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**HOUSE OF
REPRESENTATIVES**

STANDING COMMITTEE ON INDUSTRY AND RESOURCES

Reference: Resources exploration impediments

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**HOUSE OF REPRESENTATIVES
STANDING COMMITTEE ON INDUSTRY AND RESOURCES**

Monday, 11 November 2002

Members: Mr Prosser (*Chair*), Mr Adams, Mr Fitzgibbon, Mr Gibbons, Mr Haase, Mr Hatton, Mr Randall, Mr Cameron Thompson, Mr Tollner and Dr Washer

Supplementary members: Mr Fitzgibbon and Mr Ticehurst

Members in attendance: Mr Adams, Mr Hatton, Mr Prosser, Mr Randall, Mr Cameron Thompson and Mr Tollner

Terms of reference for the inquiry:

To inquire into and report on:

Any impediments to increasing investment in mineral and petroleum exploration in Australia, including:

- An assessment of Australia's resource endowment and the rates at which it is being drawn down;
- The structure of the industry and role of small companies in resource exploration in Australia;
- Impediments to accessing capital, particularly by small companies;
- Access to land including Native Title and Cultural Heritage issues;
- Environmental and other approval processes, including across jurisdictions;
- Public provision of geo-scientific data;
- Relationships with indigenous communities; and
- Contribution to regional development.

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Committee met at 10.41 a.m.**BASHFORD, Mr Keith, Marketing and Communications Manager, CSIRO Exploration and Mining, Commonwealth Scientific and Industrial Research Organisation****PHILLIPS, Professor Geoffrey Neil, CSIRO Exploration and Mining, Commonwealth Scientific and Industrial Research Organisation**

CHAIR—I declare open this fifth public hearing of the House of Representatives Standing Committee on Industry and Resources inquiry into investment in exploration in Australia. I welcome everyone here today. The witnesses appearing before the committee today are from CSIRO Exploration and Mining, Lion Selection Group Ltd, the University of New South Wales and Environment Australia. I welcome representatives from CSIRO Exploration and Mining. I invite you to make a short opening statement before we proceed to questions.

Prof. Phillips—Thank you very much, Mr Chairman. Exploration downturn at the moment is certainly the most severe in my working career. In the short term, the impact of this, perhaps the less important part, is that people are unemployed. The more important part is what it is going to do to Australia in the long term.

I want to look very quickly at where we are and how we have got there and then afterwards suggest one or two ways we can deal with it. World exploration has seen an increase through the nineties and then a precipitous decline in the last four or five years—as shown in blue at the top of the graph. Underneath that is what has happened in Australia, and you can see the parallel between the two. I want to carry on that theme and look at the ratio of world exploration spending in Australia compared to the whole world. In other words, about 20 per cent of world exploration spending has been in Australia throughout the nineties, regardless of that fluctuation; so we are not seeing a move away from Australia, relatively speaking.

The second thing is that this is not something to do with one commodity and it is not something to do particularly with gold. It is to do with a series of commodities. That is the percentage of exploration money, Australian money, spent on gold. It really has not changed; it is about 55 to 65 per cent. This is to do with several commodities.

Let us be positive and see what we can do about this. I wanted to put ourselves in the situation of an exploration manager making decisions on where he is going to invest. That exploration manager could be in Toronto, Vancouver or London, but I have actually chosen to use Denver or Perth as an example. The questions that are going to face that exploration manager and his board are, ‘What are the various risks of different countries where I might invest the exploration dollar, and how easy is it to explore?’ ‘Are there huge impediments to my exploration or is it made easy for me?’

Looking quickly at this exploration risk—I believe you have a copy of this; this is one of several surveys, so there are different ways to get the numbers—I think most people would agree that countries like PNG and Zimbabwe have a high risk and that Australia and Canada, all other things being equal, have a relatively low risk and are therefore attractive places to invest exploration dollars. Numbers that are high in this table mean that there is a high risk to do with sovereign risk, land access, green tape, red tape and so forth. Numbers that are low mean that there is a low risk.

Two interesting things come out of this. If we look at Australia, we see a lot of ones and zeroes, but there is relatively high land access, green tape, land claims and red tape. If those threes and twos become fours and threes, Australia makes itself a much less attractive place to invest riskwise. If we can make those twos and ones, we can increase the percentage of world exploration dollars that come here based on risk alone. It becomes a more attractive place to invest.

Let us look at the uniqueness of Australia. Put yourself in the situation of a person overseas making investment decisions to come to Australia. They might be used to the glaciated terrains of northern Canada and northern Europe; Australia is a very tricky place for them to get used to in exploring. The regolith, which is the soil and cover, can be a friend or foe. To a lot it has been the foe. In previous days, 150 years ago, people would explore the quartz veins and the base metal deposits which would stick out of the ground at Broken Hill, Mount Isa, Kalgoorlie and Mount Charlotte. Those days are probably mostly over. The challenge for Australia is that two-thirds of Australia is covered by the regolith—the rubble, soil and sediment—and somewhere beneath that, one metre or 50 to 100 metres, are the same rocks where we might have potential to find the ore deposits.

We have different techniques to cover Australia to make the job easy for the exploration manager sitting in his office in Denver, Toronto or elsewhere. Satellite imagery can come in digital form. Layers of geology and geophysics again can come in digital form. If you are sitting in your office with your laptop and you have all that on hand, that is a much better scenario than if you are given a blank sheet and told, 'That's Australia. You go and find out the rest for yourself.' We can either make it difficult or we can make it easy for people to work in Australia and to have access to up-to-date information in the best form possible.

On this a map of Australia there are two layers. This layer shows all the regolith, which is covered. A lot of ore deposits were found in the outcropping areas—Mount Isa and the Victorian gold province. The layer under here is the geophysics, and that lets you see through the cover. There are traces under here. The magnetics show that these continue under cover, and so they will be the new frontiers.

Let me just go through a little bit of work over the last 15 or 20 years leading up to where we are in gold at the moment as a nation, as a major producer of gold. This is difficult country to work in; there is a lot of rubble there. It is obviously 20 years ago.

The different colours are the clay areas and iron rich areas; it is pretty straightforward. The research in the seventies showed that assembling this particular material would collect and concentrate gold from anywhere round here in the regolith, whereas this material, which was commonly collected, was useless, and you could be right next to an ore deposit and totally miss it. That type of work on the regolith was pioneered in the seventies, and I want to show how it fits into where we are with one of our largest mineral industries at the moment, and that is gold.

In the seventies we were a negligible producer. Australia produced less than a million ounces per year. That is \$100 million or \$200 million worth. In the eighties a whole series of breakthroughs, scientific and technological, contributed to massive upturns. Interestingly, we are starting to see a bit of a decline.

I will highlight one piece of research that was a contributor to that: the study of the regolith; trying to understand what those different rock types were and what they meant. Secondly, new sampling methods—in other words, the sampling of a particular type of material; if you sampled another you were wasting your time. So selective, careful exploration is a must. We are right in the middle of this phase at the moment, and we certainly have not taken it to its limit: understanding the weathering of ore bodies, what is actually happening to ore bodies. Maybe they are under cover, maybe they are at the surface, but they are weathered and we cannot really appreciate them. I highlight that because it is science taking the unique feature of Australia—the regolith—and contributing at different stages, along with other developments that took place over that period of time.

I will wind up by saying that as far as country issues are concerned, we can make Australia more attractive or less attractive based on how we handle the risk issues, and we can encourage the exploration manager to come to Australia by making available, ideally on his desktop anywhere in the world, as much data as possible, ideas on ore deposits, ideas on the country, what we have done and what has gone before him.

CHAIR—I have to, firstly, compliment you on that presentation. My colleague and I agree that it is one of the better ones that we have seen. CSIRO Exploration and Mining is a core participant, I notice, in a number of cooperative research centres. What breakthroughs in mineral exploration technology are materialising through these research incentives and are those some of the incentives that you covered this morning?

Prof. Phillips—There are two I can highlight. One is CRC LEME, which is Landscape Evolution and Mineral Exploration. One CRC is now being rolled on to another one—still under the LEME banner; a slightly different name—and this regolith work fitted in very much. That is what it is all about. The second one in which we are core participants is predictive mineral discoveries. That involves looking at the hard rock underneath and trying to predict from remote methods where you find ore bodies. That is one year in, so there is nothing really I could comment on. That is starting well, but it is not eight years in, like the other.

Mr CAMERON THOMPSON—We have heard in the various hearings quite a bit of talk about airborne analysis and how important that is. Can you comment on that and tell us if there have been some real steps forward in the accuracy of airborne assessment? What value does that have compared to other methods?

Prof. Phillips—Airborne methods are just ways to collect data in a plane rather than walking across the ground. There are lots of different types of data you can collect. The most obvious one that comes to mind is magnetic. The revolution over the last 10 or 15 years has been to fly the country at low levels and closely spaced lines and get a clear picture of what is underneath that regolith cover. It lends itself to the Australian terrain, because the Australian terrain is flat—if you have alpine chains it is very hard to fly and get useful data—and because it actually looks through the regolith. I would say that that is virtually routine data collection for most work in Australia at the moment. A lot of Australia is covered by aeromagnetics.

Electromagnetics, which is slightly different, looks for ore bodies at depth. Australia has had some success in that area, but the interesting thing is that it is also influenced by saline groundwaters and so it has really been captured, if you like, and used for salinity work as well.

Mr CAMERON THOMPSON—What is the content of our data for aeromagnetic particularly? Have we covered all of Australia in any great depth? What is the extent of work that has been done?

Prof. Phillips—It is highly variable. The areas people consider as maximum, very prospective, targets would be covered at 50-metre to 100-metre type line spacing. Other parts of Australia, where people might say, 'I don't really want to be there,' would be very generally covered in much wider spacing where you get a much lower resolution of picture.

Mr CAMERON THOMPSON—Is the extent of our cover for resourcing exploration really sufficient?

Prof. Phillips—It is all a case of cost. Ideally the exploration manager would like the very best, closely spaced low-level flying across the whole of the continent, but there is a cost that goes with that. The places that have been targeted are places where people believe there is a higher expectation. That might be the goldfields of Western Australia, parts of New South Wales, Queensland and the Northern Territory.

Mr CAMERON THOMPSON—You have given us a couple of examples of where greater understanding of the processes have brought about a leap forward in the extent of our production. What do you regard as being the next steps to open it up still further?

Prof. Phillips—There are two sides. I emphasise that one is making the information available. One end of the spectrum is a piece of paper map that you hold up to the light; people did that on light tables. These days with digital data we can add separate layers and we can have that Web based. We can have all sorts of geophysical data—geology, tenement maps, who owns the ground and so forth—all together as a package. We can also put on top what type of work has been done on that piece of ground in the past, because other companies might have explored it 20 or 30 years ago. If all that data is available as well then it is a huge stack of data all on a laptop and that is very doable.

Mr CAMERON THOMPSON—You are saying that we do not need to advance our research, that we just need to make it more readily available?

Prof. Phillips—That is one-half of it: to make what we have available as easy as possible. The other part is that we have clearly spoken with our feet and our pockets, I guess, as to the two CRCs. One is understanding where—in which parts of Australia—and how large ore bodies form. Where would you find another Broken Hill, Bendigo, Kalgoorlie or Mount Isa? Secondly, if it is under regolith cover, what techniques do we have to find it? Clearly that was a fairly simple example of collecting the darker coloured material and not the light, but there are much more sophisticated ways to trace parts per billion or even parts per trillion of gold or some other metal and get a halo and say, 'Right, I think that's a better area than somewhere else.' From a very primitive level in the eighties, as time goes on we are progressively getting better and better. As we get better and better, we can find smaller and smaller signatures that still could be a big target.

Mr HATTON—What do you think the key element was in the drop in exploration by 40 per cent in the last few years?

