

ECONOMIC DEVELOPMENT AND INFRASTRUCTURE COMMITTEE
Inquiry into greenfields mineral exploration and project development in Victoria

Melbourne — 22 August 2011

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Mr R. Schodde, Managing Director, MinEx Consulting.

The CHAIR — Mr Schodde, thank you very much for being here. Welcome to the public hearing of the all-party Economic Development and Infrastructure Committee's Inquiry into greenfields mineral exploration and project development in Victoria. All evidence taken at this hearing is protected by parliamentary privilege. Comments you make outside the hearing are not afforded such privilege. Could you please state your name and business address.

Mr SCHODDE — My name is Richard Schodde, and my business address is 49 Surrey Road, South Yarra.

The CHAIR — You are not appearing in a private capacity; you are representing an organisation?

Mr SCHODDE — My company is called MinEx Consulting. It is a sole trading business. I am the managing director of that company. The work that I am presenting today is in my private capacity. I am not being paid for this. I am familiar with a number of people from other organisations who will be presenting in the next couple of weeks, but I am not under any payment or contract with them.

The CHAIR — I need to let you know that the evidence will be taken down and will become public evidence in due course. Would you like to make your submission?

Mr SCHODDE — I am still firing up my PC, but let me see if I can get to business. I have it on the screen, but you have hard copies in front of you anyway. I will cover three or four items, really to give some context to the very high level where Victoria fits into the international situation. It very much follows on from where Tim Goldsmith, the previous speaker, has come from. I do not have a particular interest or involvement in Victoria except that I live here and I was born here. I am passionate about the mining industry and making sure that we use our best efforts. I will try to give the parliamentary committee a sense of where Victoria fits into the big picture of things and what challenges are facing Victoria, in particular: is the lack of new mining projects here in Victoria a function of the fact that we do not spend enough money? Is it a function of the fact that the mineral endowment here is no good or that this is a very difficult place to do business, or all of the above? The answer is it is not necessarily correct. I was really just going to discuss those challenges and try to address some of the ways that we can overcome some of those barriers.

Overheads shown.

Mr SCHODDE — The slides will run for about 15 or 20 minutes. It will be interactive, so if you feel passionate about one of the points I make, you can stop me mid-sentence; that is fine. I will try to maximise the amount of time available so you can ask and discuss the questions of interest. [Slide 2] I was just going to cover four topics — the hot spots for exploration around the world, the level of activity here in Victoria, sections about endowment, business risks for being in Victoria — and really build a business case on why you need to nurture greenfields exploration here in Victoria. To cut a long story short, this is the front end of the mining industry. It has very high economic multipliers. If you make a major discovery, it will lead to a major mine and a lot of employment. That is exactly what Tim was saying.

[Slide 3] I will just give you some context on myself. I used to work for BHP Billiton and prior to that WMC Resources. I have been in the resources and mining industry for the last 30 years. I have been running my own consulting business and practice in the last three or four years. My client base is all of the major mining companies around the world and a raft of medium and small-tier companies as well. I have done work for three state governments here in Australia plus an overseas government as well. For the record, I have recently done work for DPI as well. I have also done work for international organisations, including the World Bank and the UNDP. I am quite familiar with the industry. I should also say that this presentation I am giving you is on my own behalf and these are my own views; they do not necessarily reflect those that some of my clients have had in the past. If they are upset about that, that is their problem.

[Slide 5] I want to give a bit of context about where Victoria fits into the scheme of things, as in where discoveries are made around the world. This is a map showing significant deposits. There are about 2500 deposits around the world that I have identified. You can see from the bad case of acne in Australia that Australia is quite well endowed.

Mrs PEULICH — Over what period of time?

Mr SCHODDE — This is all deposits over all years. I define these ones as significant deposits. These are the ones companies would love to have to develop into significant operations. They are all years. Australia has a good history of discovery. [Slide 6] If you look at what has happened in the last decade, you see there have been about 200-plus deposits of significance found around the world. That is around 10 per cent of all deposits known. Of those only about 17 were actually in Australia, and none were in Victoria. Victoria has been very silent with its discovery record in recent times.

[Slide 7] In terms of Australia and the comment that Tim was making about endowment and opportunities, 17 out of 220 is less than 10 per cent, but we only spend about 10 per cent of the world's exploration spend in Australia, so we are actually punching for our weight. In terms of where people go to explore these days, the current hot spots are nowhere near Australia. The places of interest for mining companies are Latin America for gold and copper, Central Africa for copper and other things, West Africa for gold, China for base metals and gold, and Alaska, the Yukon and Northern Ontario. These are the sorts of places that excite people at the moment. As a result of that, the level of funding and activity in Australia has actually gone down by half over the last decade.

How does Victoria fit into all of this? Let us compare Victoria's spend versus those of other states. This is adjusted for inflation, so these figures are in constant dollars. The first thing you will see from this is that exploration is an incredibly cyclical business. You can go from a spend on an annualised basis of less than \$1 billion to \$3 billion over the space of five years, so the industry goes from boom to bust, back to boom again. They are exciting times at the moment, and as Tim was saying, they will continue for a number of years going forward. But do not forget there will still be business cycles.

