

Red Bluff



HON PAUL HOLLOWAY MLC

Minister for Agriculture, Food and Fisheries • Minister for Mineral Resources Development

MI 00/0188

Date: 20 AUG 2002

Clerk Assistant (Committees)
House of Representatives
Parliament House
CANBERRA ACT 2600

HOUSE OF REPRESENTATIVES
STANDING COMMITTEE ON INDUSTRY,
SCIENCE AND RESOURCES

21 AUG 2002

RECEIVED

House of Representatives Standing Committee
on Industry and Resources

Submission No: 70
Date Received: 21 AUGUST 2002
Secretary: J. Fox

Dear Sir

Re: INQUIRY INTO TO RESOURCES EXPLORATION IMPEDIMENTS

The South Australian Government welcomes this timely Federal review at a point in history when the Resources Industry is undertaking rapid change. The Australian Resources Industry is characterised by a few large companies, a diminishing middle ground and an increasing number of junior companies. Larger companies have largely left the exploration industry particularly in so-called greenfields exploration and junior companies are being called upon to take the running and make the new discoveries.

Increasingly, exploration entry costs are being driven by social and environmental obligations leading to increased up front expense and delays. In addition, smaller more speculative companies often encounter difficulty in raising capital.

Government mines and energy departments will increasingly be called upon to help overcome some of the risks associated with exploration if Australia is to maintain its competitive position in the resources industry. Most States and Territories together with Geoscience Australia are playing a role in providing low cost or free pre-competitive data to Industry to mitigate some of that risk.

There is significant capacity for the minerals and energy resources industry to generate wealth for all Australians. It is an area of deep expertise in Australia and a point of strategic differentiation from other countries. Because of Australia's unique geology and the largely remote location of prospective ground, this wealth generation can target regional Australia and those Aboriginal communities who choose to participate in exploration and resource development activities on their lands.

The Resources Industry underpins the Australian economy now and will do so well into the future. This industry has always been exposed to international competition so that increasing globalisation poses no significant threat to this sector.

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This timely review reflects a willingness of Governments to address the change that the industry faces. It should help to ensure that investment for exploration for resources continues in a way that is sustainable for the communities it impacts and the shareholders who are willing to engage in the risk inherent in mineral, oil and gas exploration.

I have enclosed the South Australian Governments' submission for the Committee's consideration. The State is prepared to provide further input by way of attendance at an inquiry hearing if this is considered appropriate and you should contact my office in the first instance to make the necessary arrangements.

Yours sincerely

A handwritten signature in black ink, reading "Paul Holloway". The signature is written in a cursive style with a large, sweeping initial "P".

Paul Holloway
Minister for Agriculture, Food and Fisheries
Minister for Mineral Resources Development

ATTACHMENT 2

IMPEDIMENTS TO RESOURCE
EXPLORATION IN SA

**SUBMISSION TO THE COMMONWEALTH
INQUIRY INTO RESOURCES
EXPLORATION IMPEDIMENTS**

**THE GOVERNMENT OF SOUTH
AUSTRALIA**

31 JULY 2002

IMPEDIMENTS TO RESOURCE EXPLORATION IN SA

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EXECUTIVE SUMMARY

Access to land for mineral and petroleum exploration remains the most significant exploration impediment in South Australia. A summary of the impact of this and other impediments and State Government action follows:

Access to land including Native Title and Cultural Heritage issues

- The landmark CO98 Native Title agreement between petroleum exploration licence applicants, native title applicants and the SA Government is a major breakthrough and should serve as a model elsewhere in SA and Australia. A copy is attached (see Appendix 3).
- South Australia's Part 9B clause of the Mining Act has significantly differentiated SA as a preferred mineral exploration investment destination.
- Indigenous Land Use Agreements (ILUAs) are close to providing a template for speeding up access to ground for low impact exploration in a way that gives confidence to traditional owners.
- For these ILUAs the limited availability of Commonwealth funds to the ALRM (the Aboriginal representative body) through ATSIC, is seriously compromising the rate of negotiation.
- As a result, the slowness of resolution of Native Title issues is currently delaying almost 50 applications for Petroleum Exploration Licences in South Australia.
- Traditional owners have expressed good will towards exploration on Aboriginal lands in South Australia but access negotiations can be lengthy, delaying or dissuading exploration investment.