Prof. Phillips—Within Australia it is a global effect. It is not something where we look at one commodity and say, ‘Something has happened to this commodity.’ It is a series of commodities, particularly the ones we explore for. For example, we do not spend much exploration on iron, coal or whatever, so it is the ones we explore for: base metals and gold. It is a global effect. I can show commodity prices in 1997 turning down right at the time when that fall took place. There may be a deeper answer to your question, to do with people who are investing somewhere else in the New York exchange and so forth, but in the minerals area it is the commodity prices.

Mr HATTON—Is that more than five years ago? The problems we have had with Mabo and the land claims and so on, which run at threes on that table, those similar problems were there. If you had done those figures five or 10 years ago would they have been similar, do you think?

Prof. Phillips—Sorry, the figures on commodity prices or on exploration?

Mr HATTON—No, on the exploration.

Prof. Phillips—I have been right back to 1980 and before. Exploration went up through the eighties progressively and clearly peaked in 1997 and it has gone down. Sorry, I am not quite sure what you mean.

Mr HATTON—What I am trying to say is that over time we have had the Mabo case, the outcome of that case and a series of claims. The whole process is taking a very long time. So far most of it is indeterminate. What kind of weighting do you think should be given to that as a disincentive or impediment, given that elements of that are scoring threes on that aspect?

Prof. Phillips—It is obviously not affecting the global downturn, because that is an Australian effect. It is making Australia—particularly some parts of Australia; not others—attractive. People seem to be continuing exploring in some places. Native title is not a big issue in some states, but it seems to be a huge issue in others.

Mr HATTON—The perception is part of what will underscore whether people will go there or not, because that is differential.

Prof. Phillips—Very much so. If getting agreements and getting land granted is very slow, that is one thing; if it is very easy to do and it is quick, that is a different matter. Then you weigh up and say, ‘How much am I prepared to take that and go there instead of there?’

CHAIR—It being 11 o’clock on the 11th day of the 11th month, I propose that we break for one minute’s silence.

Mr HATTON—Given that those problems are there, they need sorting out so that we are able to finalise them in a smoother and faster way. The rest of the evidence you have given goes to the question of being able to see as much as possible through the regolith and to bring together in an easy to understand form all the data that can bear on a particular area so that we can entice people to come and explore in Australia. Given that the downturn seems to be (1) worldwide and (2) based on the slump in commodity prices in those particular things, if we are well advanced in those other areas, do you then think that we will be in the front position when commodity prices start to pull up?

Prof. Phillips—We can go two ways: we can drop the ball and we can watch things take off and not participate or we can anticipate things taking off—which they will from time to time—and be positioned to grow that 20 per cent so that, instead of 15 or 20 per cent of the world's budget in Australia, that can grow significantly. There are a lot of places that were getting money in 1997 that I do not believe people will go back to for non-geological reasons.

Mr HATTON—How far can we see now? Evidence that we have had over time has hinted at the fact that you can see part of the way through the regolith. Are there particular technologies which you think will be most useful for sensing at a deeper level?

Prof. Phillips—There is no doubt that we are going to continue with the geophysics, looking at magnetic properties, electromagnetic properties, gravity and so forth. I believe that will always be one prong. The other will be the geochemical way. You can do some of that satellite ball now—which is a recent breakthrough—but most of it is collecting something in the ground: waters or material, analysing that and looking for very low levels of the metal you are after. We are looking at better techniques for that.

The other thing we are trying to do, instead of looking at where some things are close to the surface, is to detect major ore bodies which are deeper, and that is new ground.

Mr HATTON—You are trying to do that in the most cost-effective way. We had evidence in Perth that BHP Billiton have a very effective technology but it is theirs. They are commercialising that and charging people to use it.

Prof. Phillips—This is airborne gravity?

Mr HATTON—Airborne gravity. Is there a similar technology, one that could be more open to the rest of the market, which could be used at lower cost or is it that the cost of using airborne gravity is such that you do not think it could be used in that way?

Prof. Phillips—I cannot comment. If it is the only one in the market, they can call the tune. We are developing airborne gravity and I believe others around the world are as well. I think over time we will see airborne gravity as a new horizon. We are talking 10 or 20 years behind aeromagnetics but it is a new frontier where we can fly, instead of using the very slow ground station method that has been used in the past. That will add one more layer of very important data.

Mr HATTON—That is not patented in such a way that it is stopping other people getting into the same area?

Prof. Phillips—My colleagues can add to this, but I do not believe anyone else has airborne gravity flying and working like BHP. We have not. We are some way off with that.

Mr ADAMS—Are you talking about the old system of tilling the grids? Is that what you mean by the 'old system', before the flying?

Prof. Phillips—With airborne gravity, the old method was to have a gravity machine take a reading. It took a long while. It would then go somewhere else and take another one. It was very slow and very expensive.

Mr ADAMS—The salt-gold connection has always been an old saying. How much work has been done on joining the two together when we are looking at salt problems and for gold at the same time?

Prof. Phillips—If you go back a few years, it was chalk and cheese. If you had one around and it was contaminating the other, it was considered a real nuisance. What has happened in the last two or three years is the recognition that these electromagnetic systems, airborne systems—Tempest being the best known—were developed to find base metal sulfite. It was affected by salinity and now it detects conductivity, which is a link to salinity. It is now used for that as a prime tool. What has happened in the next stage is that one or two multidisciplinary, multicollaborative projects in parts of Australia have taken advantage of that and said, ‘Let’s get the salinity people, the regolith people, the geology people all in the same room, working on the one block of land,’ and that is dramatically advancing our knowledge. We can then spread those techniques out, hopefully. The big collaborative projects have been a huge leap forward.

Mr ADAMS—In information gathering?

Prof. Phillips—In information, but making jumps between, say, regolith mineral explorers and salinity people, both of whom are experts on part of what they need to know but have not talked in the past.

Mr ADAMS—With regard to the new technology—you have talked about the decision-maker sitting in his office in Denver or Perth or wherever with his laptop and having layers of information—how do we as a nation compare with other places in the world?

Prof. Phillips—There are two parts to that. One part is the amount of information. There is a lot of information, particularly on the places in Australia that have been well studied and well explored, compared to even Chile and other countries. The second part is the technologies to make that available. Often they are generic technologies that you can apply to anybody who has information. We have developed a lot of that for visualising, and there is a visualisation display on at the moment in the House. Those techniques have been developed for use on mines across parts of Australia, but they are generic.

Mr ADAMS—Does everybody have that information? I know that capital moves all over the world, but looking at Australia for exploration and with the information that we have on Australia, how far advanced are we? Are we in front of the rest of the world? You said that we are in front of Chile, because Chile does not have such a sophisticated society as we have. I suppose the work has not been done there. What about Canada and places like that?

Prof. Phillips—There will be parts of the USA that are probably as well or better studied than most districts of Australia. Canada and Australia, I guess, would be seen as the leaders, at least in the geoscience area, of documenting ore deposits, where they form and those types of things. The Canadians have tended to focus a bit more on the uniqueness of their country—it was glaciated recently. We have tended to focus a bit more on the uniqueness of Australia—that is, the regolith cover; everything is deeply weathered. We are ahead on this area but, if you go to a glaciated terrain, Australians and Australia are behind. But that is appropriate.

Mr Bashford—We have to also compete with countries where you can find deposits by walking around. We need to provide information about the ore bodies that are buried beneath the regolith. That is where we are up to.

Mr ADAMS—Of course, there is an extra cost in mining that, in going deep, and it is deeper mining that everyone is talking about. We will need to go deeper to find future ore bodies. I think you said earlier that they are not on the top; they are going to be underneath, or further down, under the regolith. We are okay in that sense—we have the technologies and the information to a level where we can do things—but it still comes down to somebody making a human decision to go out there and start drilling holes. We are as good as anyone else in the world and better than a lot.

Prof. Phillips—I think Keith's point is that there are some countries where you can walk across and find deposits, such as Broken Hill and Kalgoorlie. We have done that, so we have now confined ourselves to the harder two-thirds of the country and, as such, if we are not ahead of most countries, we are behind.

Mr ADAMS—Yes, I understand that. That is a very good point for us to have. As I understand it, we have the technology and the computer programs and are putting all that information together; we are pretty advanced. I am trying to get you to say whether we are or are not pretty advanced.

Prof. Phillips—There is a whole series of fields where we have become leader in the last 20 years. We turned to North America 20 years ago and looked there for the answer. Today that is internal. The types of areas I am talking about include mining software and geoscience—the knowledge of ore bodies, what might happen to them in weathering and how they form deep in the crust. Basically Australia is very strong in that area at the moment and the academic schools in North America have disintegrated; there is nowhere else in the world that is this strong at all. We would have three or four of the half dozen strongest patches and researchers in this country.

Mr Bashford—But we want to take it further. We want to get more data and more information so that we can provide a sounder base for people to make that decision.

CHAIR—In your submission, you talk about risk aversion which, you go on to say, in part, relates to a harsh tax regime and high drilling costs. You further indicate that we need an injection of new blood; small companies. Given that small companies do not have the staying power in regard to risk and taking into consideration the risk survey that you just showed us, can you explain particularly where you think that our tax regime is not conducive to mining and exploration and how injecting small junior companies would overcome the problem.

Prof. Phillips—I am not sure that it linked exactly like that. You say that the junior companies are risk averse. In the sense of going overseas or working in Australia, their time frame is going to be shorter and it is basically because of the uniqueness of Australia. There is a limited capacity to pick up on the uniqueness of Canada or the uniqueness of somewhere else. Australian junior explorers tend to be very good at exploring in Australia. Take them to the top of Chile and they may not be as good.

CHAIR—Do you think that our tax regime is harsh and, if so, in what area?

Prof. Phillips—I guess it is relative, but I did a questionnaire and a ring around as the basis for that and that was one of the comments that came back.

CHAIR—I am trying to find out the areas that are harsh because, if that is one of the impediments, the committee really needs to know what part of the taxing is detrimental to (1) exploring and (2) production. As this is about exploration, that is the area that I am keen to explore.

Prof. Phillips—On the exploration side, I don't know. I think you probably have better people to ask in relation to that.

CHAIR—This ring around is a bit like a survey? The trouble with a survey is you ask, 'Do you want to pay less tax?' and we all say yes.

Mr HATTON—I don't want to pay anything!

Prof. Phillips—I understand that but, in the sense of what are the types of things that are affecting you today, people come back and say, 'I'm thinking of this and I'm thinking of that; they're the things at the top of my mind.' That is the depth of it. I think that is a fair way of getting what is affecting people.

Mr CAMERON THOMPSON—The statement in your brochure that, because of the lack of emphasis on exploration, \$42 billion of Australia's export income is at risk of a severe downturn, is alarming. We have your map there which shows how things have been going, but has there been any effort by the CSIRO to forecast just what is likely to happen in relation to this figure of \$42 billion? You are predicting a time bomb. When is it going to go off?

Prof. Phillips—I do not think we are the only ones who do that type of prediction. You can look at some commodities and it is not going to affect those or it is not going to affect them in our lifetime. There is a series of other commodities and it is going to affect them quite dramatically. Gold is one because, by the nature of the gold in Australia and most other countries—not South Africa—mines are set up with relatively short lives; they depend on finding more and more as they go. The classic example is Norseman south of Kalgoorlie, which has lived on two years reserves for almost 100 years. That has always depended on finding a bit and then finding another bit, and going on that way. It has never looked ahead and said, 'We can see 20 years ahead of us.' For a large part of Kalgoorlie's life, it did the same, although it has gone for 110 years.

The nature of the gold deposits we have in Australia is such that you have to be exploring for what you are going to be mining five, 10 and 15 years out. We have something like 5,000 tonnes of gold resources at the moment. We are looking at 10 to 15 years there and, as the gold price fluctuates, that is going to go up and down a bit.