[Slide 9] If we look at the absolute spend, that is Australia's, but it is probably more important to look at the relative spend between the states to see how you are doing on market share because it is such a cyclical business. If you say that Victoria is spending \$60 million a year, is that a good number or not a good number?

[Slide 10] If you do it on a sort of market share basis, looking at how Victoria compares with the other states, you will see that our share has gone down from a high of, I think, around about 6 or 7 per cent about five or six years ago to less than 2 per cent today. We have lost a lot of market share. The reason for that I will explain in a minute, but basically it is about the fact that we really have not found much here in Victoria in the last decade or two.

Mrs PEULICH — Is that because we are not looking sufficiently?

Mr SCHODDE — Yes. We are in a sort of a negative spiral in that sense. The Government's role there is to actually break that spiral and change the story, to turn it into a virtuous circle. Probably one of the outliers here is that South Australia's market share has grown significantly in the last few years, whereas Victoria's has gone down. I will get on to why South Australia's has grown. Tim was sort of hinting at that before. [Slide 11] The following questions are ones you really want to ask about the challenges to Victoria. Is the lack of new projects here due to the fact that people are not spending money here, so we are not going out and doing the essential exploration? Is it due to the lack of mineral potential, which is the question you asked before? Or is it just because of the impediments of business risk? I will cover those topics in the next minute or so.

[Slide 13] In terms of endowment, a good way to look at these things is to look at a survey that has been done by the Fraser Institute out of Canada. I recommend it as essential reading for the Committee. You should download this from the website. It is free public information. The Institute has been generating these sorts of analyses and surveys for about the last 10 or 15 years. Basically it surveys the mining sector. The most recent one had nearly 500 companies filling in its survey. It basically discusses and compares the business risks and geological opportunities for about 79 different jurisdictions around the world, over that time. In my analysis I have discussed the results of that.

[Slide 14] The Institute looks at two key things: how good are the rocks in the area, and how attractive is it to do business there? It puts fancier words around that, but essentially that is what it is measuring. In terms of mineral potential — which is how attractive are the rocks — I am afraid Victoria is not so good. It ranks 70th out of 79, so the perception by the people who did the surveys was that Victoria was pretty low down in the order of places to go to explore for rocks. As Tim mentioned before, the first thing people think about when they are looking for mining opportunities is whether there is an opportunity to make a major discovery there. Endowment is the first question I ask about. In that sense it is a bit of a negative situation for Victoria in that just

over 25 per cent of the respondents knew Victoria was attractive as a place to come and explore, just as many, if not more, thought it was unattractive, and that was actually a very strong deterrent.

Mrs PEULICH — What were the perceptions based on?

Mr SCHODDE — A range of things. Bear in mind it is an international audience that fills in the survey forms; it is not just Australians. There are a lot of Canadians and Europeans in there as well. It comes down to what they read in their trade newspapers. It also comes down to their personal experience and the conversations they have with other people. It is all about perceptions, and I emphasise the word ‘perceptions’. Really one of the challenges the Government has here is to change those perceptions around. The first question you have to ask is: are those perceptions correct or incorrect? The second one is: if they are incorrect, what can we do to educate those people; and if they are correct, what can we do to fix them. There is a subtle difference between the two.

The perception is that Victoria is not a good place to explore for minerals because of the poor endowment of the area. It may be the fact that there have not been any significant discoveries in recent years. If you look at the countries and states that are at the other end of the curve, where everyone thinks it is absolutely compelling — I will read them out for those people who cannot read the very small print — they include Alaska, Colombia, the Democratic Republic of Congo, Papua New Guinea and Yukon. Going back to that chart that I showed the Committee of the hot spots in the world, this matches up with that story. People get excited about where major discoveries have been made in recent years. These are the challenges. Victoria has to try to break that cycle by making a major discovery. That would change the perception.

[Slide 15] If you look at how those companies perceived Victoria’s endowment or mineral potential over the last six or seven years since the survey has been done on Victoria, you will find they have been relatively constant with their views about Victoria’s endowment. In other words, it is a flat line: around 20 to 30 per cent of the surveyors as respondents viewed Victoria as being okay and encouraging investment; but a similar amount, if not more, viewed it as a deterrent, or a strong deterrent, and they would not even come here because of that. So it has been pretty steady. [Slide 16] Then in terms of Victoria’s market share for Australia you can see how it has gone down from nearly 7 per cent to 1.9 per cent now. There has been a slow drift down in our market share in terms of spend. We have not been discovering things. People have not been exploring as a result of that.

[Slide 17] South Australia was mentioned by Tim before. It is interesting to note that over that same survey period — they only started this survey for South Australia in 2005 as well — in that first year the view was that South Australia’s mineral endowment potential was no better than Victoria’s. What changed in 2006 was that they made a discovery at a place called Carrapateena, which is a very significant copper-gold system along strike from Olympic Dam — a couple of hundred kilometres to the south-east of it.

