Government of South Australia

Department for Manufacturing, Innovation, Trade, Resources and Energy

SUBMISSION

to the **Productivity Commission Inquiry into non-financial barriers to mineral and energy resource exploration**

July 2013

DELIVERING RESULTS

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EXECUTIVE SUMMARY

For decades, in the context of steep competition for globally mobile capital, successive South Australian (SA) governments have concluded, with bipartisan support, that efficient, effective and competitive investment frameworks for minerals and energy resources are critical comparative advantages for the State.

The SA Government has, and will continue to, provide tangible support to encourage mineral and energy resource exploration investment with:

- World-class, efficient and effective investment and regulatory frameworks, including a 'one-stop-shop' approach to project facilitation and approvals;
- Nation-leading processes for expeditious land access;
- Pre-competitive research to reduce uncertainties that impede investment;
- Enabling data consolidation, formatting and delivery through the South Australian Resources Information Geoserver (SARIG);
- Effective marketing of exploration opportunities;
- Support for University research to reduce uncertainties that can act as impediments to exploration and development investment;
- Initiatives to facilitate exploration activity through the Plan for Accelerating Exploration (PACE) program;
- A Roundtable for Unconventional Petroleum Projects (that informed a Roadmap for Unconventional Gas published in December 2012[1]); and
- Efficient and effective stewardship and provision of critical industry data.

The SA Government, through the Department for Manufacturing, Innovation, Trade, Resources and Energy (DMITRE) is committed to continuous improvement of its investment frameworks. There are four broad areas for collaborative improvement by jurisdictions, including the Commonwealth: reduction of excessive red tape and green tape, multiple land use, Commonwealth Native Title requirements and Aboriginal Heritage.

Harmonising legislation and standards between States, Territories and the Commonwealth also remains a high priority – with the proviso that harmonisation does not result in retrograde legislation or regulations.

This submission is in three parts:

- A description of SA Government activities being undertaken to support exploration;
- DMITRE's response to the draft recommendations contained in the Draft Report; and

1 DMITRE 2012, "Roadmap for Unconventional Gas Projects in South Australia", http://www.petroleum.dmitre.sa.gov.au/prospectivity/basin_and_province_information/unconventional_gas/unconventional_gas_interest_group/roadmap_for_unconventional_gas_projects_in_sa

- Additional information about the importance of pre-competitive geoscience data in supporting mineral and energy resource exploration.

DMITRE is supportive of 18 of the 20 draft recommendations contained within the Productivity Commission's draft report (with some qualifications as outlined in part two of this submission).

DMITRE partially supports draft recommendation 3.2, which recommends that the release of exploration tenements should be deferred until tenements of appropriate size and shape can be issued. DMITRE supports this recommendation in relation to petroleum and geothermal exploration; but does not support this recommendation applying to tenements for mineral exploration.

DMITRE does not support draft recommendation 7.1, which recommends having a view towards the broader application of the cost recovery funding approach for pre-competitive geoscience data. DMITRE holds the position that provision of pre-competitive geoscience data is crucial to underpin a sustainable exploration industry in the State and is a valuable means of maximising the future value of resources that are the property of the Crown in SA. This issue has not received adequate consideration in the report and is discussed in detail in part three of this submission.

PART ONE: SA GOVERNMENT ACTIVITIES TO SUPPORT EXPLORATION

Combined minerals and petroleum exploration expenditure in SA reached a record $646.1 million for the 12 months to March 2013. In the 12 months to March 2013, spending on minerals exploration in SA totalled $275.8 million, which continues to exceed the SA Strategic Plan target of $200 million a year. SA's mineral expenditure in the March 2013 quarter of $37.6 million ranks fourth behind the resource-rich states of Western Australia, Queensland and also New South Wales[2].

In the March 2013 quarter, petroleum exploration expenditure was $119.4 million, maintaining the strong expenditure of the December 2012 quarter and contributing to $370.3 million in spending in the 12 months to March 2013.

While the SA minerals and petroleum sectors are not immune to the impacts of falling commodity prices and lack of access to global risk capital, these impressive rates of expenditure reaffirms SA's reputation as a great mining and energy frontier. It also continues to indicate that explorers recognise the potential that exists in the State and the strong support offered by the SA Government to the exploration sector, including PACE 2020 (Plan for Accelerating Exploration) - the $10.2 million expansion of the SA Government's successful $30.9 million PACE initiative.

This part of the submission discusses SA Government activities that are being undertaken to support mineral and energy exploration, including:

- One-stop-shop approach;
- Pre-competitive geoscience;
- Collaboration between government and industry;
- Mineral resources – exploration regulation and approvals;
- Oil and gas – exploration regulation and approvals;
- Geothermal energy – industry development, exploration regulation and approvals;
- Land access;
- Native Title and Indigenous Heritage; and
- Further need for red-tape reduction.

One-stop-shop approach

In both the minerals and energy resource sectors, DMITRE provides a one-stop-shop and case management approach to the grant of land access and activity approvals. The one-stop-shop approach enables regulators to do their jobs in parallel, rather than in series – fostering efficiency without reducing stringent standards for ecologic, social, heritage and economic outcomes[3].

[2] Australian Bureau of Statistics 2013, "8412.0 Mineral and Petroleum Exploration, March Quarter 2013"
[3] Goldstein, B.A., Alexander, E., Cockshell, D., Malavazos, M., and Zabrowarny, J, 2007, "The Virtuous Life-Cycle for Exploration and Production (E&P): Lead and Lag Factors" *APPEA Journal*, Volume 47, pages 387-401

This is formalised through Memorandums of Understanding and Administrative Arrangements between DMITRE and its co-regulators. These arrangements cover water, native vegetation, Aboriginal Heritage, and environment protection.

In addition, a dedicated case management system is currently being used on 30 major mining projects in the pipeline in South Australia involving gold, uranium, copper, iron ore and mineral sands deposits. The approach is underpinned by a 'minimum risk – minimum time' philosophy designed to support timely approvals and, critically, the longer-term success of mining projects. Case managers provide project proponents with one window to government, and work closely with stakeholders inside and outside of government. The aim is to identify and ultimately facilitate the management of key risks and the process of gaining government approvals.

Pre-competitive geoscience

The SA Government has an extensive pre-competitive geoscience program, facilitated through the Geological Survey of South Australia, in collaboration with Geoscience Australia, and other in-house expertise. The State's SARIG (South Australian Resource Information Geoserver) and the Plan for Accelerating Exploration (PACE) are critical elements to supporting pre-competitive geoscience for industry investment.

South Australian Resources Information Geoserver (SARIG)

The launch of SARIG 2020 has brought about a new era of data delivery and online business. SARIG 2020 is currently delivering its most diverse range of geoscientific data, information and products to the exploration and mining community and companies are now utilising new online systems for more streamlined business interactions. Potential investors also now rely on SARIG as a key information source, accessing new State infrastructure, production statistics, and mining and exploration project information.

SARIG 2020 won an Australian Government Excellence in e-Government Award for 2013 in the category of e-Government Geospacial. The SARIG 2020 geospatial web portal was recognised as a great example of how government is using location aware information to inform service design and delivery, integrating over 400 spatial datasets from across government and the private sector.

The independent Fraser Institute Annual Survey of global mining companies also recognises SA's geological database as one of the best in the world[4]. SARIG 2020 is a key element in maintaining SA's international reputation for online world class geoscientific information.

Plan for Accelerating Exploration (PACE)

The Plan for accelerating exploration (PACE) was launched in April 2004 (2004-07, worth $22.5 million) and quickly gained worldwide recognition[5] as one of the most innovative government mineral resource initiatives. PACE was also quick to attract the support of local industry, and in April 2007, PACE was extended by two years bringing its total value to $30.9 million over seven years.