Mr CAMERON THOMPSON—You have not done anything to forecast out. If it is worth \$42 billion now, at what rate is it going to decline unless the current situation changes?

Prof. Phillips—It has started to decline already. Gold has gone down from 320 tonnes per year to 290-280 tonnes per year. About 320 tonnes per year—approximately 10 million

ounces—was the peak and it has gone down over the last three years or so by about 10 tonnes per year and it is quite possible that will continue.

Mr CAMERON THOMPSON—What is it at now?

Prof. Phillips—About 280 tonnes per year. That is a significant decline and there is a lag effect such that, if we suddenly start exploring today, that trend is still going to continue.

CHAIR—Our time is just about up. Thank you very much for your attendance.

[11.19 a.m.]

WIDDUP, Mr Robin Anthony, Managing Director, Lion Selection Group Ltd

CHAIR—I now welcome Mr Widdup, the representative from Lion Selection Group Ltd. Do you have any comments to make on the capacity in which you appear before the committee?

Mr Widdup—Thank you, Chairman. Lion is a publicly listed company. It is a pool development fund and we specialise in financing exploration. My daytime job is to find money for exploration.

CHAIR—Before we proceed to questions, I would invite you to make a short opening statement.

Mr Widdup—I have given you each a booklet, within which I have four slides, and I propose to go through them briefly to explain what I want to say in addition to the submission. The submission is at the back of that booklet. My first point is that the funding mechanism for Australian exploration is broken; it has probably been broken for the last four or five years. On the first slide, I would like to give my background and the Lion Selection Group background. We are a team of mining engineers and geologists who have spent half of our lives in mining companies and exploration companies in the seventies and eighties and then, from the early to mid-eighties we worked for J.B. Were Stockbrokers, where we raised money for exploration in Australia.

In 1997, we saw a niche in the market, because exploration funding was starting to dry up, and we went out and raised \$100 million from Australian sources to fund exploration of Australian companies. What we do is we fund exploration and we spend a lot of our time visiting people who would provide funding for exploration. The other half of our time is spent visiting mines and exploration sites.

I apologise for the detail on slide 2. On this slide I want to show the background of the Lion team. This has been put together subjectively, but I think the numbers are quite representative. You will see that I have divided it up into the three boom periods of exploration over the last 10 or 15 years: 1986-87 was a boom period, as was 1994-96, and I think we are just going into another one now in 2002. While the rest of the team and I were at J.B. Were, we would have assisted with the funding of around 40 companies to raise \$300 million or so.

You can read down through the slide now. The points I want to make on that whole series are that in 1986-87 Australia was the leading mining finance centre in the world. It lost that position for a variety of reasons. People thought that the area was too speculative and became more conservative in Australia. In 1994-96 it went to Toronto, Vancouver. It really was a wild west market, but it became the leading mining finance centre around the world. As we are going into 2002-03, maybe 2004, upturn or boom, London has taken that crown and the alternative market in London seems to be the place where people are raising most money for mining exploration.

If you go through the slide there, you will see that institutional funding—money from AMP, BT, Westpac or whoever—has been shrinking over that period and overseas funding has also

been shrinking for exploration here in Australia. While that has happened their place has been taken by private investors who are stepping up to fund these situations.

The next slide really brings us to the key points of where we are. In terms of funding, institutions have become increasingly conservative in Australia. They have a very short-term view and they look out for three months. What the previous presenter has been saying is that you are looking at a 10- to 15-year time lag on exploration and you need to have an extremely long-term view. It is an extremely high-risk endeavour to go into. Australian institutions would prefer to look at National Bank or Woolworths rather than go into an exploration high-risk situation.

The other problem we have had is that, as things have gone global, institutions have become so large that their minimum investment size is \$5 million rather than half a million dollars, as it used to be. The brokers and advisers who previously provided advice to their clients to go into mining exploration companies are stepping back, for a variety of reasons. It is not one simple problem. There is Mabo native title, which clearly is very difficult to explain. Being an old broker and an adviser, you have two minutes to explain a problem to people and if you cannot do it in two minutes you are gone; forget it. These guys move on to the next thing which is simple. Mabo native title and land access and environment are very complex issues and they affect Australia greatly.

The other part of why brokers are not active in the area is that there has been an increase in the barriers which have been provided in terms of prospectus requirements, or in terms of the legislation governing what advisers can say without research. It has all just become tighter, so they have moved on to areas which are easier for them to practice. It tends to be larger companies rather than smaller companies.

The final point—and one of the saddest—is that the Australian Stock Exchange over the last 15 years has gone from having around 40 per cent of the index represented by mining and exploration companies, to about eight per cent today. Frankly, the Australian Stock Exchange is no longer a good home to have an exploration company. That saddens me greatly and I have gone around the world over the last three or four years attempting to change that. But I do not think the people in the Australian Stock Exchange are too worried because they can get other business from other people. The alternate market in London comes out on regular raids to encourage our exploration companies to go off to London. Every three months there would be another conference or seminar telling people why they should go to London rather than remain in Australia.

On the fourth page of the recommendations, the first point is that I do not think the committee should simply aim to fix the exploration funding problem we have. There is an opportunity there to re-establish Australia as the world's leading mining finance and exploration centre and to establish Australia as a service centre for mining and exploration globally. In answer to some of the questions that you were asking Neil earlier on, we have the best explorers in the world sitting here in Perth—there is absolutely no question about it; they are gold medallists every year—in terms of use of technology and the length of time people have had in the job. The background and service they get from CSIRO and from other groups are absolutely first class and beat the others to a pulp. I think we can establish Australia as a service centre.

Let me tell you a small story and then I will finish. In 1992 Geoff Stewart was 63. He had spent a lifetime in Australian exploration and had founded and developed a company, North Flinders Mines, which was active in the granites area. It is now producing 600,000 ounces of gold a year. He was displaced by a takeover in 1992. He was 62 or 63 when he decided that Australia was too tough and went to Tanzania. A lot of people scoffed at him, but he has found that it is easier to do something in Tanzania than it is in Australia. He has retained Australia as a service centre and over that time has used Australian services. I estimated very accurately that between \$A190 million and \$A200 million of money would be coming back into Australia for a mining process plant out of Ausenco in Brisbane and for assays in labs in Perth, geophysical services from people in Adelaide and all of the mining contracting, with Macquarie Bank raising the funds out of Sydney for all the legal and accounting. That has had a tremendous flow-on effect into Australia and I think complements the Australian exploration business. I think we do not simply fix the business of exploration here, but we establish ourselves as a global presence, which is sliding away unfortunately at the moment to London.

Finally, just to summarise, we need to fix the Stock Exchange. This might sound a little glib from me, but it would be nice to have a positive view which comes out of government in Australia. As an old stockbroker, when you talk to people in London or North America they say, 'Oh, yes, but the Australian government has a negative attitude towards mining.' Why they have that, I do not know, but it is certainly a feeling. Perception is reality in finance worlds. If you have two minutes to explain it to people and they believe this is a negative place, because Canberra does not view mining positively, then you have a real problem.

Land access and native title are major impediments. Again, they are so complex that it is very difficult for an adviser to get over the top of. Tax is inappropriate for exploration. It is not inappropriate for mine development. In answer to the earlier question—'Is the tax better or worse than other parts of the world?'—if you develop a goldmine here in Australia today, we are slightly worse off than Chile and Tanzania and we are quite a bit worse off than Botswana and so on. There are other areas which can compete but the difference is usually marginal.

If you want to talk about exploration, the problem there is that exploration is such a long-term and high-risk endeavour that people are not prepared to risk their money when the average investor in an institution takes a three-month view. They are going to say every time, 'We'll go to National Bank.' That is the problem we have there. We need to have some encouragement for people to provide high-risk money and a long-term view. Most investors do not look beyond three months and that is the problem we have. That is the end of my introduction, Mr Chairman. Thank you.

CHAIR—Thank you. In your submission you mentioned that the ASX previously had about 40 per cent in mining stock and that it is now down to eight per cent. What is the main reason for that? Why did they drift off?

Mr Widdup—The Australian middle-sized companies have been feeding stock for the three largest mining companies in the world. Basically they have just come and gobbled up all of our middle-sized and quite large mining companies. You can have a long list of those.

CHAIR—It is globalisation.

Mr Widdup—It is globalisation and that globalisation has trended to London. It has not trended to North America or Johannesburg. It has taken all of those stocks into London and they are then being serviced out of London too.

CHAIR—That takes me to my second question. You mentioned junior explorers. Given your background, you touched on tax. You did not mention, though, flow-through shares. Do you think that a better tax share allocation in the form of flow-through shares would benefit junior explorers in Australia?

Mr Widdup—I think it would, but it needs to be done with a raft of other things as well. Flow-through shares would definitely assist and would encourage people to risk fund. Certainly there are a number of private investors who have the ability to put in \$100,000 to half a million dollars. It surprises me, frankly, to see how much wealth there is in Australia; those who are prepared to look at the exploration area. Mark Creasy is our biggest shareholder in Lion and he has put \$6.5 million into Lion which effectively goes into that area. That is because we are a pool development fund and there are some capital gains and other tax advantages we have that many other people do not recognise. He is a bit more sophisticated than most. If you had flow-through shares there would be so much publicity from industry that you would bring a raft of new people in.

Mr HATTON—We have heard other evidence about job losses within the industry and obviously that is going to have a continuing impact. That was linked in part not just to the downturn. I think Mr Walker from Methanex outlined what he saw as a sea change within the industry—the fact that the North Americans and the South Africans had gobbled up our companies. What they were tending to do was to develop the brown veldt stuff. They were not interested in going to look anywhere; they had closed their eyes to that. The smaller companies basically had only one choice and that was to go off on a contracting basis for the larger stuff. As a result, there are many people out of the industry who have a great deal of expertise. We have a big problem with the service industry approach that you were talking about. There is no simple structure for that, where we could redirect a lot of those people back into exporting their services overseas.

Mr Widdup—At the peak, we would have 200 junior exploration companies and they can employ quite a number of the good people. Only the best survive in that area and there is a limited shelf life for most people. Not many explorers make it into their fifties and sixties. It is just too tough going and living in a remote area when you want to have a family. I think there are sufficient numbers of good people who could be encouraged, providing the funding was there, into junior exploration companies.

One point of difference I would like to make is that there are very large global companies which I do not think really want to go and explore. They talk about having these relationships with juniors, but I have not seen too much success in that area. I have seen more success in juniors operating on their own. If we can provide the funding mechanism to get the cash into those groups, then they are capable of taking a very long-term view. I gave the example of Geoff Stewart, who raised \$US40 million for exploration in Tanzania over an eight- or nine-year period from private sources. He was able to do that and was able to take an extremely long-term view.

If you have good people who have a good project which does not have too many impediments—where tax and everything else are not a question—then you will find people. It is usually cyclic, as Neil was saying earlier on, but you can generally find people. If you provide funding for junior companies, you provide a great amount of job opportunity for not only geologists and engineers, who are then going to do all of the feasibility work, but also for bankers, brokers, accountants and lawyers. A vast number of jobs stand behind each geologist.

Mr HATTON—Given that the institutions have now reached that \$5 million level, what is the situation with the super funds? That is obviously a place we should be looking to, in terms of long-term investment.

Mr Widdup—The super funds have become so conservative, they will hardly look at the situation. It is partly because these investment opportunities are generally \$100,000 or \$200,000 to get them invested and they are wanting to put a minimum of \$5 million. They have all become so conservative that they want to go and buy extremely low-risk shares; things which have an existing dividend where you can see the business and there are usually no large barriers. Banks are very attractive to super funds. They simply do not take a long-term view with people's pension money. It is incredible, but they need to be encouraged to take a longer-term view. They are ranked on a three-month basis and, until that changes, it makes it very difficult. I can blame them, but you can understand why they do not want to take those risks.