Relationships with indigenous communities

- Working in partnership with indigenous communities will underpin the resources industry in Australia.
- The leaders of indigenous communities have been willing to discuss mining opportunities for some time. Consultation and communication are paramount.
- The future development of mining policies on Pitjantjatjara Lands should be viewed closely.
- Identifying traditional people and communities who speak for regions of interest is fundamental.

Environmental and other approval processes, including across jurisdictions

- The SA Government supports the application of multiple and sequential land use principles within a suite of land-use categories. This ensures the protection of environmentally sensitive areas whilst allowing exploration and mining with appropriate procedures and safeguards except for unique or iconic sites and sites with species or ecosystems particularly sensitive to disturbance.
- The SA Government is currently monitoring impacts of the Commonwealth Environment Protection and Biodiversity Conservation Act on industry; particularly costs associated the preparation of referrals and any delays to project schedules.
- The SA Government has interacted with Victorian and Commonwealth authorities recently in progressing two proposals to construct pipelines from gas fields in Victoria to Adelaide. No significant cross-jurisdictional issues have arisen during this process.

- South Australia has a leading edge petroleum regulatory framework that aims to improve the confidence of all stakeholders in the ability of the petroleum industry to conduct their activities in an ecologically sustainable manner.
- The Woomera Prohibited Area (WPA) represents 13% of the total area of South Australia and covers the northern half of the mineral rich Gawler Craton and overlaps part of the Officer Basin that has potential for petroleum resources. Access to the WPA, and all activities within the area are strictly controlled by the Defence Forces. The restrictions imposed by the Department of Defence on mineral explorers and developers are having a serious effect on the bankability of any development projects in the region.

Tenement Management

- Future tenement management will require smaller tenement holdings to ensure ground turnover and vigorous exploration.
- South Australia provides 'one window into government' for petroleum and mineral explorers and facilitates the necessary approvals and consultations.

The structure of the industry and role of small companies in resource exploration in Australia

- Modern community requirements impose increased costs and resultant barriers to the entry of smaller companies because the perceived risk of negative impacts of their activities is greater. There is an expectation those explorers will have the resources available to manage risks to the environment appropriately and to cover the costs of remedial actions if required. A key role of the State Government is to manage these community expectations through the regulatory framework.
- Mining companies are consolidating to a few large companies and an increasing number of under-funded junior companies.
- Some have successfully engaged in alliances, a feature that will become more common in the future.
- The major mining companies have largely withdrawn from funding grass roots exploration and are now heavily biased towards brownfields exploration.
- There is now an opportunity to develop the next generation of new Australian mining houses. If the challenge is not met then there will be a major risk for Australia's prospects for future growth.

Public provision of geoscientific data

- This submission endorses the continuation of low cost "pre-competitive data" to underpin exploration success in Australia. Pre-competitive data is considered another point of strategic differentiation from competitor countries.
- The Internet and CD-ROM technology have enabled easy, low cost (or free) provision of large digital datasets.
- Extensive and thorough digital capture of key paper data has produced new and superior digital products.
- SA has funded an extensive and aggressive program of pre-competitive regional basic data acquisition (aeromagnetic surveys, drilling and mapping programs etc.) through exploration initiatives since 1992.
- Competition between Australian State governments, and IT advances, have driven exploration data costs downwards. In many cases such data are now free.
- Evidence is that precompetitive exploration data directly stimulates exploration investment by a factor of 3-5 times the cost of providing such data.

An assessment of Australia's resource endowment and the rates at which it is being drawn down

- Australia hosts a number of world-class resources and present indications are that more will be found.
- Even world-class resources are finite particularly with the huge production expected of modern mines, oil and gas fields, therefore the need for sustained and persistent exploration to replenish reserves is self-evident.
- State and Federal governments should actively support collaborative exploration initiatives that focus on key terrains and dissolve arbitrary state boundaries.

Impediments to accessing capital, particularly by small companies

- Evidence is accumulating that junior companies are experiencing difficulties in raising capital for exploration activities. Access to capital could be assisted by the application of a flow through share scheme and it is this submission's recommendation that such a scheme should be implemented.

Contribution to regional development

- Resources development provided the initial start up for many regional Australian cities and towns. It has the capacity to generate wealth again in regional centres and decrease the burden on the public purse.
- In South Australia there is the distinct possibility of developing mining clusters and resource projects that match energy with metals to form higher value products.

RECOMMENDATIONS

The following recommendations for definitive action by the Commonwealth are based on the above points.