In 2010, the Government released the "Mining in South Australia Policy", of which the cornerstone was a $10.2 million expansion of PACE. The new PACE – called PACE 2020 – leverages the success of PACE and is a key component in achieving SA's State Strategic Plan targets and other key priorities:

[4] Fraser Institute Annual Survey 2013, "Annual Survey of Mining Companies 2012-13", http://www.fraserinstitute.org/default.aspx

[5] Parliament of Victoria Economic Development and Infrastructure Committee 2012, "Inquiry into greenfields mineral exploration and project development in Victoria" (Parliamentary paper No.136 Session 2010-11)

- Exploration expenditure in SA to be maintained in excess of $200 million per annum until 2015; and

- Increase the value of minerals production and processing to $10 billion by 2020.

PACE is dedicated to driving forward SA resource development through a diverse range of programs, projects and collaborations committed to the core principals of economic stimulation, accessibility to land, development of sustainable exploration and mining, increasing cultural awareness and balancing development with the environment.

PACE directly supports and influences:

- Innovative geoscience projects and the delivery of pre-competitive data;

- Best practice policy development and streamlining mining approvals;

- Collaborative programs with industry, universities and other government agencies; and

- Global promotion of SA's mineral wealth.

PACE partners with a wide and varied group of local, national and international government, academic and industry organisations to leverage critical information, knowledge and skills, in order to maximise its overall value and effectiveness.

Over the first two years of PACE 2020, the spending on mineral exploration in SA hit a post-Global Financial Crisis high in 2011-12, confirming that SA remains a major destination for investment in exploration across a wide range of minerals[6].

PACE has been specifically designed to support exploration activity in SA at all levels. At the broadest level, PACE leads the way in the collection of regional geophysical and geochemical datasets for regional geological interpretation and targeting. At the tenement scale, collaborative programs such as Discovery Drilling and Targeting actively support target generation and the drill testing of the current generation of mineral and energy prospects and deposits. At the local scale, research partnerships between the Geological Survey of South Australia and industry coupled with collaborative programs such as PACE Geochronology help unravel the age, genesis and characteristics of mineral deposits in SA.

Collaboration between government and industry

Experience has shown that SA performs at its best when Government, business and the community work together. Through collaborative approaches, the State is able to undertake strategic projects that ensure it can harness its mineral and energy potential.

The SA Government recently announced a partnership with BHP Billiton and Santos – the State's leading miner and gas producer – to develop the new Mining and Petroleum Centre of Excellence. The Centre of Excellence aims to bring together major resource companies, universities and mining services business to foster and coordinate innovation and applied research initiatives that have a global impact. One of the areas of focus for the Centre will be to explore innovative ways to develop the State's endowment of unconventional gas.

[6] DMITRE 2012, "PACE 2020 Progress Report 2010–12". Report Book 2013/00001, http://www.pir.sa.gov.au/minerals/initiatives/pace2020

Collaborative programs under the PACE Initiative also act as a direct mechanism for stimulating exploration and discovery within SA. Since 2004, six rounds have been offered (with the seventh nearing completion) and for a government expenditure of approximately $8.8 million, over $24 million of company expenditure has been leveraged. This 4:1 multiplier is further enhanced when also factoring flow-on exploration program expenditure, attraction of joint venture partners into projects and the value of the discovered and the minerals and energy resources. Projects include the Carrapateena discovery, Challenger extension, Prominent Hill water, and Four-Mile uranium mineralisation.

Mineral resources – exploration regulation and approvals

DMITRE is committed to reducing red tape and regulatory burden for explorers, without compromising on environmental and social standards.

Low Impact "Generic" PEPR

Pursuant to Part 10A, section 70B (8) of the *Mining Act 1971* (SA), the Minister may adopt a program that applies to mining operations of a prescribed class. For this purpose the Minister has determined that a Generic PEPR for Low Impact Mineral Exploration in South Australia (Generic PEPR) shall be adopted for all current and future exploration licences granted pursuant to the Act for low impact exploration activities. The Generic PEPR can be downloaded from the DMITRE Minerals website.

The Generic PEPR has been developed by DMITRE to acknowledge the low risk and low impact nature of regional first pass activities, and to ensure these activities are conducted in a manner that will reduce any potential environmental impacts and facilitate the approval process. It describes the scope of low impact exploration activities, relevant environmental aspects, land access/consultation requirements and management of environmental impacts, including the associated outcomes and measurement criteria.

The development of the Generic PEPR also assists in maintaining community expectations in relation to environmental approvals for exploration activities, another critical consideration for DMITRE in the regulation of the mineral resources sector.

Exploration PEPR

Exploration activities on an Exploration Licence that do not fall within the scope of the Generic PEPR will require a separate PEPR approved by the Minister (or delegate) pursuant to Part 10A of the *Mining Act 1971* (SA). DMITRE has recently increased the approval time of these PEPRs from 6 months to 12 months, allowing explorers to conduct larger/longer programs while at the same time reducing the amount PEPRs to be submitted to DMITRE for approval. The recent Act amendments have also allowed DMITRE to develop a PEPR on a project basis. The "Project PEPR" concept is currently being trialled with industry representatives, with final implementation planned for 1 July 2014.

This 'project PEPR' is designed to increase exploration flexibility for the proponent, whilst at the same time reducing red tape and approval requirements. The approval time period will be dependent on the tenure of the proponent's exploration licence(s), allowing PEPRS submitted on a project basis to be valid for an extended period of time with set criteria to determine when the PEPR is required to be reviewed. The proposal must have a clearly defined scope by taking into account, but not limited to, the following parameters:

- Geographic extent of tenements within the project and/or environmental regions.
- Identify and describe the different types of environments found within the project area.

- Identify all relevant stakeholders (e.g. relevant councils, pastoral lease holders, freehold landowners etc) and consultation requirements.

- Description of all exploration activities (requiring approval) to be undertaken by the proponent in the project area.

Mining Act amendments to address petroleum interests

Following the introduction of the 2009 Bill to amend the *Mining Act 1971* (SA), and as a result of further consultation with various minerals and energy resources industry bodies, the 2010 Bill included certain provisions extending the requirements for explorers and miners to serve a notice of entry to land and notice of use of declared equipment to include tenement holders under the *Petroleum and Geothermal Energy Act 2000* (SA).

This amendment reciprocates certain rights which had recently been introduced into the *Petroleum and Geothermal Energy Act 2000* (SA). The provisions of the Bill were aimed to improve the quality of information and provide a higher level of accountability for explorers and mining developers, ensuring responsibility and accountability are clearly assigned and understood by resource companies, other land users and the community.

Oil, gas, geothermal energy and gas storage – exploration regulation and approvals

Petroleum exploration and development activities in SA are administered by DMITRE under the *Petroleum and Geothermal Energy Act 2000* (SA) (onshore), the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth) (offshore) and the *Petroleum (Submerged Lands) Act 1982 (offshore)* (SA).

The *Petroleum and Geothermal Energy Act 2000* was proclaimed on 1 October 2009 and supersedes the *Petroleum Act 2000*. The *Petroleum and Geothermal Energy Act 2000* (SA) has a number of aspects that are considered a comparative advantage without precedent in other Australian legislation[7].