The exploration program was half paid for by the State Government through one of its development programs called PACE. It has been viewed as a very great success story for the State. The South Australian Government funded grassroots exploration programs, and specifically it paid for the drilling program. A private entrepreneur actually drilled the hole — it was his baby — and he found spectacular results. That project was recently sold to OZ Minerals, I think, about six months ago for several hundred million dollars, and it will lead to a mine sometime in the future. You can see that perceptions about endowment can change quite dramatically when you make a significant discovery. That is the key message you want to make.

The CHAIR — Did the discovery predate the added emphasis that South Australia put on greenfields?

Mr SCHODDE — No. I just have to be careful what I say because I have done work for the South Australian Government. They were very mindful that there was not a strong manufacturing base in the State, that there were only a limited number of mines operating in that state and that their future lay in turning that story around. They had to develop new mines and opportunities.

The CHAIR — About when was that?

Mr SCHODDE — It was around about 2004–05 when they made that decision, and one of the programs they did was the funding of drilling to go out and test new ideas and new places.

The CHAIR — So their campaign to increase their greenfields achieved good results so far as brownfields were concerned?

Mr SCHODDE — Exactly. They have gone from having, I think, four mining operations in the State to having probably over a dozen in the next year or so. They are really ramping up the production. It has certainly been a very successful story for them, and they are viewed as the poster child in Australia in terms of good practice when it comes to government involvement and support.

[Slide 18] If you look at the exploration spend, their market share, it went from around about the 5 per cent mark up to a peak of 15, and it is now back to 8. Comparing that with where Victoria was, we were around about the 5 per cent to 4 per cent mark, so we were similar to them in terms of mineral endowment and exploration spend share, but they have made a complete change. That discovery was made several years ago. It has been drilled out, but the level of exploration activity in the State still remains quite high, and that is because of continued support by the Government. It just goes to show how perceptions can change for a significant discovery.

[Slide 19] Really the challenge here for Victoria is that there is a pretty poor or a negative perception about the current endowment for the State, and you have to turn that around. That requires coming up with fresh data, fresh ideas and a willingness to drill out targets to make the giant discoveries. Doing incremental brownfields exploration, where you are just finding another small deposit to feed into an existing operation, is not going to change the world, and that is not going to excite the market. What you need to do is make those significant discoveries — the next Olympic Dam, for example, or the next Bendigo. You have to make those sort of big discoveries, but the challenge is that those big discoveries only happen very rarely. There may only be two or three discoveries of those sizes and types made in any year in the entire world, and the entire world spends US \$10 billion on exploration. Victoria currently only spends \$60 million, so you only get a small part of the pie, so the odds of making that big discovery are quite slim. It is a high-risk, high-reward story, but to make the odds work better for you you need to have good data.

One of the key roles for the Victorian Government is to create the opportunities for increased exploration of greenfields to make the big discoveries through pre-competitive data, and the State Government through DPI has done quite a lot of work in that area in recent years, but it is not something you can stop. You can always continue to work on that. That means understanding what is under cover, getting better geophysical surveys — that sort of stuff.

You also have to invest in new ideas. It is one thing to say, ‘Okay, we have got all the raw data’. It is another thing to say, ‘Well, isn’t it an interesting idea that maybe the geology of western Tasmania, which has some great deposits, also extends into the western part of Victoria?’. So maybe there is an opportunity to find those types of deposits there as well, which could change the world.

Mrs PEULICH — So Victoria spends \$60 million.

Mr SCHODDE — Yes.

Mrs PEULICH — And what does SA spend?

Mr SCHODDE — South Australia? You have caught me on the hop there. You could sort of have a guess. There is probably about three times as much, probably \$180 million. I will make sure the official number goes into the record.

Mrs PEULICH — Thanks.

Mr SCHODDE — The last thing is to emulate what South Australia does, which is to support that grassroots greenfields drilling program to test new ideas. One of the challenges for Victoria is that most of the outcropping deposits have been found, so the next generation of discoveries will be under cover, and that requires drilling. You just cannot walk up to the rocks and say there is an ore body there. South Australia was the one that took the lead on that. Queensland and Western Australia have taken similar measures as well. I will come back and emphasise that point: the best way to change perceptions is to actually make a big discovery, and the only way you can make a big discovery is to step out and do something new and fresh. You just cannot repeat the same old stuff. That is the question about the perceptions on geology.

[Slide 21] What are the perceptions on business risk for Victoria? What do other companies, particularly international companies, think of Victoria's policies? Do they encourage mining? Going back to the Fraser Institute, its annual survey in 2010 ranked Victoria in terms of its ability to do business as number 29 out of 72 countries, which is about the middle of the pack. The most recent survey which came out in March this year ranked Victoria 31 out of 79, in the middle of the pack. Not great, not bad, but could do better — sort of C plus.

Mr NOONAN — Richard, can I just ask why in Australia the states are separated out and we are compared to whole countries?

Mr SCHODDE — It is to do with the level of exploration activity that occurs in there, and also the nuances associated with each of the states. Getting back to Tim's point before, going from South Australia to Western Australia was quite a change in culture. That state border is a real border in terms of the way you do business, and the survey respondents requested and got a breakdown by state rather than by nation.

The CHAIR — Is that more about the sovereignty?