Mr HATTON—Do you think there are any mechanisms that we could put into place that would encourage them, in a mandated way, to go into those areas?

Mr Widdup—I think that there needs to be a mandate, which means that they have to take a long-term view with some of their money. There could be some tax or other advantages for them doing that. At the moment they do not take a long-term view; they just take this quarterly assessment view. Simply, if the fund manager does not jump the two or three performance hurdles ahead of him, he is not in the job—it is a very lucrative position—and he or she disappears. I think you need to mandate for a proportion of those superannuation funds to be in long-term investment. That is not just for mining; it is for other things as well.

Mr HATTON—With US pension funds and other overseas funds, is there any of that kind of mandating, do you know, in their national interests?

Mr Widdup—They do not have the same problem that we do. Mining, to the Australian economy, is far more significant than it is to other areas and, because they have such a large and deep market, they can find funding for those areas. One of the problems that we face is that, if you are a large listed mining company and you are listed here in Australia, you might have a cash flow multiple of five or 10 times. If you are a gold company, you could have a cash flow multiple in New York of more like 10 or 20 times, which means that they have a real advantage in terms of being able to come and swoop on people here.

The reason for that is that there are so few mining companies to give the people exposure in that large capital market that they just have to go there. We do not have that advantage, because we are a smaller market. I do not think you can compare the two really. Australia is unique in that area. It may be comparable with South Africa; it may be comparable with Canada, which we compete with. Canada has flow-through funding. South Africa have a number of problems and their mining industry is going backwards quicker than ours is.

Mr HATTON—In terms of the possibility of mandating the super area, it has been suggested in the CSIRO's written evidence that, in the R&D area, this could well be where the government should actually step in at this time, when it is so low, and do more in order to carry those people with expertise through and also carry activity through until we start climbing the plateau again.

Mr Widdup—In addition, it sends a big signal out to the world—which can be a real publicity effort—to say, 'We're here to support mining in Australia,' and in an instant you turn investors on who have been turned off in London, New York and Tokyo. I visit all of these centres and they believe very firmly that we are an anti-mining country because of the government's attitude.

Mr HATTON—How long has that been a prevailing belief?

Mr Widdup—Probably since Mabo started to appear. It has been drip, drip, drip until it is now a major problem. It would have been at the onset of Mabo, which would have been 10 or 12 years ago, and it has become more severe in recent years. At first, it was a complication and a confusion. Now it is believed to be so difficult that it is impossible.

Mr HATTON—Is it an embedded expectation?

Mr Widdup—Yes, it is.

Mr HATTON—Despite the work that is being done on the ground to sort it out, it is a case of, 'We don't want to know'?

Mr Widdup—Yes.

Mr HATTON—It is too hard?

Mr Widdup—Unfortunately, yes.

Mr HATTON—Given the problems with perception being reality in that area, why is it that London has taken hold of this? If the North Americans and the South Africans are the ones that reamed out our equity in our own companies, how is it that London has taken the lead?

Mr Widdup—There are a couple of reasons for that. London is a historic mining finance centre. Very few exploration companies have operated out of there, but the very large mining companies have all gravitated towards London: Rio Tinto, Anglo and BHP. BHP, effectively, is in London now rather than in Melbourne, despite what the chief executive claims. They are all there and they are being serviced by the major banks, lawyers and institutional investment groups. That is one reason.

The second reason is that when the BreX incident happened, with the Canadians faking their results in Indonesia, that hit high-risk investors around the world. London tended not to be in there. It tended to be the North Americans, who were very heavily exposed, and so you had a group of people who were unscathed and did not have a recent memory back to 1997 of having lost a lot of money. As the gold prices started to improve, it sent a signal out to investors to say

now is the time to get back in again. There aren't people with a long bad memory in London. Investors have actually done very well in investments in the European area over the last five or 10 years and there are considerable pools of money for those who are prepared to take a risk investment.

Mr CAMERON THOMPSON—In relation to the 60 per cent of private investors, do you think that is really a sustainable position or would you really like to see that figure go back to figures from the earlier booms? It seems to me that that is a pretty difficult group of people to be chasing.

Mr Widdup—It is a difficult group of people to be chasing but, once they are on the register of a company, they tend to stay there for a much longer period than a superannuation fund would do. With a superannuation fund, they could be in today and gone tomorrow. If you look at the AMP's history of investment in these small companies over the last couple of years, it is literally here this month and gone the next. Private investors are very easy to service and they ask questions which are often more insightful than an institution would be. A lot of people are now running their own small superannuation funds, which might have \$1 million or \$2 million in them, and they are very happy to risk \$100,000 or \$200,000 into riskier investments rather than being in National Bank, Woolworths or whatever else.

It is harder to get through to those people, because you need to access them usually through a broker, and the broker itself is a barrier at the moment because the brokers are simply not recommending, but once they are on board they are a very good and supportive group. If you want to raise more money, because they are long term, those groups will usually put some more money into the company then. As to the private investors, I do not think it is a problem being 60 per cent. They could go to 100 per cent in Australia and it would not be a problem, honestly.

Mr CAMERON THOMPSON—Are the private investors in Australia, as opposed to the private investors in London, any more or less disposed towards mining? We took some evidence in Perth about how everyone ran off into the tech boom and they are worried that they will never come back.

Mr Widdup—They will come back. Australian private investors have a very good education on what happens in the mining area. They know a lot of the people who have done things in other previous success stories. A lot of those people—they tend to be between 40 and 60, with their own superannuation fund—know what is happening with the large gold discoveries at Plutonic, North Flinders and Joe Gutnick's companies, although some of them have disappeared without glory. Those companies made between 10 and 20 times their investment for those people in the 1980s. Australian investors are actually well educated in that area. They know the risk but they also know the very significant reward if you are successful.

Mr CAMERON THOMPSON—That, I suppose, takes you to your criticism of the Stock Exchange.

Mr Widdup—Yes. The Stock Exchange really needs to become a home again for these small companies that want to go and raise money. Let me give you an example. We are dealing with people raising money the whole time. If you are a little exploration company capitalised at \$5 million or \$10 million and you want to raise half a million dollars, you used to be able to do it and it would cost you maybe one per cent of the total funds raised. If you are going to do it now,

because of all of the changes which have happened over the last 10 or 15 years, it is going to cost you more than 10 per cent, which is a huge change. If you want to raise that amount of money, you tend to hold off or to try and do it in other ways. The cost of raising money for these little guys who do not have any money has increased phenomenally, and hardly anybody has said anything about that. I am not saying that the Stock Exchange is bad. The whole regulation that goes behind making an investment in one of those companies has changed.

Mr ADAMS—What has been the cost structure that has taken it from one per cent to 10 per cent?

Mr Widdup—If you are a broker, as I was in the 1980s, you would do a placement and you would charge maybe one per cent, and there would be 10, 15 or 20 brokers who were wanting to do the same job. At the moment—and I am actively trying to raise money for three or four companies in this area right now—there is only one broker who is prepared to take that risk level: Macquarie. They say, ‘Our minimum fees are half a million dollars’—so that is where it is going to be, whether you raise \$1 million or \$10 million—‘and our minimum fee, if it is bigger than that, is five per cent plus cost, plus all of the advisory fees and all of the legal and other impediments.’ So there is no competition in the area and that is one of the reasons.

The prospectus requirements have become far stricter. I realise that there are reasons for that, but again if you are wanting to go and raise money, you used to be able to do a placement quite easily. If you do it now, you need a prospectus and you then start to pay very high legal and accounting fees. The main street legal and accounting firms are extremely expensive. They are also happy to use all of the things which have occurred in terms of legislation and make them extra hurdles to increase their own fees, as they naturally would.

Mr CAMERON THOMPSON—You seem to be saying that the Australian Stock Exchange is a prime area that we need to develop. Has the range of possible investments for people been depleted to a very serious extent?

Mr Widdup—Yes, very much so. The average investor in Australia wanting to buy a mining company would be looking at the Stock Exchange. There would have been maybe 200 small ones and 10 or 15 medium sized ones, plus the very large ones, and they would all have been Australian companies. If you look now at that eight per cent which I talked about earlier on, it tends to be made up of global majors which are there on the market, and that is probably six or seven per cent; the other one per cent is from small companies. There is only MIM in that middle sized area.

We have seen Pasminco disappear, not through takeover but due to other reasons, and North Broken Hill, CRA, Ashton, Plutonic and Goldfields just this last week—a whole shopping list of companies. The Australian investor has lost the choice now that there used to be, which means that people do not service that area either. I worked for J.B. Were and we would have had 10 or 20 people in the research area looking at mining stocks. They have maybe five or six people doing that job now. Most of the brokers have pulled out of that area completely, which means that, standing behind that, they do not have a corporate finance department either. If you are a little exploration company, there is no point really walking down Collins Street or Pitt Street any more and hoping to go into those big brokers, because most of them have shut their doors. The good news is that there is a crop of small brokers coming through and operating in

that high-risk area who are attempting to do the job. They need a little bit of help, and I think if they get it then they could do very well for the junior end.

Mr CAMERON THOMPSON—How does the business that has been lured to London compare? What sorts of stocks are now listing over there rather than here?

Mr Widdup—To pick an example, Murchison was a small Australian company that was mining the Rennison tin mine in Tasmania, which one of the members here would know all about. They decided that they needed to raise money for further development and for doing all sorts of other things. They could not raise money in Australia, and so they were lured to go and list in London. The brokers there promised them unending capital raising and they have been able to do that, despite recent failure. So the London market is a mechanism that is able to fund those small companies. There have been others which have gone there and they face high hurdles in terms of cost, but they do find availability in terms of people who are prepared to provide funds into that area.

Mr CAMERON THOMPSON—Despite the perceptions about Mabo, native title and those sorts of things, it is a happier hunting ground than here.

Mr Widdup—That was for mining development rather than exploration so possibly it was a bad example. They do seek more advanced situations. If you wanted to raise money purely for exploration in Australia, then that market probably would be no better than the local market. It might be about the same. The problem that we have is that, once we have them past the first hurdle and have found some sort of an exploration project, they disappear to London.

Mr CAMERON THOMPSON—You said that you needed a whole raft of things to basically rectify that. I presume you are focusing largely on this market area.

Mr Widdup—As I said, I think we need to have some clarity on native title, which needs to be fair to all parties. I am not saying that the miners need to come out with a complete win, but it is so complicated at the moment that something really needs to change there for the explorers to win. In terms of tax, you cannot do it and we cannot do it; it is an impossible dream, really. You need to have some sort of tax benefit so that we can compete with flow-through shares in Canada. The environmental requirements in Australia vary between states and there needs to be some clarity about what goes on there.

The Australian Stock Exchange has had a whole series of things which have blocked people in terms of prospectus requirements—requirements for an adviser to have research. If you are an adviser sitting in J.B. Were and you wanted to recommend XYZ exploration company, you could not, because you are not allowed to until your firm has done some research on it. If you are a big broking company you would have a minimum limit, which would be \$100 million or \$500 million on the size of the company before research was prepared. So there is a hurdle there; it is just impossible.

Mr CAMERON THOMPSON—It is a catch-22.

Mr Widdup—Yes, it is.

Mr ADAMS—You mentioned the image of the mining sector over the last 12 years, and you mentioned Mabo. Maybe you do not want to comment on the image of the mining industry itself in that area. Do you have an opinion on that?

Mr Widdup—Yes, I do.

Mr ADAMS—The old image of the industry, environmentally, socially, et cetera?