- Change provisions of the Commonwealth *Native Title Act 1993* to allow an equivalent to the Part 9B clause of the South Australian *Mining Act 1971* for the *Petroleum Act 2000*.
- Provide adequate funding to Aboriginal communities, ATSIC and the Aboriginal Legal Rights Movement to facilitate resolution of Native Title issues for the exploration industry.
- Improve access to Commonwealth land and infrastructure sites, especially the Woomera Prohibited Area, to reduce exploration costs in this large area.
- Change Australia's tax regime to allow application of a flow through share scheme to facilitate raising capital for resource exploration in Australia.
- Commit more Commonwealth funds into pre-competitive continental geoscience programs to stimulate exploration investment (e.g. funding a national close-spaced gravity program).

THE OFFICE OF MINERALS AND ENERGY RESOURCES

This Office (referred to as MER herein), within the Department of Primary Industries and Resources (PIRSA) manages the State's mineral and petroleum resources on behalf of the people of South Australia. It is the lead agency facilitating ecologically sustainable mineral and petroleum exploration and development in the State. Its operations cover the promotion of South Australia as an investment destination through the provision of pre-competitive geoscientific data and information, the regulation of the resources industry through policy and legislation, and the optimisation of royalty income streams to the State.

In 2000, following a comprehensive review the South Australian Government received and responded to a report by the South Australian Resources Industry Task Force that addressed most of the topics targeted by this review (see Appendix 2). Elements of this response have been incorporated herein. In addition a copy of Minerals and Petroleum in SA 2002 has been included as Appendix 4 to provide a snapshot of the petroleum and mineral exploration and production industry in South Australia.

MER was nominated as the lead agency to coordinate the SA Government response to this inquiry, and liaised with the following agencies for contributions:

- Office of Economic Development
- Department of State Aboriginal Affairs
- Department of Environment and Heritage
- Attorney General's Department
- Department of Water, Land, Biodiversity and Conservation

Contributions from Department of Environment and Heritage, Attorney General's Department and Department of Water, Land, Biodiversity and Conservation were received and have been incorporated into this submission.

For more information please contact:

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INVESTMENT DRIVERS/IMPEDIMENTS

MER has identified and investigated a number of key investment drivers and has shaped key policies around them. In order to achieve MER's key roles, the investment drivers listed below need to be positive. If these are negative, they become major impediments for attracting exploration investment.

Impediments/drivers are listed below for your information, in order of MER's ability to influence them with high ability at the top and low ability at the bottom – most of these drivers correspond broadly to the Terms of Reference of this Inquiry:

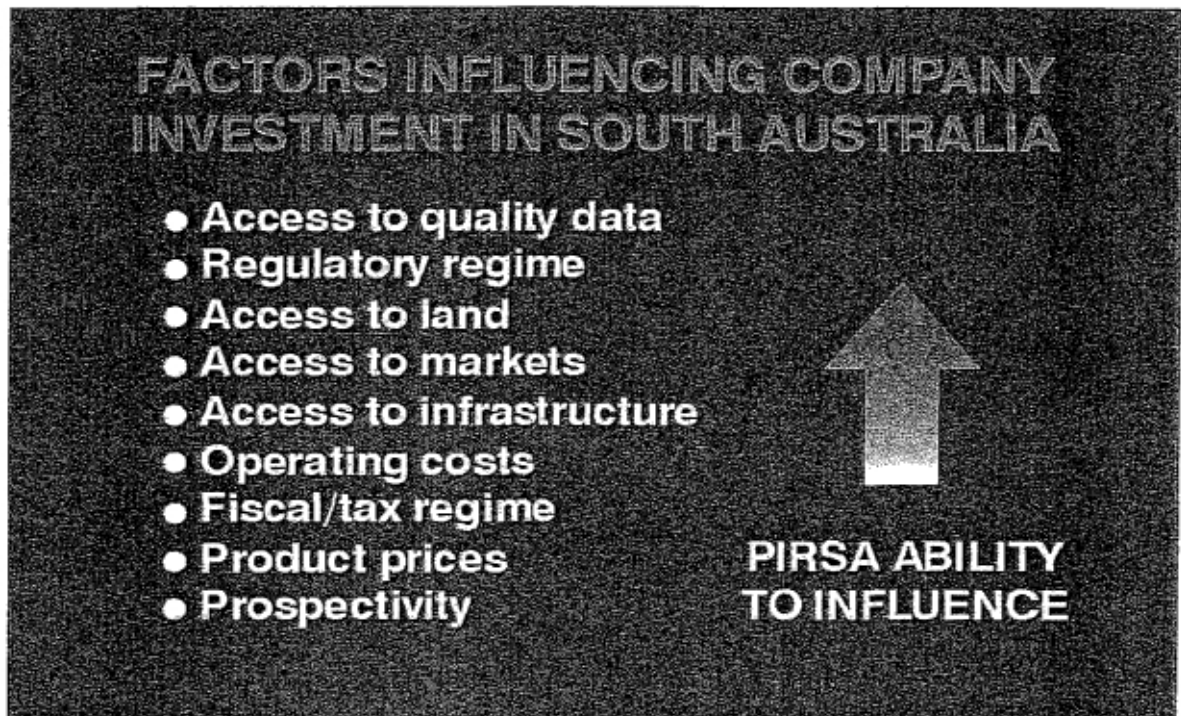


FIGURE 1. Factors influencing company investment in South Australia.

1. Access to land including Native Title and Cultural Heritage issues, relationships with indigenous communities

Native Title – Right to Negotiate process

South Australia has put a lot of effort into facilitating access to land for resources exploration and production in a manner that respects and protects indigenous interests and builds strong relationships between the resources sector and traditional owners.

The Commonwealth *Native Title Act 1993* ('NTA') introduced a regime that provides registered native title claimants or holders with a 'right to negotiate' ('RTN') in relation to mining or petroleum exploration and production within the area of their claim. Current Native Title claims are shown on Figure 2.

In most cases where the Government proposes to grant a 'right to mine' over an area where there are or could be native title rights and interests, the RTN process must be complied with before the grant can be validly made (this is also the case for some re-grants and renewals of such rights).

The RTN process is a legislative process by which a miner can reach an agreement or get a court determination allowing proposed mining to proceed. In some instances, mining may not be permitted at all. The process involves notifying existing or potential native title holders of a proposal and then negotiating with all native title holders and/or claimants who are or become registered within 4 months of the notice being given. Negotiation must be done in good faith to reach an agreement about the proposed mining.

If negotiations have occurred 'in good faith' and no agreement has been reached 6 months after the notice was given, the National Native Title Tribunal (NNTT) can be asked to determine whether or not the project can occur and on what conditions.

These provisions have the potential to impact on resources exploration and production.

In light of the RTN under the Commonwealth Act, South Australia has implemented a two-fold strategy:

- State legislation
- Negotiation of Indigenous Land Use Agreements ('ILUA')

Legislation

Minerals and Opals

South Australia was the first State to establish an alternative 'right to negotiate' regime pursuant to section 43 of the Commonwealth *Native Title Act 1993* (NTA). It has alternative regimes in Part 9B of the *Mining Act 1971* and Part 7 of the *Opal Mining Act 1996*.

These schemes have been authorised and operating effectively as alternative regimes to that under the NTA since June 1996. Over 1000 tenements have been granted under the State scheme. Most of these relate to exploration. The long delays that afflict the RTN under the Commonwealth regime have been avoided under the State system. A number of agreements have been reached between mining proponents and native title claimants.

(There is not yet a similar regime for petroleum under the South Australian Petroleum Act 2000, so the NTA provisions apply to petroleum exploration and production.)

The State's RTN schemes in the Mining and Opal Mining Acts differ in a number of respects from the RTN scheme in the NTA, including:

- The ability to issue exploration authorities subject to native title;
- The non-involvement of the Government in the negotiating process;
- The opportunity for organisations to reach umbrella authorisations on behalf of their members for opal mining;
- The Ministerial discretion to revoke tenements where miners do not attempt to resolve native title issues in a timely way; and
- The ability of the Director of Mining to seek a compliance order from the Court where a miner has not obtained or has exceeded the necessary permission.

Even though the State-based RTN schemes offer a little more flexibility than the Commonwealth RTN, the State-based schemes are significantly constrained by section 43 of the NTA.

The State has been unable to enact amendments to its RTN schemes to reflect the 1998 amendments to the NTA due to the Commonwealth taking a different view of section 43 and what it means in terms of "alternative" State schemes. This is an issue that is still being pursued with the Commonwealth.

SA currently has no backlog of granting mineral Exploration Licences under the Mining Act principally because of the provisions of part 9B. A total of 34 Mining Native Title Agreements have been registered to date.