Mr SCHODDE — There is a overlay of federal politics as well as state politics on these, so when it comes to things like the resource rent tax, that is a federal issue. It is something that the State Government has no control over, so you get that overlay as well. In the case of Canada, they do not have a single number for Canada. They break it down by each province there as well. It is the same in the United States. So perhaps we are being a little bit unfair comparing Victoria versus Namibia, but when you are dealing with Namibia, you are dealing with a single entity as you are in Victoria. So Victoria, from the ability to do business, was in the middle of the pack. [Slide 23] I would say it is second quartile if you want to rank them by their numbers. Rather than focusing on whether you are the 31st or 29th, it is interesting to focus on where you are in terms of your quartiles. Are we doing top quartile performance or not? The results can be noisy from year to year.

[Slide 24] If you look at how Victoria ranks in terms of those quartiles over the last decade or so since the records were kept in 2004, you find that Victoria has been bouncing around in that second quartile for most of that period. It really has not improved its story all that much. If anything, it has gone down.

The CHAIR — Was there a reason it jumped around 2007?

Mr SCHODDE — You will see in a second [Slide 25] when I put on all the other states that all the other states jumped as well. It may have been a perception about a change of government at that time, I am not sure, or just a more optimistic view about Australia in general. It was not just a Victorian thing; it was an Australian thing. The key message here is that when you look at Victoria, Victoria is probably only better than Queensland at the moment in terms of perception of doing business. The poster child there was South Australia, and it has consistently been the best performer of all the states here in Australia.

The CHAIR — But Western Australia dropped away. Is that Western Australia?

Mr SCHODDE — Western Australia is the black line there; it dropped and it has been improving since then. Bear in mind that there is a little bit of noise in the signal. I would not get too pedantic about whether it is here or whether it is there. The question is to try to see if you are consistently a top quartile performer.

The CHAIR — It is interesting that it is has gone against the trend in 2007 quite dramatically.

Mr SCHODDE — Yes, it has. That was a different perception there. I do not know. I would have to dig into the details a bit more of the survey. This was just a weekend hobby for me to pull this together. In terms of our ability to do business, Victoria does not really compare all that favourably against the other states, as seen by other companies outside Australia as well as within it.

The CHAIR — The important people.

Mr SCHODDE — Yes, this is an important point. These are all about the perceptions again. [Slide 26] In terms of perceptions of the ability to do business, you would compare Victoria to Mexico and worse than Burkina Faso. I should have said at the outset that in addition to running my own company I have also become a non-executive director of a company that is exploring in Burkina Faso. Our registered office is here in Victoria but our exploration activities are occurring in Africa. I can speak from firsthand experience about those decisions about where you go to explore. In terms of perceptions, mining companies like to go to where the

trend is on the way up rather than where the trend is on the way down, so it is not only the absolute measure you are worried about in terms of business risk, it is also which direction it is going in. You want to make sure you are putting the right signal into that marketplace that you are on the improve. Consistency is critical in all of this.

[Slide 27] That score we talked about called PPI — Policy Potential Index — is actually made up of 16 elements, and these are the various elements that are in there. I want to look at the information in terms of what the range of results is that came out of that. In the case of security situation, two-thirds of everyone who was surveyed felt that the security situation in Victoria was brilliant and it encourages investment. Of the one-third that did not, they thought that it was not a deterrent, so they were just being cautious. You can actually get quite a range of opinion on things like disputed land claims, where about 15 per cent said that this was actually positive thing that would attract them to the State and just as many people said this is actually a strong deterrent. Who is right and who is wrong, or are they both right or both wrong? You have to tease out behind the story. Is it due to a specific issue that is causing them concern or is it a perception issue that they do not quite understand the true picture? There is an education process there for the Victorian Government to try to get some clarity into the story. Why is there such a diverse range of views on this particular thing? Is it right or is it wrong or is there a nuance between the two?

The CHAIR — Mixed messages.

Mr SCHODDE — Mixed messages out there. This sort of chart is very fertile for identifying what the particular challenges are that are facing Victoria. They are quite happy with the trade barriers and security situation, skilled labour and political stability, but they are not so happy about environmental regulations and regulatory duplication, which are things that you do have control over. This focuses you in on where the things are that you can fix. If you were skilful at this, you could possibly work out what the impact of changing these perceptions would be, how it would change your ranking in this and how that may attract foreign investment into the State.

Mr SHAW — You did mention a lot of this is on perception as well, didn't you?

Mr SCHODDE — Yes, exactly. There is an education process there, but you have to make sure you understand the facts before you do that education process. The key hot buttons for the mining industry in terms of coming and doing business in Victoria as an explorer or a miner are environmental regulations and regulatory duplication.

I have not put this chart in this particular slide pack, but at the very end of the handouts is actually the rankings of all of the other countries as well. [Slide 40] If you want to see who is the best at that and who is the worst, you can see that there as well. I think the best would be the people from Botswana and Libya. In terms of low-risk traditional Western world countries, there are people like those in Sweden, Finland and Botswana, as I mentioned before. They probably would be the ones that you should be going and looking at carefully and saying, 'Why do industries think they do a good job there? What are their regulations like?'. Obviously it is suggesting we should do your homework.