Mr Widdup—I think the mining industry have portrayed themselves in a very bad way. What they tend to do is show themselves with large trucks and big holes, and it is easy for other people who are wanting to sling mud to sling it at them. They are their own worst enemy. The problem is that they tend to be led by people who like big trucks and like big holes, instead of showing nice looking ladies wearing gold earrings and diamonds and everything else, or people's plumbing made out of copper or whatever.

The miners have not really gone down the best track of portraying themselves in a good way. They are very easily portrayed as the villains. A lot of other industries have a history which has not been kind to the environment but I think the miners are the only ones who really do not try to clean up their act in that area. No matter what you say to the people who run the mining companies, it is very hard to get them to go down the track of helping themselves. It does have a bad image and I think the miners really need to address that themselves. It is a hard lesson and they have difficulty learning it.

Mr ADAMS—Governments, hopefully, reflect public opinion.

Mr Widdup—They certainly do.

Mr ADAMS—Maybe that view of the government in Australia does support mining.

Mr Widdup—That is a very good point. I am involved in investment of an unlisted company in Victoria that has been operating the Stawell goldmine and we have had quite a bit to do with the state government. The comments that come from the state government are, 'Why should we help you? You're an old economy, a dirty industry,' and we should go down the track in other ways. Really, the mining industry needs to fix that. It has only itself to blame.

Mr ADAMS—And it can fix it.

Mr Widdup—Yes, it can.

Mr ADAMS—The software that we were talking about with CSIRO—a whole range of things. There is a nonsense argument, 'It's brown.'

Mr Widdup—That is right. Yes.

Mr ADAMS—On the taxation: currently inappropriate for risk and the time lag. Did Ralph have much to say about that?

Mr Widdup—No, he did not really go into that. It has been a bit of a cinderella area really. The problem is that the tax scheme tends to look at people who are only going to make a three-month investment. For that reason, you would always look at things which are low risk and which you can have a guaranteed win on. The mining sector or exploration sector can sometimes be in that position but it is usually for one year in 10. That is what happens when you get your one year in 10, and this might be coming up over the next couple of years. There are huge amounts of money raised by those people, and institutions will go back into the market and provide funding. They think that, because the oil price has been going up and there has been recent exploration success, there is going to be a rapid appreciation on the shares. They will provide the funding; they will be very quick on their feet and then they will be out again.

Mr ADAMS—That is what their researchers tell the decision-makers.

Mr Widdup—Yes.

Mr ADAMS—They just get the research coming through to them and, as an institutional investor, they make that decision.

Mr Widdup—That is right.

Mr ADAMS—But we are going a bit deeper here. What is the current situation for R&D opportunities? We said that the big players no longer want to explore. How do we get money out of the big boys to fund some of that?

Mr Widdup—I do not think you will get money out of the big boys to go and explore. Two years ago I went around to all of the big mining companies in the world to attempt to get them to sponsor a 24-hour trading screen which would have all of the mining companies on it. You could use ASX technology and make the ASX a platform for global mining. What I heard from the three biggest mining companies in the world would shock most people, but it may be sensible. They said that they would prefer to see the juniors weak and that way, when they find something, they can take it very cheaply and very quickly. I do not think the managers want to go into that area particularly. If you go into the head offices in St James Square or down Pall Mall, as I have in the last few weeks, they are all still cutting exploration. They might come along to government and say, ‘Yes, we’re pro this and we’re pro that,’ but the fact is that they are cutting and I do not see that turning around.

CHAIR—Thank you for that. Thank you for your appearance before the committee today.

Mr Widdup—Thank you very much, gentlemen. Thank you, Chairman.

[11.56 a.m.]

LAVERING, Dr Ian Herbert, Adjunct Professor and Course Coordinator in Energy Management, Master of Business and Technology Program, University of New South Wales

CHAIR—I now welcome Dr Ian Lavering from the University of New South Wales. Do you have any comments to make on the capacity in which you appear?

Dr Lavering—Yes. This program is jointly sponsored by the faculties of economics and commerce and engineering and is one of the largest business and technology programs in distance education in Australia.

CHAIR—Thank you. Please proceed.

Dr Lavering—Mr Chair, the purpose of my appearance before you today is to provide a sharper focus to the issues that I have raised in my written submission and also to provide the committee with an opportunity, should they wish, to follow up on information or clarification on the material present in that. I will try and be very brief and allow whatever discussion the committee wishes to follow. In my submission I discuss the factors affecting Australia's rate of crude oil use and outline some of the lessons from the past that we could utilise for future decision-making in relation to crude oil use in Australia.

The first key point that I seek to make in that submission is the answer to the question, 'Is Australia running out of crude oil?' Clearly the answer to this is, 'Yes, we are.' We are gradually using the oil reserves we have discovered to date. We have been in a state of approximate equilibrium since the late 1970s, where we produce close to that which we have been discovering in the fields that already exist, as well as the new fields that we have discovered since that point. This has largely been for three main reasons: changes in the world oil market price; changes in government measures at greater deregulation; improved recovery from the known fields that we have, from some of the larger fields in the Gippsland Basin in particular; and changes in technology and the nature of the technology that is applied for crude oil recovery.

The issue that follows this—are we running out of crude oil?—is what should we be doing about it? The first thing I offer to you is to clearly understand the rate at which we are using our resources and the factors affecting this and the second thing is the alternatives that are feasible in our current situation with our high dependency on crude oil use, as well as a large amount of gas reserves that we have which are underdeveloped at present. At present and in the future the benefits available from crude oil use in Australia would be maximised if we maintained a completely open market arrangement for crude oil pricing, as well as the allocation of exploration rights and, in both cases, any measures which did not distort the pattern of the resource use which would take place under long-term world market conditions. Luckily we have moved in the recent past—since the early 1980s—from a highly regulated oil market and we have now largely been constrained by price and supply rather than by production quotas and allocation of crude oil to local refinery systems, as we had prior to that.

Looking to the future, we now have the opportunity to make resource use choices using the price signals evident from long-term trends in the world oil market where prices have been modest in real terms for much of the 1990s. A competitive open market for crude oil will provide a superior level of economic welfare for the Australian community and, if combined with nondiscriminatory taxation or subsidy into future exploration or production, will provide the most efficient means of determining whether oil or gas use is the best long-term resource which we have available to us.

There is some merit in the argument that long-term development of our relatively underutilised gas reserves for domestic and export markets represents an economic benefit which has been postponed by the availability of local crude oil resources but which remains for future use should those resources decline. Gas development represents in the minds of some part of a logical and eventual transition away from an oil based economy to a gas based one, a transition which is under way both in Australia and around the globe in the long term.

There has been a call from some parts of the petroleum industry for assistance in looking for oil in frontier areas and I have outlined some of the instances where the exploration for oil in high-cost frontier areas has proved problematic in the past. That does not mean that it will not be successful in the future. Some of the oil exploration results are in areas such as the Exmouth Plateau in Western Australia in the late 1970s. Other future frontier areas may be areas which provide some positive results but it may be at a high relative cost. I would suggest that the committee consider that assessing the costs and risks of exploring in frontier areas is best left for the decision-making processes of the industry and any attempts to guide or support the industry into such areas ahead of the incentive provided by the world oil market are, in the long term, likely to deter more exploration than they encourage.

As far as what government can do itself, the relative benefits and costs associated with the current petroleum exploration title conditions have been the subject of ongoing debate, and that will continue. There has been support in the more academic areas for cash bidding as an allocative mechanism for exploration rights, and that debate is ongoing. It has not necessarily been one that has had a strong focus in Australia. Work program bidding is the practice that is employed here at the Commonwealth level. It has the advantage that it does guarantee some exploration over title areas, whereas cash bidding does not necessarily do so.

The results of previous exploration, both in onshore and offshore parts of Australia, appear to show that there is some chance of additional discoveries of large high-grade oil deposits. New deposits that have been found in the last 20 to 25 years have tended to be of modest to small size and discovered as a result of more concentrated search of known petroleum-bearing regions. Other, less well explored, regions may have some additional reserves, but the costs of finding these must be balanced against the opportunity costs of alternative supplies of petroleum reserves in known areas or development of our major gas resources.

Despite the expectation of an impending decline in local oil production, there has been no comprehensive debate in detailed terms as to what is an optimal pattern of resource use in Australian petroleum resources. Instead, the discussions have largely been focused on the premise that maximising Australian self-sufficiency has inherently yielded the highest level of overall national welfare, and that argument itself is not necessarily that which would apply in a widely traded regime, as we have now. Arguments for greater oil self-sufficiency may be inherently flawed if our undiscovered oil potential is actually very limited and if the costs

associated with finding the oil resource are excessive compared to use of either imported or larger known gas reserves that we have already identified.

I would submit to you that the long-term pattern of oil resource use in Australia which maximises overall economic welfare is likely to follow that set by an open, competitive world oil market, and that the world oil market provides conditions which are the most efficient long-term signals to determine whether or not we utilise gas reserves in the longer term as part of our natural economic advantage. Thus I would conclude by saying that the long-term market signals we need to pay most heed to are those that provide the best indication of what the world oil market is doing in terms of overall scarcity, and in making any choices we should avoid those measures which distort the pattern of resource use or result in discriminatory taxation or subsidy between different parts of our oil resource that we have found or are likely to find in the future. With that I would open it to any questions the committee might wish to ask on the submission or the verbal presentation.

CHAIR—Thank you for that.

Mr HATTON—Dr Lavering, in speaking to people in the industry, the comment generally seems to be that any future prospectivity is offshore, but onshore there is not much chance at all of finding any major oil reserves. Is that your view?

Dr Lavering—I would take that view as well based on previous technical results. The largest field we have found onshore is the Jackson field in south-west Queensland, some 30 million barrels found in the early 1980s, and the incremental discoveries we have made in our other onshore basins indicate that we are likely to find fields of that size or possibly slightly less. It does not mean that they are not commercially very attractive, but there are other reasons why people are slowing the rate of exploration onshore as well.

In relation to offshore, the largest fields we found in the early nineties would be the Laminaria field, and that is around the 200 million to 300 million barrels recoverable size, but it is also experiencing, I understand from press reports, some decline in productivity in recent times. We are likely to see that kind of regime maintained. We may be very lucky. The one thing I would add is that Gippsland fields that we found in the late 1960s with Esso and BHP were world class and most unusual. They have very good reservoir properties and they have very high rates of recovery, and they have been, in terms of oil exploration, on a worldwide basis the crown jewels of what we have found in our resource base here.

The problem has been that once you establish that kind of result, there is an expectation that you may repeat that, and this is one thing that we have, to our cost, found in the recent times since the late 1960s, that things are not going to be that easy. It is going to be a hard row to hoe for oil exploration in Australia. It does not mean that people cannot be commercially successful. The difficulty will be to maintain sufficient people exploring in our own areas, or are they exploring in other parts of the world where there are attractions, where barriers and political reasons for their not having explored there in the past are now no longer there. Parts of west Africa and parts of the Soviet Union may represent a place where they would prefer to go and look in a greenfields opportunity rather than looking in a pretty tough and competitive environment that we have here. That does not mean that there are not organisations who are very willing to go into deep water areas and look into frontier areas without fairly sober focus on what they are dealing with.

Mr HATTON—How important are the new technologies that have been developed to be able to see through the layers of the earth?

Dr Lavering—They have been very important. Particularly three-dimensional seismic surveys have been very critical for focusing drilling in, say, parts of the North West Shelf and other parts of the Timor Sea. That technology has also been applied in the Gippsland Basin, but without establishing any significant further success as compared to other parts of Australia. It has been very critical in terms of providing the focus that drillers and explorers would like to see for most of their coverage for very expensive wells.

Mr HATTON—You made a very strong case about the oil in the frontier areas and what needs to be done there, but you have also in a couple of different places talked about the problems of past market interventions and the difficulties they have created and the distortions and so on. Could you elucidate on those points.

