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**HOUSE OF
REPRESENTATIVES**

STANDING COMMITTEE ON INDUSTRY AND RESOURCES

Reference: Resources exploration impediments

FRIDAY, 7 MARCH 2003

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HOUSE OF REPRESENTATIVES
STANDING COMMITTEE ON INDUSTRY AND RESOURCES

Friday, 7 March 2003

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

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

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 10.28 a.m.

DAWNEY, Mr Rodney Lawrence, Member, Queensland Mining Council Exploration Committee; Exploration Geologist, Australasian Mineral Exploration Consultants Geoscience

JOHNSTON, Mr Michael David, Member, Queensland Mining Council Exploration Committee; Manager Exploration, Placer Dome Asia Pacific

WALLACE, Mr Ian, Member, Queensland Mining Council Exploration Committee; Administration and Commercial Manager, Broken Hill Proprietary Billiton Minerals

CHAIR—I declare open this seventh public hearing of the House of Representatives Standing Committee on Industry and Resources inquiry into the impediments to investment in resource exploration in Australia. I welcome everyone here today. The witnesses appearing before the committee today are the Queensland Mining Council, CS Energy Ltd, Origin Energy, the Queensland government, the Economic Geology Research Unit of James Cook University, Lantana Exploration, Gnostic Exploration Services, Terra Search Pty Ltd, Glengarry Resources, GM Derrick and Associates, Queensland Geological Services, Geo Discovery Group, Mr John Anderson, Mr R.J. Morrison and one in camera witness.

I remind witnesses appearing before the committee today that the evidence you give at this public hearing is considered to be part of the proceedings of the parliament; therefore, I remind you that any attempt to mislead the committee is a very serious matter and could amount to a contempt of the parliament. I welcome representatives from the Queensland Mining Council. Do you have any comments to make on the capacity in which you appear?

Mr Wallace—I appear as a representative of a member company for the Queensland Mining Council.

Mr Johnston—I appear as a representative for the Queensland Mining Council as well.

Mr Dawney—I am an associate member of the Queensland Mining Council. I am also here as an exploration geologist, the principal of AUSMEC, a consulting firm in geology, and a user of large quantities of geoscience data.

CHAIR—I invite you to make a short opening statement before we proceed to questions.

Mr Johnston—On behalf of the Queensland Mining Council members, we thank the committee for the opportunity to present a brief overview of the Queensland position and to answer any questions related to the terms of reference of these current hearings that the committee may have. Mr Wallace and Mr Dawney will assist me in responding your questions.

Mr Wallace, Mr Dawney and I, either through our companies or as individuals, are members of the Queensland Mining Council. The Queensland Mining Council is the peak industry association in Queensland, representing the interests of a wide range of mineral producers, industry service providers and explorers of commodities, including coal, gold, silver, lead, zinc, copper, titanium, bauxite, petroleum, gas and magnesium. Members account for \$10.3 billion of mineral production annually, over 95 per cent of Queensland's mineral production. The council

is funded solely by fees levied on exploration and mining companies with operations or interests in Queensland and organisations servicing the exploration and mining industries. There is common company membership with the Minerals Council of Australia in Canberra, but there is no constitutional linkage between the two organisations.

In appearing here today, we are very conscious of the fact that the committee has already received almost 100 written submissions and 30 or so verbal presentations. Clearly, we do not wish to beat the same old tune; rather, we wish to briefly highlight the special circumstances of Queensland's situation and the urgency required to address it. Our suggested solutions will not be unique—they rarely are—but the urgency of Queensland's situation certainly is unique. This is not an alarmist statement designed to make a point. Discovering, defining and producing minerals at the behest of society requires a seamless sequence of events, one dependent on the other. Break that sequence and the very fabric of the economic, social and cultural wellbeing of a society dependent on minerals is severely impacted upon. A society dependent on the maintenance of a viable and significant minerals industry cannot afford to break that seamlessness—that is, discovery, development and production. Its future depends on it.

What is Queensland's dilemma? Put simply, for the first time in its mineral industry history, Queensland is producing from its existing mining operations more minerals than it is replenishing by discovery. This alarming situation has been going on for about eight years, with no sign of any significant improvement. The situation is even more alarming when one realises that, based on today's production rates, technology and mineral reserves, all Queensland's goldmines and all but one of its base metal mines will be worked out by the year 2020. You can see that in our submission.

This is a critical issue not only for Queensland but for Australia, and it needs addressing urgently. The timelag between exploration and major discovery and mine production is now in excess of 10 years, whereas a decade ago it was probably of the order of five years for smaller deposits. Queensland consistently delivered world-class discoveries in a range of commodities during the 1960s, 1970s, 1980s and the early part of the 1990s. Currently, Queensland is experiencing a downturn in exploration expenditure of crisis proportions, which is leading to low discovery rates. As a result, Queensland is drawing down on its known mineral reserves faster than they are being replaced. This is clearly unsustainable and, without urgent redress, will result in a serious structural decline in the Queensland metalliferous mining industry.

Queensland's social and economic future is inextricably linked to the success of its minerals industry. It generates 53 per cent of the state's exports, over \$700 million annually in royalty payments and 86,000 direct and indirect jobs. None of these benefits can be sustained if mineral exploration is curtailed. This is not a grievance; it is a statement of fact.

The dramatic reduction in exploration expenditure stems from a number of related factors which we are sure the committee has been made aware of in submissions in previous hearings. Clearly some of the major international factors contributing to the downturn in the exploration spending rate relate to the global economic decline and the resulting downturn in metal prices, official gold sales by major central banks and a wave of industry consolidations among international mining companies.

In Queensland these international impacts have been compounded by home-grown factors, the most serious of which is the inability of explorers to obtain access to land. Such was the

disarray in Queensland resulting from the introduction of Commonwealth native title laws and the moving feast of High Court decisions looking to interpret those laws that successive Queensland governments actually froze the grant of exploration permits for applications in the period December 1996 to September 2000 in respect of land where native title might exist. In that four-year period, a backlog of 1,800 mineral tenures developed, 1,100 of which were exploration permits. Over 70 per cent of Queensland could be subject to native title claims. The impact of native title on land access issues is much more severe in Queensland and Western Australia than in any other state.

In September 2000, the Queensland government introduced its own alternative native title state provisions in an effort to rectify the situation. But it did not rectify it. In November 2002, since the initial Queensland Mining Council's submission to the inquiry, the Queensland government announced that it would repeal the state native title provisions effective from 31 March 2003 and commence to use the Commonwealth Native Title Act as of 1 July 2003. Currently the industry is awaiting advice on the implementation of the Commonwealth act and the policies and procedures that will be adopted during its implementation. In the meantime, greenfield site exploration is at a standstill and brownfield site exploration is drying up rapidly.

Not only is it difficult to get access to land in Queensland; the initial cost of getting on the ground to explore has escalated to an uncompetitive level. This is hardly the environment that will attract exploration dollars to Queensland by those explorers still with the ability and enthusiasm to fund exploration programs. They will move and are moving interstate or offshore. No matter how prospective an area is or how large the incentives provided are, they are meaningless unless exploration permits are issued at competitive cost.

Currently, in some cases greenfield explorers are often required to spend more dollars to fund native title requirements and legislative procedures than they propose to spend in their initial exploration program. This has a particularly savage impact on the junior exploration sector, which dominates the greenfield project generation sector. This sector is also experiencing great difficulty in raising capital for exploration. In our submission, we strongly support the introduction of incentives to ease this situation.

The simplest, quickest and most cost-effective approach to achieve access to land for the purpose of carrying out exploration is to make all exploration permit grants and exploration activities classes of future act in the Commonwealth native title act that are valid provided native title holders are provided with the same procedural and compensation rights as other holders of land title in Queensland. We would urge the inquiry to recommend an amendment to the Commonwealth Native Title Act to reflect this. While recognising that minerals are owned by the states, the Commonwealth cannot and must not stand back and let the states continue to grapple with the Native Title Act in its present form.

The act is fundamentally flawed in its application to the activity of exploration. Mineral exploration in the Commonwealth Native Title Act is deemed a right to mine, triggering the full right to negotiate process, although clearly the activities, term of access rights, impacts, risk factors and capacity to raise funds are substantially different to mining. If the native title procedural concern is removed as it applies to the high-risk exploration industry, then other government initiatives must be put in place to create the attractive environment to snare exploration dollars to Australia. This council's seven recommendations to achieve this are listed in our submission.

The council strongly supports these initiatives but without access to land and the issuing of exploration permits they become academic and a mere window-dressing. To date, Australia has relied on political stability, prospectivity, security of tenure, excellent infrastructure and a competitive exploration cost environment. No longer can Queensland purport to have security of tenure and a competitive cost environment. Many of our strengths have become our weaknesses and it is largely of our own doing.

Finally, we wish to state that the industry is supportive of national and state developments in cultural heritage and environmental management. This has come about because of the extensive consultation with stakeholders in the development of the relevant legislation, in contrast to native title, which has been thrust upon the industry and the states. We welcome the opportunity to respond to any questions the committee has at this time.

CHAIR—Thank you. To what degree do your members benefit from government provision for pre-competitive geoscience data? Is the availability of this data marginal or essential to your member companies' exploration strategies?

Mr Johnston—The availability of geoscience data is essential to exploration. It gives us a leg up. It puts us in front of countries or states where you cannot access that data. It allows companies in particular to prioritise those regions much higher for their expenditure and that is a big advantage to the junior sector.

Mr Dawney—The field I work in is the arranging, organising, buying and replacing of pre-competitive geoscience data. It does not always come from government. Government has a huge role to play. It is very essential, for the reasons Mike explained. I would like to pick on the junior sector and the consulting sector or geologists working as individuals. They will not use their expertise if they cannot get the pre-competitive data at a cost they can afford and in a format they can use. From there, the leverage, as I have seen in practical circumstances, is enormous. It is also how we are going to attract, above other nations, international companies to Australia.

The world is one place now and they sit in London or wherever they may sit and look at the countries. The ready access to suitable data is very high on their list. They do not have to come here to sort the country out and say, 'Yes, this is spectacular,' because the magnetic surveys, the radiometric surveys, the geochemical surveys have been done. Their costs are now, instead of being half a million to get into a country, \$10,000 worth for a quick look and they are here. Other countries get scratched off. That is in my experience.

CHAIR—You are really saying that, now that the mining industry is basically globalised—for want of a better word—when a CEO in London makes the decision as to where to invest his exploration dollars, we are more likely to get that commitment in Australia if we have good data?

Mr Dawney—Certainly. It may not be the very highest but it would be one of the top three.

CHAIR—It keeps us in the game.

Mr Dawney—You probably already know the trend is to do that with AGSO changing a little bit what it does and the data it collects and its pricing structure—it is now down to cost

recovery of writing a CD—and the states following. I feel now that what we need is more appropriate data. The structure is already there to supply it reasonably well.

CHAIR—Who should pay for that?

Mr Dawney—Society in general because it benefits amazingly from our mining.

CHAIR—Are you saying society is government?

Mr Dawney—Yes. Government manages the taxes. It should be tax funded, yes, that is right.

Mr HATTON—Seemingly, from the mining industry it always should be tax funded when you are providing information. Most of the thrust of which are saying is that the company should not be paying but the government should be.

Mr Johnston—The companies have already paid once through royalties. It is up to government—

CHAIR—But royalties go to the state.

Mr HATTON—Yes; not to the Commonwealth.

Mr Johnston—The Commonwealth benefits from PAYE taxes.

Mr HATTON—I have a belief that if you are in exploration and you are out to make a buck, either in dividends or in increased share prices, for the people who are benefiting from that, there is some weight on the companies to bear some of the cost. The relativities of the cost you can argue about, but the general thrust of this and a number of the other submissions we have had is that the Commonwealth should be doing just about everything, without enough weight being put on what your actual running costs are and the extent to which you could cooperatively put in to the exploratory work and so on. I think that that case is not made; it is just said that the Commonwealth should be coming to the table.

Mr Johnston—We do not look for handouts from the Commonwealth government for the mining industry but we would like the Commonwealth government to recognise the bigger picture, which is if we want to pay it all up front and make the people who are accessing the data pay, then industry will stall. As we have said, there is a seamless process. It takes perhaps 100 prospects for a geologist to go and look at before one of them will even get to the next stage, which is drilling. You have to recognise the whole process.

Mr HATTON—But your evidence already indicates that in terms of an entry point, to have a look at what the situation is, the factor is somewhat like 50, from \$500,000 down to \$10,000. It is a dramatically decreased entry cost. That is a benefit we have got and something we can use to sell ourselves to the world.

Mr Johnston—Exactly. You have only got to compare it. Access to data in Australia is relatively free and readily available on an international scale at the moment. The more competitive you can keep it, the more competitive Australia will be in a global sense. The

mining industry at the top end of the market is global. I work for a global organisation but we rely heavily on junior and right down to individual prospectors actually doing the initial work. We cannot afford to have thousands of people stationed throughout the world in every country out there physically looking.

Mr HATTON—In your written evidence, you have indicated that the costs of getting to that information in Queensland are higher than in other states. Is that still the case?

Mr Johnston—Yes.

Mr HATTON—Are there indications that those relative costs are going to decline in the future?

Mr Johnston—One of the costs is the cost of time. It is not a physical dollar cost but the longer an application for an exploration licence is in suspension, if you like, the more chance there is that there are pressures on budgets. All companies and even small individuals suffer from the same thing, which is managing their cash flow in their budgets. If you have a good idea and you want to go and test it, the sooner you can go and do it the more chance there is that it will be done. If it has to go in suspension for 18 months, or in the case of Queensland four years plus, then the organisation will suffer fatigue and will not go ahead and make the investment. They will not even do the initial work. That is what you are seeing in Queensland and, to a point, you have seen in Western Australia. In Western Australia people have used native title as a means of locking ground up. Now it is starting to become free and they have to either pony up or get out. You are starting to see ground become available. Queensland is still suffering from this logjam of native title.

Mr Dawney—I would like to add a comment on the pre-competitive geoscience data. Yes, the trend is there and it is very good and very welcome and there are already benefits. There are smaller groups now generating targets with data that was not economically available and feeding the larger groups. I am certainly one of them and my clients have benefited, but that is with existing data. A lot of that is very good but it should not be said that the whole of Australia is geologically mapped and we do not need any more. We cannot say, 'We'll just make it available for \$100 for the whole of Australia's geological maps.' Probably 80 per cent of them are out of date and they are certainly not up with modern geoscience.

Geoscience is like the medical sciences: you could not freeze medical knowledge back 20 years ago and expect the advances we have today. Geoscience is like that, and therefore the data that is provided by government needs to reflect that. Thus the maps of our most magnificent Mount Isa district, which is one of the most metal-endowed areas on the planet and could attract anyone in the world who wants lead, zinc and probably gold, still cannot easily get the airborne magnetic data which is a critical thing for assessing the area.

Mr HATTON—This is where we get into future cost. The historical stuff is more readily available, but the future cost is much greater because, instead of just wandering around and looking for outcropping, we have the problem of the mantle shield and getting underneath that.

Mr Dawney—That is another trend, but we should not forget the outcropping areas. You could search for 1,000 years and still find deposits that have been walked over for those 1,000 years. With change of commodity and change of thinking, it is a very dynamic science that is

going ahead in change in understanding just as fast as any other, and that is not being reflected in our products at the moment.

Mr ADAMS—Is it important to get this onto one type of modern technology so it can be delivered on CD-ROM and then overlaid with the new information as it comes in—

Mr Dawney—Yes, the tool we use is GIS. The thing that drives that is computers. It allows knowledgeable people—like I claim I am—to much more rapidly than ever before handle this data and come up with better and better places to drill. Sometimes these are within one kilometre or five kilometres of something that may have been found 50 years ago. There are plenty of examples of this in our field in Queensland.

Mr Wallace—With the provision of data in Australia, you can see how it has worked. Some of the state governments have, in the past 10 or more years, undertaken initiatives which have cost the state governments millions of dollars but they have resulted in a substantial increase in exploration activity in those states. That, carried out state by state, works well, and I think we are also suggesting that something like that nationally would give Australia a competitive advantage.

CHAIR—Are you saying that the Commonwealth has a role to coordinate so that each state does not run off and try do their own thing? Should the Commonwealth coordinate and improve the data that is available?

Mr Wallace—Whether the states did their own thing or whether it was coordinated by the Commonwealth or whether the Commonwealth did it is something that you should discuss with the states. From our perspective, we are saying that with the provision of data, whether it be generated or paid for by the states or the Commonwealth, it is up to the society to decide at which level it is paid for.

CHAIR—I am trying to determine where we can get the best data without duplication.

Mr Johnston—I think, as Ian has suggested, the Commonwealth and state governments need to get together. The Commonwealth's role in this should be more as a coordinator in terms of the direction in which people are going. South Australia was the first to take one of these initiatives in the early 1990s and it resulted in a massive increase in their exploration expenditure, but only one small goldmine came out of it, which is in production now. New South Wales followed suit. If you look at the investment state by state in exploration, the level of expenditure of New South Wales, South Australia and Victoria has grown significantly, at the expense of more traditional states—Queensland in particular and to a lesser extent Western Australia. That has been from making the states be competitive amongst themselves in aggressively acquiring the data and making it available. So I think there is an element of competition amongst the states in providing the best data and the cost of the data, and when they are in competition it actually works well, as long as there is an umbrella where we are heading.

Mr Dawney—I have seen that umbrella work. The state geological surveyors get together all of the time and they have standards across the whole of Australia, organised by the states for, say, digital recording of company exploration reports and various things like that. I am not fully aware of the whole picture. I know AGSO, the federal geoscience agency—now called

Geoscience Australia or GA—plays a very good role in that. I do not see a lot of evidence of duplication because they talk. AGSO, I think, is playing a very good role. It could just do with a tripling of its budget and a few things like that. But models are already here. South Australia is spectacular. Their immediate benefit was, in the first three years—after spending \$20 million or \$15 million back then—a three-fold increase in exploration dollars, which went into the state. They were not waiting for the benefit of this goldmine. That came 10 years later.

Regional areas benefit greatly from people like me—scrambling around, hiring vehicles, buying fuel and using local earthmoving contractors. When we shifted from a Mount Isa centre to a Cloncurry centre in the early nineties, that town was uplifted from a pretty ordinary place to a bit of a tourist centre, because of the extra facilities. It is a better town, with a lot more people.

Mr ADAMS—In your submission on capital access impediments, you talk about tax. Your submission states:

Federal government to implement a series of agreed competitive tax initiatives to help re-vitalise exploration ...

Would you like to elaborate on that? I am conscious that there were cuts to company tax on the implementation of the GST. Would you like to tell me what that actually means?

Mr Dawney—That is not really my field, other than in general principles.

Mr ADAMS—It concerns capital access impediments. I am not sure that my pages are different to yours.

Mr Dawney—While Mike is getting ready, I hope, to answer that question fully, I will quickly say this: as a consultant feeding off the larger groups as well as individual prospectors to the juniors, I think that lack of access to capital has been one of the major effects on my business as a geological consultant in exploration. I am generally involved in the early stages, so I am very sensitive to any changes at that early stage, which I guess is what we are talking about. I could probably give you the month that capital dried up in the last four downturns through which I have been a consultant.

Mr ADAMS—Is that because we have not got companies listed much now on our stock exchange—that they are all in London or somewhere else?

Mr Dawney—I fear it is the perception of the investors. It is somewhat worldwide. It is also competitiveness for their money. There are always people who have money to invest in things like exploration—

CHAIR—Then all of a sudden they raced off with the tech stock.

Mr Dawney—But IT instantly dried up floats within a month because there is just a certain amount of money in it.

CHAIR—How do you get it back?

Mr ADAMS—I did not get the point of why it dried up.

Mr Dawney—The available funds to put into higher risk things—and you cannot regard junior exploration as blue chip—went straight to telecom, IT, computer software, phone systems—

Mr ADAMS—But that bubble has burst. Why hasn't that come back?

Mr Dawney—Other factors have taken over. It partly has come back since the IT bubble burst. In my experience, most of my mates are not consultants; they attract seed capital and float companies. They just shut everything down for two years. Everyone shut the coffers, the phone hardly ever rang and they just sat on their money and waited. Then the IT boom burst and some seed capitalists came back into the traditional known field of mineral exploration. I know mates of mine are working on seed capital at the moment. I know a few that have floated; they are raising smaller amounts.

The other international factors do come into it, but access to capital is a very significant one. When we watch the model in Canada, and perhaps the film industry, we see the almost instant revitalisation, because it is competitive. They think: 'IT—yes, I'll take the risk. That's in. Everyone's into it. We'll pyramid it,' so to speak, 'until there's a bust.' Everyone understands there's going to be a bust.

Mr ADAMS—We have had some evidence on the scheme of flow-through shares and we will be certainly giving that some consideration in our recommendations. But, in the evidence to this committee, the lack of capital seems to be coming through as one of the major impediments—that it is just not there.

Mr Dawney—At the moment a junior explorer in Brisbane might raise \$2 million and list, which is the absolute minimum required by the Stock Exchange. Five years ago that was sufficient to get some serious exploration done. You would probably waste half of that now before you would get onto the ground, despite what is put in prospectuses for what the first-year programs are going to be. As for the delay, there would be nothing done for at least two years. None of my mates around here in Brisbane who have done this have ground in Queensland—it is in Pakistan, believe it or not, Sweden, Argentina.

Mr ADAMS—So costs have increased if you do get on the ground?

Mr Dawney—Yes, the up-front costs, before you take a rock chip and certainly a drill hole.