High level objectives of the *Petroleum and Geothermal Energy Act 2000* (SA) include:

- Sustain trusted practical, efficient, effective and flexible regulation for upstream petroleum, geothermal and gas storage enterprises, and the construction and operation of transmission pipelines, in the State;

- Encourage and maintain competition in the upstream petroleum and geothermal sectors;

- Protect the public's interest in the sustainability of natural, social and economic environments from risks inherent in petroleum and geothermal operations;

- Sustain effective consultation processes with people affected by regulated activities, and the public in general; and

- Ensure as far as reasonably practical the security of supply of natural gas.

These objectives drive certainty for business by providing clarity in terms of regulatory requirements and for investment timelines, and for the public so the community can expect their interests to be protected. The objectives refer to the protection of the public's interest in the sustainability of the natural, social and economic environments, which is sometimes referred to as the triple bottom line.

[7] Goldstein et al 2007

In April 2009, the Productivity Commission released its Research Report on the Review of Regulatory Burden on the Upstream Petroleum (Oil and Gas) Sector. The Commission addressed the matters raised by the SA submission in the final report. In a number of places in the report, the State's approach to regulating the sector has been highlighted as a working example of best practice. Examples of this recognition include:

- In relation to SA's adoption of the lead agency or 'one-stop-shop' approach in regulating the sector, the report states that "Primary Industries and Resources South Australia (PIRSA)[8] is widely seen as a model for other jurisdictions to emulate". The report further states that "some jurisdictions actively seek to avoid unnecessary referrals. In South Australia, the MoU between petroleum regulatory agency and environmental agencies limits the circumstances for referral of proposals to those activities that are likely to have a 'high impact' on the environment", and that "a lead agency approach, such as that applied in South Australia, is one potential way of coordinating environmental assessments and streamlining referral arrangements."

- In relation to the relative efficiency and effectiveness of various Australian petroleum legislative frameworks, the report states that "industry participants' feedback suggests that South Australia has a relatively straightforward regulatory system, which could be considered a benchmark for other jurisdictions", and that "…the South Australian Petroleum Act 2000 is simple to follow and administer". The report also noted that "issues of regulatory capture do not appear to have emerged in South Australia. PIRSA has a clear mandate, clear regulatory responsibilities, good processes to engage with other agencies, and checks and balances that apply in high risk situations."

Licensing to attract competitive exploration and supply-side competition

The *Petroleum and Geothermal Energy Act 2000* (SA) enables competitive work program bidding, competitive cash bidding and over the counter applications. Competitive Tender Regions have been gazetted in more mature, producing basins so that competitive work program bidding is required in the Cooper and Otway basins. The criteria for ranking and selecting a winner from amongst competitive bids are published when bid block areas and closing dates for applications are defined as standard parts of the Acreage Release information package. The bid scoring methodology is reviewed for each new area to be offered to tailor scores to data availability and prospectivity (e.g. if a block already has extensive 3D seismic coverage, 2D seismic acquisition will not be as useful to explore the block as drilling so will score much less than in a block where data is scarce). Easily accessible technical information and legislated requirements for *Petroleum and Geothermal Energy Act 2000* (SA) licences are publicly available ahead of the closing date for applications. Qualifying applicants must have the financial capacity and technical competence to be compliant licensees.

Bids are assessed by two teams in a process that was successfully audited by the SA Auditor General's Department to ensure probity and fairness[9]. The guaranteed exploration expenditure in winning Cooper Basin work program bids in the term 1998-2013 total an estimated $650 million. The most recent (2012) petroleum acreage release in the Cooper and Otway basins resulted in five bids with guaranteed work totalling $79 million, included in the winning bids.. Bids closed on 4 April 2013 and following the assessment process, the two successful bidders were announced at the 2013 APPEA conference in May 2013.

Over-the-counter applications prevail elsewhere in the State, e.g. in frontier basins yet to host commercial, petroleum production, where greater exploration uncertainties translate to higher risks. Over-the-counter bids need to include at least one exploration well in the five-year work program, the

[8] Now the Department for Manufacturing, Innovation, Trade, Resources and Energy (DMITRE)
[9] Alexander and Morton 2001, "Selecting_the_winning_bid", DMITRE, http://www.pir.sa.gov.au/__data/assets/pdf_file/0005/175955/Selecting_the_winning_bid.pdf

first year work program is deemed to be guaranteed on grant, and in subsequent licence years, work programs become guaranteed upon entry into the licence year.

It is proposed that consideration is given towards establishing online tenement applications for acreage release bidding and over-the-counter applications, as well as other types of licence in future to further streamline processes.

Land access

For many years, SA has recognised the importance of land access to the international competitiveness and long-term sustainability of the State's exploration and resource development sector. Preclusion from access to land, on a permanent basis, prevents current and future development opportunities for the State. DMITRE is promoting multiple and sequential land use through the frameworks for Protected Areas and the Woomera Prohibited Area, and the development of a Multiple Land Use Framework.

Protected Areas

Areas with special natural, social or economic value, including areas proclaimed for protection or reserved for conservation purposes in SA, include those areas administered by the Department of Environment, Water and Natural Resources (DEWNR) under the *National Parks and Wildlife Act 1972* (SA), *Crown Land Management Act 2009* (SA)*, Native Vegetation Act 1991* (SA) and *Wilderness Protection Act 1992* (SA). Approximately 74 per cent of onshore protected areas allow access for mineral, geothermal and petroleum exploration and development. While the legislation is designed for conservation purposes, there are provisions for joint proclamations and regional reserves, both of which allow access for mineral and petroleum exploration and development. Where access is excluded, this excludes surface and subsurface access.

Other parts of SA with special natural values and unique management arrangements include, but are not limited to:

- Marine Parks and adjacent areas under the *Marine Parks Act 2007* (SA);
- the Adelaide Dolphin Sanctuary under the *Adelaide Dolphin Sanctuary Act 2005* (SA);
- the Arkaroola Protection Area under the *Arkaroola Protection Act 2012* (SA);
- the River Murray Protection Area under the *River Murray Act 2003* (SA);
- Prescribed water resources under the *Natural Resources Management Act 2004* (SA); and
- Vegetation Heritage Agreement areas under the *Native Vegetation Act 1991* (SA).

Woomera Prohibited Area (WPA)

The Woomera Prohibited Area (WPA) covers an area of 127,000 square kilometres approximately 450 km NNW of Adelaide and is estimated to contain nearly 80 per cent of Australia's uranium resource and more than 60 per cent of Australia's known copper resource as well as significant deposits of iron ore, gold and other minerals. The WPA is a globally unique military testing range and a key asset in Defence capability development.

The establishment of the new and more innovative coexistence framework for the WPA has provided explorers a secure and transparent regulatory process to access one of the most prospective regions in Australia. With potential mineral development alone valued estimated at more than $35 billion, the WPA

already hosts four major operating mines: the Challenger gold mine, Prominent Hill copper-gold mine, Cairn Hill iron ore-copper mine and Peculiar Knob high grade iron ore-mine.

In May 2012, the State Government also committed $2 million for 2012-13 to support an expansion of pre-competitive mineral exploration within the Gawler Craton. This new investment, in addition to the ongoing work of PACE 2020, aims to extend this level of investment into the underexplored areas of the WPA. It will also provide valuable geoscientific information that the State and Australian Governments can use to effectively manage resources and defence interests in this strategically important area for Australia.

In June 2013, this program was extended for a further 2 years (2013-2015, worth $4 million). It recognises the pre-competitive geoscience support needed in deeply covered, greenfields frontiers to stimulate exploration activity towards future discoveries. A major emphasis of this program will be pre-competitive geoscience data acquisition and delivery in the WPA and the western Gawler Craton-Eucla Basin. A major feature of this program is its objective towards developing a framework towards an innovative regional, deep prospecting drilling program in collaboration with the Deep Exploration Technologies Cooperative Research Centre (DET CRC). This drilling program will be funded in the order of $2 million in 2014-15. It will be the first of its kind in the world and will change the exploration framework for deep cover frontiers.