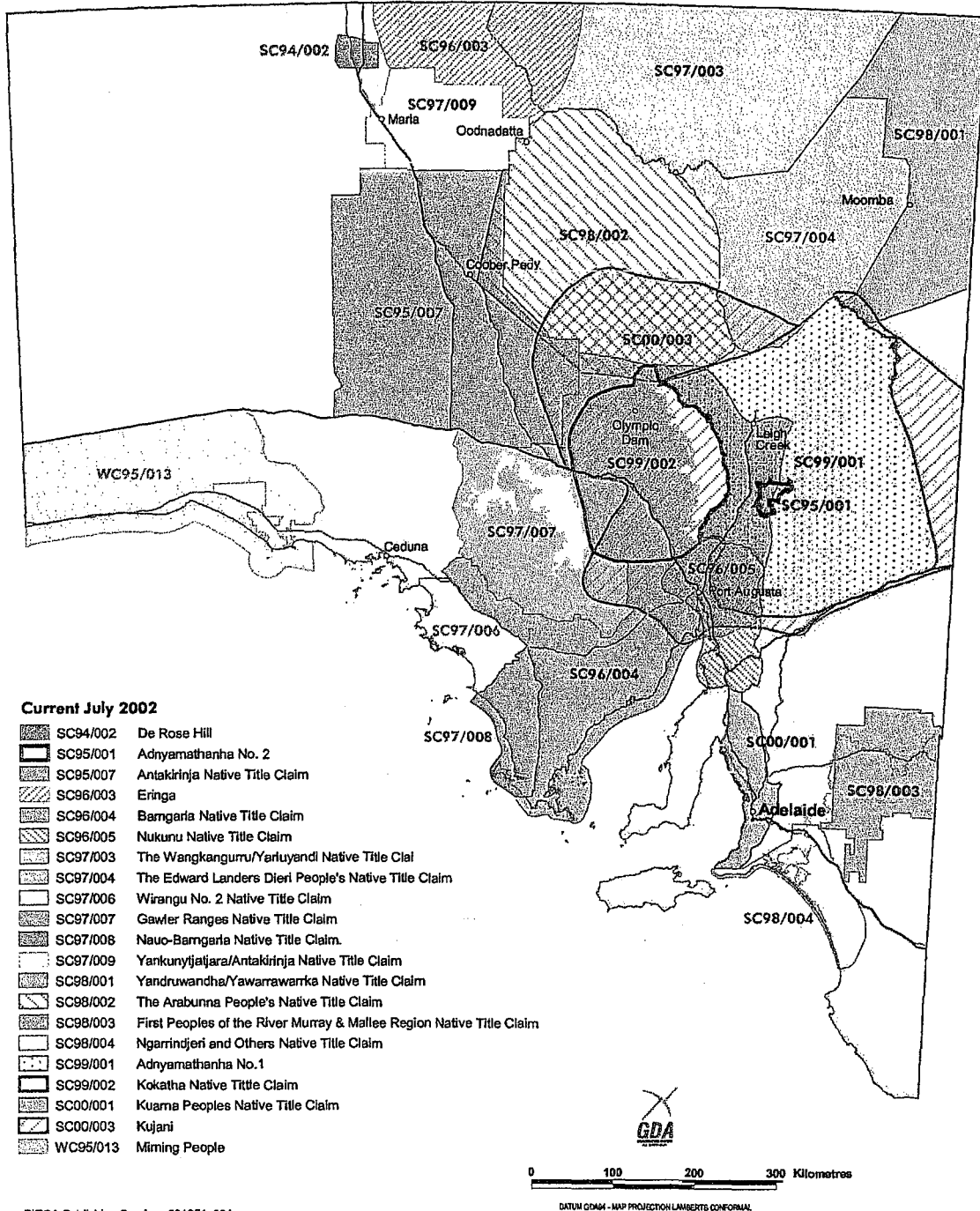
Petroleum exploration and production

The situation in relation to petroleum exploration and production is different to that for minerals. As mentioned above, no State right to negotiate process has been enacted for petroleum at this stage. In so far as there is an impact on native title, the issuing of petroleum tenements in this State continues to be governed by the federal right to negotiate procedure. In response to industry concerns, a safety net clause was included into the Petroleum Act 2000, which gives a licensee first right to any licence that may be terminated due to no fault of the licensee.