Mr ADAMS—We have learned to deal with native title issues in other ways. Quite often we compare how we deal with native title issues with the States and Canada—and I think they are probably a bit more advanced than we are in sorting out directions and things. We have to deal with that and mining companies have had to deal with that. Four years is a bit of a concern. Do land councils argue that it takes four years to consult and—

Mr Johnston—No; what happened in Queensland was that the state government put a freeze on title; it refused to issue exploration licences. That was the four-year stalemate.

Mr ADAMS—That is a constitutional issue for the state and the mining industry. I do not think the Commonwealth is impinging on that.

Mr Johnston—Arguably, the reason for it was the Commonwealth Native Title Act; it was the trigger for doing it.

Mr ADAMS—So there was a need for negotiations there to sort that out, but evidently there were no negotiations and so it did not get sorted out for four years. That is the political process. What is the image of the mining industry in Queensland? I see that at the national level they have a butterfly. When I go to the dinner, which is held down there every year, people tell me that they have got lots of people working for them on environmental issues. In my own state there has been a big change from the way we used to smash through the process. We are looking at other ways of doing things and accepting that society changes and that, if we are not going to fit into that, we probably will not be mining. I see that there are problems in getting university graduates who want to go into the mining industry. That is an issue as well. Do you think the mining industry in Australia has got an image problem in the general public?

Mr Johnston—There is no question that it has. It is working hard to improve it. If you go to any of the mines run by our companies—that is, under BHP and Placer Dome control—you will see that we and all of our peers are implementing world best practice in terms of environmental and social responsibilities. All of these are changing, and you can see the changes. I still feel that Australia is leading the world in a number of these initiatives. Some of the operations in Queensland would be some of the best in the world. It is just that you are grappling with a couple of hundred years of history.

Mr ADAMS—I want to touch on that again because you had, I think you said, over four years to put in an application and then four years before you got any response. We have got over that freeze that was occurring. How long now would it take to put in for a licence and to get some approval?

Mr Wallace—At the moment we are in the last weeks of a system which the pin is going to be pulled on at the end of this month. We are told a new system—the use of the expedited procedure under the Commonwealth Native Title Act—will be introduced then. I know that there still are matters that the state is dealing with there. So, to answer your question, industry does not know, even though the Premier said in late November-early December last year that a new system would be introduced. We are now in early March, and we just do not know.

Mr ADAMS—Using the federal act?

Mr Johnston—Yes.

Mr Wallace—The state have indicated that they may use the expedited procedure if certain preconditions are met and if certain things are undertaken by the explorer and by the respective land council. Exactly what those things are have not been detailed at this stage. I know that they are working on them. It is March and people are still applying. If you apply today, you apply under the alternative state provisions. You will probably get a grant within three or four months. To get onto the land you need an access agreement. There have been very few access agreements concluded in the state, so you will have a granted tenement but not access.

Just going back to the tax: there is a point that we did make here about the research concessions—the 125 per cent tax break on research and development concessions that the exploration industry is ineligible for. That is something the industry would feel would be fair

and reasonable to be eligible for because exploration is high risk and very costly and does not automatically result in any benefit to the investor who has carried it out.

Mr Johnston—Going back to the tax, I know you will have had submissions on flow through share schemes from the junior sector. The driver in gold exploration expenditure is clearly the price of gold. It went up at the end of last year to levels where the industry would like to see it. You have seen resurgence in some investors coming back into the gold sector. If you look globally, Toronto is still the place for venture capital in the exploration mining industry and one of the main reasons for that is their flow through share scheme. Australia is equally competitive in terms of prospectivity and in many instances compared to Canadian jurisdictions has a better legal framework for the mining industry to work in, but they still attract more money for their high-risk exploration sector.

Mr ADAMS—Okay. How many Indigenous people work in the mining industry in Queensland? Do you know that?

Mr Johnston—No, not off the top of my head.

Mr ADAMS—Do you know how much training is put into that area?

Mr Dawney—Only anecdotal stuff from my experience, because I have worked a lot out of Mount Isa and Cloncurry. I have not worked in that area for about eight years because of these other things we are talking about. Well before native title became the issue stopping land access, people like CRA, now Rio Tinto—everyone; even the smaller groups—were using whoever was available. Often, the larger groups had concerted Indigenous training schemes and opportunities. I have been inducted so many times into different groups. All the manuals have an Indigenous policy that is expected of me. They all read very well. Indigenous people have been given lots of chances. I have even worked with them and employed them on an individual or smaller scale level. I do not think that is a problem to industry, really. I have not seen it as a problem.

Mr Johnston—With our own company's mines, when we negotiate native title agreements one of the aspects of those agreements is employment opportunities for Indigenous people. They are locked in. We have training programs for them, particularly in the area of apprenticeships, and we guarantee certain numbers. I know in our mines in Western Australia we do exactly the same. Internationally, we aim to localise as much as possible and it is the same policy here in Australia. Part of the problem is that a number of the jobs in the mining industry are highly skilled and even the semi-skilled ones are in high-risk activities. You are coming from a low base rate in many instances in terms of education, which we have to lift very quickly.

Mr Dawney—There are probably more places available than there are suitable people to fill them because of that.

Mr ADAMS—That goes back to training and bringing people forward doesn't it?

Mr Dawney—Yes, it does.

Mr ADAMS—My last question is in relation to the industry's knowledge and standing in the community. Does the Queensland Mining Council educate the public that the mining industry might be worth investing in and that it is good for the country and the state of Queensland?

Mr Wallace—Are you talking about actually promoting the industry to potential investors?

Mr ADAMS—I was asking more generally than that.

Mr Wallace—More generally, the QMC do have a program. They have an education officer who has programs put together for different levels of schoolchildren for example. That is actively undertaken throughout the state.

Mr Dawney—There are minerals weeks and things like that. The Queensland Mining Council has recognised for 15 years—or certainly for 10, that I know of—that the public perception of mining is a problem. They have resource material available for schools. They have six or seven retired teachers on their books who do an education campaign by invitation. Interestingly, not all schools take it up. The Queensland Mining Council is going to lift their level of public awareness of the mining game.

Mr Johnston—A number of the mines have open days which have proved to be quite successful; I know Gympie has. The trouble is that not many of the mines are in the south-east corner here where the majority of the population is.

Mr ADAMS—Does the symphony orchestra go out and play in the mines at all?

Mr Johnston—None of the mines that I have been in!

Mr Dawney—They do at Broken Hill.

Mr CAMERON THOMPSON—If Canada is a benchmark, can the way that Australia handles native title be compared with the way Canada has been handling it? What are the differences there, if any?

Mr Johnston—My experience is second-hand. I have not worked in Canada even though I worked for a Canadian company. For the last mine we built in Canada, procedures were relatively similar. We had to negotiate access agreements in the new territories. In Canada you have to have the access agreements in place. It is very similar to Commonwealth native title procedures here. The mine agreement has many of the same things included in the agreement: training, targets for apprentices and tradespeople, and employment targets are all set in the mine agreement. It is very similar to what we tend to do now in the Australian mining industry for new mines.

Mr Wallace—I think the difference is that many other places, using Canada as an example, are far more mature in their evolution of native title. In Australia we are still grappling with overlapping native title claims. All those things that Mike just talked about with agreements and what might be in them cannot be concluded if you have three or four claimants over the same area. I am sure, in time, those claims will be sorted out. There will be one claimant group and then we will reach the stage where we will have a certainty of process. The certainty of process

will be that there will have to be an agreement reached but you will know whom to reach that agreement with and what the parameters of the agreement might be.

Mr CAMERON THOMPSON—Are those overlapping claims of particular concern in Queensland?

Mr Wallace—Yes.

Mr CAMERON THOMPSON—As compared to other Australian states?

Mr Wallace—In the area of probably the most potential in Queensland, there are still a number of overlapping claims.

Mr CAMERON THOMPSON—Are you talking about Mount Isa?

Mr Wallace—Yes. They are probably no more or less relevant in Queensland when compared to other states.

Mr Johnston—Serious overlapping claims are usually in the order of two, three or, at most, four claimants. I know in our mines in Kalgoorlie there are four native title claimants who generally crop up to claim the same areas.

Mr CAMERON THOMPSON—Does that bring it to a halt? It does not progress?

Mr Wallace—In Queensland, for example, an access agreement is supposed to be concluded with the native title claimant group. If you have overlapping claims you might have to negotiate three access agreements for example. If there is a dispute over that country, there are three parties to negotiate with. To conclude three agreements over that same bit of country and then to make them work is very difficult.

Mr CAMERON THOMPSON—Is the lack of maturity in our native title process and the prospect of these overlapping payments a significant point of difference in the minds of people allocating the capital—say, between Canada and Australia—about where it goes?

Mr Wallace—Yes, there is no question.

Mr Johnston—It extends the timeframe for being able to advance the opportunity or the thinking. In the first instance, you are dealing with a concept which the geologist wants to go and test. If you have to resolve, as Ian said, three native title claimants over the same piece of ground, it is going to take him much longer—three times as long.

Mr Dawney—And that geologist's budget may only be \$30,000 and he will make a decision whether they continue. The negotiation process will cost a lot more than \$30,000. Therefore, it is scratched off.

Mr CAMERON THOMPSON—When we were in the Northern Territory, we heard from land councils up there. I cannot remember which one, but one of them was saying that the

attraction of negotiating with mining companies is greatly reduced because there is very little benefit for Aboriginal people, particularly at the exploration stage—it is zero.

Mr Johnston—That is true.

Mr Wallace—Exactly.

Mr CAMERON THOMPSON—So do you have anything in mind to overcome that? If there is no attraction to make them want to negotiate, this is a problem that is going to be a stalemate forever, isn't it?

Mr Johnston—In our submission, we said that people confuse exploration with mining. In a lot of cases, exploration is just going on the ground, walking it, in the first instance. It is low impact. In the native title process it is treated the same as actual mining, but we cannot offer large amounts of employment, investment and all the rest of it because there isn't any. It is one highly skilled person or a handful of highly skilled people who have a lot of training and expertise in very specialised areas.

CHAIR—So that aspect should be amended?

Mr Johnston—Yes, it should be amended. That is what we have suggested. If you amended that, I think you would see a much better situation where you would get a lot freer access to the ground for exploration. That would drive a lot more exploration expenditure.

Mr CAMERON THOMPSON So the overlapping claims would not be an issue either?

Mr Johnston—That would still be an issue, because you need the access agreement just for an individual or a couple of people to go out onto the land. Mining companies these days have learnt from the past. We need to have a community licence to operate when we are out there. We have to get onside right from the start. So if there are three people claiming, if there are three same native title claimants over the same area, we do not know. They may all be legitimate and we have to deal with all three. So we need to get access agreements and get them onside before we can get on the claim.

Mr CAMERON THOMPSON—Doesn't that mean, though, that there are two serious impediments there? Really, you can address one but unless you address the other you are not going anywhere—the first one being, as we discussed, those two different areas. Getting rid of one is not going to fix the problem.

Mr Johnston—Yes, but it should eliminate probably 80 per cent of the problem. Generally, then, it will just be a case of understanding each other's position in terms of what areas are culturally significant—where you can and cannot go—and it is like dealing with—

Mr CAMERON THOMPSON—But you are saying, aren't you, that even if you separate the exploration from the mining process you still need to be able to get an agreement for access to do the exploration? But then, if you have three different gangs to work out who should give you that access, aren't you back to square one?

Mr Johnston—Yes, we would prefer to deal with one. I am not sure—

Mr Wallace—Just by illustration, a pastoralist drilling a water bore and a mineral explorer drilling a hole are very similar activities on the ground, but the processes that those two parties have to go through to achieve the drilling of the hole are like chalk and cheese.

Mr CAMERON THOMPSON—You are saying that the process of the access needs to be streamlined. Not only do you have to divorce exploration from mining but you have to streamline the access process to make it more—

Mr Johnston—Transparent.

Mr CAMERON THOMPSON—equivalent to a fellow drilling for water. Is that what you are saying?

Mr Johnston—The guy drilling water does not have to get native title approval—that is the problem. If he had to get native title approval, he may find himself in the same situation where he has three overlapping claimants.

Mr Dawney—Drilling is normally regarded as the first high-impact exploration thing that we do. There is so much sampling, walking and observing to be done before the drilling process.

Mr Wallace—There is no suggestion that the industry is against native title whatsoever or heritage protection, but some of the activities that are undertaken at an exploration stage, as we have just said, should not be classified as mining activity—but they are.

Mr Dawney—The last major discovery in Australia was in the early nineties, maybe 1991—Cannington or Ernest Henry; one of those—so there has been no large metal or gold discovery for over 10 years now—

Mr Johnston—In Queensland.

Mr Dawney—in Queensland. There have still been hundreds and hundreds of exploration licences, literally hundreds of geologists walking on the ground, and they have all gone away. Early low-impact exploration should be made so easy and so quick for them to get onto the ground.

Mr CAMERON THOMPSON—From what you can see of the current situation in Queensland, given a best case scenario, how much longer are we going to have to wait before things start returning to a more normal situation?

Mr Wallace—I would say the next field season: winter 2004.

Mr Johnston—From the position where I sit, directing the dollars for our company in the Asia-Pacific region, I cannot see the Queensland situation improving significantly at all in the short term.

CHAIR—Why not?

Mr Johnston—It is the cost of accessing the ground early. It is not just the physical cost in dollar terms; it is the time cost for the high-risk stuff. If it is going to take me two years or 18 months to get on the ground to negotiate an agreement for a high-risk conceptual target, I will go and take that high-risk conceptual target somewhere where it will take me six months.

Mr CAMERON THOMPSON—Where would it be redirected to?

Mr Johnston—From the point of view of our company, I compare all of the states in Australia. We are currently active in Tasmania and Western Australia. We are looking in South Australia and actively looking in the Northern Territory. The only leases we have in Queensland are the ones which were granted before native title and the leases around our mine. The rest of our expenditure is going into Asia.

Mr Dawney—I would add that people cannot turn around with their commitments. They have had the perception of Queensland, as it is, for the last six years or so. They just cannot turn around in one field season to commit and say, 'Queensland's now solved its problems; let's go back.' There would be at least a two-year lag, maybe longer. If there is a solution tomorrow, there would be a minimum of two field seasons or two years. In fact, I think it would be practically double that because you just cannot go through the budgeting process, which is generally a year, convince people and then educate them in a two-year period about the way things are. I think it would be four to five years before you saw a significant turnaround, unless we could get money in and people could pay for these things. We are really talking about a tight money environment where people in Brisbane prefer to go to Chile rather than to Mount Isa. They are still raising \$2 million licks and half a million dollar seed capital raisings, but you cannot waste half or more of that waiting in Queensland. Even Sweden—which is the highest taxed country in Europe with 25 per cent GST et cetera—has the most beautiful data set I have ever seen in the world. It has rocks of a similar age to Mount Isa's, so it is geologically prospective for the same things. It had a mini-boom when it opened up the country to foreigners in the early nineties, and Australia was one of the popular entrants.

Mr HATTON—On page 30 of your submission, there is an extremely strong summary of the significant structural changes that are the key things creating problems. I think that that evidence from the Queensland Mining Council is extremely well put. It directly interlinks with evidence given to us by one of the consultants, who said in effect that the core problem is not related to most of what we have been discussing; the core problem is that we have had major ownership changes, which have led to real structural imbalances compared to the past, dramatically affecting the situation of the juniors. In summary, we have gone from an approach which was generally exploratory in the past to one which is intensively extractive—in a different way, I suppose. How much of a problem is the fact that, with the changes in ownership, the concentration has been on getting as much out as you can, without that extra effort going into the future? Comparing our practices to those in other countries, are companies worldwide doing that at the moment—concentrating on getting as much value out as they can?

Mr Johnston—There is no question that, when metal prices went down, things changed, particularly when the gold price crashed in 1997, and then the federal government announced that the Reserve Bank had sold all its gold. Some would argue that that was one of the triggers for the sliding significance of gold. It also moved Australian currency off tracking the gold price.

CHAIR—Ours was not the only central bank to do that.

Mr Johnston—No.

Mr HATTON—It was a big hit.

Mr Johnston—The others were not the second or third or fourth largest producers of gold either. That had a major impact. During the period from, say, 1997 to about the end of 2001, all the companies went into what you could call ‘harvest mode’, which is what you have described. Because the prices were so low, you had to increase the margin on your product, to stay competitive and to stay in the game. So people focused on what they had and reduced high-risk activities and discretionary expenditure—and exploration falls into those categories. Now that the price cycle has swung the other way—the gold price has gone up—and there is some investor activity there, budgets have actually gone up. Restructuring occurred during that period of low metal prices and now 70 per cent of Australia’s gold production is controlled by North American producers, of which our company is one. The large corporations are now starting to take on high-risk greenfields exploration, but a lot of them do not have the people or the history, if you like, of the country. So they need to access the consultants and the juniors to help do the work—and they are not there. The reason they are not there is that we are at a point in the investment cycle where the mineral sector in Australia is not a competitive place to invest money, although it used to be in the sixties and seventies.

Mr HATTON—Because we have had a dramatic downturn, a lot of those have skedaddled and gone overseas to get work where they can?

Mr Johnston—They have. In the last three months of this year, I have seen more gold floats in the junior sector than in the last five years, probably. So there is an increase, but it is only small.

CHAIR—Thank you very much for attending.

[11.28 a.m.]

BOYS, Mr Peter Richard, Chief Finance Officer, CS Energy Limited

RISSON, Mr Glenn, Manager Business Development, CS Energy Limited

CHAIR—Welcome. I invite you to make a short opening statement.

Mr Boys—Thank you, Mr Chairman. We have made a reasonably detailed written submission to the committee. By way of introduction, I would like to make a few comments about CS Energy's role as a company and then make some additional comments in relation to a couple of the matters that we raised in our submission.

CS Energy is a corporation that is owned by the Queensland government. We are an unlisted public company. Our shares are all owned by the Queensland government, and we operate under the Government Owned Corporations Act in Queensland. Primarily, we own, build and operate power stations and we supply electricity. We operate from three locations in Queensland: Swanbank Power Station at Ipswich; Callide Power Station at Biloela in Central Queensland, just west of Gladstone; and Mica Creek Power Station at Mount Isa. Mica Creek Power Station is perhaps our main reason for being at this inquiry today. In total, we provide about 25 per cent of Queensland's electricity requirements. Of those three power stations, Callide and Swanbank operate in the national electricity market, but the Mica Creek Power Station at Mount Isa operates in its own grid, independent of the national network. It is in relation to the role of that power station that we would like to make some comments.

In our written submission, we have identified five key issues that we see as impacting on successful exploration development of resources in Queensland: the Indigenous land use agreement process; the absence of road and rail infrastructure; the methods used to quantify resources and reserves; taxation issues; and the economies of scale in relation to generation and distribution of electricity. The first three—the Indigenous land use agreement process, road and rail infrastructure and the quantification of resources—are not issues that we have particular expertise or experience in, but they are issues that we regularly come into contact with when dealing with our customers in the north-west. It is clear to us from their comments that those issues represent significant impediments to the development and exploration of the north-west area.

The two areas I would like to make some additional comments on relate to taxation issues and to the economies of scale associated with electricity generation. In relation to taxation issues, we have recently had a situation where provision for accelerated depreciation of assets has been removed from the tax act. In addition to that, we have had a taxation ruling that we believe effectively disadvantages CS Energy as a centralised supplier of electricity in Mount Isa. For tax purposes, we are required to depreciate our fixed assets over a 30- to 45-year period, while remote site generation locations are able to depreciate assets over a much shorter period, typically 10 years. We see that as a major impediment to the after tax costs of providing—

CHAIR—That is probably because they are not base load power.

Mr Boys—That is correct. They are dedicated to a particular site. We believe that, associated with economies of scale in providing this type of infrastructure, there are issues that have a tax aspect to them. The other major issue that we wanted to add some comments on was the overall question of economies of scale for generation, particularly in relation to transmission infrastructure. In Mount Isa, we operate a centrally located power station, providing power to the Mount Isa township and also to remote mining locations. Studies we have done show that we can produce power at a cost which is anything up to 50 per cent lower than the cost of on-site generation.

Where we have a major disadvantage is in the construction of high-voltage transmission lines to get that power to the sites. What typically happens is that the new start-up operations in that area might come on stream initially on the basis of a reserve that they have identified for maybe seven or 10 years. They are wanting to enter into a power supply agreement that runs for that period of time. We talked to Ergon Energy, who are the local distribution business and who build the transmission lines. They are required, under the way they operate, to depreciate to amortise any assets they put in there over the known period of the generation contract, which can be as short as seven to 10 years. That provides a major price impediment for us, because they typically have assets that can operate for much longer periods.

That is something that we believe adds to the cost of electricity to the user. Quite often, they opt out of the centralised supply of electricity and elect to put in site based generation. It is not only a higher cost to generate; in addition to that, they have to haul large volumes of liquid fuel across the road system, so you have the additional damage to the road infrastructure. Typically, that can be less efficient than a centralised gas fired generation such as we run. We believe that, overall, you have a less optimal outcome through that type of arrangement.

Finally, our position is that we see that there is a clear role for the federal and perhaps the state government in looking at ways in which they can support and underwrite this major infrastructure, particularly in areas like Mount Isa, where there are a number of known resources that could be developed if the cost structures can be addressed properly and reasonable cost structures put in place. We think it is an area that has tremendous potential. It is an area that we have had a significant amount of dealings in. The same issues could be applied to other resource areas—not just in Queensland but in other parts of Australia. That is probably all I wanted to say in relation to those additional issues. I am happy to take any questions that you might have.

CHAIR—Thanks for that. Are all your sites gas powered?

Mr Boys—No, we have a combination of coal and gas. Mount Isa is all gas fired. Swanbank Power Station out at Ipswich is a combination of coal and gas. The Callide Power Station is a coal fired power station.