In terms of the challenges for Victoria, as I have mentioned before, you have perceptions by industry on a number of items. Taxation is obviously a hot button for the industry. There is also bureaucracy and environmental regulations. Corporate tax is a federal issue; it is the same with carbon taxes. In terms of state royalty rates, I ran out of time to put together a chart on this. But the royalty rates are applying to most metals is 2.75 per cent, and that is pretty good. It is not the lowest, nor is it near the highest; I was going to put on a percentile range. We say it is in the lower 40 per cent. It is in a good range.

Gold does not pay a royalty, as I understand. I would actually argue that that is the right answer for Victoria. In terms of government agencies, some of the remedies that I would suggest you — —

Mrs PEULICH — Why?

Mr SCHODDE — Why for gold? Victoria's track record for gold production here is actually not that good. Most of the new mines that have started up in the last decade in Victoria have been gold mines. In almost every case they have failed. They really have not had the profitability there. They really struggle as a business, so to lay another layer of tax on top of those would actually kill them even more. They really are struggling. The

challenges are how are they going to change that story and how are they going to change and develop new strategies or new mining methods into the future.

[Slide 28] In terms of government agencies, the key issues there would be getting a much quicker and clearer process for the granting of environmental permits, and there are dispute resolution practices with local parties. Getting land access is absolutely vital for the exploration of business. This all sort of leads into maybe having a one-stop shop — other states do this approach, where particularly foreign countries which are not very familiar of how to do business here in the State have got the comfort of knowing where to go to talk and get things done. At the very least there should be a one-stop shop.

Mrs PEULICH — Covering all those elements that you had in your previous slide?

Mr SCHODDE — That is right. Rather than dealing with a dozen government departments, only having to deal with one and it knows who to talk to in the others. It is pretty obvious stuff.

[Slide 30] What is one of the benefits to Victoria in fixing these types of problems — what is the upside for the State? This is a very high-level analysis that I did of 170 mining companies over the period of 2000–08, which is the most recent and reliable information I have. There is a mix of Australian, North American and international mining companies in there. It may not necessarily be representative of what happens in Victoria, but it was to just get you on scale in terms of the size, profitability and spend patterns for a typical mining company. These are the big-end-of-town, not the small-end-of-town ones. On average those 171 mining companies over that nine-year period generated about US\$4 billion in revenue in today's dollars. They had cash costs of about three-quarters of that. They spent a lot of capital back into labour and operating materials.

Exploration spends about \$50 million — it is \$48 million. Probably of more interest is that it made about, on average, \$856 million profit. It paid nearly \$300 million in taxes. It spent \$490 million each year on capital expenditures. The net cash flow after tax was in the order of \$370 million. Reflecting back on the \$4 billion in cash that is coming in the door in terms of revenues, this is actually a pretty skinny business to be in. I emphasise this to the point that, in terms of this industry, you cannot milk it too hard — that is really the message I am trying to say. A substantial increase in taxes or royalty rates could shrink that number down to zero, and then why is it you are in the game?

There is \$6 billion or \$7 billion worth of assets employed. The reason I put that table together is to sort of think a little bit about the ratios between all of these numbers. This is over a fairly long time period — that is, over an entire business cycle and over a large number of companies. [Slide 31] If you make the heroic assumption that the industry is at a steady state, and it never is, you can sort of say that every \$1 that gets spent on exploration results in about \$10 worth of capital investment in subsequent years. Those capital investments, on average, will deliver about \$88 worth of sales revenue. As a rough rule of thumb, between 10 per cent and 20 per cent of that would be associated with labour costs.

The CHAIR — The previous slide indicates the cash costs and capital expenditures. Is there a breakdown of where that was distributed to? Is there a way we could ascertain how that was distributed within the localities and what area of the community benefits et cetera?

Mr SCHODDE — No, the analysis I did was not at a very high level. I basically looked at the annual reports, and they do not break down in any detail. I did do a study a few years ago looking at the economic multipliers for major mining projects, and I did a study of about 40 major investments that have occurred over a period of three decades. It depends on the location as well, but as a rule of thumb, probably three-quarters of the spend would stay inside the nation. Of that three-quarters probably three-quarters would stay within the State and maybe about one-quarter would stay in the local area, but it all depends on whether you are in an undeveloped part of the world where you have to import everything into the country. Then the ratios would be different. In the case of Australia I would say probably three-quarters of the spend would stay in Australia.

The CHAIR — Is that study that you did publicly available?

Mr SCHODDE — Yes, it is.

The CHAIR — Would you mind giving us a reference to that?

Mr SCHODDE — Yes, I can do that. I will save that question until the end. The intent was not for my statement to relate specifically to Victoria; it was a general statement about economic multipliers.

The CHAIR — I understand that.

Mr SCHODDE — I came to the conclusion that, on average, for every one job that is generated in the mining industry another two jobs are generated elsewhere in the economy. A significant number of those are actually in the local regions.

The key message here is that in Victoria we spend \$60 million a year in exploration. On average that should be generating \$600 million a year worth of investment. We do not quite see that, but you have to bear in mind that it is a fairly lumpy business; you either make a big investment or you do not.