Dr Lavering—I will probably try and separate them to some degree. Most of the market intervention I have commented on or focused comment on would be in the regulated way in which taxation and production was treated in the 1960s and 1970s in particular, and from the mid-1970s with the new oil and old oil pricing scheme, and I wanted to make sure that the committee had before it a fairly strong case, saying: please do not discriminate between the resource found in one geographic area with that in another; otherwise, that will lead to similar things, if we do find oil in frontier areas, where we will have a discriminatory rate of resource use.

The major thing I would say about frontier areas in the past is that in one case there was very strong publicity and argument put forward by an industry group in the 1970s, saying that within five years Australia's crude oil resources are going to run out, and that was repeated in the early eighties. Obviously they did not, and that particular statement was used as a basis for saying, 'We need to go and look in frontier areas.' The Exmouth Plateau was one of them and, sadly, that did not come about in terms of exploration success for crude oil. We found a lot of gas in the Exmouth Plateau, which still sits there and remains underdeveloped. The difficulty is that it is isolated and it is under deep water. It does not mean it cannot be explored and actively produced in the future.

I would distinguish between the interventionist nature of what government was doing for the community benefit, both in production and taxation, and companies then saying, 'Because we can't get more oil out of our oilfields—we're going to run out in five years—we need to rush into frontier areas and find new oil in those areas.' I think we are more mature in terms of our understanding of the nature of the resource we have in Australia, and also the way in which the world crude oil market will dictate, if not largely command, the rate at which we go exploring in this country. We are very sensitive, we are a very open trading system now with crude oil, whereas prior to 1982-83 we could not send oil overseas; it had to be utilised here.

One of the key things that I would point to is the rate at which oil use in Australia has been significantly different since that date from what it was before. We had some instances of fields that were under the old oil-pricing scheme being neglected relative to new oil pricing, and that has a significant effect. Nowadays we have a profits based resource rent tax in place that has no discrimination over where production is coming from, and it provides the companies with an

opportunity to go and capture those real crown jewels fields that they might find or hope to find but we are having difficulty in locating.

Mr HATTON—In this sense it is a relatively level playing field.

Dr Lavering—It is certainly far more level than it was at one time in the past. I would add that governments did things for what they thought were very good reasons at the time. Part of the policy that we applied with new oil and old oil had come from North America where similar things were applying at the time. We tend to take models which we can see happening in the real world and apply them in our own backyard, but we may not see what the end result of it is. Nowadays we do have the opportunity to develop some of the fields that were fairly marginal and found even in the early 1970s; they are now being developed and produced. That is a highly satisfactory outcome as far as the industry goes and as far as equitable use of the resource we have here. As long as we see that companies pay their due and do not earn supernormal profits, that should be a reasonable basis for ongoing use of the resource.

Mr HATTON—Given our dependency on importing oil from overseas—we have one prospect of the Stuart shale oils being able to be developed to decrease that, given your evidence, and others, of smaller finds over time—and given the amount of natural gas we have, do you think we should be looking much more closely at providing incentives, benefits or mechanisms within our systems here to encourage the use of natural gas for vehicles, in particular large trucks, buses and transport vehicles, so that we become more dependent on that, given that we are resource rich in that area?

Dr Lavering—I would start by saying that we have been self-sufficient in light-grade crude oil. That represents about 70 per cent of our local use. We have always been dependent on heavy-grade crudes which we have to import to produce bitumen, tar and fuel oils. Examples such as Stuart oil shale are likely to have technical issues that will be ongoing until the economics and the nature of the technology that would make that feasible are precisely finetuned.

We have a large gas resource, which we have discussed in the submission, that is available. I would not say we should in any way discriminate in terms of resource use, but whatever is not going to be a subsidy would be worth while considering. If there were issues of government regulation or other things that would make it easier to move towards that resource, certainly one would be in favour of it. But in the longer term, whether it is 10, five or 25 years, these things are going to be economically stand-alone. That will be the thing that drives them. It will be competitive advantage out there in the marketplace for transportation and transport fuels that is going to drive this. Irrespective of whether we do that by developing an industry focused in that way, in our own country, it is unlikely that that would be something that we could have a great deal of influence over. It is going to be world market conditions that drive that faster than anything government can do, provided we do not have regulation that makes it difficult to implement.

Mr HATTON—Thank you, Dr Lavering. The last question is a conundrum, I suppose, in terms of the evidence you have given with regard to public geoscientific data, its availability and use. Basically you have put the point that government involvement in supply of geoscience data may lead to higher levels of exploration, despite low real oil price levels—that is very much a positive at this particular time—but, going against that, that investment in that

geoscience started by governments may lead to overinvestment in exploration, overextraction of a scarce resource. Would you like to clarify that?

Dr Lavering—The difficulty that I see for government in balancing is not encouraging people to go into high-risk frontier areas that would otherwise be neglected if the markets are still showing low real long-term oil prices. There is a large pool of organisations or companies involved in the petroleum industry that have been active in Australia but are not active now. They take that as being part of their normal business cycle. It may take a change in management personnel, it may take a change in outlook in the marketplace, before they will come back. I see a role significantly for government to maintain the flow of credible information rather than overly optimistic information that is based on what is available from the industry results to date. The best thing for government is to make this information as readily available as possible and also to make it available to the smaller and more high-risk operators in the industry which themselves have a significant role in encouraging participation from other groups from overseas.

The number of organisations that government promotion—both at state and federal level—brings into Australia each year is less than a quarter of the total pool of organisations that have already been here but are not now. It is at that margin where most of the promotion is going, but there is still a large pool of people who have been here and who have moved back overseas and said, ‘Look, Australia is not right for us now.’ Part of the role I see for government is to maintain credibility in the information flow they provide, rather than being overly optimistic and getting people involved in high-risk areas that they may not otherwise be involved in. It is just part of that very delicate balancing arrangement. You have to be in there to be a player, but you should not be encouraging people to find oil in an area that to date has been known for gas results and saying, ‘We’re optimistic that something will be there.’ You have to maintain credibility in terms of your role, rather than exaggerating claims of positive prospectivity. Whereas we may not be able to compete with organisations that are highly successful in parts of West Africa in finding large fields, we should not pretend that we can, but we should at least maintain credibility with the industry as being a source of information, in my view.

Mr HATTON—Thank you, Dr Lavering.

Mr TOLLNER—I would like to apologise for being late. Dr Lavering, I apologise I was not here to hear your total opening remarks. It took me a bit longer to get to Canberra than I thought it would. I am just curious and would like to talk about subsidising industries and the like. I am focused on the North West Shelf. It is generally accepted around the place that the North West Shelf would not have occurred without the intervention of Charlie Court—and I suppose the federal government of the time—in doing taker-pay deals and some of the subsidies that were involved there. Some time down the track, of course, we have seen the major deal in China. Do you believe that would have ever got off the ground had there not been government involvement in that project?

Dr Lavering—Given the market they were dealing with, government involvement in terms of providing reassurance to the client who was going to take the resource would have been essential for that deal, obviously, in retrospect. In terms of my comments on subsidy, most of the things I have to say are in historical context, with the existence of the Petroleum Search Subsidy Act that we had from 1957 until 1974, where there were rebates for expenditure in

drilling and seismic for specific areas. Once those areas experienced success there was a ring fence placed around them that no further subsidy was received.

Do I think that, say, the North West Shelf would have got going without subsidy? Probably not, but we do not have the hindsight of comparison in the absence of subsidy. We can only look at what was historically developed there. Most governments take a very close interest in these things when they are in their formative years and that is understandable. Once government can see that industries can get up and walk and carry on under their own steam, there is less justification for having them nursed along and provided with fairly significant forms of assistance.

We are now in a situation, particularly with the petroleum industry, where the resource can be freely traded on the open world oil market. If we can make more money out of selling our light-grade crude oils to Singapore, to the west coast of America et cetera, that makes far more sense than their having to come here through our refineries, if that is going to be a high-cost thing. If we can utilise feedstocks from around the world to cut our production costs in refineries, I see that as being the best thing as gains through trade. That is fairly unchallenged these days in terms of our open pattern of crude oil pricing.

In a sense I have seen the debate move from one 20 to 25 years ago where we had to find oil because we were so dependent upon it, to one where now we say we can actively trade throughout the world with the light-grade crude oils that we have been producing, which are highly desirable in refineries around the world. Therefore the argument to maintain high levels of self-sufficiency or high levels of reserves tends to go with that argument as well. Self-sufficiency is not the highly rating argument it used to be in an open crude oil market, provided we do not have imbalances or trade difficulties.

Mr TOLLNER—I am from the top part of the Northern Territory. As you would be aware, there is some debate taking place up there at the moment in regard to Bayu-Undan Oil and Gas and, in particular, the Greater Sunrise field, too. At what level, in your personal view, do you believe government should be involved or should not be involved in encouraging gas onshore and development of that resource?

Dr Lavering—I would take a very deregulated view and say that, while it is desirable in terms of local development onshore, it still remains a commercial decision for the partners involved and there are obviously some unresolved issues in relation to international boundaries and treaties et cetera there that would make that something that is really outside the areas on which I can comment at this stage.

Mr TOLLNER—Finally, do you believe that there is any evidence emerging in Australia that Australia is moving away from oil and is becoming more and more gas driven?

Dr Lavering—I would imagine in the long term that we are. In terms of our lifetime, it is a slow process. If one can think back to, say, the early seventies when we had major price hikes in crude oil, the efficiency of motor vehicle fuel use in those days was quite archaic compared to what we do with motor vehicles these days and, despite the larger number of people and motor vehicles on the road, the efficiency per kilometre that we derive from that is significant.

In terms of looking at what has happened with motor vehicles in the last 25 years and looking forward to another 25 years, irrespective of whether it is the same technology and the same fuel, I would imagine we would see a fairly significant change in terms of fuel use and the efficiency with which we use it. I think we look back almost in horror these days and say, 'What were we doing?' even though they were the old Kingswoods et cetera—apologies to the particular brand.

CHAIR—Fair go! V8s at least!

Dr Lavering—Even Morris 1100s, I dare say, were not particularly efficient in terms of what we see and what we do now. I would see that we have to and will be part of a global process in moving to a more gas-centric fuel use in the future and possibly, in the longer term, to hydrogen. But that does not mean that it is going to happen tomorrow or that you will be driving a hydrogen car in five years. It is part of the things that we cannot necessarily see and determine ourselves, but they are just going on around us so quickly now, as they have in the past.

Mr CAMERON THOMPSON—Given that we have heard from you and from others that the offshore areas are likely to be most prospective for oil, how do you rate our knowledge of those oil-prospective areas offshore? Do we have a high degree of knowledge about those? Where are we at internationally and is there any way for the government to encourage greater offshore exploration?

Dr Lavering—The level of knowledge, I would say, would be highest over small areas such as the Gippsland Basin in offshore Victoria, where there is a fair degree of seismic survey coverage. It then goes to lesser and lesser degrees in parts of the North West Shelf, and for other parts of our continental margins is fairly limited. The federal government has been involved, through organisations such as the Bureau of Mineral Resources, now Geoscience Australia, in undertaking surveys of those areas of industry interest, but also for marine jurisdictional reasons as well. I would say that we are still to come to terms with precise knowledge of the geology, let alone the petroleum potential, of some of those areas. That does not mean that we can tomorrow go and point to where there might be petroleum in those regions. It is a very piecemeal and iterative process and, if government was to make it easier, it is probably going to happen at lower cost where you have the most data presently.

Some groups in the industry are very active in terms of considering frontier areas—that is part of their corporate strategy—and others less so. We can only let the players do what is their role or what they perceive to be their best role in a commercial sense, allow them access to the information that is currently available or encourage them to collect more. There are other ways. The government has in the past undertaken basic surveys for jurisdictional reasons, as I mentioned. There are other more remote technologies that people have utilised, such as looking at satellite surveys of natural slicks of petroleum and other flows in offshore areas as a means of trying to determine if petroleum exists in those areas. In part, it is a case of allowing people who are interested in these things to get on and do so within the existing regulatory framework.