Mr HATTON—That was an interesting submission, particularly coming from a Queensland government organisation that is almost a public company and arguing that the federal government should pick up the costs of the infrastructure that the Queensland government, which directly benefits from the mining activities, has not picked up in the past, particularly around Mount Isa. Over the last decade, we have heard a lot about public-private partnerships. Has there been any indication of the willingness of the mining companies in that region—there

have been approaches to the state government—to put in some of this infrastructure together rather than relying on the hope that the feds might come to the party?

Mr Boys—Yes, there has been a significant amount of work done with the state government on putting in this infrastructure. The problem the state government has is that it is now obliged to operate within the provisions of the national electricity market arrangements, which are entered into in conjunction with the federal government. From our dealings with organisations such as Ergon—and I certainly do not want to speak on behalf of Ergon—they have certain criteria they have to meet in relation to investments in this type of infrastructure that would not permit them to underwrite longer-term investments unless they had some sort of contractual basis with the private sector for supplying that power.

Mr Risson—Quite often it is a matter of scale. If it is a large enough mine or they are going to do a large enough amount of processing or semiprocessing on site, the scale of the electricity supply is large enough to justify almost a stand-alone or a purpose-built unit. But quite often these mines are of a smaller nature that need five or six megawatts of electricity basically to deal with very local arrangements. That of itself does not allow the justification for a purpose-built transmission line—100 kilometres of transmission line, for instance. But a multiple number of them can justify it. They do not all turn up together.

Mr HATTON—Your written evidence has indicated that there are half-a-dozen or so of those, unnamed, that are using that inefficient diesel based power generation, but they also looking at trying to cut their costs by trying to do more refining in situ. How significant is that potential, given that one of major problems that we have had is that we have not added enough value here in Australia? You are suggesting that a lot more value could be added here. How important are not just the electricity generation in a more competitive and larger scale base but that road and rail infrastructure in the region? You are suggesting that the brownfields stuff that is there could in fact be dramatically explored where it has not been in the past.

Mr Risson—The small mines that we are talking to are typically around the Cloncurry area or to the north of Mount Isa. I need to correct our written statement: we said six; it should have been four—that was a typographical error. We have found is that they are small mines that have been going for some time and typically have loads of four to six megawatts. Selwyn, which is currently in financial difficulty, is the biggest of those with nine megawatts. Part of their processes have been to try and capture the lower grade material by refining or getting a better concentrate of product—typically copper but also gold—and for that they were talking about increasing the load to 30 megawatts. Part of that was increasing the volume throughput, which adds a variation of loads to anything from motors to grind and crush to electrowinning of some other copper, so that instead of turning out a 28 per cent copper concentrate that gets hauled away, it is much more refined product. That stuff is typically taken and refined in smelters overseas.

Mr HATTON—So you can only efficiently exploit the resource that is there if you have efficient power generation—you will not do it otherwise?

Mr Risson—That is right. There is no way that you can afford to do that on diesel generation, where the total cost, including plant, is typically \$150-\$200 a megawatt hour, depending on the price of diesel, which floats around a little bit from time to time. We could certainly typically

save between a third and a half of that by a more centralised sharing of resources. That is what it basically boils down to.

Mr HATTON—Okay. So that makes real sense in terms of exploiting material that cannot be used unless you have got the proper power generation, the proper efficiencies. What I do not understand is that the mining processes have used a window of time from March to November and the rest of the year it is impassable because of the road situation. Is the mining time dependent, given that they have been able to efficiently mine in the past and they do not have to get their product out during the wet season? Or are you saying that there would be a benefit if you had all-weather roads and that that would lead to more business and more mining? I do not understand the conjunction.

Mr Risson—Wet weather roads have not been a significant issue, typically, for the mines that we are specifically involved with. It tends to be a short-term issue where a particular road is cut for short period of time. They are, typically, working 365-day mining operations, involving two to three shifts and processing. Short-term shutdowns may occur when there is a wet and there are roads that particular rivers or culverts cut or bridges that are washed away. However, those operations carry a short-term holding of diesel on-site to back up their supply and, if they are mining and they are still processing, they do not have the same impediments to have to deliver their concentrate out other than cash flow arrangements.

Mr Boys—To add to that, what we are looking at here are the new and undeveloped resources and the companies who are coming in looking at the logistical issues associated with getting a development up and running. They typically come in and look at issues such as road and rail infrastructure and the electricity infrastructure and they factor into even their initial exploration phase whether or not those are going to be impediments to them eventually developing the resource. We are seeing people come in and saying, ‘We know there is no all-weather road in there and we know there is no high-voltage transmission—that means on-site generation,’ in their initial assessment of the resource. They are saying that there are too many impediments here and they are going to move on and look for somewhere a little more attractive. We think those things could be overcome in the Mount Isa area and provide a much more attractive environment for people to invest in and develop. I do not think there is any question that a lot of high-quality resources are available there. It is just the remote nature of the location and getting in there and developing the resources that are the problems.

Mr CAMERON THOMPSON—I have a couple of different lines to pursue. Some of them are nice, friendly lines, and some of them are a bit more curly. I was very keen to see CS Energy put in a submission because I spoke to the CEO of CS Energy about the development of the SUDAW area of the Surat coal basin, which I understand is a location where you people have some coal reserves. I understand that the same sorts of things you talked about in your submission in relation to Mount Isa also apply down there: lack of infrastructure and inability to effectively drag the coal out of the ground to provide the sort of cheap power you are talking about. Are the same sorts of issues apparent there? What steps should be taken? Should a different menu of activities be undertaken to improve infrastructure in that area? It is a massive coal reserve, as I understand it. I think several years ago it was an initiative of the Queensland government to try to promote that area. Can you tell me what has happened with that? I am sorry to digress a bit.

Mr Boys—It is a slightly different issue down there. The resource you refer to is the Kogan Creek coal deposits. We currently have plans under way to put a major baseload power station down there. There are two impediments we have to deal with in that area. Firstly, there is the lack of provision of water in the area. We have to add anything up to \$200 million to the capital cost of the power station to make it a low water using operation. If the dam infrastructure that was being considered for that area were in place and there were a year-round reliable water supply, we could go in with a lower capital cost and ultimately produce cheaper power.

The other major impediment in the area relates to the rail infrastructure. That does not directly affect the power station operation, because we have a mine mouth power station proposed there. In opening up that coal resource, there is potential to export some of that coal overseas. But we are not able to take advantage of that, because we do not have the infrastructure to get the coal out to the ports and get it overseas. They are the two main things I would identify in relation to Surat. They are slightly different from the problems here.

Mr CAMERON THOMPSON—Just on the waterfront: would you be potential users of reused water that could be piped out from Brisbane? Is there a proposal to send it out to the dams; to lift all the ex-sewerage or reused water out of Brisbane and lift it up the range to make it accessible up there? Would that be a potential use?

Mr Boys—It certainly is a potential source of water for us. The project we are dealing with is very close to Chinchilla. There are costs associated with putting pipelines in. Also, I do not believe the volumes of water that could be transmitted would be sufficient to provide a viable alternative to the current deep aquifer bores we are proposing to put in up there.

Mr Risson—Just to put a volume content on that, we are talking about 12,000 to 14,000 megalitres per year to have a wet-cooled coal-fired power station of around 800 megawatts. That is an enormous amount of water to pump over a lot of hills and a long distance.

Mr ADAMS—What happens to the water after it comes out of the power station? Does it come out or not?

Mr Risson—It depends on the arrangements at a particular site, such as Swanbank. Most of the water in a coal-fired power station is used for cooling. It goes through the cycle several times. Because it is going through machinery we add various chemicals to it, so we raise the salt levels in there. Then we do a blow down once it gets to the limit we are environmentally allowed. Typically it goes into the creek water systems, or the trend tends to be total site nil discharge. So you have to do an evaporation process, which is quite possible further west, or move towards reverse osmosis for cleaning up the water, which is a very expensive process.

Mr ADAMS—There is a lot of potential.

Mr Risson—Yes. This is totally off the subject in many ways, but we have talked to a number of people who are trying to develop coal seam methane tenements out there. They are pumping water out to get to the coal, so that the gas can come out. But the water they are typically pumping out is too salty and therefore needs treatment. In addition, it is not guaranteed to keep on coming. When you are building something involving a billion dollars worth of investment, you want the water to keep on coming—otherwise you cannot operate.

Mr CAMERON THOMPSON—In your submission you make the very important point that Mount Isa is closer to Darwin than Brisbane. There is a point that causes me some concern about the development of the pipeline network in Australia. You are saying Darwin is closer than Brisbane, and yet I note that Mica Creek Power Station draws its gas from Roma. Is that something that has been put together by a state government to promote a state government resource? I note that the Northern Territory has sent gas over to the McArthur River, and I think they oversized that pipe in the hope, perhaps, of supplying Mica Creek. Is the gas you use at Mica Creek cheaper coming from Roma than it would be from the available source at McArthur River?

Mr Risson—It actually comes from the south-west, not from Roma, so it is right out in the far corner. It comes through the Santos gas processing plant out there. It comes up the Carpentaria pipeline from Bellara to Mount Isa. In part, I am going to beg off the question, because that deal was arranged between Mount Isa Mines and Santos and AGL prior to CS Energy taking ownership of the Mica Creek Power Station, which occurred in 1997. The gas deal was arranged prior to our purchase.

The price of gas is relatively common within Australia. We have certainly been having major talks with both Timor gas suppliers and PNG gas suppliers, to try and bring gas both to Mount Isa and to the south-east part of Queensland. Over a number of years, we have had MOUs or term sheets—I am not sure what you would call them—with the PNG gas suppliers, indicating our ability or willingness to take very large amounts of gas. We are talking about 20 petajoules of gas a year for use.

Mr CAMERON THOMPSON—Is that for Mica Creek?

Mr Risson—If the pipeline comes down the western side of the gulf and across towards the Carpentaria pipeline, it could be for Mica Creek. It is a pipeline issue.

Mr CAMERON THOMPSON—You are submitting that you want to be able to provide the cheapest, most efficient source of power for people out there trying to operate. The cost of gas available at McArthur River and the infrastructure to supply it: was that significantly different? Would it have been a much shorter pipe?

Mr Risson—It may well have been, but the gas that is currently supplied for McArthur River has a limited gas reserve to supply it. What you are really looking for is where the source of gas is and what the volume of the reserve is. South-west Queensland, connected to Moomba and so forth, had a very large gas reserve, and so they can say, ‘Yes, here is 100 petajoules set aside for you for 10 years.’ PNG and Timor would be great, but McArthur River gas—no.

Mr ADAMS—The Institution of Engineers (Australia) has submitted that we have fallen well behind with infrastructure in Australia—to the tune of billions of dollars, I think, although I forget the exact figures. Your submission deals with some of this—in relation to rail and, I think, transmission areas. How far behind in the industry do you think you are? You supply 25 per cent of the state’s energy needs, and you must have an overview of the whole state: where do you think we are behind in Queensland?

Mr Boys—My observation is that Queensland would not be behind in infrastructure in relation to its connection to the national electricity market. I think there is capacity for both

Queensland and New South Wales to cooperate to increase the capacity of the interconnector between Queensland and New South Wales. But it certainly would not be my observation that we are behind in relation to the general infrastructure for electricity on the national electricity market. As for Mount Isa being a separate remote grid, that is a difficult question because there is really no end to the infrastructure you could build out there, potentially. There are a lot of very small, very remote locations out there that are required to generate their own power on site, and there is no question that they would benefit from interconnectivity. So they are behind in that regard. But I do not believe that, in the majority of those instances, there would be an economic case for building interconnectivity.

Mr ADAMS—Your argument out there is that the nation-building need is for the infrastructure to be put in place so that there is a base load of power for people who want it to downstream or whatever from the base metals that are there. We received evidence just a while ago from the minerals council that it is one of the best areas in the world for going out and finding metals. In Australia we have not value added much in metals, and we need energy to do that. Is that what you are saying in your submission?

Mr Boys—Yes. We think the as yet undeveloped resources sitting out there could become the driver for the big transmission links. For example, if you ran a high-voltage powerline down to the Selwyn area, you would immediately supply all the small users in that area and they would get a collateral benefit from it.

Mr Risson—The cost of that really depends on how large you want to make it, of course. If you make it for a 30-megawatt customer, you could do it for \$20 million, but no-one else could get it. But, if you spent \$45 million, for instance, it would be large enough for three or four mines to be able to attach to. That does not necessarily bring it on. I am not an enormous believer in the ‘if they build it, they will come’ thing. There is a limit to where that goes; but it certainly changes the economic equation. If they say, ‘Yes, I can connect to significant electricity; I can process more of my concentrate on site, reduce my transport costs and do it here,’ that will change the economics when they are viewing the projects.

Mr ADAMS—Yes. It is a bit like transport. You might want to grow it, but you cannot grow it. It is a chicken and egg situation. These days, we are in this philosophical set where we do not do it; it is not trendy for government to actually put in that infrastructure. It is against the trend. Some of us can see how we have built the nation by doing it the other way. We could do it a lot better, and we have probably wasted a lot of infrastructure—and political decisions as well. But some of us are trying to say that there is probably still a need to do some of this.

Mr Risson—Yes. We would certainly see some sort of ring of transmission around the Mount Isa area as being a way of helping that to happen. The transmission line currently goes east from Mount Isa to Cloncurry and north up through Mount Gordon to Century. But, if that sort of ring could be completed, there are certainly five mines that we are talking to now where it would make a difference to their economics.

Mr ADAMS—Do you still do overland towers for transmission lines? Do we have technology that can run underground or whatever?

Mr Boys—It is expensive.

Mr Risson—We have the technology: cost is the issue. Native title is certainly an area that building transmission towers continually bumps into, even though the footprint of those is relatively small. But it seems to be a long process, talking to our Ergon brothers.

Mr ADAMS—We have had that in the Gippsland area.

Mr Risson—Yes, and that is a very particular issue.

Mr ADAMS—And the Tasmanian link, yes.

Mr Risson—Yes, that is right.

Mr HATTON—I will follow up on the points Mr Adams was making. An interesting part of your submission talks about the federal government paying for this 220,000-volt transmission system. There is the idea that you could notionally almost hypothecate that, if you created 200 jobs, they could just forget \$30 million worth of income: that would then pay for this infrastructure, which now may be \$45 million or so. In terms of national competition policy, is anything prohibiting your company from putting that infrastructure in? Having determined that there is a market for it—you could get people to cough up and five mines could start operation as a result of it—is anything prohibiting you from spending \$30 million to \$45 million for a guaranteed return? Would the national competition approach say that you cannot have those people? Is that the reason you are not contemplating doing that?

Mr Boys—I think there are probably two aspects to that. One is that we are established as an electricity generator, so building and owning high-voltage transmission lines is not part of our core business. We can overcome that, because we can go back to our shareholders in the Queensland government and ask them for a special exemption for a particular investment, and they will then consider that. In addition to that, we are required to operate in a commercial environment, and we compete against the private sector in the national electricity market. Those big types of investments in high-voltage transmission become a commercial risk issue for us at the end of the day. We have to go to our board and put to them a justification for that type of investment. Generally, the board takes a commercial view and says, ‘How do you propose to underwrite that type of investment?’ My feeling is that they would perceive investing in high-voltage transmission infrastructure for which we do not have an immediate electricity generation contract as too high risk.

Mr HATTON—If you did have contracts with those mines—the major users there—would you be able to lock them into a long-term contract?

Mr Boys—Yes, you would.

Mr Risson—Our problem would be getting the four mines to move at the same time. You could write a contract with one, but that would only cover a quarter of your costs; the rest would be on hope and belief. Because of the commercial charter we are required to act under, we are not allowed to move under those circumstances.

Mr HATTON—But, given that you are a company that is owned by the Queensland government, might it be possible to move along those lines in conjunction with the government?

Mr Risson—There are certainly community service obligations and state development issues that the Queensland government could choose to pursue, but maybe a joint effort between state and federal governments is needed, to assist those sorts of things to occur.

Mr HATTON—Thank you.

CHAIR—Thank you for your attendance here today.

[12.04 p.m.]

MINCHINTON, Mr James Stephen, Corporate Lawyer, Origin Energy Ltd

WOOD, Mr Tony Richard, General Manager, Public and Government Affairs, Origin Energy Ltd

CHAIR—I now welcome representatives from Origin Energy Ltd. I invite you to make a short opening statement before we proceed to questions.

Mr Wood—With your indulgence, I would like to table a document which I will talk to briefly, and I have copies available for committee members. I would like to make a few opening statements in relation to the upstream gas industry which I think are pertinent to the inquiry. Then James will make a couple of supporting comments in relation to the submission, which, as you would be aware, focuses specifically on issues to do with native title and the impact that it has on the development of upstream resources and the exploration activity that is associated with that.

Just to put things in perspective, Origin Energy is a listed Australian company. We operate across the energy spectrum and, for the purposes of what I want to say this afternoon, we have particular interests in upstream gas exploration—mainly onshore—and we are also one of the major retailers of energy in Australia. In particular, I draw your attention to the third table, which is quite complex, and I would like to make two comments. First, there has been a lot of concern in Australia over recent years that we are looking at a potential gas shortage. In our view, that reflected the commercial reality of supply and demand and the long-term nature of many of the contracts that had been entered into many years ago, and it was only going to require the market to develop to the point where that would be addressed.

So what you see with that table is a heavy line in the middle which has the word ‘total’ on the left-hand side. Basically, that is the total proven reserves. At the right-hand side, you can see the number ‘16’, which is 16 years coverage. That reflects very favourably with respect to most markets in the world—and particularly the US, which would normally operate on something like 10- to 12-year reserves. The numbers below that are what are now considered to be subcommercial discoveries, but Origin and the various partners with which we operate would consider that many of those figures will turn out to be conservative. In particular, I draw your attention to two numbers. One is the number in respect of cold seam gas—which is now proving to be a very significant reserve in Queensland and for Australia—and the other is the number in relation to the Bass/Otway, which potentially is well in excess of 3TCF of gas.

Turning to the next chart, the point that we would make is that, whilst most of the significant downstream demand for gas was heavily contracted, there was little incentive for people to explore for gas. If there was any impediment to exploration, that would have been a primary impediment to upstream gas exploration. As those contracts rolled off over the last little while and will start to commercially roll off in about two or three years time, that provided the incentive for people to look for gas. Organisations like Origin, which are connected with the downstream end of the market, saw opportunities to recontract for some of that gas. That resulted in a significant contract between Origin and its various partners and AGL, which was

announced prior to Christmas last year. That meant that the considerable amount of debate around the future of gas reserves—like PNG—then played out in terms of commercial arrangements, and those contracts were written. In our view, that was an example of the market actually working.

The other point I would make is that gas exploration is also driven by increases in gas demand, particularly for gas fired power generation. We expect to see significant increases in gas fired power generation, particularly in Victoria. For the first time, this year New South Wales became a state in which the peak electricity demand was in summer, and Victoria and South Australia are already peak demand states. That is going to be drawing through a lot of peaking generation, and that is almost certainly going to be met from gas fired power generation. For example, this year in the southern parts of Australia, we had a record peak demand and that was met mostly from gas-fired generation. So in our view, the market is now working and you are seeing significant activity. In particular, we are seeing a lot of activity in Queensland around cold seam gas and we are particularly focused on that activity. We see significant investments over the next several years in the development of that resource. Inevitably, there are issues associated with exploration activity that go in front of that, and we have seen a lot of activity over the last three or four years, in particular, on cold seam gas reserves.

It is specifically in relation to that cold seam gas activity and also some of the stuff that Origin has been involved with—the offshore Otway Basin with its partner Woodside in Victoria and, to a lesser extent in recent years, the activity in the Perth Basin in Western Australia—that we have run into one or two issues, and they formed the primary basis of our original submission, which focused particularly on process associated with native title. Our concern is very rarely in relation to negotiations with native title claimants; most of the difficulties we tend to run into are associated with the process of getting through the activity of generating a final agreement so that the exploration or development activity can actually proceed. We have raised these issues directly with the Minister for Industry, Tourism and Resources, and we have also raised them with the state governments in each of the jurisdictions to which that pertains.

In terms of an opening statement and Origin in general, those have been the issues driving upstream gas exploration in Australia over the last three or four years where there has been more activity than the previous 20 years. I will ask James to make a few comments to highlight some of the points in our original submission which, as I said, focused primarily on issues associated with native title.

Mr Minchinton—I would like to speak to our original submission and to touch on two things relating to native title: firstly, the theme of certainty and, secondly, the theme of workable processes. In relation to certainty, any exploration project needs to have certainty that a process can lead to a particular outcome. There are several instances in the legislation where a process may be embarked upon but simply be unworkable because of a clash between federal and state law, so you may not be able to achieve the outcome that you necessarily want to achieve. The second point on certainty is certainty in relation to whom one needs to deal with when dealing with native title. The present system allows for multiple claims to be made over a particular area and until a determination of major title is made specifying who is the holder of native title, any project developer must deal with all the native title groups who have lodged a claim over the area. So there are multiple parties, leading to complications with negotiations and dealings between the native title parties as well as with the project developer. In order to overcome this

issue of certainty of whom you need to deal with, it is considered that determinations of native title need to be made. The process needs to go through the court to such an extent where there are regular determinations of native title to give certainty as to who the native title groups are that hold native title over a particular area of land. That will confine the number of people you need to deal with to a particular group.

A third aspect of certainty is in relation to certainty of compensation that would be payable for any exploration development. At the moment there is only guidance within the Native Title Act as to what amount of compensation needs to be paid for any future development. There have been a number of agreements between developers and native title groups but these agreements have been reached on commercial terms. There has been no judicial guidance in any court or tribunal in Australia or, as far as our research has shown, anywhere in the world as to what value of compensation can be placed on native title rights and interests. It may interest the committee to know that there is presently a case before the Land and Resources Tribunal in Queensland which we understand is in relation to a mining development but will be the first time a dollar value has been placed on compensation for native title rights. Once this determination is made it will provide guidance to the industry, the government, the native title holders and any other interested parties as to what is an appropriate value of compensation. It will provide principles which can be laid down and, hopefully, in time, a well-worn path as to the process that needs to be followed in relation to the quantum and style of compensation.