Multiple Land Use Framework

SA is experiencing increasing challenges regarding land access and use as a result of greater demand for multiple land uses on the same limited area. The State has an abundance of economic, social and environmental resources that can support the coexistence of various land uses in a sustainable and profitable manner, yet land use issues have and continue to present challenges to governments, industry and communities.

SA has long been a national pioneer in supporting optimal multiple and sequential land use approaches; in particular, with land interactions involving the mineral and energy resources sector. Examples include the Woomera Prohibited Area, SA Regional Reserves (see below for more information about the success stories of the Innamincka Regional Reserve (Coongie Lakes) and the Yellabinna Regional Reserve (Iluka Jacinth-Ambrosia project)).

In addition, the Statement of Environmental Objectives process required as a precedent to all on-ground activities within *Petroleum and Geothermal Energy Act 2000* (SA) licences is widely considered a national benchmark to satisfy stakeholders that only compatible, multiple land use that is environmentally sustainable is allowed in SA.

Through its co-Chairing of the Standing Council on Energy and Resources (SCER) Land Access Working Group and by Chairing SCER's Coal Seam Gas Working Group (CSG WG), DMITRE is committed to progressing a transparent, objective-based land access framework for the minerals and energy resources sector. The CSG WG documented leading practices for the regulation of coal seam gas in the National Harmonised Framework for Coal Seam Gas (NHF-CSG) that was endorsed by COAG Resource Ministers in 2013. The Land Access Working Group developed the Multiple Land Use Framework (MLUF). The MLUF concept was endorsed by national SCER Ministers in December 2012.

DMITRE is aiming to implement a Multiple Land Use Framework from 2013, to apply co-existent and collaborative approaches to land use policy, planning and development by the minerals and energy resources sector.

Yellabinna Regional Reserve (Iluka Jacinth-Ambrosia project)

Iluka Resources' Jacinth-Ambrosia project in SA offers an excellent example of how to manage issues critical to mine planning and approval under a multiple-use framework for land management. Jacinth-Ambrosia is a heavy mineral sands operation located in far west SA, approximately 300 km from the town of Ceduna. The project has the capacity to supply around 25 per cent of global zircon demand, with an expected mine life of 10 to 15 years on current reserves.

Regional Reserves were established in SA under the *National Parks and Wildlife Act 1972* (SA) with an amendment in 1987 making provision for multiple-use reserves. The multiple use regional reserve category allowed for exploration and mining activity by Iluka Resources to be undertaken in the Yellabinna, subject to the statutory framework, approvals and regulatory mechanisms in place for mineral activities in SA.

Collaborative partnerships were developed between the mining and environmental regulatory authorities in SA, in particular the Department for Environment, Water and Natural Resources, to ensure approvals for mining in the Yellabinna Regional Reserve were managed efficiently and lead to positive outcomes for industry, the environment and the community. Successful partnerships were also developed with other government agencies and groups, including the Native Vegetation Council, Crown Law, Department for Transport, Planning SA and the Aboriginal Lands Trust.

Overall, the project was commissioned in record time, taking only five years from discovery through to commissioning, with project approval being achieved in May 2008, and official opening by the Premier of SA in February 2010. In this way, the multiple use framework for the Yellabina Regional Reserve encouraged a variety of players with seemingly conflicting interests to work collaboratively to achieve sustainable solutions for the benefit of industry, the environment and the community.

Innamincka Regional Reserve (Coongie Lakes)

Another of the first successful applications of a multiple use framework in SA is the example of petroleum exploration and production in the Innamincka Regional Reserve, in SA's far north-east. The success of this concept challenged the long-held notion that resources exploration and production and biodiversity conservation were mutually exclusive.

The Innamincka Regional Reserve was proclaimed in 1988, covering over 1.3 million hectares of land. The area is of international environmental significance and is also the traditional home for several Aboriginal groups. The area is also of important economic significance, with the underlying Cooper Basin holding some of Australia's most important onshore oil and gas reserves, as well as geothermal potential. The proclamation of the Innamincka Regional Reserve was therefore an important milestone in multiple-use land management in SA as it allowed for these competing interests to coexist in the area to everyone's benefit.

Another success within the Innamincka Regional Reserve has been in Native Title negotiations between the government, industry and the Yandruwandha-Yawarrawarrka people, through negotiated Indigenous Land Use Agreements.

Precautionary principle versus multiple land use

There are potentially polar objectives between precautionary protection of certain values (environmental, heritage etc.) and multiple land use. Rather than consider land use and land access on a case-by-case basis, consideration should be given to whether exploration and development is compatible to triple bottom line outcomes. Precautionary protection (including, for instance, the recent NSW decision to develop "no-go" zones for coal seam gas within two km of townships) immediately

makes industry activity more difficult, resulting in higher costs for industry that flow on to end consumers.

In this way, DMITRE proposes that:

- An agreed multiple land use approach would provide an initial basis for land access and land use decision-making on a case-by-case basis, with long-term change to the general mindset of land use (from singular, to multiple).

- Mapping objectives and approval processes for all State and Commonwealth co-regulation for resource exploration should identify scope for efficiencies without diluting the effectiveness of protection for social, natural and economic environments.

Native Title and Indigenous Heritage

Native Title for petroleum exploration and development

Compliance with the statutory requirements for petroleum exploration on land affected by native title in SA is managed through the processes under the *Native Title Act 1993* (Cth).

DMITRE considers the Commonwealth native title system and processes are a barrier to petroleum exploration in South Australia and across the country:

- Lack of transparency in the nature of agreements reached in Right to Negotiate (RTNs) and Indigenous Land Use Agreements (ILUAs), which can minimises innovation and achievement of best practice and the best outcomes for all. There is an opportunity to incrementally improve the system and the outcomes for Aboriginal people with greater transparency, e.g. RTN and ILUA agreements become publicly accessible documents.

- Unclear timelines for ILUA negotiations increase process uncertainty for explorers and for native title parties.

Native Title for mineral resource exploration and development

On the other hand, native title requirements for mineral exploration are progressed through Part 9B of the *Mining Act 1971* (SA). Part 9B is an approved scheme under the *Native Title Act 1993* (Cth) and is available as an alternative native title process for mineral exploration to occur in SA. Part 9B provides several advantages to explorers in terms of streamlining the process and reducing government red tape, including:

- The State is not a party to any native title agreements under Part 9B, and therefore the State does not participate in the agreement-making process which occurs between native title parties and industry;

- Mineral explorers are able to be granted an Exploration Licence before a native title agreement is required, so recourse to the Court through an expedited procedure is rare;

- The Part 9B system was designed to facilitate a risk management approach to dealing with native title issues, so as to avoid imposing unnecessary regulatory burdens on explorers for low risk activities, but at the same time, providing clear processes and requirements to be followed for activities likely to affect native title. The scheme in Part 9B means there is less need for the State to be involved in negotiation of native title issues; and

- The timeframes for compliance with the processes in Part 9B are more truncated than timeframes in the *Native Title Act 1993* (Cth).

These advantages result in it being possible for explorers to satisfy native title requirements more quickly and often with less expense than through the equivalent right to negotiate process under the *Native Title Act 1993* (Cth).

DMITRE is currently reviewing its policies for how to appropriately deal with native title in the exploration context. Part of this review will involve considering at what point in time exploration activities affect native title, and accordingly, what is an appropriate trigger for when native title agreements (or a Court determination of native title) must be provided by explorers.

