ECONOMIC DEVELOPMENT AND INFRASTRUCTURE COMMITTEE

Inquiry into greenfields mineral exploration and project development in Victoria

Melbourne — 30 January 2012

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Prof. J. Hergt, Head of School, School of Earth Sciences, University of Melbourne.

Mr FOLEY — Thank you, and welcome to 2012. My name is Martin Foley; I am the Deputy Chair. The Chair, Mr Neale Burgess, is indisposed but will join us shortly. I am the Member for Albert Park; with me is Mr Geoff Shaw, the Member for Frankston, and Mr Wade Noonan, the Member for Williamstown. This is a hearing of the Victorian Economic Development and Infrastructure Committee, which is an all-party committee. Today it is taking evidence on the Inquiry into greenfields mineral exploration and project development in Victoria.

I welcome Professor Janet Hergt to the hearing. Professor, all evidence taken at this hearing is subject to parliamentary privilege, but any comments that you might make outside of the hearing are not afforded such privilege. So we look forward to your frank contribution to the hearing. I see you have a presentation, but before we get into that I ask you to state for the Hansard record your full name, your business address and the capacity in which you are today representing the organisation you are from.

Prof. HERGT — My name is Janet Margaret Hergt. I am from the University of Melbourne, and I am representing the school of earth sciences at the university.

Mr FOLEY — Thank you very much, Professor. The evidence will be taken down and in due course will become public material. Please feel free to take us through your submission.

Prof. HERGT — Okay. I believe you have my somewhat more detailed document. I have tried to pull out some of the key points in this presentation so it will be quite focused and hopefully quite brief, but I am happy for you to stop me at any time and ask me questions or pursue things a bit further if you would like to. I guess I would like to start by saying thankyou for giving me the opportunity to present a university perspective to this inquiry. I think it is a really important topic and one that many of us feel quite passionate about, so I really welcome this opportunity.

As I said, I will try to be quite focused in this. I know from having read some of the material that has already been uploaded on the website that you have been through quite a lot, and you do not need to hear a lot of it all over again so I will try to be a bit more focused. In particular the universities quite understand issues surrounding permissions and compliance issues for organisations working in the minerals industry et cetera. I think the cases have been made much better by other presenters so I will not go there. I really want to focus on the areas in which I believe earth sciences play a central role. I thought it might be quite useful for this inquiry to take you through what I see as some of the important aspects of earth sciences capacity in Victoria and perhaps give you a different feel for the capacity that we have in this state, the different functions that government, universities and broader industry can bring to the question, and some thoughts on how I think the stakeholders could work more closely together not just to more effectively enhance exploration but also other investment in Victoria. I will take you through some of those things.

Overheads shown.

Prof. HERGT — I have taken these two images off the GeoVic website — from the DPI website — just to illustrate the problem really. I mean for someone coming in to look into Victoria and say, 'Does commodity X exist in Victoria and, if so, where is it?', and staring at a blank map with a few localities on it is pretty unhelpful. I know you have heard a lot in the Inquiry about pre-competitive data and the value of the sort of information that GeoScience Victoria provides and so the illustration on the bottom right there showing the surface interpretation of the geology is a really important aspect of that information. In other words, the different coloured blobs on that lower map show you where you should and should not be looking for different sorts of geology and therefore different sorts of deposits or resources of whatever kind. I know the Inquiry has also heard from a number of people about that no longer being enough. Yes, we have this wonderful data and we have come a long way, but increasingly we need to look under cover so we need to have far more sophisticated tools including geophysical tools, if you like, to 'ultrasound' beneath the surface and see what is down there. As Jonathan Law quite correctly put it, we should not afford to be too clever; we really need to check it with drilling to actually gain samples of what is down there.

Although Victoria has really led the way in a number of the geological technologies and innovation and data processing that it has provided to the industry, we have still got quite a way to go. As I said, feel free to stop me at any time if you would like to.

Mr FOLEY — You are on a roll.