FIGURE 2



REGISTERED NATIVE TITLE CLAIMANT APPLICATIONS - SOUTH AUSTRALIA



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The number of licences and licence applications is at all time high in SA. Currently there are 55 applications for PELs, and 15 granted PELs in SA. Fig. 2 shows the trend over the last 15 years. Since Federal Parliament passed the NTA, the number of licence applications pending resolution of native title issues has steadily increased while the number of current licences has remained relatively static (Fig. 2).

Currently 48 Petroleum Exploration Licence Applications are waiting for resolution of native title issues. The inability to grant licences has significantly delayed petroleum exploration investment in South Australia.

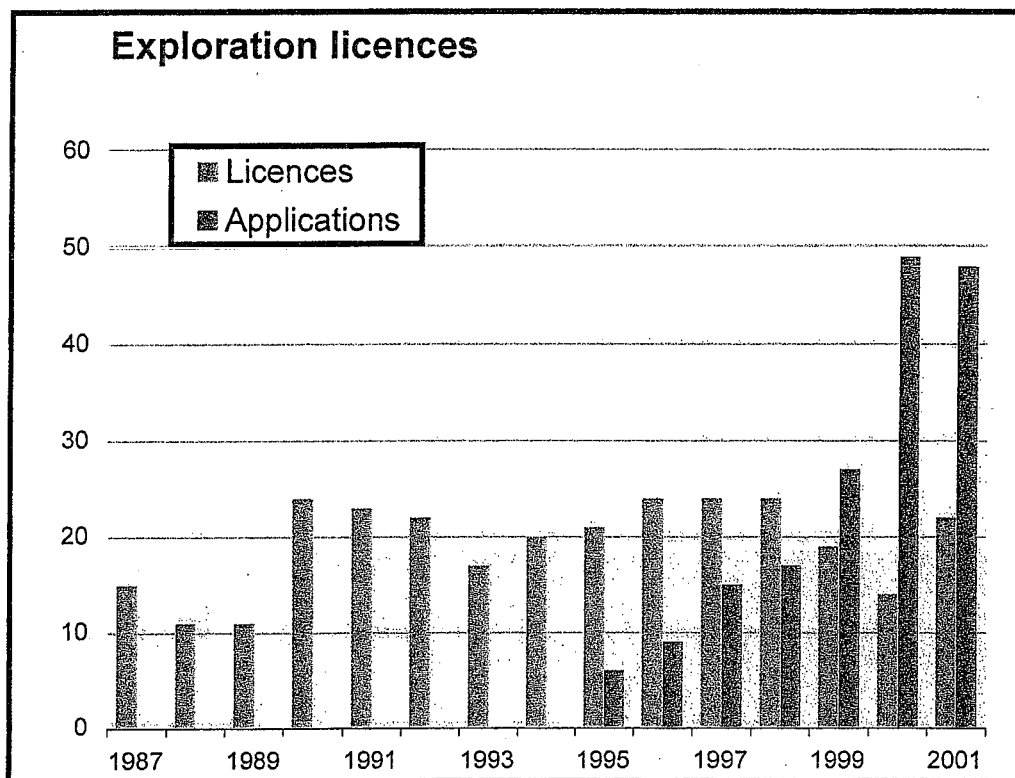


FIGURE 3. *Petroleum exploration licences and applications, South Australia.*

The petroleum productive Cooper Basin has been a priority for the establishing agreements pursuant to the right to negotiate process pursuant to the NTA. Now that the CO98 agreement exists, other pending applications for petroleum licenses are to be progressed.

The historic CO98 native title agreement was signed in Adelaide in October 2001 and allows \$45 million worth of new petroleum exploration investment over eleven new Petroleum Exploration Licences in the Cooper Basin (originally offered as the CO98 acreage release blocks in October 1998). This agreement is an Australian first and will logically form precedents for future native title negotiations, not only in the Cooper Basin, and South Australia, but also throughout the country. These cover not only the exploration phase, but also provide for development of any discoveries should exploration be successful.

The South Australian Government invested significant resources in facilitating this agreement over a three-year period and is keen to see it used as a template for future negotiations in SA and elsewhere. A copy of this historic agreement, extracted from a petroleum exploration licence document from the on-line SA Petroleum Tenement Register is attached as an Appendix.

Negotiation of Indigenous Land Use Agreements

The RTN provisions of the NTA and the alternative State regime in respect of mining activities can be expressly replaced by the terms of an Indigenous Land Use Agreement ('ILUA') reached under the NTA at any time.