In developing its policy on these matters, DMITRE will be taking into account its own overarching policy document *Regulating Mineral Exploration and Mining in South Australia* and in particular the following*:*

- Minimisation of liability for both government and the community;
- A risk-based approach to determine which impacts must be managed;
- Clear accountability for the explorer to achieve community and government expectations; and
- Ensuring compliance through best practice strategies.

DMITRE considers that an appropriate policy approach on these matters will provide sufficient flexibility for explorers to conduct low impact exploration activities, but at the same time sets clear boundaries as to what activities are more likely to affect native title.

Indigenous Heritage

The *Aboriginal Heritage Act 1988* (SA) provides the framework in South Australia for regulation and management of indigenous heritage. The current regime, whilst supporting a risk assessment model for avoidance of damage to indigenous heritage for low risk activities, does not currently accommodate agreement making processes for dealing with indigenous heritage. Moreover, the current regime contemplates in most cases, a government decision-making process when dealing with Indigenous heritage.

The SA Government is currently in the process of reviewing its Indigenous heritage legislation. In particular, consideration will be given to whether a suitable scheme of agreement making can be developed, and whether native title processes and Indigenous heritage processes can be more effectively aligned to avoid duplication of process, to minimise costs of land access and to facilitate more efficient processes for dealing with Indigenous heritage.

Further need for red-tape reduction

Harmonising legislation and standards between States, the Territories and the Commonwealth remains a high priority – with the proviso that harmonisation does not result in retrograde legislation or regulations.

SA also pursues the removal of cross-border impediments through agreements with other States. The SA and NSW Governments announced in June 2013 that they will sign a Memorandum of Understanding to support a cooperative approach to support exploration and resource development, particularly in the Braemar Province. The Memorandum of Understanding will encourage cooperation between agencies with respect to infrastructure access and development, policies on best practice regulation and planning processes.

PART TWO: RESPONSE TO DRAFT RECOMMENDATIONS

This part of the submission provides DMITRE's response to each of the draft recommendations contained within the Productivity Commission's Draft Report on Mineral and Energy Resource Exploration.

Exploration Licensing and Approvals

Draft Recommendation 3.1

> *Governments should ensure that their authorities responsible for exploration licensing:*
>
> - *prepare and publish information on the government's exploration licensing objectives and the criteria by which applications for exploration licences will be assessed*
> - *publish the outcome of exploration licence allocation assessments, including the name of the successful bidder and the reasons why their bid was successful.*

DMITRE **supports** both components of this draft recommendation.

DMITRE provides full details of the bid assessment process for all SA petroleum bid rounds, including the scoring system (which is tailored to the prospectivity and data availability in the area), plus template forms and papers on the philosophy work program bidding and bid assessment. These details were provided for the most recent petroleum acreage releases[10]. The bid assessment process is also reviewed from time to time[11]. The successful bidders and details of the work program are published in the SA Government Gazette and the work program is included in the license document available publicly via the Licence Register online. This transparency is important so that unsuccessful bidders can see the winning program and understand why it was successful.

In relation to mineral exploration, DMITRE publishes Earth Resources Information Sheet M05 "Mineral Exploration Licences – general conditions, procedures and information", which provides general guidelines on the grant of an exploration licence in SA. It sets out guidance on the purpose of an exploration licence and the criteria by which applications for an exploration licence will be assessed. In relation to applications for competitive areas known in SA as "Exploration Release Areas", Minerals Regulatory Guideline MG17 – "Guidelines: applying for mineral exploration release areas (ERAs) in South Australia", outlines the purpose and objectives of this process, the process for application and the criteria by which applications will be assessed. The outcome of the process, including the names of all applicants and the successful applicant are published by DMITRE. All applicants are offered the opportunity to seek feedback from DMITRE on the process outcome.

Draft Recommendation 3.2

> *Where possible, governments should not allocate exploration licences for tenements that would be too small or too irregular a shape for an efficient mine or production wells to be established. The release of exploration tenements should be deferred until tenements of appropriate size and shape can be issued.*

DMITRE **supports** this draft recommendation in relation to petroleum and geothermal exploration.

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[10] For further information, see DMITRE website, http://www.pir.sa.gov.au/petroleum/licensing/new_acreage_releases

[11] Alexander, E 2012, "Shaping the Cooper Basin's 21st century renaissance", http://www.pir.sa.gov.au/__data/assets/pdf_file/0007/175984/Shaping_the_Cooper_Basin_21st_century_renaissance.pdf

This is already an objective for *Petroleum and Geothermal Energy Act 2000* (SA) licences. Vacant SA Cooper and Otway Basin competitive tender acreage is generally stockpiled to make up reasonable blocks in acreage releases. A recent example is the OT2012 release, which was deliberately held back until all vacant acreage could be included, forming the large block offered for years in the basin. This attracted a very good work program from a UK-based explorer because there was a range of play types to spread risk[12].

It should be noted that exploration operations can still successfully occur in small areas where a licence consists of a number of non-contiguous parts – and in the Cooper Basin[13] for example, most areas are still bigger than typical licenses in the United States of America or Canada. SA also offers other alternative types of license to enable activities like seismic acquisition to occur beyond the relevant license area, i.e. Associated Activities Licence (AAL) which authorises the licensee to conduct associated activities or operate associated facilities[14] on land outside the area of the primary license.

However, DMITRE **does not support** this draft recommendation in relation to mineral exploration.

In terms of mineral exploration licences, recent amendments to the *Mining Act 1971* (SA) now give DMITRE discretion in the way that relinquished mineral exploration licence areas may be released to the industry, which include small or irregular shaped areas. However, DMITRE does not wish to regulate the size and shape of mineral tenements due to the significant variation in size, shape and orientation of mineral deposits. If a company believes an area is prospective for the commodity they are interested in they should have the option to apply for the ground and test their model rather than being forced to wait for a larger area to become available – in general the industry will determine what is too small an area to explore for a given commodity. What could be considered instead is an increase to the minimum tenement size from 1 minute of latitude and longitude to 2 minutes of latitude and longitude however this would then affect how companies release ground and may not be acceptable to industry.

Draft Recommendation 3.3

> *If an Act requires the Minister to notify a person of a decision regarding an exploration licence, the Act should require that the notice include the reasons for the decision.*

DMITRE **supports** this draft recommendation.

Transparency and fairness are fundamental to the efficient and effective operation of exploration licensing systems. Applicants in SA already receive notification of reasons for a decision regarding an exploration licence.

Draft Recommendation 3.4

> *Where not already implemented, governments should ensure that at a minimum their lead agencies responsible for exploration, coordinate exploration licensing and related approvals (such as environment and heritage approvals). This should include the provision of guidance on the range of approvals that may be required, and on how to navigate the approvals processes.*

DMITRE **supports** this draft recommendation.

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[12] See http://www.pir.sa.gov.au/petroleum/licensing/new_acreage_releases/co2012_acreage_release3

[13] Note that in the Cooper Basin licenses have naturally broken into smaller areas due to normal end of five year term relinquishments. Regular relinquishments are a fundamental characteristic of exploration licenses because industry want turn over and a chance to enter a productive basin, and it minimises fallow acreage and warehousing.

[14] An associated activity or facility is anything that is reasonably necessary for, or incidental to, carrying on regulated activities in the area of, or the vicinity of, the primary licence area (e.g. record seismic lines for full fold coverage in the primary licence area).

In April 2009, the Productivity Commission released its Research Report on the Review of Regulatory Burden on the Upstream Petroleum (Oil and Gas) Sector. The Commission addressed the matters raised by the SA submission in the final report. In a number of places in the report, SA's approach to regulating the sector has been highlighted as a working example of best practice[15].