Over the last decade there has probably been about a billion dollars spent in the mining sector here in Victoria. That would be my guess. There have been significant investments in the goldmining sector in central Victoria, the Horsham mineral sands projects and other mineral sands projects in the states, which is quite significant. I am sure some of the other submissions that you will get will give you more accurate information on that.

Over time, on average, there actually have been quite significant investments of capital in Victoria. The message that I want to give is that if that dollar is spent on good exploration, it will lead to discoveries that will lead to these sort of payoffs to the State. The message I want to leave you with is that being positive about encouraging exploration will actually pay off as a dividend later on in terms of additional royalties to the State.

The CHAIR — And what would be the timing of that, generally?

Mr SCHODDE — It can actually be very slow. As Tim mentioned, the lead times on these things are of the order of 20 years. Work that I have done suggests that it is probably 10 to 15 years between discovery and development, on average, and that the exploration phase leading up to the discovery phase could easily vary from 1 to 5 years. You are talking of the order of 15 to 20 years from 'Let's go out and start exploring in the State' to actually delivering revenues in the form of royalties to the State.

They are long lead-time items, but that does not mean that you should not start work on it now. In fact some of the problems we have now are based on what happened 20 years ago in this state. It is time to do something about it.

[Slide 32] If you get it wrong, this is what the impact on your policy potential index or ability to do work will be. I have chosen some pretty extreme examples here. Venezuela is in the news at the moment because President Chavez has just announced that he is going to nationalise everything and bring all his gold back from Europe to Venezuela. In terms of the policy potential index it is actually the lowest of all of them, so I do not suggest you emulate them.

Bolivia has also got some very strong nationalistic tendencies. South Africa has been talking about what they call black empowerment rules for several years, and that has actually scared most of the foreign companies away from South Africa. It has actually scared a lot of South African companies out of South Africa as well.

Mongolia was the poster child for a number of years. But in 2006, as part of a concern that the Government was missing out on the rewards associated with a major discovery there, they changed the rules and, if you will excuse my French, 'They went feral'. It basically killed most of the exploration activity in the country after that. Peru has been going through some major problems, and it is actually going to be worse this year.

Chile is an interesting one to discuss, because it has been viewed as one of the better places to go to. Country risk is actually quite low there, as Tim mentioned. But back in 2007 there was a discussion about and they actually did implement a royalty rate there. Prior to that there were no royalties in Chile, and then they brought in a 5 per cent royalty there. For a couple of years that adversely affected the country risk rating and the amount of exploration activity that went on in the country. But they managed to reclaim most of that concern back, and they are back to about where they were before. It will be a good learning exercise for you guys to start talking to people about what happened there and how they got around that.

The CHAIR — Was that reflective of the royalty being then targeted into encouraging exploration?

Mr SCHODDE — No. I do not think they did anything specifically to encourage exploration there. What they did is they were quite transparent about the fact that the regulations were going to come in and why they wanted to bring them in. But then they softened the blow to the existing or established players by saying, ‘We’ll look into the option to how you buy into the story’, and there were a few grandfathering clauses in there as well. They managed that education process quite well; that is the key point. Once they got the rules bedded down they were back to business. They made it quite clear that they were still open for business. There was a period of turbulence for a couple of years and then it was back to business. Whereas places like Peru brought in a royalty rate, people thought it was back to business and then turbulence appeared again. That is really not where you want to be. That was all the bad stories; these are the good stories.

[Slide 33] The good story in the case of Canada is, as Tim mentioned, they brought in flow-through financing. Not only did it improve the perceived business risk in that country, but it also effectively doubled their market share for exploration activities worldwide. That is part of the reason why exploration activities in Australia and the US have gone down, because the Canadians spend their money in Canada instead of somewhere else. That is a key message. This is not a popular statement to make but, whilst flow-through financing has been successful in terms of increasing the level of exploration activity and spend in a country, it actually has not delivered much in the way of additional discoveries. I would argue that it has not been an effective program to do.

The CHAIR — Did it increase exploration?

Mr SCHODDE — It certainly did. This is a measure of how much exploration activity occurred in the country. It substantially increased, but the perception and the challenge is that Canada is actually a difficult place to explore, and it is a fairly mature environment — so the number of new discoveries that came out of these increased explorations have not paid their way. I am on the record as saying that. That is outside the scope of what the Victorian Parliament wants to do, but just bear in mind that you really have got to make sure that you spend your money on things that improve the level of knowledge within the State so that there are opportunities for companies to go and use those ideas to meet targets — that would be my argument — rather than just giving them a tax refund.

[Slide 34] Really the challenge for Victoria is that there is about a 10 or 15-year lead time between discovery and development. There is a lead time to get to discovery, so you really have to just go to them and fix things now. Otherwise there will not be an industry around for you to build on in the future because it will be all closed down. That is not to say that you cannot bring people back into the State in the future. But one of the key things that Victoria has, which it does not appreciate very well, is a very good service sector. A lot of the banks that do the investment in the mining sector and a lot of the consultants, like AMC, SRK, Snowden and all these other companies, have their offices here in the State. So there is actually a very major export service going from Victoria both to the other states of Australia and internationally in providing technical advice. The history for that was because of the financing that was here in the past and also the long history of mining here in Victoria — —

The CHAIR — But at the moment we have all of the services but none of the product.