If you were to ask me what was the easiest way to encourage industry tomorrow, I would say to you that it would be to make the data that is already in existence more readily available or to allow those players who wish to be in that game of utilising data ready access to that information. There are strict commercial limits in terms of when data is submitted by industry. There is a two- to five-year period, depending on the commercial sensitivity of information, but

a lot of that data that is in existence is in old formats and needs to be transcribed in up-to-date, more dense and more compact form so that it can be readily available.

If you had a pool of money that you wanted to throw at that, making that data in a more compact form readily available would be something that would really assist the decision-making processes of industry without necessarily trying to steer them to a certain geographic location or region. Let them get on with the work but assist them by helping with that data being readily available.

Mr CAMERON THOMPSON—Earlier, Mr Hatton asked about oil shale. It has often been said by the proponents of that that it is potentially a massive resource. Do you agree with that? Is it something that, if the technical difficulties can be overcome, will result in Australia being self-sufficient? How do you see the potential for oil shale, if its technical difficulties are overcome?

Dr Lavering—Oil shale in Australia is somewhat similar to oil shale reserves around the world. They are a large resource. They do exist. However, the costs of extraction and processing are fairly high in terms of the technology. It is one of these things that remains to be utilised if it is commercial and if it meets the environmental standards at some time in the future when resource scarcity dictates that or it may be that we will make the transition to more gas resource utilisation rather than switching to the oil shale.

It is a balance between the large resource that is there for gas and the large resource that is there for oil shale. Does the technology make one more readily usable, in terms of the technology and environmental boundaries that we face, or is the price such that it is going to be more advantageous to switch to wider use of gas resources? That is my view on it. It tends to be dictated to by the nature of the technology and the costs that are involved, both environmental and technological.

CHAIR—Dr Lavering, thank you for your appearance before the committee today.

[12.30 p.m.]

EARLY, Mr Gerard Patrick, First Assistant Secretary, Approvals and Legislation Division, Environment Australia

FORBES, Mr Malcolm Andrew, Assistant Secretary, Environment Assessment and Approvals Branch, Environment Australia

KAHN, Mr Tim, Director, Mining and Industrial Section, Environment Assessment and Approvals Branch, Environment Australia

REVILLE, Dr Barry, Assistant Secretary, Heritage Assessment Branch, Environment Australia

CHAIR—I now welcome representatives from Environment Australia and ask you to make a short opening statement before we proceed to questions.

Mr Early—The main purpose of making a submission was to provide the committee with information on how the Environment Protection and Biodiversity Conservation Act 1999 operates in relation to exploration. That act, commonly known as the EPBC Act, is the key Commonwealth environment protection legislation. It protects matters of national environmental significance and Commonwealth land.

Exploration that is likely to have a significant impact on matters of national environmental significance or on Commonwealth land must be referred to the minister for the environment to determine whether or not it is a controlled action and therefore would require assessment and approval by the environment minister. Exploration proposals that are assessed under the EPBC Act enjoy an effective and streamlined process that provides certainty. Key features include: the Commonwealth only undertakes assessment and approval for matters of national environmental significance. The proponent can trigger the act as early as possible to avoid delay. Statutory time frames are set to avoid delays. Proponents know up-front whether a project or activity will trigger Commonwealth involvement. Environmental, social and economic factors are all integrated into the decision-making, guidelines have been prepared to assist proponents to determine whether an action has a significant impact on a matter of national environmental significance, and specific guidelines concerning large cetaceans have been developed for offshore seismic exploration activity.

Environment Australia also has a standing committee on environmental approval processes for offshore acreage with the Department of Industry, Tourism and Resources and the Australian Petroleum Production and Exploration Association, APPEA, is also a member of that committee. We meet quarterly to coordinate and facilitate the handling of offshore development proposals. That committee is currently preparing a booklet to assist the offshore exploration industry.

In practice, few mineral and petroleum exploration projects require approval under the EPBC Act. There have been 60 mineral and petroleum exploration projects that have been referred under the act; 36 have required no assessment or approval; 17 did not require assessment or

approval as they were conducted in a particular manner that avoided an adverse impact on matters protected; and only four required assessment and approval, all of them in very sensitive environments, namely, Christmas Island rainforest, the Townsville Trough adjacent to the Great Barrier Reef World Heritage area; and in a whale migration route near Scott Reef, which has been approved. There was another drilling of an exploration well in the Otway Basin near a whale migration route. That was controlled action but was subsequently withdrawn when after a 3D seismic survey the company decided it did not want to pursue the drilling at that time.

Another key aspect of the EPBC Act is the ability to remove duplication of processes through the use of accreditation. Through the development of bilateral agreements, state and territory environmental assessment processes are being accredited and, to date, bilateral agreements have been put in place with Tasmania, Western Australia and the Northern Territory. The Commonwealth and Queensland have agreed on the text of a draft bilateral which was released for public comment recently, and agreements are progressing with the other states.

In the absence of bilateral agreements, state and territory environmental assessment processes are accredited on a case by case basis where appropriate. Coordinated assessments between the Commonwealth and states have also been conducted to minimise duplication. A strategic assessment has also been conducted under part X of the EPBC Act on offshore petroleum exploration and appraisal activities in Commonwealth marine waters. This strategic assessment will enable the Commonwealth environment minister to endorse a program covering the selection and release of offshore exploration acreage, the award of exploration titles, exploration activities and appraisal activities.

The outcome of the strategic assessment will be an invaluable tool for the offshore exploration industry. It will provide industry with a clear understanding of the types of petroleum exploration activities likely to trigger the EPBC Act and it is also likely that exploration activities carried out under that program will require a lower level of assessment. Through the guidelines, bilateral agreements, strategic assessments and a streamlined operation, the EPBC Act protects Commonwealth environment interests and responsibilities in a sensible manner without impeding exploration.

CHAIR—Thank you for that. You mentioned the striking of bilateral agreements with the states. I believe there have been some problems in striking an agreement with South Australia. Can you explain to me what the problems are and why there is a problem with South Australia coming to the party?

Mr Early—South Australia have taken the view that they do not wish to enter into a bilateral agreement with the Commonwealth. They are the only state or territory to take that view and they are choosing instead to rely on case by case accreditation as projects come up.

CHAIR—Have they given a reason for not wanting to join?

Mr Early—No. They have basically said they do not want to enter into a bilateral agreement. They have not articulated any particular reason in correspondence with the Commonwealth.

Mr CAMERON THOMPSON—Earlier this morning we heard from the CSIRO. They have been grading the things that are regarded as impediments to mining exploration in Australia. We also heard that a very large part of Australia's export income was at risk—\$42 billion. They

scored the environment—or green tape—as being an area in which Australia scored higher than in other areas, so we have at least a perception among people involved in mining that there is a lot of green tape and a lot of bureaucratic focus on the environment. Why do you think we would have that?

CHAIR—I might add that a high score in that case was a bad score.

Mr CAMERON THOMPSON—Yes. Why do you think that would be the case?

Mr Early—I think it is perception, to be honest. If you look at the facts, there were 60 referrals of which four required approval under the act, one of which was withdrawn. Part of the reason why the government introduced the Environment Protection and Biodiversity Conservation Act was, in fact, to upgrade it. There were concerns under the previous regime about certainty for industry. There are basically two primary objectives behind this act. One is increased environment protection and biodiversity conservation and the other is a better outcome for industry and greater certainty.

If you look at this act, every time there is a decision by the Commonwealth there is a statutory time frame to be met. For example, if somebody puts in a referral under the act, they get an answer within 20 days as to whether or not it is a controlled action. For 56 of those exploration activities, they have had an answer within 20 days that they do not need to be involved with Commonwealth environment legislation.

Mr CAMERON THOMPSON—Is it something that comes from the state level? We have all heard the story about, ‘You can’t go there because there’s some sort of toad or frog that’s a problem.’ This seems to be out there in the public’s mind.

Mr Early—As you know, the states have the constitutional responsibility for land management and, clearly, their environmental regimes cover this area as well. There are a variety of different regimes in place among the various states. I think there is a combination of perceptions about individual states and perhaps perceptions about the previous Commonwealth regime, but really the facts speak for themselves with regard to the existing Commonwealth regime.

Mr CAMERON THOMPSON—What can be done to iron out some of these myths?

Mr Early—We would encourage all of the jurisdictions in Australia to come up with state-of-the-art new legislation along the lines of the Environment Protection and Biodiversity Conservation Act.

Mr CAMERON THOMPSON—Do you think these bilateral agreements will end the confusion?

Mr Early—They will certainly make the assessment processes easier because the bilateral agreements will ensure that, where there is a controlled action under the EPBC Act and it is done under the bilateral agreement, there will only be one assessment process. Companies will go to a state or territory environment agency, run through the assessment process, and then at the end of the day that report will go to the state or territory minister and to the Commonwealth minister for consideration. There is no duplication of activity at all.

Mr CAMERON THOMPSON—In the examples you gave, there were some whale migration zones.

Mr Early—Yes.

Mr CAMERON THOMPSON—Are they clearly identified or is it basically just the Southern Ocean?

Mr Early—No, they are clearly identified. They are also identified as per times of year when they apply. We can leave a copy of our guidelines on these issues with the committee, if you wish. There are maps at the back which specify the dates and the locations of important whale habitat. Many of those that I said were not controlled actions because they were being done in a particular manner were companies avoiding the times. It is fine to do the seismic surveys and exploration activity when the whales are not there, so companies generally say, 'We'll do it and avoid the specified times.'

Mr CAMERON THOMPSON—In closing, to give you an example of something that may have helped contribute to the myth that you are talking about in this regard: with the Mount Todd gold deposits in the Northern Territory there was talk about the Gouldian finch that went on for years before they finally had that mine operating, and then I think it was closed within a year because it was not prospective. The point is that far greater effort went into pursuing the Gouldian finch than in the end went into pursuing gold. What happened there? Was it something that involved you guys?

Mr Forbes—We would have had an involvement. It was a bit before my time, but I think it would have been a whole combination of things.

Mr Kahn—I believe it was assessed under the Commonwealth Environment Protection (Impact of Proposals) Act 1974, the previous act, jointly with the Northern Territory. So it was an EIS under both pieces of legislation, jointly done.

Mr CAMERON THOMPSON—How are we better off today than we were at that time? Is it easier?

Mr Kahn—Under the new regime?

Mr CAMERON THOMPSON—Yes.

Mr Kahn—The Commonwealth interests would be more focused. In that particular case it is likely that the Commonwealth would be involved, in the sense that the Gouldian finch is an endangered species and it is only found in a restricted number of areas, but the process would be similar. Now that the Northern Territory has signed a bilateral agreement, it could be assessed under a bilateral agreement, so it would be even simpler than before.

Mr Early—Under the Commonwealth legislation now, we concentrate on only those matters of national environmental significance, whereas previously under the old regime, which was very ad hoc, it depended on whether or not there was a Commonwealth decision to be made. For example, you could get similar projects, one having Commonwealth involvement, the other not having Commonwealth involvement, and companies did not really know what the ground

rules were. Now the matters of national environmental significance have been spelled out. If one of those were involved, then the Commonwealth does get involved, but only in relation to that matter. It is not the broad-scale assessment that happened previously.

Mr CAMERON THOMPSON—We would not be as interested in the Gouldian finch?

Mr Early—Yes, we would be involved in the Gouldian finch.

CHAIR—We are interested in jobs now.

Mr CAMERON THOMPSON—No. Apparently we are still interested in finches.

