victoria, yes.

The CHAIR — So it is untrue to say that there is no gas and no oil. It is true to say that it is there. It remains to be seen, depending on the international price points, what is recoverable.

Mr RICHARDS — Yes.

The CHAIR — Thank you.

Ms SHING — Thank you, gentlemen, for your contribution and for the presentation that you have taken us through this morning. I would like to take you to page 19 of the document that you have given to us all and talked us through. It says:

Mecrus believes that there are compelling reasons why hydraulic fracturing in Victoria should be permitted in the future ...

The first dot point says:

Victoria is out of step ...

There is a subpoint to that which says:

Based on Mecrus' review to date, hydraulic fracturing is permitted in many other parts of the world ...

The second dot point says:

The public debate is uninformed ...

I cannot see how it is that those two points provide a compelling reason for why fracking should take place in the terms that you have outlined. You say that Victoria is out of step. You have indicated in your evidence that fracking has been going on for 50 years, that it is nothing new and that there is an economic benefit to the state. You then go on to say that the public debate is uninformed. The evidence we have had before this inquiry has indicated very clearly that people are fundamentally opposed to any sort of fracking on land in the Otway or Gippsland basins and that part of that relates not only to a failure by industry to consult and have meaningful engagement about the risks, the effects and what the long-term outcomes might be for those areas but also the risks presented to the reputation of prime agricultural product and output for the state.

We have had evidence from Dairy Australia and from farmers that the clean and green selling point and brand for product that comes out of this part of the world is significantly at risk. I am wanting to know how it is that those two dot points — 'Victoria is out of step' and, 'The public debate is uninformed' — are compelling reasons as to why fracking should be allowed to go ahead.

Mr RICHARDS — One of the points you made there, and you said it yourself, was that the communities and those who are raising it have admitted to being uninformed. Their opinion is that industry has not been involved in educating them, so it is an admission that they are ill-informed. Dairy Australia, and I think they are part of the Victorian Farmers Federation, is the group we have tried to have discussions with. Vin Delahunty is the person I have emailed twice. I met him publicly at a rural press gathering and said, 'We want to talk to you'. He said, 'I'll gather some people together, and we'll come back to you'. I have emailed him twice and they have

not come back. What do I do? They are a group I think it is important to get to. We are open, and we are not jamming ourselves down everybody's throats, but we are there to talk to them.

It is an early stage for us. We are an organisation, and people keep saying that the industry has not done anything. The industry in Victoria is minute. It is tiny. It is small. It is us and a couple of others like Lakes Oil, and really Beach Petroleum, that are really starting to push in this area. I think perhaps we are a little bit late in it all. The movement has overshadowed us perhaps so that we now cannot even get a hearing. We are happy to be heard. As we said, fracking has been around for a long time. It is done regularly offshore and in those sorts of environments. There is no particular great history where it is an issue.

How do we move on from this? The thing that Victoria needs to realise is that we have a great history in oil and gas as a state. Bass Strait is massive; it has done so much for our economy. We have learnt so much. It has been so well regulated. The state has many controls in place, and I think they probably do not need to reinvent them. They need to apply them across this and work with the industry to ensure that nothing happens to our great state.

Ms SHING — Thanks. Just by way of supplementary, on page 20 of your submission you refer to value to the economy. The final dot point in the conservative midcase production forecasts refers to a royalty to Victoria of \$520 million. What do you say to the proposition in other evidence that has been given to this committee that in fact the net loss to beef and dairy production as far as boutique sales on prime product to new and emerging markets might offset any financial benefit the state might get through this commodity?

Mr RICHARDS — I actually fail to see how our industry would degrade that industry. You must be suggesting that we would infect watertables and that we would infect the ground that is associated with that industry in some way or another.

Ms SHING — I am asking about reputational risk as opposed to actual risk. Perceived risk is one significant component of market value for primary production, so that has a bearing on the outcomes.

Mr RICHARDS — Yes, but our lobster industry, the Victorian lobster industry, is huge throughout the world, and we have Bass Strait. So how is that different?