Prof. HERGT — Okay. I really should explain why I think universities have a role in any of this and why it is wonderful to be talking to you anyway. If you like, Australia in general has universities that are very strong in the geosciences, or the earth sciences more generally, and we are fortunate enough to be able to undertake greenfields research. If we can come up with a great idea, and if we can manage to get it funded through the Australian Research Council or wherever, then we can pursue that passion. We are not restricted to looking at Victoria of course. It is nice when we can look at problems in Victoria, but we can take our science anywhere — and we often do. But that means that the outcomes of the research we do, that are not necessarily on Victorian issues, can be brought to bear on Victorian problems — so new ways of analysing and thinking about problems can be directed at Victorian problems.

We also often have it the other way round where I have a hypothesis that I would love to test and if I know enough about Victorian geology — so I can go down to DPI and chat to people in GSV, they can perhaps direct me to the ideal locality to test my hypothesis in Victoria, and of course that is really valuable for Victoria because it means that research is being done that would not otherwise be done that contributes to our understanding of how Victoria works.

That is from the research perspective, if you like. Of course universities also produce the graduates of the future that are the workforce for industry, for government — hopefully — and for universities beyond their graduation. I thought it was worth pointing out — I know David Giles mentioned the MTEC program supported by the Minerals Council of Australia, and Victoria hosts a quarter of the universities involved in that program. Both Monash and Melbourne gain direct support from the Minerals Council of Australia. That is something that we are very proud of, because it is an endorsement that the programs that we offer our students are very sound and are well respected by the industry. Our graduates have a broad base in earth sciences education, and they are highly sought after by the industry. It also means of course that the graduates take the new information and the new ideas about earth sciences directly into the workforce when they are employed, so there is a rapid uptake of new ideas, which is very important.

The last one might seem a bit lame, but it is becoming increasingly evident to us that community engagement is a role that universities can play quite substantially. We have heard a lot about fracking, for example. If company X says, 'Fracking is fine; trust me', the community may be a bit less likely to believe them than if a university team has been doing some serious research on it and looked at lots of dimensions of the problem and can say with confidence, 'This is fine'. We have had some examples in my own department to do with geothermal energy out in Gippsland. The academics have gone out to talk to communities that are very concerned about what is going to happen to our water table. Perhaps they are less likely to listen to the geothermal energy company but happier to listen to an academic who seems a little less biased.

One of the things I did notice in reading some of the submissions were perhaps perceptions — and I think false perceptions — that universities are not particularly good at working with each other, they are not particularly good at working with government organisations and they are not particularly good at working with industry. I wanted to dispel all three of those as quickly as I can. I have just put together a couple of slides here showing a few examples where certainly Melbourne in all of them and Monash in most of them have played an important role.

Mr FOLEY — Could I just pause you there, Professor? I hand the baton of running today's hearing to our friend, the Chair of the Economic Development and Infrastructure Committee, Neale Burgess.

The CHAIR — My apologies. Please continue.

Prof. HERGT — I was just at the point of trying to describe the strong history of cross-organisational collaboration that the universities have had in this particular area. You may well have heard about the Predictive Minerals Discovery CRC, a very large national program — Monash and Melbourne were both very strong players in that, and of course the Victorian State Government and CSIRO and various others. The Victorian Institute of Earth and Planetary Sciences is a cooperation between Monash, Melbourne, La Trobe and, more recently, Ballarat, and even more recently, the University of Tasmania. We share bids for research infrastructure. We share senior teaching, so staff and/or students may travel between universities so that rather than duplicating efforts we actually work together. That has been going for 25 years, so this is not just a new flash-in-the-pan sort of thing; this is a very well established collaboration.

I have already mentioned the MTEC program supported by the Minerals Council of Australia. You can see along the bottom there the eight institutions that are supported by that program.

In my own area of geochemistry, we do lots of one-on-one research work with GeoScience Australia, the Northern Territory Geological Survey, the Geological Survey of New South Wales and the Geological Survey of Western Australia as well as the CSIRO. There are lots and lots of examples you can come up with of where we carry out research or teaching together.