Similarly, as the lead agency for regulating mineral exploration, DMITRE is already responsible for coordinating exploration licencing and approvals, via a 'one stop shop' or case management type approach, including consultation with all relevant government departments. This process is outlined in the guidelines and information sheets available on the DMITRE Minerals website.

Draft Recommendation 3.5

> *Governments should ensure that their regulators publish target timeframes for approval processes, including exploration licensing and related approvals (for example environmental and heritage approvals). The lead agency for exploration should publish whole-of-government performance reports against these timeframes on their website.*

DMITRE **supports** this draft recommendation in-principle; however implementation of reporting against target timeframes would also need to be supported by the other regulatory agencies in SA (i.e. DMITRE's co-regulators).

DMITRE has recently completed a project to enable mineral exploration companies and the public to track the progress of a mineral exploration licence application online via DMITRE's SARIG interface. This functionality allows the client to view the target timeframes for different parts of the process, both within DMITRE and for other agencies, and if these are being met. Performance measures and associated metrics are currently under consideration, however it is considered important that individual agencies take ownership of, and are responsible for their own performance against targets.

In addition to the online tracking of exploration licence applications, DMITRE is currently developing a project to determine the feasibility of implementing online lodgment and tracking of environmental applications (for conducting on-ground mineral exploration activities).

Expected approval time frames for environmental applications, to conduct on-ground mineral exploration activities, are currently specified within DMITRE guidelines MG9 and MG10 (available on the DMITRE website).

Land Access

Draft Recommendation 4.1

> *Drawing on the guiding principles of the Multiple Land Use Framework endorsed by the Standing Council on Energy and Resources, Governments should, when deciding to declare a new national park or conservation reserve in recognition of its environmental and heritage value, use evidence-based analyses of the economic and social costs and benefits of alternative or shared land use, including exploration.*
>
> *Governments should, where they allow for consideration of exploration activity, assess applications by explorers to access a national park or conservation reserve according to the risk and the potential impact of the specific proposed activity on the environmental and heritage values and on other users of that park or reserve.*

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[15] Productivity Commission 2009, "Research Report: Review of Regulatory Burden on the Upstream Petroleum (Oil and Gas) Sector"

DMITRE **supports** this draft recommendation.

DMITRE is highly supportive of the implementation of consistent multiple land use approaches to the management of access to land for mineral and energy resources.

SA has long been a pioneer of multiple land use approaches to land use and land access for the minerals and energy resources sectors, including for land designated for conservation purposes. This started with the proclamation of the Innamincka Regional Reserve in the State's far north, where high value conservation values were protected without precluding access for resource exploration and development (subject to sustainability), which is one example of the success of the State's Regional Reserve System under the *National Parks and Wildlife Act 1972* (SA).

The SA Government undertakes an extensive analysis of the full range of environmental, economic and social issues when establishing new conservation areas. This includes a rigorous consultation framework between DEWNR and DMITRE established by an administrative agreement.

When assessing exploration programs within the protected area network, DEWNR, on behalf of the Minister for Sustainability, Environment and Conservation, has always taken the approach of assessing applications according to the risk and potential impact of the proposed activity. DEWNR does this in close partnership with DMITRE.

Draft Recommendation 4.2

> *State and territory governments should ensure that land holders are informed that reasonable legal costs incurred by them in negotiating a land access agreement are compensable by explorers.*

DMITRE **supports** this draft recommendation.

DMITRE already provides substantial information and support to both landowners and exploration companies in relation to land access rights and responsibilities through a number of mediums including the DMITRE website, printed materials, regionally based information workshops and expert advice on community consultation.

Draft Recommendation 4.3

> *Governments should ensure that the development of coal seam gas exploration regulation is evidence-based and is appropriate to the level of risk. The regulation should draw on the guiding principles of the Multiple Land Use Framework endorsed by the Standing Council on Energy and Resources to weigh the economic, social and environmental costs and benefits for those directly affected as well as for the whole community, and should evolve in step with the evidence.*

DMITRE **supports** this draft recommendation.

DMITRE is highly supportive of the implementation of consistent multiple land use approaches to the management of access to land for all mineral and energy resources. However, DMITRE does not support the development of specific resource based multiple land use approaches.

SA does not have shallow gas resources equivalent to those being exploited in Queensland and NSW. Shallow gas is characterised by low pressure and low deliverability, so the wellheads are relatively closely spaced. In comparison, deep gas (for example, in the Cooper-Eromanga and Otway basins) has a different footprint that does not inevitably create land access conflicts. A consistent approach for land access for all resources should be developed with the flexibility to manage these differences.

DMITRE notes that the *Petroleum and Geothermal Energy Act 2000* (SA) already has a fit-for-purpose approach where the focus is on achievement of objectives and is risk-based.

Heritage Protection

Draft Recommendation 5.1

> *Until concerns with state and territory legislation have been fully addressed, the Commonwealth should retain the Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (ATSIHP Act) and amend it to allow state and territory regimes to be accredited if Commonwealth standards are met. Once all jurisdictional regimes are operating satisfactorily to Commonwealth standards, the Commonwealth should repeal the ATSIHP Act.*

DMITRE **supports** this draft recommendation.

DMITRE supports the recommendation as a means of streamlining legislative requirements around cultural heritage, and to minimise opportunities for "forum shopping" between the State and Commonwealth regimes. Moreover, DMITRE supports the proposal for accreditation of complying state legislative regimes to avoid unnecessary overlap between State and Commonwealth processes.

As regards the proposed repeal of the ATSIHP Act, DMITRE considers this aspect of the recommendation as somewhat speculative and premature. This aspect of the proposal will require detailed consideration by the State and Commonwealth Governments at an appropriate time.

Draft Recommendation 5.2

> *Governments should ensure that their heritage authorities:*
>
> - *require that resource explorers or other parties lodge all heritage surveys with that authority*
> - *maintain registers which map and list all known Indigenous heritage*
> - *adopt measures to ensure that sensitive information collected by a survey is only provided to approved parties (and only as necessary for the purposes of their activities), on the basis of agreed protocols.*

DMITRE **supports** this draft recommendation.

DMITRE supports this on the basis that it suggests an appropriate balance between the protection of indigenous heritage, whilst providing greater certainty and clarity for resource explorers. DMITRE agrees that a regime which maintains a detailed register of all heritage sites and is the central repository for heritage surveys undertaken would significantly assist to provide increased certainty for resource explorers in relation to areas where Aboriginal heritage exists.

DMITRE agrees that appropriate measures are likely to be required to protect sensitive information from release but these would require careful development to ensure an appropriate balance between protection of information and the ability to rely on existing surveys (so as to avoid repeat surveys of the same areas).

Draft Recommendation 5.3

State and territory governments should manage Indigenous heritage on a risk assessment basis.

- *Where there is a low likelihood of heritage significance in a tenement and the exploration activity is low risk, a streamlined 'duty of care' or 'due diligence' process should be adopted.*
- *Where there is a high likelihood of heritage significance and the exploration activity is higher risk, models of agreement making should be adopted rather than a government authorisation system.*
- *When negotiated agreements cannot be reached, governments should make decisions about heritage protection based on clear criteria, transparency and consultation with all parties that have a direct interest.*

DMITRE **supports** this draft recommendation.

The regime in SA currently supports a risk assessment model for the avoidance of damage to indigenous heritage for low risk activities. The existing framework does not currently accommodate agreement making processes for dealing with Aboriginal heritage but provides a government decision-making process to be followed. SA is currently reviewing its aboriginal heritage regime.