In relation to workable processes I touched on this a little bit before in stating that we need to have processes that can lead to a desired outcome. The clashes between state and federal legislation sometimes prevent some outcomes being achieved. Also in relation to workable processes there is the issue of time frames in which developments can occur. There are examples, some of which are related to Origin, of authorities to prospect for petroleum that have been in the application stage since 1993 but have not yet been granted due to a delay caused by native title negotiations. I am also aware of a mining lease application that has been in progress since 1996 and has still not been granted as a result of native title processes.

The final point that I would like to touch on, and which is not dealt with in our original submission, is the future of how native title is dealt with. Once there have been a greater number of determinations of native title, a decision will need to be made as to whether the Native Title Act can continue to operate for those determinations or whether an alternative system needs to be introduced. Some sort of registration system, like a land title system, may be useful both to proposed developers and to native title parties. For example, a system whereby native title parties are entitled to grant leases, easements, mortgages or other interests over their properties may simplify the process of dealing with those landowners, whether they be petroleum explorers or other groups, and may provide benefits to the native title parties which would allow them to reap the benefits of holding native title rights and interests over the land. In summary, we would be looking to encourage changes to the legislation and systems that are in place that would enable the exploration industry to be taken out of hiatus and put back on track and would enable money to be spent on the ground for practical results.

CHAIR—I want to ask an unusual question, which was not covered in your submission. Given that Australia accounts for some 30 per cent of the world's black coal exports and that, by 2006, we will be exporting some 16 million tonnes of gas, what is the CO₂ content of your gas fields? Secondly, the reason why we will not sign the Kyoto protocol is that we are an energy

exporter and one of the things we cannot do is get credits for gas sequestered back into geological reservoirs. What is your view on that? What do you think the cost will be?

Mr Wood—I will take those questions separately. The CO₂ content of gas does vary, as I am sure you are already aware, across the various gas fields in Australia. We have, for example, in a small gas field that drives the gas-fired power plant in South Australia, a 30 per cent CO₂ content gas plant. It is very unusual, and normally it would not have been developed except that it happens to sit right next to an interstate electricity transmission system. As a consequence of that, that is now quite a significant commercial power generation facility. On the other hand, coal seam gas is very unusual at the other extreme, in that it is extraordinarily low in CO₂. It is usually in excess of 98 per cent methane, so it requires very good processing and is almost pipeline quality gas as it comes out of the ground. Across those extremes—and I will quote numbers that I think are reasonably accurate—there are 12 kilograms of CO₂ per tonne. I would need to confirm that number on notice.

Origin's figures are slightly less than the national average, driven primarily by the coal seam gas activity, which is becoming an increasingly significant part of our gas portfolio and, in our view, will increase proportionally as well. So we would expect that that CO₂ content would progressively reduce. In terms of the absolute number, I can certainly confirm that, probably today if necessary, back through the secretariat.

In relation to Kyoto, Origin have already made statements in a number of places that we acknowledge that our industry is operating in an environment that is increasingly constrained by its inability to absorb carbon, that that will have to change and therefore we have acknowledged the government's commitment to the 108 per cent target. In our view, the mechanisms by which we get there become the critical issue, and we are on the record in our submission to the Parer commission as saying that in our view the best way to do that is through some form of cross-sectoral carbon signal such as emissions trading. Whether it turns out to be emissions trading or whether it turns out to be something else that looks like that, or even what particular model the emissions trading one uses, in our view that is the best way to do it, and we would agree with the Parer commission that instruments such as MRET and the Queensland gas and electricity credit scheme are far too specific to qualify in that regard. However, the worst thing you can do is to switch policy halfway through the game, and our view, therefore, is that the real trick is how we migrate from one to another.

It is most likely that instruments such as MRET are best used for industry development, including things such as the solar Photovoltaic Rebate Program which is administered through the Australian Greenhouse Office. Origin's view—as primarily an Australian company—on whether or not Kyoto is ratified is that it is an issue for the Australian government. If the government chooses to ratify that protocol, we would think that would be entirely appropriate and we can see very few downsides to that. Our opportunities out of that would be relatively minor, because we are involved, in particular, in some solar photovoltaic activity which could benefit from international trade; therefore, being in some way prevented from doing so through the fact that Australia had not ratified and some of the countries we were dealing with had, that could be a problem. So in a general sense, that would be our position.

I should also comment in relation to that last part, which is associated with the dollar cost, that I have looked at—I have not yet had our people finish the analysis—the recent work that was done on behalf of the New South Wales-South Australian-Victorian governments. We have

not yet come to grips with whether we believe that is an appropriate analysis of the cost of ratifying or not ratifying Kyoto on the assumption that the 108 per cent target remains in place. We commissioned some work last year which demonstrated to our satisfaction—and I have had nobody refute this—that one of the vehicles to achieve the 108 per cent target would be by increasing the MRET, for example, to five or even 10 per cent. This would have relatively little impact on Australia's international competitiveness in electricity and would probably result in a price to the industrial customer—who, today, probably pays in the order of \$35 a megawatt hour in the wholesale market—of no more than perhaps a dollar increase in that cost rather than the sorts of increases that others have talked about in terms of the impact of an increase in the MRET.

In our view, an emissionist trading regime in Australia will almost certainly lead to one outcome. The reason we say that is that Origin is primarily a gas company. That outcome would be that almost certainly Australia could meet its Kyoto targets through meeting its growth in electricity demands through gas. So it would require only a relatively small value—and I am talking at the lower end of the scale: in the order of \$10 to \$20 a ton of CO₂—to be placed on carbon in an emissionist trading regime to generate a significant investment in gas power generation in this country. Progressively that would mean going from open cycle to combined cycle gas turbines. You would see a significant shift in the mix of power generation between gas and coal, and that would enable us to do that.

Also, I refer you to the McKinsey report that was produced in the last 12 months in relation to the impact on emissions trading in Europe. Their conclusion was that, under an emissionist trading regime, a value of carbon of about 25 euros would effectively, in its own right, cause the entire European coal industry to go to gas, so it is relatively sensitive. In our view, that would mean that renewables are very much down the pecking order in terms of the relative position they would compete for.

CHAIR—But we have a much greater problem: we are an energy exporting country. I go back to the question I put to you with regard to sequestering the CO₂. Given that GEODISC did a study of the frontier basins, as you are probably aware—

Mr Wood—Yes.

CHAIR—they concluded that at our current CO₂ emissions level we have some 100 years of storage of CO₂, so we eliminate that totally. Have you looked at sequestering and the sorts of impediments that would put on you?

Mr Wood—I have two comments. One comment is on one side of the argument and the other is on the other side of the argument. Therefore, I guess I am saying that we do not have an absolute conclusion. On the one hand, we are currently working on funding some activities around CO₂ sequestration in coal seams in Queensland. One of the reasons for that is that the methane that we take out of the coal seams in Queensland under our coal seam gas regime adsorbs onto the coal seams. Coal preferentially adsorbs CO₂. So by injecting CO₂ into those coal seams, one would not only be able to sequester the CO₂ but also be able to extract greater volumes of methane, which potentially have some interesting commercial drivers. That is very early work and we are nowhere near the stage of being able to get a handle on the technical viability or, more particularly, the commercial viability of such an activity. But that is work that currently we are funding through the University of Queensland.

On the other side of the equation, we have participated in some work more particularly driven by BP and Shell. I forget the name of the particular organisation that is pushing this work which is talking about CO₂ sequestration. I have to say that the numbers that I have seen in terms of the cost of CO₂ sequestration are potentially quite significant—that is, in the order of 25 to 30 euros per tonne. It seems to me that does an awful lot—

CHAIR—That is based on the Norwegian experience, though.

Mr Wood—I think so, yes. To be honest, I would say that we have gone beyond looking closely at whether that is a real figure. So we have concerns. If you look at the clean coal issue, either in terms of our exports and what happens in an international carbon regime or in terms of Australia's generation, I think we still are highly sceptical of not necessarily the technology but what it does to the cost. The relative advantages that Australia has in cheap power generation will, in our view, be just about wiped out. So what we think will happen is that, under any of these regimes, you will see a significant change in the mix. I am clearly avoiding making any comment in relation to this export issue because it is not a position that Origin can realistically make many more comments on because it is not an area that we have a particular interest in.

Mr HATTON—In good part, it depends on the value of what you are going to extract as to whether that will pay. Woodside are looking at a new petroleum field or a couple of fields in Western Australia but, because of the price they can get for petroleum, they are actually looking at doing sequestration. It will pay them in the order of \$100 million to actually do it. But in terms of the total that they will be able to extract from those fields, they are saying, 'We think we can do it, even though we'll get nothing back for it in terms of credit.'

I want to ask about the problems you have had in regard to native title in different states. We have heard evidence this morning about the different way that Queensland has gone about things. The question that was not taken up this morning too much is that, if you compare Queensland with Western Australia and the Northern Territory, in the actual submission from the Queensland Mining Council they said that, if you run on the expedited basis—which they think will happen in the future here—you can get to your final point of certainty more readily. What has been your experience in the other states, and in particular between the other states and the onshore-offshore situation?

Mr Wood—We have had, so far, little issue in Western Australia. We do have, as I mentioned before, some activity in the Perth Basin. We were doing a gas exploration and we actually found some oil, so we are having to grapple with that. When we do some of this activity, we are certainly starting to think in relation to the cost of carbon that might be imposed and making sure that we understand it. So that is one comment.

In terms of native title, we have had experience with that most particularly in Victoria, South Australia and Queensland. We have generally run into similar issues in each state, and they come back to the hub of James's comments about process. We have usually chosen to go down the ILUA route where we have been able to. In most cases, we are able to find an agreement reasonably quickly. The problem we ran into in Victoria was that there was considerable disagreement within the Victorian government—between the various arms of government—as to what the government's position was going to be on the way in which they would push the issue of certainty. What we were seeking from them was basically a time line on developing an ILUA. In South Australia, we had no problem with that whatsoever and we were able to

expedite one particular activity quite quickly. In the case of Victoria—and I am talking probably 12 months ago—it was a considerable problem. As a consequence of that, that project was delayed quite significantly, mainly while the government worked out what their position was going to be on providing certainty about coming to an agreement position. At the end of the day they did, and quite quickly then we were able to reach an ILUA with the particular native title claimants.

In the case of Queensland, the most particular example where we have run into a difficulty has been in relation to the complex relationships between the native title claimants and the land councils. We have actually reached an agreement in one particular case but, because the boundary of the land councils virtually goes straight down the middle of the particular area we are talking about, two land councils are involved. So we have reached an ILUA but, before we can get to the tribunal, we have to get the land councils to sign off on that activity and the land councils now want to be able to make sure that the appropriate process was followed. Despite the fact that the ILUA has been signed, the land councils want to see the minutes. We actually paid for the cost of the land council person to attend the process. He did so, he did not produce a report and now he cannot be contacted. This is the situation we are now faced with. The very simple things in the process are causing us frustration. We had a meeting with the Premier of this state on Wednesday and raised this specific issue. We are still optimistic we are going to get through this—and, if we were not optimistic, most of our people would go stark raving mad with the process—but we think the process is still very difficult. James's comments were more related to our view that there are some principal issues with the process, but it is also our view that there are certainly many practical issues which are making it difficult. Does that answer your question?

Mr HATTON—Yes. It demonstrates that it is not just Queensland but that there are problems in other jurisdictions with trying to get to that certainty.

Mr Wood—Correct.

Mr HATTON—I want to follow up a little more on the Queensland case where you think there will be virtually a precedent and you can actually put a dollar value on what compensation for native title is worth. It might be a reasonable commercial approach to take, but it is a strange view to take given that there are native title claims Australia-wide in relation to different pieces of land with different things in them. So, if you have oil, coal seam gas, gold or whatever else then the outcome is going to be differential; the outcome will be based on commercial arrangements rather than on anything else. Can you tell me a little more about that case and why you think there would be a set of legal precedents and, indeed, almost a commercial precedent?

Mr Minchinton—I agree with you that different lands will have different qualities which will make compensation different. Similarly, each piece of land will be subject to different native title rights and interests which will also need to be compensated differently. At the moment, under the Native Title Act there is some debate within the legal fraternity as to what is the appropriate amount of compensation to be paid—whether it is capped at freehold value; whether it is something more than that, being on just terms; or whether it is something else. So what we are really looking at here are the broader principles that will apply to any determination of compensation, and so far there has not been any case to give guidance on those principles. This particular case in the Land and Resources Tribunal is being heard under the alternative state provisions that presently exist in Queensland under the Mineral Resources Act. Under that

process, the tribunal must make a compensation trust decision in this case, so they must put a dollar figure on compensation for native title rights and interests as a consequence of the particular mining lease applications. In reaching that decision, they must determine the principles of law that apply—whether it is capped at freehold value or whether it is on just terms. So these principles will be enunciated for the first time in a judicial body, which will provide a bit more certainty to the industry when they go forth and negotiate on commercial terms.

Mr HATTON—For a system that closes down on 31 March?

Mr Minchinton—The hearing will occur before 31 March. Even if the system does end on 31 March, the tribunal still has an obligation to hear this matter under the existing legislation. More than likely it will be the only determination for compensation made under that system; nonetheless, the decision will be made.

Mr HATTON—Then you have the question of transferability to the new regime, which is entirely different.

Mr CAMERON THOMPSON—You made a couple of comments, James, about a clash between state and federal law. Can you clarify that?

Mr Minchinton—Probably the best way is by way of an example. Section 24KA of the Native Title Act says that, if you want to get an easement over land, you have to do so by treating native title holders in the same way as a holder of freehold. There are certain processes that you go through with a freehold owner, and they are not entirely appropriate for native title holders because the rights and interests of landowners are not the same as the rights and interests of native title holders. It is probably not so much the inconsistencies but the application of applying a broader federal law to specific state law instances where the state laws vary between each state—albeit in small degrees—that the application does not necessarily have universally consistent effect.

Mr CAMERON THOMPSON—I thought we were supposed to have a complementary system. I thought those bugs had been ironed out.

Mr Minchinton—Even the best legislators end up with bugs in their system. There are still a few little bugs. The worst have been removed. Nonetheless, there are still some little ones in there.

Mr CAMERON THOMPSON—But you seem to be flagging that as a major concern. You ranked that along with the other prime issue as being a serious matter. You raised a question about certainty and you keep referring to the clash between state and federal law. Are you saying these glitches are only little ones?

Mr Minchinton—For the most part they are little but, when you are involved in a process, they may prevent you from continuing that process in a direction that both parties would like.

Mr CAMERON THOMPSON—I will put the same thing to you as I put earlier to the people from the Queensland Mining Council. It was about the extent to which Aboriginal people are employed in exploration or, in your case, the coal seam gas industry or anywhere in

the gas distribution or generating industry. Do you think that we could be assisted to some extent if we could find ways to provide greater employment for Aboriginal people? The comment from the other side seems to be that there is very little benefit for them in pursuing those sorts of opportunities because they are not employed.

Mr Wood—One of the difficulties that our part of this industry has is that we do not employ that many people. This is an issue we run into with not only native title claimants but also other landowners when we are building a gas pipeline for example. Basically, we are just going to stuff them around. They are not going to get any direct benefit. We will go away again and they will have a gas pipe under their ground. Or, in the case of a coal seam gas field, the actual physical impact on a property, whether it is a native title claimant or a landowner, is relatively minor in the long term. Actually identifying the nature of the thing we are trying to compensate people for is often the difficulty.

In some areas of our operations, we have employed small numbers of people from the local community, in particular Aboriginal groups. If we could find opportunities to do more of that I agree that would be a very good thing to do. But in very few cases does our activity provide an opportunity to do something positive. We have done it in very small ways in two or three situations but it has never arisen as a significant issue. For example, in Victoria and South Australia, one part of our Indigenous land usage agreement was to provide scholarships to the local tribal group. I think there were three scholarships allocated to the local people to go on to post-secondary education. We found that tended to be quite effective but we just do not employ enough people in our side of the business to really be able to do very much

Mr CAMERON THOMPSON—In James's presentation he talked about an example of an authority to prospect that had been lurking since 1993 and had not been delivered and another example of a mining lease from 1996. Taking your industry, as opposed to mining and all the other industries, can you give us an estimate of how much activity growth we are missing out on because of the delays as a result of this?

Mr Wood—To put it in perspective we have spent about \$300 million on our coal seam gas activities in Queensland to date. We currently produce about 40 per cent of the coal seam gas in Queensland, which produces about 25 per cent of Queensland's gas. The case I referred to before, which is held up as a matter of process between the native title claimants and the land councils, is one of the more significant issues we have in terms of acreage. In this particular case, it will not mean that an investment will never happen but it is likely to mean that an investment that could have taken place 12 or 18 months earlier will be delayed to that extent. That activity has commercial impacts. That activity is of the order of \$50 million a year, which will be delayed.

There are certain cases where we have decided that it is just not worth the effort because there has not been enough clarity of process for it to be worth doing. They would be relatively minor in the scheme of things, so it might very well be that we do not bother with things now. We will never know to some extent how significant that activity could have been because we do not bother to go ahead with it. You may be aware that in Queensland there is an issue that needs to be resolved between the coal and petroleum sides of things in the new coal seam gas regime. If we can see there being a significant clash with either a native title issue or with the coal gas regime, we will not bother with that particular acreage and we will never know how much we might have been able to develop in that area. The example we were looking at in south-west

Queensland was more a clash with coal than an issue with native title. This probably means that potential investment—certainly, on the low side, in the order of \$50 million—will not go ahead. We will never know what the upside might have been.

Mr CAMERON THOMPSON—Can you clarify the clash between coal and petroleum? Is that an administrative clash?

Mr Wood—No, it is not administrative. You need to go back to the physical nature of coal and gas. Gas is basically physically in the coal seams and it is that same gas that was the cause of the Moura mine explosion. One of the reasons you want to get rid of that gas is to make it safer to mine the coal; secondly, it has a significant environmental benefit because the methane which otherwise would have gone into the atmosphere when you mined the coal will now be captured; and, thirdly, you get the commercial benefit of the methane. So you have got three good reasons for getting it out. The problem is that where you have got overlapping tenements or claims over the particular property concerned, how do you resolve who has prior right? How do you resolve any potential clashes between the people who want to explore for gas and those who want to develop the coal? That is where there is tension.

What has happened over the last three or four years is that the interest in coal seam gas has accelerated. The Queensland government announced the principles of a new coal seam gas regime before Christmas and is now working through the process of developing the legislation to support that regime. My understanding is that that is proving a very complex issue, not only because they are complicated processes but also because quite complex commercial issues are involved. It comes down to simple things like the coal industry arguing: ‘We should go this way because we’re worried that those wretched gas people will leave their drill bits in the ground after they’re finished, and when we come along and mine the coal later we’ll have an interesting safety problem.’ Most of the activity we are doing is in areas that will not be mined in the foreseeable future; therefore, 800 metres and further underground. But there are areas where there is potentially a clash, even with things like the definition of mineable coal.

It is a significant issue for the Queensland government to work through that legislation. It happens to be a Queensland issue because that is where the biggest coal seam gas resource is. In the US it is mostly resolved in a way that is more straightforward because most of the companies that are developing the coal are also developing the gas whereas in Australia you do not have that. The only Australian example I can think of where the company is interested in both gas and coal is BHP Petroleum.

Mr ADAMS—Has Origin been bidding for offshore petroleum rights?

Mr Wood—Yes, but not a lot. Origin is an upstream and downstream company, and I guess singularly so in Australia. We are very interested in gas that can come to market. Many of the smaller upstream guys are concerned about monetising and exploration success; we are concerned about getting the gas to market. That is one of the reasons why you hear a lot of noise around the place about whether the upstream market is actually competitive or not because of joint marketing activity, and we have a view about that.

An example I can think of where we have had to deal with both state and federal is mostly offshore. Even offshore South Australia, Victoria and Tasmania would usually be in the territorial waters of one of the states. We are currently developing the Bass Basin and the Yolla

gas field, which will come onshore Victoria—although at one stage we thought about bringing it onshore Tasmania; I believe that particular gas field is in Tasmanian territorial waters. When we bring gas ashore, when we get to the development stage, we have some issues to do with environmental approvals from both state and federal governments. They usually occur fairly cleanly. In addition to that, we are usually able to get parallel environmental approval processes. We are able to get both state and federal running parallel so we do not have to go through the same thing, one after the other, on a sequential basis. That usually works fairly well.

We do have a few hold-ups with the granting of exploration permits. They are mostly in state jurisdictions—the examples I can think of. Usually they occur when you have simplistic things like new ministers in chairs who are worried about making sure they do not put a foot wrong and who have to make a significant decision on granting an exploration permit. I cannot think of any significant examples of where we have been in federal territory for offshore activity. Most of it we are talking about is near shore, Perth based and offshore Otway Basin and Bass Basin.

Mr ADAMS—But no real problems in that area?

Mr Wood—No significant problems. We have a current very frustrating delay near shore Victoria around the Warrnambool area, where we are really struggling to get the process of exploration permits expedited. I think there are some particular sensitivities from an environmental perspective. In that state you have two new ministers. It is almost a pragmatic issue of new ministers wanting to make sure they understand the legislative process. But generally speaking, they are the sorts of things that cause delays, rather than a fundamental breakdown of the process.

Mr ADAMS—So that is the political process?

Mr Wood—Yes.