I have also just thrown up a few examples of the industry partners that we work with. With many of these companies it is a one-on-one program that might run for a year or two, often supporting a masters or an honours student in a research project. The students really enjoy being able to work on real-world problems with a real, live company rather than doing something more theoretical, and the companies obviously appreciate having that expertise of the universities directly involved in their organisations. As I said, there are lots of examples of collaboration with industry as well.

I want to deviate now for a second and perhaps provide a bit more context for the strength of geosciences in the country and then focus on Victoria, because I do not think this is particularly well understood. There is a lot of focus on biomedical research and biotech and that sort of thing, as there should be, but geosciences in Australia really punches above its weight. I have a diagram on the right there, which is perhaps getting a bit out of date now. It was produced by Thomson Reuters, and it was an examination or an assessment of research performance in Australia across the years 2003 to 2007. The blue bars, if you can vaguely make them out, are the percentage of papers published in those particular discipline areas — which you probably cannot read, down the side — compared with the rest of the world; and, more importantly, the green bars are the relative impact that work has had.

You can see right at the top of the tree there is geosciences, publishing a small fraction of the publications. Less than half the universities in Australia even have geosciences; a smaller fraction again have geoscience capability in more than one small area. Melbourne and Monash are amongst the broadest in Australia, as I will mention in a moment. So for geosciences to top the league table nationally in terms of impact I think really says something. I do not think we make that point often enough.

As I said, the data are a little bit out of date now, but we had a recent ERA exercise that you may well have heard about, the Federal Government's Excellence in Research for Australia exercise, following similar sorts of things elsewhere, overseas. That exercise confirmed that both Melbourne and Monash are very broadly based, so we scored in a whole range of areas. There are six earth sciences areas, and we both scored in five of them. The scores were at or above world standard, so very high-calibre, broadly based research is being conducted at these institutions. I have just got a note there that the ERA exercise was volume based, so if there was a small pocket of excellent research somewhere — for example, in Ballarat — it would not have been picked up in this exercise. That is not to say there are not good things happening in some of the smaller institutions in Victoria, but Melbourne and Monash certainly stand out as being high quality.

Mr FOLEY — Professor, while I have got you, what is the measure of the relative impact, the green bar?

Prof. HERGT — I have not looked in detail into the data behind this, but I imagine it is citations — so, how highly cited are the publications produced from Australia compared with the publications produced elsewhere? That is normally the measure of the impact of publications.

Mr NOONAN — I just want to take that one step further, because I think you made the point right at the outset that universities do not just look in our own backyard, they are obviously a global resource. I am trying to link that to the value that is brought to Australia as opposed to the resources that are used for global purposes — in other words, your research capacity can take you anywhere.

Prof. HERGT — Yes.

Mr NOONAN — What we are saying here is that the level of expertise in research in an Australian university is very high, but the question really is: where is it applied? Is it disproportionately applied back here in Australia, because we have the resources available to us here, in terms of academics, or is it applied more broadly, or increasingly globally?

Prof. HERGT — Sorry, are you talking about the sorts of research problems that people tackle — are they local or international?

Mr NOONAN — Yes.

Prof. HERGT — Both. So one of the arguments that I want to put forward later on, or one of the suggestions, is how to focus more of that back home, if you like.

Mr NOONAN — Okay. I have pre-empted you, sorry.

Prof. HERGT — No, that is fine. But it is very much both, and it will depend on the problem. If the right geological context or whatever exists elsewhere, it will be elsewhere. If it does not exist in Australia, it cannot be applied here. One of the really important points, though, is that on the world stage geosciences is very high as a nation. North America or Europe, or wherever, know about the stuff we are doing in Australia, which I think is really important.