Mr Early—This legislation came about as a result of an agreement by COAG, where all the chief ministers, the premiers and the Prime Minister signed off on that notion that the Commonwealth had a role on matters of national environmental significance. We would argue that if there are species that are threatened as a result of a project, then it is entirely appropriate that the Commonwealth should be involved in the assessment and approval of that project.

Mr CAMERON THOMPSON—With that perception of the environmental green tape in the case of the Gouldian finch, we are really more or less where we were then? I would have to say that that went down as a classic.

Mr Forbes—The circumstances now are that there are set time frames, whereas in the past there were not. We have statutory time frames within the new legislation which did not apply in the past.

Mr CAMERON THOMPSON—So it would wrap it up in—

Mr Early—For example, if someone makes a referral, as I said, they get a decision within 20 business days. If it is a controlled action, they then provide some more information and we make a decision—I think it is within 30 days—about the level of assessment. When the assessment is finished, we then have about another 30 days to give approval. It cannot drag on and on in the way that some projects did in the past. It is a much more streamlined system. At the end of the day, the Commonwealth will always be interested in the protection of the Gouldian finch. I would argue that that is entirely appropriate.

Mr CAMERON THOMPSON—Are you saying to me that, in the process of approving the Mount Todd goldmine, the issue would have been resolved quicker; we would have come to a regime to protect the finches quicker?

Mr Early—That is what I am suggesting. I am saying that a little bit in ignorance of what happened in that case, but certainly it is a much more streamlined process with time frames all along the way.

Mr TOLLNER—Following on from Mr Thompson—not so much about Gouldian finches—certainly public perception in the Northern Territory is that the Commonwealth panders to green minority interests and the like. Of particular concern to most of the public in the Territory is that Ranger uranium is continually faced with environmental checks all the way through which

never seem to come up with any particular adverse findings but cost the company quite a lot of money through the process. In the last four years there have been two or three Senate inquiries, as well as a whole range of other stuff. Would you agree that there is a public perception out there that the Commonwealth panders to these minority groups in relation to Ranger?

Mr Early—No, I would not agree with that. I think there would be as many people who would argue the contrary. There would be as many people saying that the Commonwealth panders as there are other people saying the Commonwealth allows ERA to do what it likes. I would suggest that neither of those views is accurate. I think the Supervising Scientist does a really good job.

Mr TOLLNER—Do you think it is appropriate that they have been to three Senate inquiries?

Mr Early—The Senate inquiries are not to do with the Commonwealth, as such; they are to do with the Senate. But in terms of the Supervising Scientist, his responsibilities in relation to the Ranger uranium mine came out of a public inquiry many years ago, as you know, and we would argue that they are entirely appropriate for a matter of such national environmental significance.

Mr TOLLNER—Of course, when I talk about the public perception, I am talking about the Northern Territory public, who have most to gain or lose with ERA in that particular case. With the incorporation of the Commonwealth's cultural heritage responsibilities under the EPBC Act, there has been an opportunity to ramp up cultural heritage provisions. Do you see that this has been the case?

Mr Early—I will ask Dr Reville to deal with that question, as he is from our heritage area. Those provisions are still before the parliament, so there is no actual change to the old regime at the moment.

Dr Reville—The new heritage amendments before the parliament are part of the COAG decision in 1997 to rationalise the Commonwealth's involvement in terms of national environmental significance. The intention is to repeal the Australian Heritage Commission Act, which has existed since 1975, and to establish a national heritage list so that the places on that list would be of truly national heritage significance. The register of the National Estate covers local, state, national levels of significance and consists of about 13,000 places. That is the primary intention of the new legislation. There will also be a list of Commonwealth heritage places.

I guess again it depends on your point of view. The statutory issues associated with section 30 under the Australian Heritage Commission Act in relation to places on the Register of the National Estate would disappear. The primary focus would be on the national heritage list, which again would be of places only of national heritage significance. Under the current material before parliament, it would be the minister of the day who actually makes the decision about listing rather than the Australian Heritage Commission.

Mr TOLLNER—I imagine Kakadu would appear on that list.

Dr Reville—Kakadu is already on the World Heritage List. If Kakadu is nominated and assessed by the Australian Heritage Council, which will be the body doing the assessment of significance, as having national heritage values—and these will be specified in the regulations to the legislation—it would then be up to the minister of the day whether to put it on the national heritage list for those national heritage values. It would not affect its World Heritage listing. It would be presumably looking at a different set of values.

Mr RANDALL—Part of the terms of reference regarding impediments into increased mining and petroleum exploration in Australia include access to land, including native title and cultural heritage issues. In your ‘Summary of main points’, you state:

Cultural heritage is protected under various Commonwealth Acts. Minerals and petroleum exploration proposals infrequently fall within the jurisdiction of this heritage protection legislation.

... ..

The management of Commonwealth heritage responsibilities is being further improved through a set of Bills ...’

And you have just referred to them. Recently you were speaking to prospectors in Western Australia about land that is cleared for heritage. You are saying that this is largely a state issue. Do you have an input into multiple heritage listings on particular leases?

Dr Reville—The involvement we have had in Western Australia recently has been mostly under the Aboriginal and Torres Strait Islander Heritage Protection Act which dates from 1984. That is only invoked when an Aboriginal person or someone representing an Aboriginal person makes an application for protection where there is a place which is threatened. That is on a case by case basis. We have not had a particular involvement in Western Australia under the other pieces of legislation in a way that has affected prospecting at all recently.

Mr RANDALL—My point is that I am told by various prospectors that there are multiple, sometimes overlapping, heritage claims on particular bits of land by different Indigenous groups and that various companies going to that same bit of land have to have a heritage clearance, even though it has been cleared previously to one company. How do you view that? Once cleared, should it just be cleared then forever?

Dr Reville—I do not think that has been involving us. It would be normal, I think, for there to be fairly intensive consultation with Indigenous groups—and there may be several Indigenous groups who would actually claim to have responsibility for an area, and I suspect it is referring to that—but I do not think this would be something that is currently happening under Commonwealth legislation.

Mr Early—I think that is probably state legislation.

Mr RANDALL—It is, but you are saying that you are trying to make it more transparent and workable by working with the states in a bilateral manner. How are you doing that?

CHAIR—And by striking bilateral agreements.

Mr RANDALL—Yes, but it appears not to be happening.

Mr Early—There is not a lot we can do in relation to state and territory legislation, but we can make our own legislation as transparent as possible by having, as I said before, the time frames and the processes and clear exactly what is happening at the Commonwealth level. If there is a Commonwealth involvement in an issue and the state is also involved, we can use a bilateral agreement to streamline that. But when the states are doing their own thing, if you like, under their own legislation, really there is nothing we can do about that.

Mr RANDALL—The following question then is in relation to that. Once you have given it a heritage clearance through your legislation—or our legislation, or whatever—is that land then cleared forever? How long does it last? If a new company comes along, do you then do a completely new heritage clearance again?

Mr Early—I do not think we would be giving clearance in that way. But to get back to a sort of generic issue: if the Commonwealth government gives approval under its legislation and the company needs approval under state government legislation, they will have to get that; they need both basically.

Mr RANDALL—Yes, but if the Commonwealth does it, can it be seen as setting some sort of leadership, precedence or whatever that the states might wish to tag on to?

Mr Early—It might show some sort of leadership, I guess, but the states can go through their own state processes under their laws; they can do what they like basically.

CHAIR—The second part of my colleague's question was: once cleared, can it be cleared for a foreseeable period rather than every new proponent having to go through the hoops once again?

Dr Reville—Perhaps I could respond. I presume this refers primarily to Indigenous issues. The Commonwealth has in the past attempted to introduce a replacement for the Aboriginal and Torres Strait Islander Heritage Protection Act which, in the form it was introduced, would have set up minimum standards for accreditation of state legislation. It would have meant that under the state process, because it was accredited, there would not be any further appeal to the Commonwealth except in cases of national interest. That legislation has not been reintroduced since the last election but it is a commitment of the government to reintroduce that legislation. In terms of Indigenous heritage issues, the sort of thing that is covered by the current Aboriginal and Torres Strait Islander Heritage Protection Act, that is attempting to set in place an accreditation system whereby the state would have the primary responsibility for actually doing the assessment of significance, for example, and that would be honoured by the Commonwealth.

Mr RANDALL—Therefore, the answer to the second part of my question is: not yet, not until the new legislation.

Dr Reville—For that particular case where a place is under threat, that is correct. Once that legislation is passed, especially with minimum standards for accreditation, that should simplify the system. This is something which government has been working on for some time to try and get through.

Mr RANDALL—The final question is: who watches you? Who do you answer to?

Mr Early—We answer to the minister for the environment.

Mr RANDALL—That is the only person who overarches or has a watching brief on your body, Environment Australia?

Mr Early—We are subject to the normal processes of admin law. If people want to challenge our decisions in the courts or whatever, they are able to do that.

Mr RANDALL—Does the Auditor-General audit—

Mr Early—Yes, the Auditor-General. In fact the Auditor-General is currently doing an audit of our processes which will be in the parliament some time next year. We are subject to all the normal Public Service—

Mr RANDALL—If somebody had a complaint about you, who would they address it to?

Mr Early—They could go to the minister or the Prime Minister, or they could go to the Ombudsman, or the Auditor-General, or they could take it to the courts. There are all the usual avenues.

CHAIR—Court is a fairly involved and expensive process.

Mr Early—That is true.

CHAIR—There is a saying, ‘If you fight the Commonwealth, the Commonwealth has deep pockets.’

Mr Early—That has not stopped a few people in the past.

Mr RANDALL—Yes, but how about the little prospector—

CHAIR—My colleague is quite right. It does not stop the big guys, but the small guys are the ones that are disadvantaged. I guess where we are trying to come from is—and I pick up on my colleague’s question—what process is there for the juniors, if we can call them that, in the exploration area to have fair access at an affordable price when they feel as though they have been aggrieved?

Mr Early—As I said, there are processes under the act to seek reconsideration of decisions through the minister. There are political pressures, obviously, that can be brought to bear through—

Mr RANDALL—Yes, but the answer to that is that there is not a clearly defined mechanism to actually make adverse comment about you, because we know that if it is left to a political decision it is not satisfactory. There should be a clearly defined mechanism where people can go and address their concerns about the way you operate. I am not saying that you are operating poorly; I am saying that, if somebody had a complaint, there seems to be a pretty nebulous way of dealing with it.

Mr Early—That was obviously one of the considerations when this act was being drafted as a bill. As I said, it is a two-edged sword. If you have an appeals body—for example, the Administrative Review Tribunal could be brought into the act—that means that every time some third party does not like one of our decisions, too, they can also appeal to that. I think the general view of the government was that having some sort of administrative appeal mechanism would actually reduce the certainty that is available under this legislation, because companies can appeal our decisions that they do not like, but our decisions that they do like can also be appealed.

CHAIR—Under your act you cannot take an appeal to the Administrative Appeals Tribunal?

Mr Early—No, it does not have jurisdiction, but there are third party rights, as I said, before the courts under the act. People can also seek reconsideration of decisions through our minister.

CHAIR—I might add that the act you have on the table is nearly as weighty and large as the tax act.

Mr Early—It is very simple, though.

Mr RANDALL—I would like to see the summary. That probably is the summary.

CHAIR—There being no further questions, I thank you for appearing before the committee today, and generally I would like to thank the witnesses who have appeared before the committee today.

Resolved:

That the following exhibits be incorporated into the records of the committee: exhibit No. 35, *The Economic Time Bomb*, lodged by CSIRO Exploration and Mining and exhibit No. 36, summary and slides of the introductory statement by Mr Robin Widdup, lodged by Lion Selection Group Ltd.

Resolved:

That this committee authorises publication, including publication on the parliamentary database, of the proof transcript of the evidence given before it at public hearing this day.

Committee adjourned at 1.03 p.m.