DMITRE supports the recommendation for low risk activities to be streamlined and managed in a 'duty of care' or 'due diligence' process, while activities of high risk should be underpinned by models of agreement-making with indigenous groups. This is likely to go some way to significantly reducing costs and delays for explorers in cases of low risk activities, whilst ensuring that higher risk activities are appropriately managed. Moreover, DMITRE agrees that in cases where negotiated agreements are not possible, that appropriate mechanisms will be required to address aboriginal heritage protection and other land use (such as mining) in an appropriate way, including by way of government decision-making processes if necessary.

DMITRE notes that it is unfortunate that consideration of native title is outside the scope of the Productivity Commission terms of reference. As has been noted in the Draft Report, DMITRE agrees that native title and aboriginal heritage matters are inextricably linked and are fundamentally interconnected concepts and processes. To date, State and the Commonwealth indigenous heritage regimes have not been reconciled with the complex native title regime, and in DMITRE's view, this is contributing to: duplication of processes, increased costs and delays in access to land, and confusion as to who are the appropriate Indigenous people who may enter into agreements for native title, and who can speak for country in relation to heritage matters.

Environmental Management

Draft Recommendation 6.1

The Commonwealth should accredit the National Offshore Petroleum Safety and Environmental Management Authority to undertake environmental assessments and approvals under the Environment Protection and Biodiversity Conservation Act for petroleum activities in Commonwealth waters.

DMITRE **supports** this draft recommendation in-principle.

Draft Recommendation 6.2

> *The Commonwealth should improve the efficiency of environmental assessment and approval processes under the Environment Protection and Biodiversity Conservation Act by strengthening bilateral arrangements with the states and territories for assessments and establishing bilateral agreements for the accreditation of approval processes where the state and territory processes meet appropriate standards. The necessary steps to implement this reform should be properly scoped, identified and reviewed by jurisdictions and a timetable for implementation should be agreed.*

DMITRE **supports** this draft recommendation. To this end, the SA Government has had formal discussions regarding this and provided details of the *Mining Act 1971* and *Petroleum and Geothermal Energy Act 2000* assessment and approval processes to the Commonwealth, with the intent of progressing approval bilateral agreements.

Draft Recommendation 6.3

> *State and territory governments should reconsider the option of conferring their existing petroleum-related regulatory powers in state and territory waters seaward of the low tide mark, including islands within those waters, to the National Offshore Petroleum Safety and Environmental Management Authority.*

DMITRE **supports** this draft recommendation in-principle, on the basis that SA would first need to finalise a review of the *Petroleum (Submerged Lands) Act 1982* (SA) and investigate potential impacts on the marine park approval regime. It may be preferable that the State retains the discretion to confer the power to the National Offshore Petroleum Safety and Environmental Management Authority on a case-by-case basis.

Draft Recommendation 6.4

Governments should ensure that their environment-related regulatory requirements relating to exploration:

- *are the minimum necessary to meet their policy objectives*
- *proportionate to the impacts and risks associated with the nature, scale and location of the proposed exploration activity.*

DMITRE **supports** this draft recommendation, however recommends that regulatory requirements should be “fit for purpose to meet their policy objectives”, rather than “the minimum necessary”.

DMITRE has adopted a regulatory approach encompassing outcome based regulation, risk assessment principles, and ‘one stop shop’ to efficiently and effectively achieve policy objectives.

Draft Recommendation 6.5

> *Governments should ensure that their environment-related regulation of exploration activities should be focused towards performance-based environmental outcome measures and away from prescriptive conditions, in order to better manage risk and achieve environmentally sound outcomes.*

DMITRE **supports** this draft recommendation.

A fit for purpose, risk based approach to environment-related regulation of exploration activities is already implemented in SA.

The *Mining Act 1971* (SA) amendments, which came into force on 1 July 2011, require Programs for Environment Protection and Rehabilitation (PEPR) to include outcomes and measurement criteria. PEPRs required for exploration activities were given a three year transitional period to allow DMITRE to implement this change. As of 1 July 2014, all exploration proposals will include outcomes and measurement criteria.

Draft Recommendation 6.6

> *Governments should ensure that when there is scientific uncertainty surrounding the environmental impacts of exploration activities, regulatory settings should evolve with the best-available science (adaptive management) and decisions on environmental approvals should be evidence-based.*

DMITRE **supports** this draft recommendation in-principle, noting that lack of knowledge should not necessarily lead to a ban on exploration activity.

The Environmental Impact Report and Statement of Environmental Objectives processes under the *Petroleum and Geothermal Energy Act 2000* (SA), and the Program for Environmental Protection and Rehabilitation under the *Mining Act 1971* (SA) are evidence-based and allow for adaptive management of impacts of exploration activities.

Draft Recommendation 6.7

> *Governments should clearly set out in a single location on the internet environment-related guidance on the range of approvals that may be required.*

DMITRE **supports** this draft recommendation.

A single location on the DMITRE website is provided for activities conducted under the *Petroleum and Geothermal Energy Act 2000* (SA)[16]. Minerals Regulatory Guidelines MG9 and MG10, both available on the DMITRE Minerals website, provide information on environmental requirements when seeking approval to conduct exploration activities under the *Mining Act 1971* (SA).

Where additional environmental approvals are required for exploration; for example within conservation parks and 'special protected areas' or for water permits or EPA licences; DMITRE closely collaborates with its co-regulatory partners to ensure explorers are informed on any additional requirements to obtain these Ministerial authorisations.

Draft Recommendation 6.8

> *Governments should ensure that their authorities responsible for assessing environmental plans and environmental impact statements (and equivalent documents) should make archived industry data publicly available on the internet.*

DMITRE **supports** this draft recommendation.

Transparency and fairness are fundamental to the efficient and effective operation of exploration licensing systems. This recommendation should not be limited to industry data, but should include all information that was used in a decision making process.

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[16] http://www.petroleum.pir.sa.gov.au/legislation/regulation/approval_process_summary

In SA, transparency of information also extends to all compliance and enforcement actions undertaken by DMITRE under the *Petroleum and Geothermal Energy Act 2000* (SA), which are published through annual compliance reports[17].

The *Mining Act 1971* (SA) provides a process for the release of certain types of information under section 77D.

Geoscience

Draft Recommendation 7.1

> *Governments should monitor the outcomes of the cost recovery funding approach to the provision of pre-competitive geoscience information being adopted by the New South Wales Government, with a view to its possible broader application in those jurisdictions.*

DMITRE **does not support** this draft recommendation.

Although the Commission acknowledges the high regard for pre-competitive geoscience data provision and that it is not a barrier to exploration, DMITRE does not support the recommendation of having a view towards the broader application of the cost recovery funding approach.

The Commission seems to have misunderstood the model currently being used in NSW, which uses royalty and other fees to help fund pre-competitive geoscience initiatives, rather than being a direct cost-recovery model.

It has been well established[18] that selling of pre-competitive data limits its effective uptake and application into greenfields frontiers. It is these regions that require the greatest pre-competitive data assistance for minimising risk for exploration investment.

Please see accompanying additional comments on pre-competitive geoscience data, contained within the third part of this submission.

[17] http://www.petroleum.pir.sa.gov.au/legislation/compliance/petroleum_act_annual_compliance_report

[18] Department of Finance and Deregulation 2011, "Strategic Review of Geoscience Australia" p25, http://www.ga.gov.au/webtemp/image_cache/GA20983.pdf; Hogan, L. 2003, "Public Geological Surveys in Australia" ABARE eReport 03.15

PART THREE: PRE-COMPETITIVE GEOSCIENCE DATA AND EXPLORATION

The major issue that has not received adequate consideration in the report is the importance of pre-competitive geoscience data in supporting mineral and energy resource exploration.