So where do we direct our research resources? Because the point has been very well made: industry can go anywhere. Where are they going to spend their dollar, where are they going to explore and how can we get them exploring more or putting their projects in Victoria? It is the same with universities. How are you going to get this high-calibre research expertise directed more locally and to be of more benefit to the state? This again is where this pre-competitive data that GeoScience Victoria has been so strong in putting together, and maintaining, and making available plays a key role. If I do not know about a particular situation in Victoria, I am likely to get on the phone with my colleagues internationally or wherever and say, 'I want to test this hypothesis', and they will say, 'Oh, yes, come over to San Diego' or wherever, Iceland or something, not realising that the equivalent situation might be in Victoria. I can give you an example. A colleague in my department wanted to test a new way of determining where sediments come from, which is quite important if you are looking for alluvial deposits, for example, or just trying to work out how processes have operated. He went down to GeoScience Victoria and said, 'I need this kind of mineral, and it needs to be this sort of size to be able to test my hypothesis. I have a masters student I want to put on this'. That fellow in GeoScience Victoria got out the map and said, 'You need to go here, here, here and here'. The project is now coming to completion this year, and the student will submit. Had that depth of understanding not been there, either that work would not have been done at all or it would have been done overseas, as you said. It is that dialogue between the people who really have that in-depth knowledge about the state's geology and the universities that I think is critical.

Mr FOLEY — Does that flow just via that dialogue and exchange? Is there a crossover of staffing or is it just a more research-based approach? Can you and your colleagues look to work with them in DPI on a project basis or there is an exchange of staff? How does it work on a practical level?

Prof. HERGT — To be honest, at the moment it works in a very piecemeal way. The colleague I mentioned took it upon himself to get on a tram to come down and meet with the people in GSV and say, 'This is what we are doing; can you help?'. If he had not done that, he might have gone somewhere else or, as I said, not pursued it. There is no mechanism by which that routinely happens. One of the issues is that we are all very busy and get tied up in other things and say, 'Oh, yes, I meant to pop down and see you and have a chat but didn't get around to it'. There is a lot of goodwill and examples of collaboration as I mentioned before, but sometimes it is just too hard. There is no mechanism to facilitate that at the moment. I guess that is where I am coming to. I think that would be a really valuable step forward for Victoria. I know some people have talked about triangles of cooperation where government agencies, industry and universities and research organisations can work together. I think Jonathan Law had an example in his presentation for the CSIRO.

The CHAIR — Following on from what my colleague has said, after our visit to South Australia it certainly appeared to me that they have reversed the process over there. Is it fair to say that because of the lack of cooperation that has been experienced — not a deliberate lack of cooperation but perhaps not an organised cooperation — to some extent you have to drive it from the academic level to the marketplace, when in fact what they have done in South Australia is say, 'Here is the marketplace; this is what we need from academia'. Would that be what you think is happening?

Prof. HERGT — I think there are a couple of sides to it. Yes, in the example I described we had to go to DPI and say, 'This is what we are going to do; can you help?'. Sometimes we will have companies come to us

and say, 'We need this sort of project done or this audit. It is very piecemeal, and it is not all in one direction: it is not about academics going out and saying, 'Please work with us'. We have a lot of things to do with our time; we are not looking necessarily for those things. As I tried to explain in the submission, we have very limited funding and time. If you want to work with company X, it has to be a really compelling case because that will mean we have to stop doing something else. It is not just a matter of having the information flow and knowing that somebody wants work done; it has to be better than what we thought we were going to do. It has to be competitive, if you like, because universities have different drivers. We are not going to drop all of our esoteric, exciting research on things we are passionate about and all work for particular industries or companies or whatever on their research problems. It is not the kind of thing we do. We will be involved in the things that fascinate us and we feel passionate about, otherwise you really do not want us working with you. We have to feel switched on by it, and we will hopefully deliver some really cool stuff. I take your point. I will probably come back to it towards the end. I am nearly there.

The CHAIR — That is okay.