Mr ADAMS—You believe that getting a compensational figure out of this court will help solve some of the native title issues?

Mr Minchinton—It is more the principles that can be applied in each individual case to help reach a figure. It would be of benefit in negotiations and help the parties to reach good commercial negotiations to the satisfaction of both parties if there were an idea of what the figure would be if the parties were to go to court. It could assist with negotiated settlements.

Mr ADAMS—Are there such figures in Canada?

Mr Minchinton—Not that we have been able to determine.

Mr ADAMS—Or the United States?

Mr Minchinton—No.

Mr ADAMS—So there it is just by negotiation?

Mr Minchinton—Yes.

CHAIR—I thank you for your appearance here today. Is it the wish of the committee that the document entitled *Origin Energy: Delivering the Goods* and presented by Origin Energy be taken as evidence and included in the comments and records as exhibit No. 44? There being no objection, it is so ordered.

Proceedings suspended from 12.48 p.m. to 1.47 p.m.

DICKIE, Dr Geoffrey, Executive Director, Native Title Services (Mining and Exploration), Department of Natural Resources and Mines (Queensland)

MURRAY, Dr Cecil, Geoscience Manager, Geological Survey, Natural Resource Sciences, Department of Natural Resources and Mines (Queensland)

CHAIR—Welcome. I invite you to make a short opening statement.

Dr Dickie—Thank you. I will just update the committee on developments on the native title side since the submission was made, and Cec will do the same thing on the geoscience side. There have been some significant developments since August 2002, when we had our native title processes in suspension after the Federal Court decision. On 28 November, the full Federal Court reversed the decision of Justice Wilcox about the validity of the native title provisions, and the Queensland alternative state provisions were confirmed as valid—and as always having been valid. The government then decided to continue receiving applications under the alternative state provisions until 31 March 2003.

The government also decided to continue processing any applications that had started or been entered into under the alternative state provisions, through to grant abandonment or other closure. Also, the government decided to begin releasing into the alternative state procedures any of the backlog mining leases. Out of a backlog of 750, approximately 200 to 250 exploration permits are now being released into the alternative state provisions. At the same time, the Land and Resources Tribunal recommenced its activities. In the ensuing time, there has been considerable movement in reaching agreement in disputes that have gone to the Land and Resources Tribunal.

The second important date was 25 February 2003, when legislation was introduced to the House to adopt the Commonwealth process of the right to negotiate. That included the use of expedited procedures for explorations of specific interest to this committee. As a condition of the grant of exploration permits, the government has decided that the minister can impose native title protection conditions. The objective of these is to reduce the number of objections that native title parties would make to the use of the expedited procedures. The native title protection conditions have been negotiated over the last couple of months with the Queensland Mining Council and the Queensland Indigenous Working Group. There is substantial agreement on the terms of these conditions, which will be attached to exploration permits. We are hopeful that, when the Commonwealth procedures start to be used on 1 July, we will have a process by which we will be able to use the expedited procedures with a minimum of objections from native title parties.

I would also like to refer briefly to our progress with Indigenous land use agreements. The government is committed to the most widespread possible use of Indigenous land use agreements. We have mainly worked on two fronts in that regard. There is the state wide model ILUA for exploration, which has also got an equivalent in the north-west—the Kalkadoon agreement in the mineralised province up there. We promote those two models for exploration agreements, which companies can sign onto once the native title parties have agreed to them.

We have also been using ILUAs for small mining activities, recognising that right to negotiate provisions—and even the alternative state provisions—were just not appropriate for small opal miners, gem fields or small goldminers in north Queensland. We are now in the final stages of agreement with most of the small mining groups in Queensland over area agreements that will cover small mining activities for the next five to 10 years. These will give a smooth process for the grant of mining leases, mining claims and exploration permits in those restricted areas.

I would like to make a comment about ILUAs and the difficulties in reaching agreement. That was referred to by the representatives from Origin Energy as well. With the scheme for ILUAs where you have to reach an agreement, have it authorised and then subject it to a three-month objection period through the National Native Title Tribunal, we have established a system where we have to get 100 per cent of a native title group on board and agreeing with it. I do not think that that sort of level of requirement on agreement making exists anywhere else in the world. We have found that that does create problems in coming to final agreement on Indigenous land use agreements. The Origin representatives this morning raised some of the other problems relating to dealing with land councils—the potential disputes between native title groups and land councils and between different land councils. But the government is still committed to agreement making where possible. We are suggesting ways of improving the legislation, whereby ILUAs can be used more widely.

Dr Murray—I want to say a few words about geoscience data. One important thing we seemed to leave out of our submission was the view of the Queensland government that the provision of geoscientific data is primarily to attract and assist exploration. You can use it for a number of other things, of course, but that is its main use. To indicate that, we have our program of geoscience activities looked at by an industry advisory group on a regular basis. They can contribute ideas and rate their priorities for our different proposed projects. One other thing not in the submission that I just wanted to mention is the price of geoscience data. It has become fairly common practice in Australia to provide fundamental geoscience data free over the Internet, where it can be transmitted in that way, or to distribute it at a very nominal price on a CD or in hard copy. That is fairly common practice throughout Australia now, and we see that as a big boon for explorers during that earliest highest risk stage of the exploration process.

One thing of note in Queensland is that our QDEX system, the Queensland digital exploration reports system, came online just before Christmas. It allows people to search, view and retrieve online company exploration reports from anywhere in the world. Unfortunately, we have not scanned all our hard copy reports into that system yet, but we are working on that as fast as we can. Those are just a few things that were not in our submission and I think they bring us up to date.

CHAIR—Thank you. Flowthrough shares and R&D tax concessions for greenfield exploration are recommended in your submission on page 7. There are other financial mechanisms that could attract investment to the resource exploration industry. What is the state government's view on flowthrough shares and other incentives to kick-start exploration more fully?

Dr Dickie—The lack of venture capital for junior mining companies is something the state certainly views seriously. It is supportive of any measure that might enhance the ability of explorers to raise money for high-risk exploration projects and to develop small mining

activities. Over the last four or five years, very few companies have been able to raise money on projects in Queensland through public floats, and any financial mechanisms that might provide an incentive for junior exploration companies to fund their high-risk activities would be supported.

Mr ADAMS—Do you think there is an opportunity for the states to work together to obtain overseas capital? I note that the Prospectors and Developers Association of Canada is having its annual trade show in Toronto in a week or so. Do we get together nationally to attend such an event, or are the states there individually? Is there any opportunity for us to do things as a nation at that level?

Dr Murray—Yes. My boss is over there right now. The Australian states do get together; they go as Team Australia. That has become a very big theme over the last year or so. They go jointly because, at big international events like the one you mentioned, we see that we have to be seen as promoting Australia rather than individual states. There is a great deal of cooperation and collaboration in promoting Australia at that event in particular—it is the biggest event of its type in the world—and we have seen some considerable benefits in terms of attracting Canadian companies to invest in Australia.

But the other point that has become obvious from that exercise is that you need to keep at it for a number of years in a row; it is not something that you can go to once and instantly get a response from. In conjunction with that event, of course, visits are made to a number of selected Canadian companies. That whole process is very carefully evaluated every year. There was even a session held in Brisbane around October last year for a national conference here. We brought in a market consultant to look at the best way of promoting Australia at that event.

Mr ADAMS—Are we up to world standards in geoscience? Do we lead the world, are we a middle player or are we down the bottom?

Dr Murray—In general terms, Australia would be leading the world in providing regional geoscience data sets. There are probably some Canadian provinces that match us. However, because Australia is very flat and other countries are not necessarily so easy to fly over, we have certain advantages in getting regional geophysical data sets—many of these are airborne surveys. So our coverage in Australia is second to none, apart from some of the smaller countries around the world, perhaps. The issue there is that we have done a lot of airborne radiometric and magnetic survey work and over the last decade or so most of that has been done by the states, which have put an awful lot of money into it—\$270 million. To find new ore bodies, which will probably be buried ore bodies rather than surface exposures, requires the next level of regional data, from things such as airborne gravity surveys and airborne electromagnetic surveys. Those are extremely expensive. A nationally coordinated program involving the Commonwealth and the states will be needed to make progress with that, I think. If we are to keep at the forefront, we need to be thinking about that sort of approach.

Mr ADAMS—Does that sort of survey technique and approach provide benefits for industries other than the mining industry? Can we use the information we get from surveying for other things?

Dr Murray—Yes; airborne EM is useful in salinity studies. It is a great technique where mineralised areas happen to coincide with problem salinity areas, such as in the Western

Australian wheat belt. These low-level surveys provide very good digital elevation models, which are also useful in a number of areas.

Mr ADAMS—Are they useful for water flows?

Dr Murray—Not really. The surveys show up saline water because saline water is a conductor, whereas fresh water is not. The technique is not particularly useful for locating fresh water.

Mr ADAMS—Thank you.

Mr CAMERON THOMPSON—The committee heard evidence earlier about the problem of native title and multiple claimants. What is being done to try to hasten a resolution of that problem?

Dr Dickie—Fundamentally, the problem of multiple claimants is being dealt with by the Federal Court, which is the ultimate body that makes decisions on native title. Resolving the overlapping claims is one task that the National Native Title Tribunal has been undertaking. It is a major problem in Queensland. The representative bodies, the land councils, are devoting considerable resources to anthropological studies to try to resolve where the claims of the various native title groups reside and to work out the boundaries.

Mr CAMERON THOMPSON—Who is doing that—the national native title groups?

Dr Dickie—No, the native title representative bodies, the land councils in Queensland. An example is in the north-west; we are particularly interested in resolving the boundary difficulties up there. There are, I think, a total of eight overlaps involving the Kalkadoon claimant group. Many of these are very highly emotive disputes. A number of groups have tried to go in there and work out a resolution. There is still considerable overlap in there. It is a task that, as a state, we have stayed back from because within the native title claim process the state is the first defendant, the first party to the claim. In that position, we would say that, until we know who the people are and what the area is they are claiming, we are not going to get involved in negotiating with the various groups until they have a resolution.

Mr CAMERON THOMPSON—Do you think the representative bodies are the right people to do that? Obviously, if there is such a strong degree of division, isn't there room for some kind of mediation or something to resolve it?

Dr Dickie—There is. The native title representative bodies are the legal representatives for the native title groups and, as such, it is their job to find out who it is they actually represent, for which part of the country. The mediation role is the National Native Title Tribunal. They do provide mediation. They go into areas to try to resolve differences and NTT has been into the north-west two or three times. The Federal Court has been in with its mediation, and there are still overlaps. The representative body up there now is embarking on a major anthropological study, which will give a bit more factual basis for the next round of people who go in and try to mediate.

Mr CAMERON THOMPSON—There seems to be a perception among some of the people who appear in relation to native title that Queensland has a bigger problem than elsewhere. Why would that be the case?

Dr Dickie—Firstly, on the native title claims, Queensland has had probably more dispersal of the native title parties—movement off their traditional lands. Getting people to identify with their traditional lands when they are spread out across the state is, firstly, a logistical problem and then it is a resourcing problem. If you need to get a group together, you are often faced with a cost of \$30,000—to get a traditional owner group to a meeting for a couple of days. That is the sort of money that you are faced with. You have to get people from Cairns and Palm Island and all the reservations in eastern Queensland back to an area that is close to their traditional lands.

Mr CAMERON THOMPSON—What is the motivation for doing that—for resolving these conflicts among the native title potential claimants? In other places, we have heard people saying, ‘We are not going to get any employment out of mining, so mining does not particularly interest us much. We are not going to get the job, so we are not interested in it.’ But we are talking here purely about native title and who has the rights. Is that a matter of interest to the potential claimants, or are some of them indifferent to that?

Dr Dickie—I think the native title parties derive significant value from being recognised as the traditional owners of their traditional lands. They want to be a part of the group that has the native title rights for their particular area. That is the first point. The other is an involvement in any uses of the land, flowing from the traditional linkage with the land that is in the Aboriginal tradition. There is recognition on a couple of levels. There is recognition of who you are and what your lands are, and there is recognition through being consulted about future uses of the land.

Mr CAMERON THOMPSON—I was asking you whether they are all keen participants, wanting to participate in resolving these issues, or whether there are people who are either indifferent or perhaps even actively not wanting to resolve the issue? I do not know what the motivation might be, but I would have thought, given a strong degree of interest in proving their case, that we should be able to get through this process more quickly than we do?

Dr Dickie—There are disputes at various levels when you try to bring those traditional owner groups together. There are intra-family disputes and disputes sometimes between the traditional owner groups and the land council representing them—or any other legal representative that they might have. There is a lot of potential for fracturing of the group. That is one of the reasons that the land councils particularly like to bring the group together for communal decision making. That is a way to bind the whole group into the decision. Whenever decisions are made in a fragmented way, there is a greater opportunity for the individuals to say they were not part of the decision.

Mr CAMERON THOMPSON—Do you know how many of these disputes exist?

Dr Dickie—I do not know how many exist, but there are—

Mr CAMERON THOMPSON—What about just the north-west area? You have said that you are interested in trying to resolve this in the north west, and there seems to be a real need to do that. How many disputes are there?

Dr Dickie—There are probably eight disputes between traditional owner groups. Then, within the traditional owner groups, there are occasional flare ups of disputes—within, say, the Kalkadoon group, which is an amalgam of eight to 10 family groups.

Mr CAMERON THOMPSON—How many meetings have been held to try to resolve those eight disputes?

Dr Dickie—I am aware of two attempts that the National Native Title Tribunal made over about two or three years, with a series of meetings between the groups. Then, within the last year or so, the Federal Court had meetings out there with the groups and their representatives. So there have been ongoing attempts to resolve the groups' differences.

Mr CAMERON THOMPSON—Does the Queensland government have any preferences about the way in which that process should be brought to a head—or are you happy to allow it to be an indefinite process, basically?

Dr Dickie—Our interaction with the groups, especially on the mining side, is that the groups have procedural rights, by virtue of the fact that they are registered claimants over the area where we want to grant an exploration permit or a mining lease. Whether one, two or three claimant groups exist, given either the Queensland processes or the Commonwealth processes, there is a process in there for getting all those groups to come together to make an agreement. If they cannot make an agreement, then it goes off to a tribunal to be determined. So, while it makes agreement making more difficult, it does not prevent agreement making. We have had a number of examples of the right to negotiate process in Queensland where there have been three or four groups involved and eventually an agreement has come out.

Mr CAMERON THOMPSON—But surely a delay of two to three years in knowing who you are negotiating with is a real concern, especially in an area as potentially important to the economic development of Queensland as the north west.

Dr Dickie—Under both processes, you know within four months whom you are going to negotiate with: you notify, and the claimant group gets registered, so you deal with the registered native title claimants. So there is that timeframe put on it. Once the negotiations start, you run into difficulties with the possibility that the various groups are not prepared to come to an agreement.

Mr CAMERON THOMPSON—Yes, but the question still stands. We have been waiting two to three years in relation to the eight disputes up there: are those going to go on much longer? What is the cost of those delays?

Dr Dickie—The proposal by the land council is to do an anthropological study up there over two years.

Mr CAMERON THOMPSON—On top of the two to three years we have already had?

Dr Dickie—Yes. The study began at the start of this year. That study has a larger scope. It will cost half a million dollars.

Mr CAMERON THOMPSON—That means another delay of two years. Is that an issue of concern for the Queensland government?

Dr Dickie—In terms of getting these mining tenures through the system, it is not a delay for us. It is a complication, because you may have more than one group to deal with, but it is not going to delay us in granting exploration permits or granting mining leases. We have got that time limited system in place; if there is no agreement, it goes off to the National Native Title Tribunal or the Land and Resources Tribunal for a decision to be made.

Mr CAMERON THOMPSON—We have heard from earlier witnesses that confusion over who is responsible is causing capital which might have come to Queensland to be sent elsewhere. The evidence you seem to be giving is that we have had two to three years of delay, and now we are going to have an anthropological study that will go on for another couple of years—and at the end of all that we will still not have solved that central question that is worrying the mining companies.

Dr Dickie—No, the Federal Court is monitoring and overseeing this whole process, because it is required to determine native title claims, which requires boundaries to be established between competing claimants. The Federal Court has given the land council some time to come up with a solution to the problem of defining the claims in the north west. But it will take a minimum of two years probably before that situation is clarified to the extent that you know where a native title group has its traditional native title claim.

Mr CAMERON THOMPSON—Is the Queensland government confident that such an anthropological study will give evidence that will resolve the question?

Dr Dickie—It will give evidence that will help resolve that question, but it will not resolve it.

Mr CAMERON THOMPSON—Coming back to where I started: is the Queensland government satisfied that this process is effective enough to bring matters to a head? Is it satisfied that the issue about capital that is going to other places instead of to Queensland is not being compounded at great cost to the Queensland economy in the meantime? It is a balancing thing: are you satisfied that we are bringing it to a head effectively enough?

Dr Dickie—We are not satisfied that native title is being resolved quickly enough, because the court determination system is a very complex and expensive process. It is not delivering on clarity of native title claims. It is a system that we are involved with as the first party to a court action, so there is very little that the state can do to actively intervene in the process that the court is working on. We work on the side with the various groups to try to resolve their boundaries.

In trying to issue exploration permits, we have been negotiating ILUAs for each claim area. So what do you do with overlap areas? The pressure of that issue has meant that some of the claimant groups have adjusted their boundaries so that they do not have to have a separate agreement for that overlap area that accommodates both groups. But in terms of granting exploration permits and mining leases, the fact that there is not a defined set of native title

claims in that area may slow down the process, but the process is still there to deliver on the grants of those permits.

Mr CAMERON THOMPSON—Excuse my ignorance, but isn't there a conflict? If you can go and negotiate an Indigenous land use agreement for an area, but you can't get involved in trying to resolve the question as to who has the predominant claim, won't any land use agreement that you make in that area be seen as a prejudgment of your position on the claimant? Isn't that a conflict of interest between those two?

Dr Dickie—No. Our interest is in getting the ILUA agreed and signed up. We had to take what we call the 'cleared' area—the area that does not have overlaps on it—for each of the claimant groups. We do the Indigenous land use agreement for those areas where there is no overlap.

Mr CAMERON THOMPSON—What proportion of the total area does that leave you with?

Dr Dickie—Probably half.

Mr CAMERON THOMPSON—And half of it is in dispute?

Dr Dickie—Half of it would be in dispute, yes. But there have been instances in the North Queensland Land Council area where adjoining groups have said, 'We can't resolve who owns this piece of country, but we'll sign an ILUA covering that overlap area,' under the same terms as if they were single claimant groups. If the neighbouring groups recognise the value of moving forward with getting exploration and mining development on that land then they can see it is in their interests to reach a cooperative agreement. Unfortunately, in the north-west there is a legacy of bad feeling that is very difficult to break through.

Mr HATTON—The Queensland Mining Council, in their submission at page 21, said:

Mineral exploration in the Commonwealth Native Title Act is deemed a right to mine triggering the full right to negotiate process (unless the expedited procedure applies)...

The council further indicated that in doing a comparison between Queensland, Western Australia and the Northern Territory—and in the case of the latter two, they used the expedited approach that had seemed to work relatively successfully—the latter two were relatively much further ahead than Queensland. Given that you have signed up to or were part of that approach from 1 July, can you explain your understanding of those expedited procedures and how they differ in practice.

Dr Dickie—The expedited procedures are meant to apply to activities that are not going to have a significant impact on the land and waters. In most exploration, we would consider that the activities permitted under our exploration permits and our environmental authorities do not have a significant impact on the land and waters so that they would qualify for expedited procedures. But expedited procedures are a considerable reduction in the procedural rights afforded to native title parties. The right to negotiate is up there at the top. The expedited procedures is a right to notification only. Native title groups have objected in the past to the invoking of the expedited procedures, because all they get is a notification that the state is going to grant an exploration permit over an area.

Going from the experience in the Northern Territory—which I think has been very valuable for everyone, but I am not sure comparing it favourably with Western Australia, where there is still a 12,000 tenure backlog, is all that helpful—there was a flood of objections when the Northern Territory decided to invoke the expedited procedures. They built up a process of evidence that they gave to the National Native Title Tribunal to justify the Northern Territory government's use of expedited procedures. There were 67 objections heard last year in the tribunal. There are a lot fewer objections this year, because their precedents have been established.

The Queensland government did not want to go through the whole learning curve again. What we did learn from the Northern Territory was that you need to have some level of guaranteed heritage protection and that you need to have a pretty well-established notification process, meetings, dispute resolution and conditions for how inspections are done. What we have been negotiating with the Queensland Mining Council and the Queensland Indigenous Working Group recently is based around that. With the state-wide model ILUA, we had gone through that whole process just with the Queensland government and the Queensland Indigenous Working Group, but it served as a useful basis for the negotiations that went on between the other groups.

Mr HATTON—Were the alternative state provisions another way of trying to get the same sort of effect?

Dr Dickie—The alternative state provisions were alternatives to the whole Commonwealth process. In 1998, the Beattie government committed to going down the alternative state procedures process. We had meetings with the various groups to try to develop our alternative procedures. They had a rocky road both through the political scene and through the courts, and I think we never really had an opportunity to try out the alternative state procedures because of the delays of going through both the political process and the court process. There was an element of frustration for the mining companies in having to deal with all of those diversions or interruptions. The Mining Council were frustrated. They wanted the certainty of the Commonwealth procedures, and the Premier was responsive to that.

Mr HATTON—I want to go into a couple of other areas. There is an interesting confluence between the Queensland Mining Council's submission and yours—in particular, in regard to the question of R&D and how R&D should be defined. You are both effectively arguing that what happens in mining exploration should be considered as R&D and therefore you could write it off under the 125 per cent principle. Do you have any order of magnitude of what that might cost the Commonwealth in revenue—given that, if it became very popular, mining activity might then be boosted within Queensland?