DMITRE holds the position that provision of pre-competitive geoscience data is crucial to underpin a sustainable exploration industry in the State and is a valuable means of maximising the future value of resources that are the property of the Crown in SA.

Pre-competitive geoscience data plays an important role in addressing major challenges for mineral and energy exploration, such as:

- Rate of mineral discoveries is too low and is unsustainable;
- Brownfields exploration exceeds greenfields exploration;
- Australia's share of exploration expenditure has dropped alarmingly in the last decade;
- Geological Surveys increasingly move in "greenfields exploration" space as companies move to higher risk countries;
- Large areas still exist with poorly constrained geological framework;
- "Covered" sequences are the new exploration space – better techniques are needed; and
- The technical risk in the "Exploration – Development – Production" chain by far occurs at the exploration stage.

The Importance and Impact of Pre-Competitive Geoscience Data

SA has a strong track-record of providing major mineral exploration break-through from its provision of pre-competitive geoscience data. A major highlight here was the importance of this type of data for the discovery of Olympic Dam and more recently the PACE initiative which created a surge in exploration, leading to significant discoveries at Carrapateena and Four Mile.

Pre-competitive geoscience data acquisition includes the collection, collation and integration of fundamental geoscientific data by government agencies. These strategic regional geoscientific research programs are aimed at upgrading historic data sets and filling data gaps by acquiring, efficiently and economically, modern geoscientific data at geologic province scale.

Increasing in recent times there has been an added demand for further value-adding to this data with increasing levels of synthesis and interpretation. Priority is given to upgrading datasets over areas considered to be prospective but under-explored. The dearth of exploration activity in some regions is partly related to the reality that the bedrock of vast tracts of the Australian continent is hidden by a thick layer of rock debris. This prevents low-cost conventional exploration techniques being definitive. The benefits of the provision of pre-competitive exploration data include:

- reduced risk associated with greenfields exploration;
- reduced expensive re-acquisition of data;
- catalysed research, remapping and refinement;
- leveraged increased exploration spending;

- expedited discovery of new resources deposits;
- reduced duplication of surveying and hence decreased environmental impacts;
- established sophisticated information systems to provide data delivery to the exploration industry; and, maintained Australia's international competitive edge[19].

Pre-competitive geoscience data programs: assessments and reviews

There is a long history of review and assessment of pre-competitive geoscience data provision in Australia and the world.

A report by ACIL Tasman as part of the Strategic Review of Geoscience Australia, considered the impact of freely available pre-competitive geoscience information. Based on this ACIL Tasman report[20], the Strategic Review of GA concluded that:

- failure by governments to invest means private interests are not likely to invest in exploration to the optimum level;
- where pre-competitive geoscience data was sold (rather than freely available), it appeared that the exploration industry would focus on known prospective areas at the expense of under-explored or frontier areas;
- there have been numerous examples of mineral and petroleum discoveries that have been facilitated through the pre-competitive geoscience of GA, including the Olympic Dam copper-gold-uranium deposit in SA;
- there are a variety of market failures and other reasons that justify and provide an economic case for government involvement in the provision of pre-competitive geoscience information;
- pre-competitive data is a public good which is non-rival and non-excludable to some extent; and that
- pre-competitive data plays a significant role in reducing risk for the resources industry, particularly for private explorers who are better able to determine exploration targets.

ACIL Tasman found that government-produced pre-competitive data generates positive externalities in terms of new deposits providing information about regional prospectivity and comparable geological formations. It was also noted that pre-competitive data also supported the Government in maximising the future value of resources that it owned on behalf of society. This is further supported by an ABARE report[21], which stated that "in 1999-2000 the exploration budgets of public geological surveys in Australia were around $75 million, mineral and petroleum royalty payments that year were $2.4 billion."

Private industry investment in exploration is largely driven by the provision of good quality pre-competitive geoscientific data, for example,

- In a submission to the 2002 Australian Parliament House of Representatives Inquiry into resources exploration impediments, major exploration and mining company Rio Tinto stressed,

[19] Australian Parliament House of Representatives Committee 2002, "Inquiry into resources exploration impediments" http://www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_Committees?url=isr/resexp

[20] Department of Finance and Deregulation 2011, "Strategic Review of Geoscience Australia", pp25-26, http://www.ga.gov.au/webtemp/image_cache/GA20983.pdf

[21] Hogan, L. 2003, "Public Geological Surveys in Australia" ABARE eReport 03.15

"collection and low-cost dissemination of geoscientific data by government agencies is critical for exploration success".

- The CEO of the Association of Mining and Exploration Companies, Simon Bennison, stated "it is vital State and Federal Governments continue to implement strategies that ensure there is a sufficient level of greenfields mineral exploration expenditure to find the mines of tomorrow"[22].

Pre-competitive Geoscience Data Initiative: Example of impacts

An example of a beneficial collaboration on pre-competitive geoscience data is the recent Frome AEM survey collaboration between DMITRE and Geoscience Australia. The SA State Government was the first to co-fund a regional AEM survey, and DMITRE contributed a cash investment of $278,000 to the Frome AEM survey. The SA State Government was also the first to collaborate on interpretation and prospectivity analysis of regional AEM data. The benefits realised from this collaboration included:

- DMITRE successfully trialed high-quality AEM test lines over the Pandurra Formation. The same AEM system used for the Frome AEM Survey was used to fly lines over the Pandurra Formation during a long transit flight between Parafield and Leigh Creek to test whether the Pandurra Formation was able to be mapped using AEM. This was a great success.
- Companies took up tenements based on AEM data and U-prospectivity recommendations (e.g. GB Energy, Renaissance Uranium, Euro Exploration).
- Companies used AEM data to define conductors related to Cu mineralisation - Lyndhurst (Renaissance Uranium) and Portia area (MMG – Havilah).
- AEM data was used to guide further exploration near Marree (Renaissance Uranium).
- Companies used AEM data to guide exploration and drilling for palaeochannel U (Energia Minerals, Toro Energy).
- AEM was used to map palaeochannels near Honeymoon (Core Exploration).
- Companies purchased infill to AEM data (Callabonna Uranium, Uranium One, Mega Uranium).
- Company conducted own TEMPEST AEM surveys west Lake Frome (Cauldron Energy).
- Company used AEM data to reduce own risk by reviewing tenement holdings (Cauldron Energy).
- AEM data was used to construct 3D models of depth to basement in the Murray-Darling Basin, Benagerie Ridge, Honeymoon uranium mine area and the Blanchewater area, used to model mineral systems and prospectivity analysis for uranium, gold, lead-zinc-silver.
- Geological Survey of SA (through PACE 2020) acquired further airborne geophysical data (including magnetics and radiometrics) over Marree 1:250k sheet area to add to AEM survey data.

[22] Association of Mining and Exploration Companies 2012, "Industry welcomes funding towards national geoscience data", AMEC media release 14 November 2012, http://www.amec.org.au/news/media-releases/industry-welcomes-funding-towards-national-geoscience-data

In terms of the wider influence of these collaborative surveys:

- The WA Government has announced that it will fly a 5 km line spacing AEM survey (in collaboration with CSIRO and the UWA-Curtin Centre for Exploration Targeting) over the Capricorn Orogen. The success of regional AEM surveys has directly influenced Geological Survey WA to undertake regional AEM surveying to promote mineral exploration and reduce exploration risk.
- The WA Department of Water will fly similar regional AEM surveys.

DMITRE CONTACT DETAILS

General queries relating to mineral and energy exploration in SA can be directed to the Department for Manufacturing, Innovation, Trade, Resources and Energy (DMITRE).

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