Prof. HERGT — What I would like to describe is the virtuous circle of knowledge generation, if you like. I think the State Government has a really fundamental role. In the way I have been describing it and the sort of data I have been talking about — we are really talking about GeoScience Victoria here, although I would include water and I believe that comes under DSE rather than DPI. Perhaps the knowledge base, the geological data interpretations and the better idea of where different geological resources are understood to be, might be more the domain of the State Government, and perhaps identifying gaps and looking at research projects, new technology or ways of thinking might be more the sort of thing that universities could be involved in, perhaps with companies. There is a cycle of that. State government does not have to do it all. It can leverage off the other talent it has in the state, and there is considerable amount of that. I would also include industry and CSIRO.

The CHAIR — In a very unsophisticated way, let me ask this question. My interpretation of one thing that was put to us in South Australia was that the academic model had gone away from finding out why things were where they were and towards actually bringing on board — I think following on from where my colleague was — people to study where it is. Are we focusing as much as you would like in Victoria in that area or could we do better at that?

Prof. HERGT — I think we can always do better; in fact I think we can do better at both those sides of things.

The CHAIR — But they are discrete, are they — those two things?

Prof. HERGT — They are linked. Understanding the processes and why something might be where it is, if you understand the kind of context of, say, Victorian geology and the history that it has undergone — I think that is a really important aspect. Having done that, you have reduced the search space, as it were, but you still have to then find out where things are. I guess this is one of points that David Giles was trying to make — that you really need to ask that fundamental question, 'How do we see under the cover?'. We might think it is somewhere vaguely here — if it is going to be anywhere, it is somewhere vaguely here. Then we come down to, 'Where is it?'.

That is what I was mentioning earlier. We need to look at the more sophisticated geophysical tools to see underneath the cover, and in Victoria it is not just distributed surface cover — we have basalt plains that obscure a whole bunch of geology down there. It is about seeing through that to find out what is down there. That is the 'where' — having decided why it might be there, it is then about where it is exactly. That is why I think they are linked — because both of them really need us to have the geophysics and the drilling to test hypotheses and see whether we are talking nonsense or not.

Without trying to labour the point here, what I am trying to say in all of this — —

Mr FOLEY — We are simple people, so we need nice, clear messages.

Prof. HERGT — I think Victoria has almost all the pieces of the puzzle. We have great expertise in research infrastructure sitting in the universities that we have put together over many years, and of course we have CSIRO, the Synchrotron et cetera. We have a culture of collaboration, despite what you may have heard from

others, in lots of particular areas such as geological mapping, geochronology and all those sorts of things. I think the kind of piece we are missing is coordination, and that is what you touched on before.

How does Monash know what Melbourne is doing? How does GSV know what either of us are doing? How does industry know about any of this? The title of the slide is 'Our subdued profile — a problem of diffusion'. We do not have time to go out there and wave the flag and say, 'Aren't we clever? Look at what we are doing!'. Nobody has that time. GSV, or DPI more generally, does not have that time. None of us do. So I think there is a real need for somebody whose dedicated role is to liaise with all the stakeholders, and I mean including industry as well, not just the minerals or energy industry but all of the people who feed in to how we manage the State's land, if you like — water, geothermal et cetera. It could help bring us together, maybe around a medium-sized project. There could be genuine collaboration, and they can spruik that and really sell what we are doing in Victoria, because I think that is a powerful part of what is going on in South Australia. Everybody knows about it.

The CHAIR — What do they know?

Prof. HERGT — They do not even need to know any detail. All that needs to happen in a sense is that there is a real dedicated relationship between the State Government and in this case Adelaide University, but it is focused on resources for the State. I do not know that too many outside of this sphere would even know specifically which resources were in and which were out. In a sense that is not important, unless you happen to be in resource X and it is out. I would actually encourage Victoria to look more broadly, because I think our problems are much more broadbased. We are not just looking for gold here or whatever there; we do have that interplay of water versus geothermal versus petroleum versus gold. All of those rely on solutions going through a crust and interacting in a funny way, so I think we need that much broader perspective, and we do not have that.