Mr DALLA-RIVA — Just a question in terms of Mecrus. From my understanding Mecrus is an exploration company, which I think was in the initial presentation. Can I just get some clarification? Once Mecrus finds a site at which it can demonstrate there is a resource, do you then undertake the removal of the gas or oil, or do you then onsell the licence?

Mr RICHARDS — That will be an economic decision at the time. This area is expensive. We are a small private company. That is the reality. We will need support in developing this. How do we go about achieving that? We have talked to other organisations about supporting us, but our overriding objective is to maintain control and benefit for our state and our country as far as we are concerned as a business. We would want to maintain influence over that. But financially this could well get to a stage where we will only be a bit player; that is the reality. It would be nice if the state government contributed to help us out, but I do not know where the funding will come from. We are not about exploring and just dropping it; we will stay involved in one form or another. To what percentage? Yet to be seen.

Mr LEANE — On page 15 of the presentation you have handed us, the bottom dot point states:

Accordingly, all operations to explore for and produce hydrocarbons will be in accordance with 'world-class good oilfield practice'.

Is that a new application? Is that something new? I suppose the argument relates to people who have concerns around the industry. Is it fair for them to ask was that practice taking place at Gloucester coal seam gas project in New South Wales when AGL closed that down themselves earlier this year, or the concerns that were in WA the year before. Were they working by that practice or is this a new one?

Dr HALYBURTON — I cannot speak for the coal seam gas producers, but I can tell you what has been happening in the industry from the time I started in the industry a long time ago. Along the way some mistakes have been made and people have learnt from those mistakes and have increased the level of safety and complexity in the way the wells have been drilled. I do not know if you are familiar with the way wells are

drilled, but when a well is drilled there is initially a large casing that is put there. The casing is cemented to the earth around it. Then there is another string of casing, so on and so forth, maybe two or three strings extra till you reach the resource. The aim of the industry is always to have two barriers between whatever oil you have there and the environment.

There are valves up at the surface. There are valves down the hole. A lot of this practice was developed with offshore technology. We cannot afford to have a major oil spill offshore. That creates much more havoc than it would onshore. But we do not want it anyway. We do not want to destroy the resources. We do not want people to be injured, killed or maimed. There are a whole lot of processes which are in place which ensure safety, occupational health and of course protection of the environment.

Mr LEANE — I appreciate your response. the question I was asking is: with the world-class good oilfield practice, is that a new documented practice? Could you supply us with a document that actually — —

Dr HALYBURTON — I do not think you could get a document which says, ‘This is the case all around the world’, but in each country — for example, the States and the UK offshore — all have procedures which have to be followed, and that is referred to as good oilfield practice.

Ms BATH — A couple of very basic questions. In order for your shale oil to be drilled and explored, you require fracking. Is that correct?

Mr RICHARDS — No.

Ms BATH — No? That is fine. Tell me about your licences 5298 and 5297. Where are they located, approximately?

Mr RICHARDS — If you look at the map, against the South Australian border and up. In the map you can actually physically see where they are. They are the top two along that line there.

Mr DALLA-RIVA — Page 4.

Mr RICHARDS — They are the most developed ones.

Ms BATH — There was a general comment I think you made that was not on the slide, so you might want to take us back to it, but you related in terms of the chemicals and that there is already transference around the use of chemicals in fracking, and you said there is transference around those. I guess my question or comment would be that we have heard in Melbourne the chief health officer talk about the range of chemicals involved in that — and there is quite an extensive range — and that some of the potential health risks to those are not known as yet, because they have not done longitudinal studies on that. We inquired fairly intensively around that, and he said they are just not known. I guess my question is: whilst we may know what they are and that is transparent, I guess the long-term outcomes may not be known. Do you have a comment in relation to that?

Mr RICHARDS — All I can say is on MSDSs, which we are required to have on any industrial site — —

Ms BATH — What was that acronym?

Mr YOUNG — Material safety data sheet.

Mr RICHARDS — Yes, material safety data sheets. If you have them, you have got the ingredients, and that has got to be there — and the effects of those and the information on the website is quite descriptive as to what information is there. That is what all industries are faced with every day. I am sure that other industries are in the same boat, where not necessarily the long-term effects of all chemicals are understood. That could be from a bakery through to anything.