Dr Dickie—I really do not have any figures on that available.

Dr Murray—The total level of expenditure per year that is termed exploration expenditure is, at the moment, at quite low levels compared with what it was, but I think it is about \$100 million a year. Not all of that, I would think, would come under the definition of R&D as we see it or as the Queensland Mining Council sees it. Obviously, exploration expenditure is considerably more than that in Western Australia.

Mr HATTON—And if it applied to Queensland, of course it would be applying to Western Australia.

Dr Murray—Correct.

Mr HATTON—Do you know of any other jurisdictions worldwide where that kind of mining exploration activity is considered as R&D?

Dr Dickie—No. In Canada, the incentives that are offered are really through the flow-through share schemes. The additional write-off there—the extra 33 per cent or 66 per cent write-off—is run through those schemes. That is their chosen route.

Mr HATTON—It is my impression that, historically, this has been treated as a risk capital approach, given the nature of exploration.

Dr Dickie—Yes.

Mr HATTON—The fact that you have got no necessary product at all in 999 out of 1,000 cases means that arguing an R&D thing is a bit novel, to say the least. I am sure federal Treasury may continue to actually view it that way. However, having to undertake exploration is getting to be a more expensive business all the time because of the easy pickings of the outcroppings and so on. Some are still there, but the fundamental costs are continuing to rise quite dramatically. In the 13-year period from 1992 to 2005, do you know what the Commonwealth's contribution has been in terms of the amount of money it has put into geoscientific analysis and data gathering?

Dr Dickie—Not off the top of my head.

Dr Murray—I believe the annual budget for Geoscience Australia is about \$40 million per year. But of course the figure that I mentioned before of \$270 million from the states is not the total budget that was put into geoscience activities. That was just the additional special funding that has been put in on top of the normal budgets for state geological surveys and geological survey activities.

Mr HATTON—So is that additional funding directed towards trying to push forward the boundaries of geoscientific data and to push forward on the basis of increased costs?

Dr Murray—I think the aim was always to attract and assist exploration to provide the fundamental datasets that exploration companies could use, in terms of public good, to lessen the risk element of exploration.

Mr HATTON—This \$270 million sounds very impressive, but it is all of the states and over 13 years, so it comes to \$20 million a year. Given just how expensive this whole process is becoming, if you look at that in that broader context we might be looking at needing far larger amounts on a joint Commonwealth-state basis. I might suggest that it may be more profitable to look into the area of what could be done at the geoscientific level at state and Commonwealth level rather than just down the R&D path, because it is a fundamental service that has been provided so far. You have indicated that Queensland, along with the other states, have become a

lot smarter in terms of the approach to it by providing this information free over the Internet. The Queensland Mining Council indicated that Queensland were a bit slower than the others at making that change, but that now has happened. You are equivalent to the other states in terms of cost and so on. Is that correct?

Dr Murray—That is right.

Mr HATTON—How much more expensive do you think it is going to get? Is this whole process more expensive because of companies like BHP Billiton, which have patented methods of exploration that they charge other people lots of money to access?

Dr Murray—Our experience has been that any new technology initially is very expensive to run. That goes for the latest in airborne electromagnetic systems as well as airborne gravity, for example, which is the big BHP Billiton thing. On the other hand, one of the other new developments that is being used is deep seismic reflection, which is run by the Commonwealth government. All of these are very expensive processes. There is no doubt that, with time, the cost will come down. CSIRO is trying to develop another airborne gravity meter and, if there is competition, the price will come down even further. This will take time. Of course, you have to ask: when is the best time to get into this technology? Probably, the best way to do it is to target some relatively small areas first that are affordable to see how useful the technology is before you go committing huge sums of money to do it over 90 per cent of Australia.

I am sure that, in time, these surveys will become as widespread as the current magnetic and radiometric surveys, which are now routine, and there is 100 per cent coverage of some of the states and the Northern Territory. Queensland is lagging in that, but that is because we do not see the value of doing a lot of this over the Great Australian Basin or the Great Artesian Basin, which represents a considerable covered area with little mineral potential. So we have done most of our high priority areas. I see the same thing happening with these other techniques, but it will take time. There is a great deal of cooperation and collaboration between the states and the Commonwealth. We have an annual conference to discuss all these issues. I can assure you that there is no particular state or territory that gets far ahead of the others in developments, because they are all made widely known and if someone comes up with a good idea everybody latches on to it. The free provision of geoscience data was one example.

Mr HATTON—Despite that cooperation, your written evidence seems to indicate that the Commonwealth has gone a bit missing in action because its focus is now elsewhere. There were onshore and petroleum searches in the past, but the Commonwealth is concentrating on other areas. Do you know what they are?

Dr Murray—Yes. When I first joined the Geological Survey, there was a big joint Commonwealth-state program in Queensland to produce first-edition geological maps of the whole of Queensland. It was a very big regional program, and that was extremely successful. In a period of a little over 20 years, we mapped the whole of Queensland and got the first really comprehensive geological coverage of the state. What has happened to Geoscience Australia and its precursors is that a lot of their resources have gone off in different directions from these regional surveys.

There was a big concentration on offshore petroleum. You can argue that that was correct and a good decision to make, but there was a big concentration. A lot of their finances went towards

offshore petroleum in the offshore basins. As a result of a number of reviews, they have now been told that they do not carry out regional studies; they are to specifically carry out specialist research that may contribute to regional studies. The way they go about this is that they focus on only a few—about three—significant projects in Australia and, if none of those happen to fall in Queensland, we miss out. We have missed out for a number of years now. You can argue that that is partly our fault for not coming up with a good proposal for a joint project, but they do seem to concentrate their resources within rather small areas now rather than look at the regional picture. I think they need to broaden their activities to cover a more regional scope to some extent.

The other point is of course that I believe they are now a statutory authority and not linked to any particular department, so they will take their funding from wherever they can get it. They have done some work for Environment Australia, for example. Again, that is not a bad thing, but it does mean that they do not have the same focuses as we do in the states. I think I can speak for most of the states in saying that all the state geological surveys are focused very heavily on mineral exploration—perhaps more so in the west than in the east.

Mr HATTON—You have made the point—as others have—that there are structural differences and changes. You have not made that as strongly as others. What you have pointed out is that the move towards the development of brownfields and reserves is in conjunction with the consolidation of the industry. It may just be that the severe downturn that we are having now—the other problems we are having in the native title area—has come at a time when people worldwide are not all that interested in exploration. You make the point that it is a problem not only here but also worldwide, that there are some indications that new activity is starting to pick up. Would you like to expand on that point? It is, I think, on page 10 of your submission.

Dr Dickie—I went to the Prospectors and Developers Association a couple of years ago, probably at a time when there was an all-time low in both exploration activity and the mood of the explorers. They represent very much the mood of the industry. In the last couple of years there has certainly been more of a rebound. There has been some rebound in specific areas of metal prices. Gold is always a spur to people going out and looking. In Queensland probably half of our exploration expenditure in the past 20 years has been on gold. That has dropped off considerably with the low gold price. Nickel is another one that is reasonably strong. There is a response, and I think that we are looking at a measured increase in activity, but there are still some very weak spots in the base metals.

CHAIR—Gentlemen, thanks for your evidence today.

Proceedings suspended from 2.42 p.m. to 2.56 p.m.

OLIVER, Professor Nick, Professor of Economic Geology and Director, Economic Geology Research Unit, School of Earth Sciences, James Cook University

CHAIR—Welcome, Professor Oliver. I invite you to make a short statement before we move to questions.

Prof. Oliver—I guess that the bottom end of the relationship between the current downturn in the exploration industry is represented by the mismatch between the needs of the industry with respect to fresh graduates and the capacity for the tertiary education institutions to deliver those needs. In the seventies and eighties, the cyclicity within the boom and bust cycle of the minerals industry was not totally out of whack with the capacity of the tertiary education institutions to deliver it. That was partly because the cycles were fairly short, so there would be a boom in the minerals industry and, then a couple of years later, there would be a boom in the graduate output.

The problem now is that, with six or seven straight years of decline in the exploration side of the business, the capacity for the current crop of graduates to deliver any growth within the industry is completely compromised. It is compromised for a number of reasons. One reason is that the perception of the exploration industry as a viable future career is so low that, even for the graduates who are out there at the end of it who are going to get snaffled up in the next couple of years like this, it is a huge hole that they are potentially coming into and trying to fill. If the minerals industry has a turnaround tomorrow, there will probably be four years of serious shortage in terms of the capacity for geology graduates, mining engineering graduates and metallurgical graduates to deliver into that industry. So irrespective of any changes that as parliamentarians you may be able to implement for the future good in this area, there will be a bad lag. So not only is there a previous impediment; there is a future impediment because of the perception of the status of that industry in the eyes of fresh graduates. What is even worse is that in previous cycles of short-term boom-bust, people went out of the industry for a short time and came straight back into it. We have had seven years where people have ended up as taxi drivers or accountants or where they have gone into a completely different field, never to return to the industry. Coupled with that, the next generation of mineral deposits discovered will be incredibly difficult to find—much more difficult to find than the previous generation. We just touched on the edge of that with discoveries like Olympic Dam, Cannington and Ernest Henry, which run beneath about 50 metres of dirt.

Basically, all the easy ones have gone so there will be a greater technical need with respect to mineral discovery in the future. It is not just the numbers that have been ground down to very low levels within the tertiary sector, it is the average quality. There are no students in this room, so I can say it safely. The average quality of the earth science graduate today is substantially less than the average quality of the earth science graduate five or 10 years ago. That is simply because the good ones have left to go into dotcoms or into whatever else they thought was going to provide a viable future for them. We are left with the ludicrous situation—

CHAIR—You are lucky the media has just left too!

Mr HATTON—But Hansard are still here!

Prof. Oliver—I am assuming that one of these guys is the reporter and the other is the editor! This is no real reflection on the students coming through—they are all still enthusiastic—but the reality is, in that sort of cycle when the perception has gone way downhill, that the best graduates or the best potential graduates leave to do something else. That delivers a double whammy because the technical requirements to make new big discoveries are not going to be led by people who have come out of university having gone from school with OP14 in Queensland terms. Those guys might be suited for being on drill rigs or what have you but they are not the guys—or women, sorry; there are some women in this industry, but not very many—they are not the people who are going to go out and find the next Broken Hill, because the next Broken Hill is going to be extraordinarily difficult to find. All I am doing is enunciating that, because of the length of the downturn, the capacity of the system to rebound out of that has been seriously hammered. What might be done about it is not straightforward. We as academics have obviously been thinking about it. Our approach is to take students of lower and lower quality. We now have an entrance requirement that says that if you want to do geology, all you need is to have got through year 12 with English: not maths, physics or chemistry—English. Those are the students we are taking in to geology degrees these days. That is the problem in a nutshell.

CHAIR—Thank you for that. You said that investor confidence in gold exploration and production has declined and that native title legislation is partly the cause. What other influences on investor confidence do you believe are significant?

Prof. Oliver—On investor confidence or on general confidence?

CHAIR—Both.

Prof. Oliver—If you have a bunch of graduate or potential graduate students out there thinking that it is better to become an accountant rather than to stay as a geologist, that is a symbol of that lack of investor confidence. If the people potentially coming into the industry as employees do not have the confidence to stay with the industry, why would you expect any investor to be confident? Maybe we are seeing some changes now, but the gold price, as we know, is not responding to the wonderful productivity of the Australian marketplace; it is responding to overseas threats. The dividend return on this industry has been increasingly low in terms of the total share portfolio arrangement. If you had a complete cross-spectrum share portfolio, it is the minerals industry that would be performing the worst unless you had been lucky to get involved with some of the very few recent big kicks in the market, and they are few and far between. They are mostly associated with small gold producers in Western Australia. It is not an attractive industry. If you were a big business person with lots of money to invest, at this point probably you would be seriously considering investing in the minerals industry only out of philanthropy or the hope that at some point in the future the situation will strengthen. In reality, if you are out there hustling on the share market, you are not going to make big money out of the minerals industry at the moment.

Mr CAMERON THOMPSON—In your submission you made reference to secondary school curricula and you focused on Queensland and WA. Why was that?

Prof. Oliver—I focused on Queensland and WA in terms of the revenue that is raised by the federal and state governments that comes from minerals in those states. It is almost inversely proportional to the number of earth science courses taught in high school in those states. All I

have seen in Queensland and Western Australia in the last 10 years is a gradual shutting down of secondary school earth science departments at the expense of other courses that might correspond to what people might think were more vocationally useful. The reality is if you take some—

CHAIR—Do you put the Kalgoorlie School of Mines into that category?

Prof. Oliver—No, but the Kalgoorlie School of Mines is a tertiary institution with links into the secondary school. I have not got the statistics with me, but, literally, the number of geology courses taught in secondary schools around the country has definitely plummeted in the last 10 years. The reason for that is a mixture of two things—one is that, in previous cycles, there were actually a number of unemployed geologists who became secondary school teachers, but that wave of people who basically came through in the early seventies has now retired and there has not been another wave of people go into teaching, because I guess there is only one thing less attractive than being a geologist at the moment and that is being a secondary school teacher. Again, I hope there are no secondary school teachers here.

CHAIR—He has broken all the rules.

Mr HATTON—This has made sure the report is going to be a best seller! We have not got a title yet, but there is some very quotable material there.

Prof. Oliver—You are probably quite lucky. I am a bit pumped up, because I was getting bad information about the location of this. If I had had an hour to think about being circumspect, I would have done so.

Mr CAMERON THOMPSON—You say that this issue of interest among secondary school students is actually inversely proportional in Queensland and Western Australia, which are states which have traditionally been reliant on that. Have you been able to have some talks with them? What is the reaction to the idea of generating interest at least at the secondary school level?

Prof. Oliver—I think there is a slow change. There is a double change. The first one is the recognition by the state governments—probably Western Australia was quicker than Queensland but both are actually doing it—in terms of a revenue flow chain that they cannot afford to neglect the general areas of science and engineering for too much longer. I think both states, and probably every state at the moment, has got a relatively recent implementation of strategies within secondary schools to try to boost the profiles of science and engineering. It has been an international and national trend recently, and it is slowly impacting on those schemes, so that should have an effect.

The other difficulty is—and this is partly in the realm of where I would be held responsible, as in the academics—that the interface between the tertiary sector and the secondary sector has been fairly weak in recent years. That is basically because there has been so much pressure on the tertiary sector that nobody has any time any more. It is not that we had a huge amount of spare time before, but at least there was enough time to feel that it was a useful community service to go out and try to encourage secondary schoolkids to look at fossils, rocks and minerals. It is just because there are so few secondary school teachers who teach any earth sciences that they do not even have the incentive or understanding of why it would be

important, and then it is not being forced on them by any sort of curriculum structure or any structure. They just would not even know that you would need to teach earth sciences.

Mr CAMERON THOMPSON—But if native title is the issue, wouldn't it be better to train lawyers? If there is this fundamental breakdown in the process of employment, you can put more people through or put more investment into that, but the lack of employment opportunities remains.

Prof. Oliver—But I would hate to think that it was only lawyers who were going to get us out of native title issues, for starters—just in response to your first attempt to get me going again. There is no question that secondary school students are aware of native title, but they are not aware of what proportion of the country's revenue actually comes from minerals, and that is the gap. I am not saying that I could actually solve that gap, but that is the fact. The average secondary school student knows a lot more about native title than they know about geology. What is the one that ultimately makes the money for the country? It is not native title. Native title is a legal document; it is not something that makes money for the country. I am not in the business of advising whether or not people should be taking law degrees, but that is the symptom; it is not the way to fix it.

Mr HATTON—Do you think it was a really bright idea to make HECS higher for scientific courses and scientifically based courses? I suppose it does not matter much if you do not get a job, but it may if you do.

Prof. Oliver—I guess this gets back to the quality issue. The problem is that, if you have unilateral HECS for every student going into universities, the vice-chancellors have no incentives to put extra resources into the science and engineering departments. In so doing, it means that there is no capacity for science and engineering departments to attract good students. What you need to do is not to have people coming in through the bottom door because you have to place bodies on seats but to actually put some quality back into that sector. The only way you can really put quality back into that sector is if those departments are resourced properly. So the current focus at pretty well every level, as far as I can see as an academic, on student numbers and dollars is completely detrimental to getting quality science and engineering graduates out of the system. That is something we face on a daily basis. It really has been seriously eroded. If you wanted to fix that then you would have to raise the barrier to what it was 20 years ago, when the gap between getting into science and engineering and getting into arts was big. It is now non-existent. That gap needs to be big, because you need students who have the capacity to deal with the technical changes required to get into the next generation of mineral deposits to make more wealth for the country. We are not going to get that with people who come through with OP14, who have failed half their subjects and who take five years to pass their degree.

Mr HATTON—Those people have gone off into law, medicine and dentistry. They are not being pulled in in the first place at all, are they? The attractors are not there.

Prof. Oliver—Exactly, the attractors are not there at any level—at the start of, during or towards the end of their career.

Mr HATTON—Part of the problem is that, in the view of the students, there is not big money in this field.

Prof. Oliver—That is the other huge misconception. If I, as 21-year-old, went out and worked in the iron-ore industry in Western Australia, within four years I would have a salary the same as I have as a professor. In four years, I would be on \$100,000, after having started on \$60,000. That is good money for a 21-year-old. At age 25, I would be getting a salary of \$100,000, which means that at age 30 I could have a \$250,000 house in Perth. People just do not know that. What would the average person coming through school know? All they would think is that it would be terrible to consider working in a mine in Western Australia. That is all they would be considering.

Mr HATTON—So, instead of just looking at the federal government championing mining and so on, the Queensland Mining Council should be looking at running a program through the state schools to put mining back into first place—or at least to give kids a basic understanding of what it is about and how central it is to the economy?

Prof. Oliver—I would agree with that in the sense that science comes first, absolutely—and not just more teachers teaching more science but with a better emphasis so that students understand the link between science and engineering and the country. At the moment, they just do not understand. They think the country is run by people with share portfolios or by lawyers or by dotcoms. They do not realise that the background wealth is all in this other sector that they do not know anything about.

Mr HATTON—So there is a massive disjunction there.

Prof. Oliver—Yes, and there would not have been this disjunction previously. Because there has been this seven-year downturn in the mining industry—for various reasons, including native title—students just see it off there in the distance. They think that these are the people who work out bush and they do not need to worry about that.

Mr HATTON—Who have you been teaching? What have the kids who have come through with these very low TER scores been doing? Have they been going into mining or going off elsewhere?

Prof. Oliver—At the moment, students who have just scraped through three years of a geology degree are not really eligible to be professional geologists. They need a fourth-year honours degree and, increasingly, recognition by the Minerals Council or AusIMM. Basically, they are going to be either unemployed or a taxi driver. If they can pick up any job in geology at the moment, it is going to be a 'grunt' job, certainly with the prospect of making money in a remote location but not really with much prospect of furthering their career.

The next cycle is that people who have been out in the industry for several years might come back to do a postprofessional course. The number of people actually doing that is very small, so it does not really benefit the total minerals industry at large, although it does a little. There is also an increasing number of PhD-level students who are graduating and getting in that way. At that level, most people will ultimately have the technical capacity to deal with what is going to happen in the next five to 10 years. But we do not have the breadth needed to service all parts of the industry that we had previously. It is patchy as to where the productivity is within the education sector at the moment. Because of that patchiness, we do not really have the capacity to fill in when opportunities come. It looks as though an opportunity is starting now. Because of the impending problems in Iraq, the gold price is up—which presumably means that there is a

bit of scurrying, particularly in Western Australia. That opportunity might last a wave of three years of development and discovery.

Mr HATTON—This has come at a time of an interesting set of conjunctions, or they would be interesting if the effect on Australia's exploration was not so dramatic. You have pointed out quite nicely here, in terms of the smaller companies that have either merged into something else or gone into oblivion, that we have not just a consolidation through merger but a takeover of Australia's major mining companies so that they are owned either in London or in South Africa, so we have almost no control now over what is happening there. They have also determined to extract as much as they can out of existing resources and they have effectively used the juniors as their exploratory arm instead of building the capacity within the company. There has been not only a deskilling but also a dramatic decrease in demand for skilled people coming through as a result of that change. Do you think that is just cyclical or do you think that the problems we have got will probably be compounded because the cycle is going to run a very long time? It has already run a long time now but it could well run for a lot longer.

Prof. Oliver—I think that you have hit the nail on the head. Let us say there is a big boom now, for whatever reason. I am not saying that in three years time it is likely that the industry would even want the numbers of geologists that it had in the industry 10 years ago, because the technical needs have changed, like in many of these sorts of industries, and there are other people out there who do some of the functions that geologists would previously have done. The geologist of the future is going to have to be on average smarter, more skilled and probably more trained, and there probably will not be as many of them as there have been in the past.

Mr HATTON—And they may well not be doing your courses, because given the type of people who have been coming in—we have it on the *Hansard* record; all past students will have access to that—we have also got the problem that the skill sets that will be demanded will be so dramatically different. Instead of on the ground stuff and the ability to see what is there in terms of the outcroppings, it is almost a blind science using new approaches. You would normally expect the skills to come from that area but it may be the case that the skill sets are so different that you might draw them in from a range of other areas—remote sensing stuff, people who have done electromagnetics elsewhere and so on.