VIEPS — the Victorian Institute of Earth and Planetary Sciences — used to have a half-time director, and the director's role was to go across, at that stage the three institutions, and try to keep us all in the loop of what each other were doing so that we could collaborate on things. It worked very well with our teaching program, very well with research infrastructure and kind of a bit in terms of research. It was only a half-time person who was really focused on those three institutions. That person did not have time — and we did not have the funds to provide the time — to do the outreach to industry or the State Government in a very detailed way. I think the State Government could play a really leading role here and turn that around.

I guess that brings me to the last point. I made this point in the submission too. I do not know whether you guys have received copies of this for your inquiry.

The CHAIR — No, it does not look familiar.

Prof. HERGT — I was really surprised that this was not even mentioned in the Government submission, because this took a lot of us a lot of time, effort and money. It was supported by DIIRD, DPI, DSE, Monash, Ballarat, Melbourne — —

Mr FOLEY — Can you tell our friends what it is?

Prof. HERGT — Sorry. It is the Innovation Road Maps for Victoria's Earth Resources — sound familiar? — final report, and it was finalised in August 2006.

Mr FOLEY — Prepared by?

Prof. HERGT — STEM Partnership. I think most of the money came from DIIRD but, as I said, we all contributed funds — the universities contributed a bit of funding too — that involved BHP, Origin Energy and Cement Concrete & Aggregates Australia. It took us nine months. There were lots of focus groups involving huge amounts of industry and partners across mineral sands, gold and minerals in general, construction materials et cetera, so touching on a whole bunch of the things that you guys are dealing with in this inquiry. There is a bunch of recommendations there. Included in those recommendations in 2006 were things like greater coordination between the State Government, industry and universities and the revitalisation of VIEPS — more of that sort of stuff.

The CHAIR — We might just change the cover on that.

Prof. HERGT — And the dates! They actually did propose a model as well where there might be an opportunity. I think I can quote from it:

> There is an opportunity for GeoScience Victoria (GSV) to have a stronger facilitation role between universities and industry. To promote this interaction, it has been suggested that having GSV personnel based at a university would be one way of keeping them close to the current and relevant research.

That is the kind of model that you saw, I suppose, in South Australia.

The CHAIR — What was the date of that?

Prof. HERGT — It is slightly déjà vu here — 2006.

Mr FOLEY — August 2006.

The CHAIR — Okay.

Prof. HERGT — I noticed in the Minerals Council's submission — I am not too sure if it was Chris Fraser, but Chris Fraser was involved in this too; the Minerals Council spent a lot of time involved in this — one of them described having survey fatigue or something like this, something like, 'We have been here; we keep saying these things'. Hopefully this time you guys will pick up the baton. That is really all I wanted to run through. As I said, I think there is a bit more detail in my submission, so if there are any questions about any of that or anything else — —

The CHAIR — I would just like to pose one question to start with if I could please. I got the impression from the things you were saying that you do not see the academic involvement necessarily all being prior to investigation of the land by a particular person who wants to develop an area. So, for instance, with a mining company, do you see your involvement occurring before and after?

Prof. HERGT — Yes, very much so, and I think there is an issue of scale here too. For example, it is interesting that we want to work out what is going on, when it happened, why it happened and how it happened. That is all very much prior to company X being interested in an area for whatever reason. That can be on a much smaller scale or on a much broader scale depending on what the question is. Companies obviously tend to want to focus on their lease — unsurprisingly — and perhaps even the mine scale. I have two students starting this year; one is working in Fosterville and one is working in WA. They are working on mine sites with companies where they want to look at that sort of scale.

Having finished that program who knows what that is going to throw up? We might then want to go and look adjacent or further up the road or at a different sort of flavour of that geology for different reasons. But working with the company, obviously they want us to be focusing on their patch. I think at all different scales. I am not too sure if that answers your question.

The CHAIR — Yes, it does, thank you.

Mr FOLEY — Professor, in your second-last slide there are three key points that I assume you want us to take away — that is, to put the resources together that are lacking, that some pieces of the puzzle are missing and that we are in the process of losing others. Obviously I have read your submission, and I could probably take you up on some of the specifics particularly about GeoScience Victoria, but what do you think are the resources to put them together, what is lacking where and to put what together specifically? What is missing and what are we losing?