Ms BATH — One final question: the baseline study of the seismicity of the region that you have looked at, when was that done? How long ago? What can you tell us about it? Is that available to the inquiry or not?

Dr HALYBURTON — We actually conducted — did a lot of work as to what earthquakes had occurred over time and recorded all of that — —

Ms SHING — No, you cannot give evidence from behind in the gallery; I am sorry.

Mr RICHARDS — Yes, we can make it available. It will not have last Thursday's earthquake on it; I am sorry.

Mr RAMSAY — My question refers back also to page 19 of your submission around the debate in Victoria in relation to unconventional gas exploration. I appreciate the moratorium is all encompassing, and you have made it clear that you are seeking the ability to frack for shale oil and gas. The trouble is, the community is confused about the different exploration techniques. You have currently a permit, PEP 174, which is for oil and gas exploration under the Petroleum Act.

Mr RICHARDS — That is correct.

Mr RAMSAY — There is an exclusion clause in that in relation to the use of coal seam gas extraction. That is my understanding of that permit. It is hard for the community to understand the difference between fracking for shale oil and gas, fracking for coal seam gas, and non-fracking but extraction of unconventional gas. We have also heard only this morning about the moratorium encompassing conventional gas extraction. Then we have got offshore and onshore. I think industry has not really provided the community with the appropriate debate for a full understanding of all these different ingredients, and there is absolute confusion amongst the community about the will or the want of industry to be able to extract gas in whatever sorts of techniques, as against the issues around risk.

I cannot see how you are so confident to say that your fracking techniques for oil and shale will not compromise our water tables, because Victoria does not even have appropriate mapping for groundwater. We do not know where all the water arterial connections are underground yet, as I understand it, so despite the confidence that you have in saying there is no risk, or nil risk, in fracking for oil and shale — not coalmine gas extraction — the evidence I have heard does not give me that confidence. You probably do have much more technical understanding than we do, but the industry itself has failed to provide the community with information about the different techniques in relation to extraction. To my mind we are totally confused now. The more we learn, the more confused we get, so the response from community is, 'We don't understand it, and we don't want it'. You have done a very poor job of selling the importance of gas extraction in techniques that are safe, that minimise risk and that have the appropriate regulatory framework in place.

I will ask the Chair if he might like to respond to that, rather than it just being a monologue.

The CHAIR — You have made a statement, Simon, so our witnesses might want to respond.

Mr RAMSAY — Is that a fair interpretation of where we are sitting at the moment, then?

Mr RICHARDS — I think it is. One of the things is the banners are all about CSG — 'No CSG'. We agree; there is no CSG. In the Otways we do not believe there is CSG, and we have been open about that all long. But one of things that has happened is that events outside of our state have collapsed in on us in a great rush. We have been quietly working away on exploring, and it is a long, long process when you explore for anything, be it minerals, hydrocarbons or anything. There is no point when you are in early exploration getting out and discussing anything with anybody because what are you really talking about until you get some definite understanding of what is there? There is not much real point. You can be misleading people. Everything was all about 'No CSG'. Then all of a sudden it has been extended to tight gas and everything got rolled into one, so it collapsed in on us so quickly.

Ms DUNN — Thank you, gentlemen, for your submission. In relation to your activities for exploration — and it goes to extraction too — are there any waste products generated as part of that, and how those waste products disposed of?

Dr HALYBURTON — We do not believe there will be significant waste products generated. When you are drilling for oil and gas there are rock cuttings and chips that come up, and some of the latest technology is to reinject those drill cuttings back into the rock where they came from. So you take a look at it and reinject it while you are drilling.

With regard to producing hydrocarbons, yes, you do bring oil up to the surface and you separate the oil from the gas, and utilise the gas that you have for fuel. Sometimes then there will be small amounts of gas that cannot be used for fuel. They may be able to be compressed. If they cannot, then it is flared. But you have to get

government approval to flare any gas. Flaring these days is minimal, if not totally not done anymore. Other than that, there might be some waste products from the drilling mud, and those will be contained within an area whilst you are drilling and be tested before they are properly disposed of.