Prof. Oliver—That is certainly true. The tertiary sector is responding as fast as it can to that, which is not as fast as we would like because the changes are quite dramatic. There is a CRC that I am in and there are a couple of minerals industry CRCs that are in the realm of attempting to change that portfolio, particularly with things like adding the word 'computational' to the word 'geoscience', for example. Geologists, when they go through, do not think of themselves as having any capacity to be systems engineers but there will be that sort of fusion down the track and some of the CRCs are moving towards that. Landscape evolution and predictive mineral discovery are now heavily involved with trying to fuse with computational and geophysical aspects of the science, which will mean that people who have gone through that system will have a different skill set to the traditional skill base that they would have with a geology degree. But, irrespective of the changes that have to happen within the educational system to deal with that issue, the first problem is getting the light shining in the eyes of people between the ages of 12 and 17 to even realise that there is an industry. I think that is the number one priority that governments, state and federal, have to try to deal with. I think that boils down to raising the profile within the secondary education system and encouraging those parts of the tertiary education system that can respond to it. I do not really want to get into that one,

especially with the tape recorders running. The balance between the federal and the state governments with respect to secondary and tertiary education does hamper some of the capacity for the tertiary education system to change.

Mr HATTON—But there are particular problems at the secondary level. I would imagine that it has emerged now very heavily, not just in science but in mathematics, that there is a dearth of trained teachers. If you do not have teachers who are devoted to their subjects, it is very difficult to motivate students to become attracted to the subject. It has also become evident that we are starting to get a major problem in the tertiary area in terms of people who are maths trained and capable in stats and so on. So, at the time that we have the greatest need to have more scientifically trained people, it is actually going the other way.

Prof. Oliver—Yes.

Mr HATTON—In the past, we had Julius Sumner Miller doing very strange things, but he actually got the attention of a lot of kids. We have also had some of our own home-grown scientists such as Gus Nossal getting their attention. Do you think we need an intervention program, particularly in the last two years of school—for example, an advertising program or something else that will get into the schools Australia-wide—to open up the possibilities? I think that is what you are suggesting in part, and at least it would make it interesting and have some factual basis.

Prof. Oliver—I guess various places have things like that. I think the key time would be between years 8 and 10, because that is when you would capture people's interest. It is also when the curriculum can potentially involve a fusion of subjects—for example, combining maths, physics and geology as opposed to separating maths, physics and geology—so that people can see that, with that background, they can do more than just become mathematicians. I certainly think it should be directed mainly at that level in the first instance.

Mr HATTON—And I just hazard a guess that, in geography and in certain other subjects where they have been extremely good at teaching geology for a number of years, there should be an emphasis on wealth creation, how that is generated and how we develop it.

Prof. Oliver—Again, because of the way public opinion has generally run, we use various disguises, but they are not really disguised. The concept of courses that teach earth and environmental sciences should not be laughed at. As stalwart geologists, we tend to laugh at it because we think of it as dilution. But, if taught properly, it is not. It basically has a complete cross-discipline capacity in that students will come to appreciate the connection between our environment and the fact that our country depends on digging up a bunch of stuff. People who actually understand that fusion might become mine-site rehabilitation specialists and be part of both games at the same time.

Presently, the secondary school system has one bunch of people teaching environmental sciences and biology and another bunch of people teaching chemistry, maths and physics. Subsequently, the students doing chemistry, maths and physics do not realise that they are going to be the backbone behind the engineers, physicists, miners and chemists of the country who are actually responsible for generating most of the wealth. So there has been a little 'rabbit out of the hat' or 'gilding the lily' to try to compensate for the fact that most students in years 8, 9 and

10 quickly become environmentally conscious but do not quickly become economically conscious. People in general do not like it, so the education thing has to get to a higher level.

Some great inroads have been made by various groups around the country in trying to solve that—for example, Mick Roche, representing AusIMM North Queensland and BHP Cannington type connections. He has been involved in the Lake Eyre conservation scheme for a long time. He realised early on that the catchment for Lake Eyre was near BHP Cannington but that the drainage time was about 1,000 years. So there is somebody who is actually concerned that some silver and lead might get into the Lake Eyre catchment over a 1,000-year time scale. He is the sort of person we need to be encouraging high school kids—and he does a great job of it—but we probably need quite a lot more people like him.

CHAIR—Thank you very much for your presentation here today.

[3.24 p.m.]

ANDERSON, Mr John Alexander (Private capacity)

DERRICK, Dr Geoffrey Michael, Director, G.M. Derrick and Associates Pty Ltd

HARVEY, Mr Kenneth James, Technical Director and Exploration Manager, Diatreme Resources Ltd

McLEAN, Mr Neil, General Manager, Geo Discovery Group Pty Ltd

MORRISON, Mr Robert James (Private capacity)

SAUNDERS, Mr Barry John, Managing Director, Queensland Geological Services Pty Ltd

CHAIR—Welcome. Do you have any comments to make on the capacity in which you appear?

Mr Anderson—I am a mineral explorer with 26 years experience and a recent casualty of the downturn.

Mr Morrison—I am a member of the AIG and AusIMM. I am sponsored by the North Queensland branch of the Australasian Institute of Mining Metallurgy.

Mr Saunders—Queensland Geological Services is a consulting company that works in the coal industry in Queensland. I am a member of the Mineral Industry Consultants Association, AusIMM and the Australian Institute of Geoscientists.

Mr Harvey—I am an explorer of 33 years. I am appearing here as a representative of Terra Search Pty Ltd. I am a shareholder in Terra Search and a friend of the principal of Terra Search.

Dr Derrick—I am a solo operator representing myself, mainly, but also small consultant groups throughout Queensland, unofficially. I made the submission initially just out of loyalty and a passion for this industry which we currently see in deep decline.

Mr McLean—Geo Discovery Group is a Brisbane based mineral exploration consulting group.

CHAIR—I ask the panel representative of each of the groups to make a short opening statement.

Mr Saunders—I would like to make a representation on behalf of the coal people—because I seem to be the sole coal representative and only for that reason. There are three main points that I would like to make. We need to see exploration as a priority in Australia. For too many years now the leaders of our country have been prepared to take a step back from the importance of exploration and mining to the country. We have seen a big movement in the environmental

lobby, and that seems to be a very big vote catcher. We have seen a lot of support go towards that. I am not saying—and if you read my submission you will see this—that we do not need that, but there has been a big shift. Mining is not the gold star that it once was. If the parliamentarians believe that it earns money for our country and that is valuable for our country to continue with mining then the politicians need to get up and say in public that they support mining—we do not see enough of it. So we need to see exploration as a priority.

The second thing is native title, and I think there will be others far more qualified to talk about the ramifications of native title, so I will not go into that at all—it is outside of my league and my experience. The higher education issues have just been talked about by Professor Oliver. There probably needs to be some more said about that.

My company is very small; I have a staff of seven geologists. I recently have had staff turnovers. Two decided to leave me earlier in the year and that meant I had to find two more. I was prepared to put on a graduate and I was also looking for an experienced person. I sent emails to the three principal universities in Australia for coal geologists and I got a response from one of those. I then sent emails to New Zealand: to the University of Canterbury in Christchurch and to the University of Otago in Dunedin. I also made some inquiries of universities in Germany. I did get some response from the universities overseas, but it indicated to me that there is a shortage of available people. Following on from what Professor Oliver was saying, it is clear that this problem is something which needs to be addressed and, I believe, can be addressed by the federal parliament. The higher education part of our education is very squarely in their court. Along with higher education there is also continuing education—the things that Professor Oliver talked about—where we need to encourage students from a young age to take on the minerals industry rather than to go into other things which appear to be more favoured. This comes back to my first point: the government needs to lead and say that mining is important to Australia. If the government can lead, then I think you will see the students picking up on that and following.

My third point is that the legislation is a minefield, and I referred to this in my submission. We have three levels of government, all of which want to have a piece of you, particularly if you are making a bit of money. My experience is in the Ipswich coal measures. The local government stopped the mining industry there because it wanted the rates from the housing blocks. My experience is at the state level, where there are impediments such as changing legislation, rewriting of various acts and bringing in more things. There are more acts which impact on you now than there were 20 or 30 years ago, and you have to be aware of all these things. It is very difficult for the explorer who goes out to try to make his way through all this and there is not a lot of assistance around. You only get jumped on at the end, when somebody says, 'You forgot to do this,' instead of there being a clear path along which to go. Native title and other things, including environmental legislation that has come from the federal government, are also impediments. The fact that there are three tiers of government and that they are all increasing the degree of complication in applying for exploration rights is just making it so much harder.

Dr Derrick—I will be outlining the minerals industry submission. I come from an era probably only 10 years ago when an exploration permit application made at the department could be acquired within two months possibly for the expenditure of about \$3,000. It is enormously frustrating and depressing to listen to stories from junior miners and others at the moment and to hear their travails in trying to establish themselves on the ground to do

exploration which most of them regard as being vital to the general future of this country. The downturn, which has been on us for some time now, is attributable—as you all know—to a number of things. Generally, metal prices are used as an excuse for those who do not want to concede the obvious. There is the amalgamation of companies in which one company is taken over by another and their exploration group is halved. That is also used as an excuse—for those wanting an excuse—for the downturn. But there remains no denying in the minds of most people that ultimately the most important factor in the downturn for many of the people that I am representing here would be the native title situation and the complexity that has wrought upon the industry.

It comes at a time when mining companies as a whole are very accepting of native title, in the same way that they are accepting of their responsibilities for environmental factors in their operations in their desire to be a very good corporate citizen. This is the way the industry is operating these days and the way all companies are, I think, operating, or want to operate, in a modern age. The images that are put across by the media about the industry are, in so many cases, misplaced. I do not think that they have done us much good at all by sticking to some very old models and very old reputations. It is a new time for many mining companies. As far as I am concerned, they do an excellent job in integrating so many of the desirable things in society and yet, at the same time, they are great wealth creators.

As far as consultants—like some of us here—are concerned, in the end things might turn out for the best. But initially that withdrawal of exploration, when the department virtually closed down the granting of tenements throughout Queensland from 1996 onwards, was the key that caused so many people to leave the industry. It was the cause of juniors being frustrated and not being able to raise money. No-one could get on the ground. The department chose, for legal reasons, not to take the risk of issuing title, unless they could be sure of the Native Title Act and all that goes with it. That is the biggest problem that I can see with the situation as it stands at the moment. You would think that, after these years and the issuing of various alternative state provisions and the like, we would be in some ways better off, particularly with a small sign at the moment that metal prices may be increasing. The time might be right for companies to start employing people or doing work by using consultants. That in itself might be one reason why those who have stayed with the industry may in fact prosper in some consulting way in the months and years ahead because there are so few of us left. So many have left the industry and so much experience has gone that companies that want help might find it very difficult to get or they may have to pay a price for it.

Having said that, here we are with a moderately favourable upturn in some conditions but, at the same time, we are still seeing and hearing anecdotal evidence of difficulty in making the current system work. It is the single biggest factor that I hear from other people who are more actively involved in this than I am—that is, the difficulty in getting applications to the department granted and then doing the negotiations with the various claimant groups.

I would like to table the green document. It adds a little bit to my earlier submission and recounts a few of the stories involved in how difficult the situation is. Low-impact exploration, for example, is said to be the cleanest and the swiftest of all the grants we can make to get exploration done, albeit with very low impact. But with up to six months or so officially indicated as the time available for that, we hear of companies that waiting 18 months trying to get approval to set foot on the ground. It is costing them \$100,000 before they even get permission to get onto the ground, and this is with a low-impact setting. These sorts of stories

could be got from all of us here at some stage or other; I do not pretend to know all of them. It is still probably the most onerous and most difficult of times for people trying to make the system work. I would like permission to table this particular document and to pass a copy to the committee.

CHAIR—Permission granted, Dr Derrick.

Dr Derrick—I would add in closing this initial statement that Glengarry Resources have also made a submission. To break the mood of doom and gloom for a moment, I draw your attention to the excellent comments in that submission—and also in the submission from Lantana Exploration. Just to lighten the mood a little, under the heading ‘Suggestions for Change’ Tony Alston of Glengarry listed:

* close down 50 % of coffee shops

* impose 10 % levy on chardonnay to promote Amex—

the Australian exploration industry.

CHAIR—I am a red wine drinker anyway!

Dr Derrick—Tony Alston said:

A small but never the less important concession to Amex has been removed with the demise of Ansett ie the PA system used to invite unaccompanied miners to enter the aircraft first thus ensuring a more comfortable flight.

I am sure those brief points that I commented on will be enlarged upon in questions, so this is where I will leave my statement. I apologise to my friends here if there have been great misstatements and gross distortions of truth.

CHAIR—Thank you for that. I would like to firstly ask Barry a question, which then goes to the others. Barry, you mentioned that mining is not the gold star that it was. Firstly, I ask you: whose fault is that, and why should it be the government’s job to promote the mining industry? Secondly, we have been hearing about the acid mine drainage problem for decades. Is the problem still stigmatising the industry? Are there other chronic environmental impacts that are still an issue to critics of the resource industries?

Mr Saunders—I will take your first question first. The government do not have to promote the mining industry if they do not want one. If they want one, then they need to promote it.

CHAIR—But surely the people and the industry organisations through the schools or whatever have got a job to do as well.

Mr Saunders—They are promoting and they are doing it with fewer and fewer resources because the professionals are not coming through the schools and the universities, so that downturn has occurred through fewer and fewer people being involved. Where the mining companies are involved in their communities—and we certainly see a lot of that in Central Queensland—they do promote their industry and promote it in a very positive manner.

The acid mine drainage and other environmental impacts are areas which are continually being addressed. They are being addressed by the mining companies. We have people who are active in the environmental areas in the coal and metals industries. The mining companies have taken on this responsibility and they have engaged these people to go through the issues and provide solutions, and they are providing solutions.

CHAIR—Given that BHP has been down the south-west of Western Australia and has struck huge problems—

Mr Saunders—It is close to your area, isn't it?

CHAIR—That is right. And the greenies obviously had a field day with it.

Mr Saunders—The greenies will have a field day with anything they choose to. They have a field day with nuclear warships.

CHAIR—But they can only have a field day if the community is not well knowledgeable about the processes. I say that because, again, in the south-west of Western Australia, the mineral sands companies generally have a very good reputation. Back in the sixties, Cable Sands was one company that involved schools, community groups, footy groups, sporting clubs and goodness knows what else, so the community really had a strong backing from mineral sands mining. It was a good example of what we were talking about earlier with the need for the community to support mining. It does not seem to have translated into some other areas. I am wondering what needs to be done—getting back to the professor's comments—to get the community to realise the economic benefit of mining to their community as well as the nation.

Mr Saunders—The economic benefit to those who are immediately affected by it is well recognised. If you ask the people in Emerald, Blackwater, Middlemount, Tieri and Moranbah, they all know the economic benefits. It is the ones who are getting the taxation benefit from the government who are not recognising it. The government do not get up and say, 'We get X percentage of our income from mining.' The government do not champion that. They do not say, 'Here it is.' I know it is a significant amount. I do not know what the amount is, but I know it is a significant part of GDP, and the government are not there saying, 'This is where we get our money from.' The people in the individual communities know where the money is coming from.

Mr CAMERON THOMPSON—Geoff, you stated that you used to be able to get an exploration permit for \$3,000. What are your people telling you it costs now?

Dr Derrick—I stand corrected on that by people like Ken. But what I am trying to point out there is that it was a very simple matter 10 years ago to do just that. There were very few complications. I will flip that one to Ken. Historically, can you add to that?

Mr Harvey—When I started in exploration in 1970, it was a fairly simple matter to get an exploration permit. You would make an application, you would pay some money and the area would be granted. I cannot tell you the exact figure, but the rents were quite a minor amount of money compared with the amount of money that you would spend. Because of that, because Australia had a good legislative system and because there were no real access to land problems, it was basically free go—and we are talking only 30 years ago. There have been a number of discoveries. There has been the wealth generation from the mining industry that we see today.

The situation today is quite different. The form that you put in to apply for an exploration tenement can be anything up to 30 pages long. It may be less than that, because there was some reduction in size. It is an involved process that is very difficult. A normal 100 sub-block EPM in Queensland would cost you in the order of \$10,000 and a few extra dollars. Then you start on the native title process—the negotiations and so on, and all the administrative stuff that goes with it. We estimated in 1999, when we went to the federal government in Canberra and pointed out that this was a disaster for the industry, that it would cost in the order of \$80,000 just to have a tenement granted. At \$80,000, no small miner could afford that amount of money. In fact, there are a large number of large miners who are not prepared to pay that sort of money, and that is particularly the case for greenfields exploration. So something has to be done about that and it has to be done very quickly.

We need to go back to a situation where you put your application in and the application is dealt with in a couple of months. The cost of a few hundred dollars is appropriate in the current climate, until we get people out on the ground exploring again. When exploration permits are granted, as they sometimes are in Queensland, you need to be able to go onto the ground. You cannot even get on the ground with some of these permits because you then have to start negotiating with the Aboriginal groups, or whoever it happens to be that you need to negotiate with, to establish the native title situation. So it is a terrible situation at the moment. In my opinion, that is the most urgent issue that needs to be addressed. It has to be addressed if we want to have an industry. If you do not want to have an industry, that is fine, but please let us know that you do not want to have an industry. It is a problem from the point of view of both the state and federal governments. If the answer is that we do not want to have a mining industry in this country, let us know and we will all go and do something else. That is what it boils down to.

Mr CAMERON THOMPSON—Thanks for that. Barry, I want to go to your comment about promoting the positive aspects of the mining industry. I would like to get your feedback. You mentioned people in Middlemount and those sorts of places. I used to live out that way, so I know what they are like. But I also lived in Gladstone and I know how reliant, for example, it is on the coal industry. But I reckon if you asked kids there, they would be flat out giving you a positive spin on the mining industry. I think a lot of that comes from watching TV. If you watch TV kids shows, you see cartoons showing Captain Planet chasing the tree choppers and carrying on all over the place, but you do not see—

CHAIR—How do you know about that?

Mr CAMERON THOMPSON—I know because I have a kid. But you do not see Captain Mining out there doing good things and creating wealth for people. I think there is a deep-seated change in attitude among the people, too, particularly among young people, with all this propaganda that comes out of the box at the moment. Can you honestly expect some government propaganda campaign to overcome that?

Mr Saunders—I think it can chip away at it, but I do not know whether it can overcome it totally. I certainly must have watched the same episode of *Captain Planet* as you did, because I was just gobsmacked at what was coming across the TV.

Mr CAMERON THOMPSON—It is every day; it is always the same.

Mr Saunders—It is amazing, isn't it? Yes, that is something that we are fighting. Earlier Professor Oliver talked about the need to get it into the kids' minds at grade 8, but here they are in preschool now and they are getting fed Captain Planet. I do not know whether the mining industry can put together the Mighty Miner or something like that. There have been a couple of goes at doing that. I know that Queensland put out a King Coal thing some years ago which was aimed at the primary school level, and I think it was very well done. I am not quite sure how successful it was. It was at the time that the environmental lobby was very strong, but I think they probably won out. But I do not think we should be defeated by that. I still think we ought to go into battle. If we are going to be defeated, we might as well pack up and go home. We have to say, 'Look, there is a benefit in this for the country as a whole. People enjoy less tax because the government gets money from mining.' Saying that as simply and as blandly as that I do not think will get you very far but, because that is the fact, we need to make a point that it is good for Australia that we mine and use our resources.

Mr CAMERON THOMPSON—Just on that, Jim, you are from North Queensland?

Mr Morrison—Yes, that is correct.

Mr CAMERON THOMPSON—I think it is a serious part of the debate to try to get over this mind-set change. I would like your feedback. Do you think this kind of a message is more effective in the north and in places like that?

Mr Morrison—Yes. There are probably two answers to that. It is where people go out and actually do it. As has been said before by Nick Oliver, Mick Roche from BHP has done an awful lot of work individually, off his own bat, through the North Queensland branch of AusIMM, going to secondary schools, giving bursaries and all sorts of things and spreading the word. It has been very successful, certainly in Townsville and in areas around there. Simply by individuals going out, spreading the word and just telling it as it is, there is a very positive benefit. All sorts of other things happen in Townsville to promote this industry amongst younger people.

Mr CAMERON THOMPSON—Okay, I take what Mr Roche is doing, but has the industry in general made any efforts to try and go to schools and talk to the kids? Has that been done?

Mr Morrison—Yes.

Mr Anderson—I was chairman of the education and community relations committee for the South Australian chamber as well as being the president for a couple of years. I overheard some of the earlier conversation. I want to point out to the committee that the Minerals Council of Australia and all the chambers in Australia do have a schools education program. It is very well run. It is funded by the MCA. Money goes to the chambers and all the chambers carry out junior and senior school visits. It has been a fairly aggressive program and Fred Cook would be aware that some mines departments also run their educational programs as well. It is not as though the industry is sitting on its hands. I have been a bit perturbed with the discussion about whether there is a government role for propaganda or not. I do not think it is that simple. The government should look at itself as part of the industry. As for promotion, if you go to Santiago, you get off at the airport and the first thing you see is a big sign promoting mining. You know that you are in a mining country. We are not just talking about some sort of community program; we are talking about giving the sense of the whole country wanting to be in the game.

Mr CAMERON THOMPSON—And that is a government sign?

Mr Anderson—I do not know. It looks like a government sign.

CHAIR—There was a big conference there late last year.

Mr Anderson—It has a big machine on it, but it does not actually mention the name of the machine. That is just an example. It is not just simply a government running propaganda. I think we are all in it together and, if we all want as an industry to promote the industry, we should be looking at ways of doing it. But there are moves afoot. Things are being done.

Dr Derrick—It seems to me that you have to get into that sort of thing even at the primary level. At the secondary level, requests for data are great from those schools that have earth science courses. They are over the moon with the amount of material they can get from Geoscience Australia, for example, or the mines department, but the number of schools that teach geoscience is very limited.

Mr Anderson—Sorry; I meant primary school when I said junior school.