Prof. HERGT — I think the resources to put them together and the pieces that are missing are linked, and I think that is coordination. The universities do not have the resources to hire a full-time Director of Earth Resources for Victoria or whatever, and even when we had funds to support a half-time position, it was more focused on trying to get universities talking more closely together. It is just too big a job for us to do that work, and that is where I think the State Government could provide that leading role — to support a director of whatever you want to call it, as I said, whose role it is to keep their finger on the pulse and to say, 'Did you realise so and so was doing that? You guys could work together rather than duplicate efforts'. We do not have

enough time or money to be duplicating anything; it is much better if we can put our resources together. I think that is what we are missing — the resources.

You could say human resources, and of course that means funding, and that is the piece that I think is missing primarily. There might be specific pockets of expertise on a particular problem that may be between the universities of Victoria or whatever that we do not have, but I do not think we are there yet.

The pieces that are missing also include of course some of the people who have been lost out of GeoScience Victoria. It is quite alarming to see the mass exodus, if you like — —

The CHAIR — Where have they gone? Let me guess.

Prof. HERGT — We have three in our department.

The CHAIR — Okay.

Prof. HERGT — They are on soft money positions. Rather than having a continuing role in GSV with the way it was going, they have said, 'Okay, I will take instability and uncertainty'. As I say, we have three in our department and I think unless things turn around very quickly you will lose more. Those people have such an amazing depth of knowledge. That is not easy to build; you do not build it overnight. You certainly do not rebuild it in the boom we are having now.

Mr SHAW — What are the reasons for that?

Prof. HERGT — I am not a member of GSV so I have not been witnessing what is going on there. I think there has been quite a change in the culture down there. I do not think people have felt particularly valued or valuable. I do not think they felt their work was particularly valued or valuable, which is about as 180-degree diametrically opposed as you can imagine from all the submissions; you have heard about how important their work is both to industry and to universities. It seems to me that it has been not just counterintuitive but completely counterstrategic to make the changes that have been made down there — simple things like losing the brand. GSV is a bit like Coca-Cola; it does not matter whether you are a part of the old guard and you still think of it as the Geological Survey of Victoria or whether you are part of the new regime and think of it as GeoScience Victoria, GSV is the brand. My understanding is that groups are being broken up and people put in different things with new titles that nobody is quite sure of the meaning of, and that is a real problem — a concern.

The flipside is that if this were to be turned around — and some of the things that we have been talking about in this inquiry and this roadmap all these years ago — and we were really building strength in that area, as I said it is going to be tough in a boom but this might be an opportunity to come up with a different model where GSV people are not necessarily sitting in an office downtown but where we could think about embedded researchers or difficult models of operating.

Mr NOONAN — Janet, I picked up in your written submission that a strong GSV is essential to both industry and universities, and you have just touched on essentially the question I was going to ask. I am just trying to come to terms in my mind with what will turn that culture around within GSV, because I suppose part of what we have heard throughout this inquiry is that we have very good data but how that translates essentially into new mines being established in Victoria is probably the output that people in positions higher than those who are operating on a day-to-day basis in GeoScience Victoria need to really assess.

We did hear evidence late last year that there were some issues in GSV that were having an impact, and it seems to be part of, if you like, the public sector that does rely very heavily on specific expertise. We may have to make a recommendation about this so can you try to pinpoint for our committee what it is in your assessment that needs to be considered in relation to GSV's future. If this is simply a leadership culture, that is one thing because that comes down to perhaps one or two people who are directing. If it comes down to the issue of GeoScience Victoria believing that their best work is done and therefore this issue of increasingly looking at under cover drilling, as you have put it, is perhaps the domain of others, that is another issue. But I suppose in trying to pinpoint that I am really keen, and sorry for the long-winded preamble to all this — —

Prof. HERGT — No, that is fine. It is very helpful to hear.

Mr NOONAN — But I am really just trying to get to what from your experience might need to happen there, because to be on top of this is essentially the role of state government.