Ms DUNN — What does properly disposed of look like? What does that mean?

Dr HALYBURTON — They need to be dried and either put into safe landfill or injected down into the rocks from which they came.

Ms DUNN — Thank you for that. In terms of your activities in relation to exploration, I note that you have compared a whole lot of different plans, but I wondered if you have looked to completing any risk management plans that go to looking at how to deal with any impacts on either health, environment, economic or social elements in terms of your operations.

Dr HALYBURTON — Normally with risk management you would start to do it when you start to get approvals for drilling, when you start to be able to raise the funds for all of your activities, and then there will be a comprehensive risk management plan as well as any other plans to deal with associated effects, whether it is risk to people or risk to the company's reputation. There will be a complete risk and crisis management plan that will be prepared, which is normally done by the oil industry. That is part of good oilfield practice.

Ms DUNN — So you would see that that risk management plan or plans would in fact cover off on health, environment and economic impact to the area generally. I am talking about other industries that might be impacted on, or any social impacts — community wellbeing and those sorts of things. You would see that all of those matters are covered within a risk management assessment plan?

Dr HALYBURTON — Yes, all of those would be covered when you start to get a company that will do the drilling for you. There are drilling operators — you get them. You sit down together with them and work out these plans.

Ms DUNN — In relation to worst-case scenario in that there is some sort of accident contamination, some sort of damage in some way to any of those sectors, do you believe the licence-holder should be liable and pay those damages and costs incurred in relation to any damage?

Dr HALYBURTON — Sorry, can you repeat that? I am slightly hard of hearing.

Ms DUNN — No worries. If the worst-case scenario happens and there is some sort of contamination or damage to either health, the environment or the economy, do you believe the licence-holder — so the operator — should be liable for paying damages and the reparation of whatever it is that might happen?

Dr HALYBURTON — Generally when exploration activities such as drilling production are taken out, a significant amount of insurance is taken out by the companies. Then if anything happens, that is passed on to the insurance companies to evaluate what are the damages and what has to be paid.

Ms DUNN — Ultimately the cost for that is borne partly in the policy and partly by the insurance company and how they mitigate the costs across their a broader cost structure.

Dr HALYBURTON — That is right.

Mr YOUNG — My colleagues have done a fantastic job of asking all the questions I wanted to ask before you got me, so I have nothing further.

The CHAIR — We will go in reverse order next time.

Mr DALLA-RIVA — I have one follow-up. Following up from the discussion, we have heard evidence about this area here, that there is lots of population and lots of dairy. Over here, again, there was evidence from Melbourne that there is lots of dairy and lots of industry. It is this area here which you have outlined. I was taking some advice from my learned colleague — —

Ms SHING — Can you indicate which area you are pointing to for the transcript?

Mr DALLA-RIVA — This is called Victoria, and this is definitely part of Australia!

Ms SHING — You learn something new every day!

Mr DALLA-RIVA — I am trying to get an understanding. We have been talking about areas that are highly densely populated, areas where there is high industry and other industries where there are high populations. I am not taking any disrespect to the people in that area here on the border with South Australia, but it seems to me that it could be an area which you have outlined up here for some level of exploration potentially, and where it may have — and I am asking the question — limited impact in a high density area and limited impact on a high-density industry. I understand there is industry there. Can you give me an idea whether that could happen in that area, and is there enough gas or oil to at least demonstrate the process?

Mr RICHARDS — Everything we have talked about is in just two of those exploration licences. That slide on the top, the blow-out up the top there — that is, 5298 and 5297 — all our information and facts and figures are related to just those two. All those others are potentials that we will look at over years to come. Our first stage is those, and they are our priority for these reasons.

Mr DALLA-RIVA — All the evidence you have given is related to that particular area that I have just pointed to.

Mr RICHARDS — Just those two areas there, yes. I must say any piece of land in Australia and Victoria is important to us. Whether there are people there or not, the environment is no. 1 for us. Even though there is a lesser amount of people around, we are still just as concerned.

The CHAIR — Thank you both for the evidence you have provided, and it may be that the secretariat wants to come back for clarification and information on certain points.

Witnesses withdrew.