Mr SCHODDE — Correct, yes. The thing is you can only run your car for a certain time before the petrol runs out. You have to keep putting new projects into there. That is not to say that in 20 years time we can suddenly come in and develop new mines around the State. The challenge is that those mines might be run by companies outside of Victoria, if not outside Australia. Therefore you miss out on the opportunities for management and the spin-offs that go with that.

To pick up on a point that Tim discussed, and I have used slightly different words, you have to be very mindful that whatever statements you make to industry you have to make them very carefully and in a measured way so that you do not send the wrong signals out to the marketplace. Trust is hard to earn and easy to lose is really the motto that I follow.

[Slide 36] In closing, Victoria’s market share has gone down from nearly 7 per cent to just under 2 per cent. I feel that it is due to the lack of exploration success in the State and that government policies and regulations have really not been very helpful in this area. You have to recognise that there are better opportunities both in other parts of Australia and overseas and people go where the best projects are. You must never forget that

exploration is the front end of the mining industry and that nurturing it has quite significant spin-off benefits down the track. Sure, it is 15 or 20 years down the track, but the payoffs are quite large in terms of employment, capital investment and royalties.

You have to start now; you cannot wait. The best way to change perceptions about Victoria's endowment is to actually make a big discovery, and the only way you are going to encourage somebody to make a big discovery is to create programs which make people take that big, bold step and go outside the existing areas to chase new targets with new ideas. To do that you need to have pretty competitive data and new geological information.

The CHAIR — Are there any countries or jurisdictions around the world that have managed to successfully reduce the time lag?

Mr SCHODDE — That is a good question. I would say probably Chile. Back in the 1970s the industry was very moribund and there was a change of government there. Pinochet came in and he was a fairly difficult person. He was not a democrat; let us put it that way. But he did reinvigorate the mining industry because he felt that that was the future of the country. A number of projects that were previously on ice or mothballed got developed in that period. So getting a new project up in Chile is probably in the order of 5 to 10 years. That would be one.

Botswana would be another country that would be pretty quick in getting a project up. Namibia is also one that is relatively quick. I have personal experience in Burkina Faso. In 2003 there was a change in the mining code in that country. Since 2003, 11 gold deposits have been found that are more than 1 million ounces, and half of those deposits have been turned into mines.

The CHAIR — In that time frame?

Mr SCHODDE — In that time frame. So it can actually happen.

Mrs PEULICH — Are there examples of jurisdictions that have leaner lead-in times but also reasonably good environmental processes?

Mr SCHODDE — That is a good question, and I will move onto a chart that might show that. [Slide 40] This talks about regulatory duplication and inconsistency. This is just a snapshot from the Fraser Institute survey. The countries that were perceived to be fast were places like Sweden, Burkina Faso, Botswana and Western world countries such as Finland, Norway, as well as South Australia. I would say probably all of those Western world countries would actually be proud about their environmental regulations as well. In fact, this one over here shows environmental regulations as well. So as you can see, there is quite a lot of confluence there; they are viewed as being quite friendly. Finland and Sweden have been quite friendly for mining. I suggest that you guys buy a couple of air tickets and fly to Sweden to check it out.

Mr NOONAN — I think the Chair is thinking about those airline tickets. Thank you very much for your presentation. We were also provided with some additional papers in preparation for your visit, and one of them was the paper that you co-authored in April last year called *Market Failure in the Australian Mineral Exploration Industry — The Case for Fiscal Incentives* and one of the areas that you talk about in terms of declining greenfield investments and success rates, you have not touched on today. That relates to, in essence, technology and a global scale decline in discovery performance. I have to borrow the industry jargon and talk about the blind, about which my translation is: close to surface, easier to discover, as opposed to those that are deeper and therefore require a greater level of technology in relation to discovery. Because Australia is perceived to be a mature country for exploration, perhaps there is a redirection, reading between the lines, to go and look for the easier locations offshore as opposed to perhaps looking at Australia.

I hope I have not mangled that too much, but that was my reading of it. I wonder whether you can expand on that in the context of Victoria, and in the context of perceptions, as much as anything else.

Mr SCHODDE — That is a pretty fair read of the paper I put together a year or so ago. It is true that the rate of discovery in the world has gone down. Part of the reason for that is a switch from greenfields to brownfields exploration. A large part of the reason for that has actually been abandonment by the major mining companies in mining exploration and leaving it to the junior sector to do.

To pick up on Tim's comment before, the junior sector has got a much shorter time frame to work on than the majors. At any one time a junior company, on average, has got two years with cash in the bank, so they have got to deliver results in the next two years otherwise they will not get funding for the future. They are always on a very short fuse. From the risk management point of view the easiest way for them to make a discovery is to drill a hole next to someone else's discovery.

What it means is that if they take a risk-averse approach, they will get some results, raise additional funds, they may find a good ore body in the process, but they are not going to find the next Olympic Dam doing that. That is part of the challenge, that the problem is that the junior sector is perversely set up to focus away from the big discoveries. I think that is part of the malaise.