Prof. HERGT — Absolutely. I would say it is entirely a leadership issue. As I have put in the submission and I notice that other people have mentioned it too, the GSV led the nation and had global recognition for some of the stuff they were doing. I do not know if you have talked to many of them, but they are incredibly passionate people who are really fired up by boring things like rocks. There is not a problem with the people there; there are problems now with the people who have left, because I think there is a huge amount of expertise, corporate history and knowledge and all that sort of stuff that has gone. Whether or not those people would come back under a different leadership is the question. So I think the passion and drive, the knowledge and the desire from the team is there. They just — I do not quite know how to frame it delicately — felt undervalued I suppose, as I said before, and the sorts of things they were doing that everybody else thought were fantastic the leadership did not seem to value.

Mr NOONAN — The leadership goes to policy and what people do on a day-to-day basis?

Prof. HERGT — Yes. 'We should not be doing research any more; that is all done. We have data. Why do we need any more data?' kind of attitude, when the rest of us know that, yes, we have data but that has just thrown up more questions and now we need more data. Having a small amount of geophysics does not help us with our three-dimensional model, and we do not even have a four-dimensional model. We do not know how things have happened with time, so when did that ore deposit form? It is quite important if you want to know what is happening and when to find the next one. So, yes, it was solely personal understanding and leadership.

Mr NOONAN — Thank you.

Prof. HERGT — Just on the links with universities, I guess one of the other things I put in my submission that I should perhaps mention in this context is it is not just the willingness of people to work together but the timing of when you can put funding together. As a university person, I know that the next Australian Research Council round is coming up, and so even if I have a great relationship with people in GSV and say, 'Let's put in a linkage application together', they say, 'Well, actually, we've got only one more year to run on this initiative, so we can't commit funds because we have the links'.

Mr NOONAN — It does not link up with the Government's cycling or funding through budgets.

Prof. HERGT — Yes. Talking to my colleagues who work very closely outside geosciences with UQ and the Queensland Government, there seems to be a model in their state government — I do not know whether it is funding that is ring-fenced for strategic things or whatever it is, but it is a different way of trying to ensure that if there is a really cool thing that we want to fund and do together, we can do that.

Mr NOONAN — I was going to ask you, Janet, but we have gone over time — you did touch on the issue of competing land use and community disputation, which has been a regular theme of our submissions. What value, beyond the respected third-party independent, would the university and research sector be able to bring to the management of that, in a content way? What would you — your colleagues, CSIRO, the whole sector — be able to say that was different from what is said by industry, local government, NGOs et cetera?

Prof. HERGT — I will just put on my Melbourne University hat now. I know we have a real momentum building at Melbourne through what we refer to as our virtual institutes, where it is not just a matter of my looking at the geology and all my colleagues looking at geothermal in isolation. These virtual institutes bring together the legal issues, the economic issues, the geological issues, the engineering issues, whatever, as a whole, so that there is a much more holistic approach to the problem. The social needs are sort of embedded in that, if you like. Perhaps me and the individual geologists going out there saying, 'Trust me; I've done a bit of research here and it's all fine' may not really add anything particularly new. I might have a little bit more street cred because I do not think I am biased, but I think in the bigger problems, with the CO2CRC relationship that we now have with DPI, we have a professor of Geological Carbon Capture Storage, who has just been appointed.

That sort of thing, working with universities in this multidisciplinary way, I think could be very powerful, because all sides will have been looked at. I think the problem you get is, 'Well, I've looked at this site and this

is what I think', and understandably somebody in the community says, 'Well, hang on a minute; you haven't considered this. What about this side?'. So I think that more holistic approach is really important.

The CHAIR — Thank you very much, Professor. We really appreciate your evidence and the time you have taken to be here with us. A copy of today's transcript will be sent to you. Feel free to make any changes where you believe there has been a typographical error, but none to the substance of the material. Thank you very much again, on behalf of the Committee.

Prof. HERGT — Thank you. It was a pleasure being here.

Witness withdrew.