Mr CAMERON THOMPSON—The issue that generates the most heat and light is still native title in amongst all the other things. One of the things that disturbs me a little bit is that, while miners and people associated with the mining industry, exploration and so on are desperate to get land access, that seems to be a fundamental shortcoming in the way things are at the moment. Yet, among the people who are native title claimants and the people who are negotiating, there does not seem to be the same acceptance of the urgency of this. Do you agree with that and, if so, do you have any strategies to deal with it?

Mr Harvey—I think it depends, when you talk about Aboriginal people, which Aboriginal people you are referring to. For example, we have signed an ILUA with people in Croydon in north Queensland and they are very anxious for us to get on the ground and to get things going because they see exploration and potentially mining as a way of employing people and so on. That is a brief summary of what their attitude is. But if you talk to those parties who are the publicly funded Aboriginal groups, who seem to have a vested interest in not sorting out native title, I think you get a different opinion. It depends on whom you talk to. That is a summary of my conclusion.

Mr CAMERON THOMPSON—Ken, assuming that all goes well at Croydon, how many jobs are they going to get out of that from you in exploration and then in mining?

Mr Harvey—I have not looked at the agreement for some time. The ILUA was signed on 13 November 2001 and because there is no real process and it is such a complicated issue we are still not on the ground. Signing an ILUA does not get you onto the ground in exploration, because it is such a complicated process. But we have undertaken to provide employment in the exploration stage and who knows what follows on from that. There is ongoing employment in the mining stage as well but we cannot specify that until the exploration is done. One problem is that in Queensland the ILUA process looked like it might be okay but the state government came up with a state government ILUA. That meant that very few Aboriginal groups wanted to talk to the companies any more because they saw the state deal as a much better deal and so

they said, 'No, those are the conditions we want.' Of course, the state ILUA is such that the companies, particularly small companies, cannot afford it. It has all stalled.

Mr Morrison—I seek leave to table some documents. This is a supplementary recommendation. The recommendation is that, in the same way that we have national geological mapping, topographic mapping and so on, we have a national mapping exercise on all native title and cultural heritage sites. If it was properly funded and systematically done through AGSO or Geoscience Australia or an organisation of similar stature, this could have huge benefits for the employment of Indigenous people, particularly in remote areas. It could have a large number of benefits for those local communities. It would help solve a lot of problems for future infrastructure developments such as pipelines and bridges—we have had problems in South Australia, as you know—and it would identify areas that are clear of significant native title issues and which explorers could look at more quickly. I put that for your consideration as a way forward to help resolve this problem.

CHAIR—Leave is granted, Mr Morrison.

Mr Morrison—As an aside, I would also support the AIG resolution that exploration should be removed from native title. I understand from hearsay evidence that exploration was only included as a very last-minute afterthought just before the legislation was introduced to parliament. Whether that is correct, I do not know, but there was a lot of hearsay evidence that that was the case.

Mr HATTON—Maybe we need some other superheroes. Given my age—

CHAIR—You are not going to apply?

Mr HATTON—No, I am not applying. I can very strongly remember George Reeves as Superman—even though it was in black and white—taking a piece of anthracite, crushing it in his hand and producing diamonds. I suppose that is a bit of what the industry is about: you can lever around that and, in a million years, you guys can go and dig it up. I am interested in the increasing difficulties of finding stuff. I want to look deeper at some of the evidence that has been given—Mr Anderson's in particular—and the fact that almost everything that has been found is less than 100 metres down. We have significant problems with looking deeper; most of our stuff has surfaced beforehand. As I understand from other evidence we have had, a lot of our competitors' stuff is still on the surface and is pretty easy to get at. Given that they are looking at the situation in Australia—because so much of it has been picked over in the past and the easy stuff has been found—is there a significant problem of people saying, 'It's there. It still surfaces. There's still a lot that has not been looked at'?

Mr Anderson—Australia still offers a lot of potential, although it is fairly difficult to look for. What Australia offers compared with the shallow deposits overseas is grade. Broken Hill and Mount Isa offer a much higher grade—it has been rich pickings. While it was shallow, and all the stuff was found at the end of the 1800s, we are still living off that legacy. That is my concern. I understand that QMC have also raised it in their submission. So the rewards are there, but the challenge is to look for the deeper stuff that does not have a surface expression or a connection with the thick mantle of cover that Australia has, such that you do get some sort of signature through to the surface. A lot of the exploration of recent times has used geophysics and geochemistry to try to pick up subtle indications of that leakage through to the surface.

There are two diagrams in my submission. The first shows the distribution of mineral deposits in Australia and how they are particularly restricted to outcropping areas. The other diagram was to show that not much has been found where the top does not come within 100 metres of the surface—and you have picked up on that—the exception being the Olympic Dam discovery in 1976. The Olympic Dam discovery and a few of the recent discoveries in Queensland largely were found using fairly old magnetics technology. The boon there, particularly for Queensland, was the fact that cheap aeromagnetics could be flown over large areas, and explorers went out in the late eighties and early nineties and found all the obvious things to be found. Mind you, for every discovery, they probably tested another 100 or 200 anomalies. It raises the question: how do we filter through all the empirical anomalies that come from magnetics? But, now, the people who have the airborne gravity technology are hoping that it will give them a fairly empirical, quick and easy pass without their having to do too much to access land. They can pick the areas they want to focus on, go to all the trouble and spend the hundreds of thousands of dollars and negotiate access to the land.

What I raise—it has been alluded to but I do not think it has come through significantly—is the research side, particularly the concepts of ore formation and predicting where these deposits will be. You would have heard by now about the CRC for Predictive Mineral Discovery. I was involved with the group that set it up. I was very supportive of the whole process, and I brought a major company into it, which underpinned the whole process. I believe that, until we can predict pretty well where these things are so we can put the search technology over the top of them, we are not going to improve on our discovery rate. That is why I say that the government should be backing this further than just CRCs and taking that process further. They should be backing the research into predicting where mineral deposits are, using Geoscience Australia and all the institutions—including a very good institution up there in Townsville, the James Cook University—and also supporting groups like CSIRO in developing the search technology, which they were good at. I am not sure they are at the same level of support at the moment, but they certainly put a lot of effort into developing airborne EM, for example, and various geochemical techniques in looking for subtle indications of mineralisation. I think that is the key for the industry to be able to go ahead. To be able to go ahead, the industry has to crack that code in predicting where deposits are and finding them if they are going to continue the wealth that the past legacy has given us.

Mr HATTON—As you see it, what is the intersection between the geoscientific data that has been made far more broadly available now and at virtually no cost and this deeper knowledge? Are you saying that that is there and that is available, and it is at least something that people can go to because it is close to what has been done in the past?

Mr Anderson—Yes. The so-called precompetitive data—and I am not sure that that is a good term—the regional data gives you the first two dimensions. It can be modelled into the third dimension but actually predicting where in that third dimension the minerals will be is the big ask. So you need that basic precompetitive data. We need all of Australia covered with as many techniques as possible. Somebody alluded earlier to the fact that airborne gravity will get cheaper and will become a fairly readily available technique once it gets through all the patents, exclusive control and things like that—and that will happen with time.

Mr HATTON—But are there sets of historical data that have not been fed in yet? I think you alluded to the fact that one of the things the Commonwealth could do is have a more centralised

database as there are still some historical datasets that have not been integrated into what we have so far.

Mr Anderson—You could go on integrating datasets forever. Some of the jurisdictions are catching up in providing what we consider are basic data and this comes down to even historic geochemical data—and I have seen submissions that have talked about putting together historical data. Historical drill data is very important information that jurisdictions have been putting together, and we need all the jurisdictions to have that basic data up to date. Beyond that, you can overlay native title claimant areas, regolith topography and everything else. So having a readily accessible multilayer dataset is very important. Everybody recognises that and they are working towards it, but it is not happening fast enough. Again, I do not think enough money is being put into surveys in particular. What have been called initiatives should be basic framework budgets to provide the data and promote the resource potential of the particular jurisdiction.

Mr HATTON—Based on what the distinguished professor from Townsville indicated previously, and based on some of the other evidence we have been given about the disjunction between knowledge in the community, particularly between younger people and real world activities, does the industry here in Queensland provide an access point for schools in the Brisbane-Ipswich area where they can go and learn about mining, like a museum of mines or any kinds of interactive displays?

Dr Derrick—I know of field days and open days held by the mines department and the local societies, and they are very well received in general. They are a bit patchy in the way that they present the material, but they are held in the museums here on South Bank, for example, and other settings like that, and they do attract a lot of interest. In terms of gem clubs, for example, the interest in that side of rocks by old and young people has probably never been higher. There certainly are occasions where bringing the geology to the community is up and running: bringing your pet rocks to be identified and so on.

Mr HATTON—The reason I bring that up is that recently one of the other committees that I am a member of went and had a look at CSIRO in Canberra, a facility that I did not know existed. They had integrated a display unit which had a variety of activities of CRCs that CSIRO is involved in. That is directly integrated with an in situ series of labs where people are working on real scientific activity. They also have a couple of other labs where they bring primary school aged children in and, separately, they bring secondary school aged children in to do practical work that is similar to what is being done in the labs. It seems to be extremely well set up. The guides are PhD students working in their own scientific field. They are primarily being taught how to communicate their own knowledge to people who have no knowledge about that subject area. That is an extremely good interface. Wherever it might be, it might be a model that could be useful for the mining community in Queensland and elsewhere to not only change the way in which they are perceived but also give a lead-in for children to have some better idea of what the possibilities are in that area.

Mr Harvey—I would make the comment that I started my life as a science teacher and I taught for two years. I have been to schools on a number of occasions and have taken part in the QMC programs. I think the exploration industry has no resources to invest in this area; the exploration industry is on its knees. The large companies have mostly gone, the small companies have no money, and there is not much chance, I do not think, of anyone coming up

with any sort of funding, and I do not think people have the time these days. We are so flat out just handling the red, green and black tape—as it is sometimes called—that I do not think there is much chance of anything happening unless there is some support from somewhere else.

Mr HATTON—I am not suggesting support from the juniors or from the explorers and so on. The Queensland Mining Council is an aggregate group. The companies that have taken over pre-existing Australian owned companies may be hit with it and possibly the state and federal governments or whatever. Given there is a problem in terms of educating the community, that might be a useful model. The other thing that occurred to me that might be extremely useful is that, given the dearth of practically-trained science teachers we have, the industry could look at some kind of mechanism to move people in and out of industry and education. It is a way of using past graduates to give people some practical experience.

Mr Anderson—Just following up on that, the South Australian experience is that we got rocks into the Investigator Science Centre whenever we could, but also we took teachers on tours of mines and the tours were much sought after. As a matter of fact, the general response is usually very good if you take your science, your geology and your mining into schools, particularly from the teachers—even if you take a fossil collection in, they say, ‘Gee, we haven’t seen anything as good as this in the school for a while.’ We just need the resources to get out there. We were doing our utmost with the resources that we had. South Australia is a small mining state; we do not have a lot of money to spend on an education forum, but we got a lot of exposure out of that. Again, I say that the elements of this education are going on.

Mr Saunders—I will just follow up on that. I work closely with a high school teacher at Blackwater. He is a physics teacher and he is very interested in the geophysics side of exploration. We are currently undertaking some surface resistivity in the area. He is going to follow up on that by coming out and discussing that with us. Where the opportunity exists, I think the industry is really trying to get involved and we are doing it successfully but, as Ken alluded to, resources are stretched.

Dr Derrick—At a personal level, I find myself wanting to give talks to primary school teachers and students and to secondary school teachers, but it is very ad hoc. Like Ken, it is my time, but I have the resources and I go there. This education question is a very important one. If you scale it upwards—to education of the native title claimant groups, for example—this is one of the biggest problems that has been facing explorers. The Northern Territory and South Australia currently are, I think, invoking a program of education for the tribal elders in the hope that they can smooth the exploration application process, simply through those people knowing what is involved. It is a long-lasting concern of mine that the people who are making life difficult, if you like, for explorers do not understand the process and think that the piece of pie that is there to be cut up happens at the exploration stage, when in fact it happens at the back end of the whole stage when the mine is found.

This program that seems to be working in the Territory simply takes tribal elders or people involved and arranges mine visits, lectures and hands-on demonstrations of everything from discovery through mining to rehabilitation—a whole array of what goes on in the industry. It happens accidentally, perhaps, but someone is bound to point out to them, ‘This is the wealth creation for you people. Taking part in this part of the project brings the wealth that many of us assume anyway in our life.’ Enormous numbers of Aboriginal people are employed at Ernest Henry, Century and any of the mines that are enjoying the economics of being part of that

project. But the first thing is to go to the Indigenous people and say, 'This is how it all works. Don't load up the front end with difficulties at this stage because, at the end of that process, that's where you really can share in the good.' It is just an educative process shifted up the scale a bit.

Mr HATTON—That is a point you make very strongly in your submission at the bottom of the page where you quote my predecessor in his second reading speech on the Native Title Act in 1993. His expectation was that, in exploration, there would not be the encumbrances, but you argue in part in the rest of it that it is a lack of knowledge about these real work processes. I would hazard a guess that, despite all of the difficulties associated with dealing with native title since 1993, the core part of it has been that there is an interface now between the native communities, the miners and the others who have an interest. The situation is exacerbated because it takes a long time to get those understandings into place and a long time to sort out and make simple things that should be relatively simple.

Dr Derrick—A lot of the early costs, for example, that people would be experiencing now in any sort of low or high impact would relate to having people come out with you—for example, anthropological consultancies or archaeological consultancies—to identify this and identify that for a fee per day, per head, for five people and so on. But in fact we heard the AIG or others—or Jim might have made the submission just now—suggest that we make that a national program: that we find these places and make a national register of these things over and above the mining industry. If we have that there, in one program you have employed or have the potential to employ large numbers of Indigenous people doing that, and you have removed the need to have that process take part in every individual exploration permit. To me, it would make a lot of national sense to embark on some sort of program like that because, as a general rule, the exploration process is not a high employer of groups like Indigenous people. It is just the nature of the beast; there are lots of make-work items at that early stage, when in fact people would rather say, 'For goodness sake, let us get on with the job of exploration, using this beautiful technology that we are developing with time, and find the deposits which ultimately will prove to be the manna for you people to develop yourselves economically, socially and financially.'

Mr CAMERON THOMPSON—Mr McLean, I want to hear from you. You are very quiet up there. I noticed in your submission that you have been dealing a lot with Canadian companies. We are hearing that, because of the problems in Australia, capital is going elsewhere and not coming here. What is your experience of that? Is the level of inquiry, the level of support and the level of interest you have got from potential clients and companies in Canada decreasing? What is happening?

Mr McLean—Yes, it is decreasing. When our group started up about four years ago, we got a lot of support from Canadian companies as clients, and that has decreased over the past two or three years. I think it is due to a number of factors; metal prices is one of them and tight budgets is another. When that is the case, companies like that tend to return home with their money rather than increase expenditure offshore. The other factor that is having an influence in Canada is taxation issues, which make it a lot more effective. Let us put it this way: they are getting a lot more for their dollar exploring in Canada than they are in Australia. I can quote one company where, for every dollar that they were spending in Quebec, they were getting an extra dollar through various tax breaks. Consequently, why spend that money?

Mr CAMERON THOMPSON—That is mainly the flowthrough share thing, is it?

Mr McLean—It was flowthrough share, but it was other taxation initiatives, as far as I am aware, that the Quebec government were doing. So there is no doubt in my mind that there is a lot of competition for the exploration dollar.

Mr CAMERON THOMPSON—Can you just elaborate on that? Do you know what additional things the Quebec government were doing?

Mr McLean—No, I do not. I could find out, but I do not have the information at my fingertips.

Mr CAMERON THOMPSON—Bearing that in mind and what your submission says about native title, does that come in any way out of exposure to what happens in Canada? You are saying in there, ‘Don’t have all these overlapping claims. Only negotiate with people who actually have had their claim confirmed.’ Is that something that you have got as a result of exposure in Canada?

Mr McLean—No, it is not. To me, it just makes sense, but it has nothing to do with any Canadian experience that I am aware of, except to say that the Canadian companies who are our clients have found it a very frustrating business dealing with the native title issues.

Mr CAMERON THOMPSON—What sort of feedback have you had on that? I am interested in the comparison between Canadian native title and Australian native title. We have heard that it is basically just further down the track. Is that the situation—that they have had longer to resolve these potential overlapping claims? Is that all there is?

Mr McLean—I am not familiar enough with the Canadian native title situation to give a very specific answer, but the feedback that I have got from the Canadian companies is that it is a lot simpler process in Canada. The parties that they have to deal with are clearly identified. This does not appear to be the case here, and our experience certainly bears that out. It can be very difficult identifying the parties to deal with when you are negotiating ILUAs, for example. Our clients have found this quite frustrating because it can take several months just to identify the parties that you may have to negotiate with. We have one case in north-east Queensland where we had actually reached agreement with what we thought was the party who was the traditional owner, but then we had another party appear on the scene making a claim as well. As it has turned out, that particular ILUA has just stalled and there cannot be any more discussion on it until the parties have solved their internal problems. This is one, again, that we have with one of our Canadian clients. It is not really sending a very good message to the world in general—that is, ‘Come and explore here.’ So there are a number of issues—the taxation issues and the native title issues—that can make it difficult to explore in Australia as compared with countries like Canada.

Mr Harvey—I have a submission here from Mr Tony Alston, the Exploration Director of Glengarry Resources in Townsville. He is a member of the group that I represent and he could not be here today. I wonder whether I could table that submission.

CHAIR—Yes, you can. Thank you.

Mr HATTON—This is a ‘between a rock and a hard place’ question. What is the future for the miners, given the changed nature of prospectivity in Australia and the changed nature of the

ownership of the major companies? How do you see that working out over the next decade or so, given that most of the things you have facing you are different? You are facing a different landscape than before and a different business environment. It is a lot harder, particularly for some miners who have to adjust themselves to being the research arm of major companies and so on.

Dr Derrick—I think some people will always want to explore. It will be the nature of the beast but, unless they are HIH inclined, they are not foolish. They do not want to lose money unnecessarily, so there will always need to be that carrot of exploring to find a mining resource that can be economically treated and end up with a profit. It seems that, for the time being, Australian miners who have been successful in the past are doing quite well in the present metal price landscape on existing mines. Queensland's production is right up there in terms of revenue. Exploration is a different kettle of fish but I think people still want to do it under the present metal price regime. Countries like China are poised to boom for a few more years yet and will keep world exploration bubbling along. We must remember that, while Australia competes all the time with other countries for exploration money, Australian companies will explore overseas. They want to explore but they can do it overseas as well to meet this demand and make their money at the bottom line. Initially, they will use the new technology and will be pleased with that. Ultimately, it gets back to this tiny point that is such a major point: the ability to get on the ground and spend the dollars efficiently. It gets round to the semantics and the detail of the native title legislation as it is written.

Mr Harvey—It is a very different game now to what it was. Some of those changes that have been made are irreversible. We will not see it go back to what it was and I do not think anyone expects it to go back to what it was. The thing that concerns me about the whole situation at the moment is that, if we do not reverse some of the problems we have got, if we cannot address those problems and if we cannot get back to a more balanced situation than we currently have, I see the exploration going overseas. Native title and access to land issues particularly affect Queensland and we have lost a lot of the major explorers. Some of those companies have been swallowed up by overseas organisations that do not explore in Queensland, although some still do and it is just as well that some do. As time goes on and we address some of these issues, if we do not put it back into balance, we will see people going to PNG, Indonesia, Iran or wherever it happens to be. We will not be able to sustain our minerals industry unless we do something.

Mr Saunders—We are seeing some successes in the coal industry with some of the miners. Some of the recent discoveries that have been made over the last 10 years and some more recent than that have been put into production. We are still seeing some successes there despite all the impediments. From that point of view, there is a future.

Mr CAMERON THOMPSON—There is one in the paper today.

Mr Saunders—Yes, and there have been others. So there is still some future there, but it is getting harder and harder.

Mr Morrison—There is still huge potential in the brownfields area as in existing tenements. There are vast amounts of minerals still to be found there as long as we can keep hold of the tenements. Currently you cannot get a mining lease renewed in Queensland. It is a diabolical problem.

CHAIR—Is warehousing a problem?

Mr Morrison—I do not believe that it is a serious problem.

Dr Derrick—It may surprise you to know that you cannot get a drill rig in Mount Isa—I am told, at the moment—because they are all occupied on brownfields drilling. They are drilling around existing projects, which is good for them, but it is not exploration as such. It is just expanding the resource base around the local mines like Ernest Henry, Mount Isa Mines, Gunpowder, Cannington and so on.

Mr Harvey—That in itself is a problem. It takes out a lot of the flexibility in the system to continue to produce because mines explore around their existing deposits, that resource is defined and it becomes part of the mine. If there is no greenfields exploration, then when it hits the wall it is really going to hit the wall because there is absolutely nothing in the basket at the end. There is no flexibility to go and find more resources at Mount Isa or wherever it happens to be. At some stage in the future we are going to hit the wall as it currently stands.

Mr Anderson—I think warehousing is a problem because what has happened with native title and the access issues is that the ground has become valuable and not ideas. People have been pegging knowing that they can sit on it. It is a game that is played by everybody. It is an impediment to exploration, because if you have a good idea about an area, you will go and negotiate the access, but if it is stagnant under applications then nothing is going to move. That is basically the problem of recent times.

CHAIR—Thank you for your attendance here today. Is it the wish of the committee that the additional submissions—by Glengarry Resources Ltd, 5 March 2003, submission No. 103; R.J. Morrison, 6 March 2003, submission No. 105; and G.M. Derrick, 7 March 2003, submission No. 104—be tabled? There being no objections, it is so ordered.

Resolved (on motion by **Mr Cameron Thompson**):

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.

Evidence was then taken in camera—

Committee adjourned at 5.42 p.m.