The second one is that a lot of the discoveries that have been made in the past have been at surface or near surface, sticking out of the ground or partly sticking out of the ground, so it has been relatively easy and you do not need much of those skills to walk up to an existing contact, and off you go.

To go looking underground or undercover requires technical skills. The interesting thing is — and this is something Tim picked up on before — in the past major companies used to do all or most of the exploration. They went for a bit of creative destruction and all of those geologists went out and, instead of driving taxis, they set up their own mining companies as juniors. During that same period there has been a lot of innovation in terms of technology where people can actually have laptops that now have as much computing power as the mainframe that a major mining company had 20 years ago. There is all of that computing power and modelling, looking at things, Landsat photos — in fact we actually use Google Earth as one of our exploration tools now in picking our prospects.

All these things can actually be very helpful for a small company. Barriers to entry, in terms of technology, actually shrank and made it easier for junior companies to operate. If you are going forward into the future, I would say that it is probably a good space to be, but they can not afford to, and they do not have the budgets to do regional sample sets, which is what you need to do to look at things over cover.

That is the role of government, to provide that sort of precompetitive data. A map of Victoria showing the geology of Victoria; a map of Victoria showing the depth of the cover; are there any shallow parts in the Mallee where 20 metres down there might be an ore body? If there is, then that is the place to explore. The site could turn into an easy open pit as opposed to a difficult underground, and those sort of things.

Mr NOONAN — Richard, you have openly disclosed that you have worked for DPI, and I would be interested, as much as you can provide an answer with a level of diplomacy, to know how we compare as a state to others that you have seen in relation to providing that sort of information to, essentially, the market. Because we have heard from Tim, I think, about the communications, the advocacy you can do on a global basis, but in contrast with the geological information, where are we placed? What are the perceptions?

The CHAIR — This is where you read your rights, I think, before you answer.

Mr SCHODDE — Yes. I am a little bit too close to all of that.

Mr NOONAN — Should we be asking others though?

Mr SCHODDE — You have every right to ask that question of others. I am just mindful — —

Mr NOONAN — We have got the right, but should we?

Mr SCHODDE — I think you should, yes. I mean it is very pertinent to the whole issue there. It would be fair to say that there are some very skilled people in DPI and the knowledge, the datasets they have compiled are excellent, but like every government department they never have enough money, and the challenge that they always face — and it is not unique to Victoria; it is an issue common to all states — is where you put the focus. Do you explore for Bendigo-style deposits, or do you look for something else? What are the commodities that are most likely to deliver the goods for the State? They are valid questions that the DPI needs to address.

Mr NOONAN — Thanks.

Mr SCHODDE — You were asking where you could get the other stuff from?

Mr NOONAN — Yes.

Mr SCHODDE — If you just go to my website, I have actually been very generous and I have put probably about 20 of my papers up there, so I have done similar sort of work to what you see today on a range of topics, and if you go to <http://www.minexconsulting.com>, you can download them from there, but I will send a copy by post directly to you here.

The CHAIR — Are there any more questions?

Mrs PEULICH — No, we just wanted to thank you for your presentation and for bringing clarity — —

The CHAIR — Thank you.

Mr SCHODDE — There was actually one last question, which was about the depth of cover story. This is a spare slide I had. [Slide 39] Red is the outcrop, which is where all the ore [inaudible] bodies have been found, and yellow is where the shallow cover is. If you actually look at Australia — and talking about WA, there is really deep cover in WA, in Queensland and in New South Wales — actually Victoria, although it may only make up 10 per cent of the total land mass of Australia, probably makes up 20 per cent of the shallow cover. So do not write off Victoria just yet, okay?

The CHAIR — Good one! I believe Wade has got one more question.

Mr NOONAN — Just really quickly. I think your last slide, Richard, was about challenges for Victoria and the sensitivities essentially to investors. To what extent does government positioning and statements made around mining versus agricultural use of land feed into those sensitivities, wherever they might be, about those competing interests?

Mr SCHODDE — Yes, it is a major problem, a major challenge. One of the reasons Queensland has been marked down so severely in the last Fraser Institute survey and will get marked down even more in the next one is because of this whole issue of loss of access and control to things like land for coal seam gas. That issue of farmers' rights versus miners' rights is quite a thorny one, and it is brought to a point here in Victoria because of a higher population density than you have in many of the other states. You cannot walk away from it, but it is not a new challenge, and responsible miners come up with responsible ways of developing operations there. So I think the two can coexist.

Mrs PEULICH — So it can be a win-win?

Mr SCHODDE — Definitely. I am a country Victorian boy, and the farmers up my way just find it wonderful that they can go and work in one of the mineral sands mines because it pays well, it is regular work, and it fits in very nicely with their lifestyle, so they view it as a win-win.

The CHAIR — Thank you very much, Mr Schodde. We have really appreciated your submission and your answers to our questions. Within about two weeks you will receive a transcript of this session. That will be made available to you to make alterations where there are errors, but not to change any of the actual substance. Thank you again.

Mrs PEULICH — Fantastic, that was great.

Mr NOONAN — Thanks, Richard.

Mrs PEULICH — Well informed. The classification of ideas makes it easy.

Committee adjourned.