For the last couple of years the State has focussed significant energy and resources on exploring the potential benefits of using agreed processes under an ILUA to replace the RTN provisions that would otherwise apply to resource exploration and production.

An ILUA is the catch-all solution in the NTA for negotiated outcomes. Essentially, an ILUA is a contract or agreement between people claiming to hold native title and other people or organisations, about how native title issues can be dealt with in relation to land. ILUAs are binding on the immediate parties to the agreement and also all native title holders whether or not they are a party to the agreement.

While ILUAs are a very flexible mechanism for resolving native title issues, a stable ILUA takes some time to negotiate. To obtain an ILUA which will withstand the registration and objection process, the negotiations must be very inclusive and generally acceptable - this means resources invested in identifying the right native title interests, and additional time and money invested in the negotiating phase.

The amount of time these processes take is problematic for the resources industry, particularly in the case of exploration. It is also a burden on indigenous communities to have to negotiate with each individual explorer or miner that wants access to their claim area. In highly prospective areas, this can mean dealing with numerous applications per year.

To try and reduce the burden on native title parties and to expedite matters for the resources industry, South Australia has embarked on a process of negotiation with key stakeholders that is known as the State-wide Indigenous Land Use Agreement initiative. A full explanation of what is involved in this initiative can be found on the South Australian Native Title Negotiations website at www.iluasa.com.

The Statewide ILUA negotiations are being held between:

- The South Australian Government;
- The Aboriginal Legal Rights Movement (ALRM), which is the recognised representative body under the NTA for native title claimants in South Australia;
- The South Australian Chamber of Mines and Energy (SACOME), which represents the interests of the mining and petroleum industries;
- The South Australian Farmers Federation (SAFF), which represents the interests of pastoralists and farmers.

A key aspect of the negotiations is a minerals exploration template. As proposed, this would be a generic agreement for exploration that any explorer could utilize, as native title parties would have agreed "up-front" to its basic terms.

The generic agreement would give Aboriginal native title claimants practical recognition of native title rights, so they can achieve benefits and carry out their cultural and heritage obligations relating to land. It would offer explorers quick, affordable, certain and predictable access to land for exploration purposes and, importantly, it would enable the South Australian Government to provide a stable and predictable climate for economic development and to strike a fair and reasonable balance between the rights and obligations of all groups.

The minerals exploration ILUA comprises three main parts.

The first of these is the Framework ILUA which provides the required statutory consent to the doing of future acts constituted by the grant of exploration licences, that the right to negotiate procedure under Part 9B of the South Australian Mining Act does not apply and sets out that an individual explorer can agree to become bound to

standard exploration contract conditions (annexed to the framework ILUA) by signing an acceptance deed and notifying the relevant native title parties. On this being done a contract comes into force between the explorer and the native title parties.

The framework ILUA also contains provisions in relation to Aboriginal heritage protection. It enables native title parties to request the State at any time to undertake a cultural heritage survey of all or part of the claim area. The survey can extend to all or only some exploration activities as specified by the native title parties in their notice. Any "mapping survey", if requested, thus proactively clears land for future exploration activities. An individual explorer can access the survey and apply for an authorisation to carry out specified exploration activities without a further, individual survey being required.

The second part of the minerals exploration ILUA is the standard exploration contract conditions that set out the terms on which exploration may be carried out in the relevant claim area.

Finally, the package includes an acceptance deed under which an individual explorer agrees to be bound by the standard exploration contract conditions.

This template is being considered in a "pilot" ILUA negotiation with the Antikarinja claim group, centered around Cooper Pedy.

In addition, in parallel with these negotiations, the ILUA initiative has also included developing a set of suggestions for changes to the State's Aboriginal heritage protection scheme to more closely involve custodians of Aboriginal sites and objects and to improve access to land for miners and explorers to carry out activities in the confidence that Aboriginal sites, objects and remains will not be damaged or interfered with. These proposals for change are discussed in more detail under the heading "Aboriginal Heritage" below.

If successful, the Statewide ILUA initiative will significantly expedite minerals exploration in the State, whilst protecting Aboriginal heritage and giving native title claimants full protection and a number of benefits.

From the outset, the State has borne its own cost of the process. The South Australian Chambers of Mines & Energy and the South Australian Farmers Federation have received financial assistance from a fund established from the NTA and administered by the Commonwealth Attorney-General.

Under the NTA, specific provision is made for the funding of representative bodies such as the ALRM through ATSIC. To date, ATSIC has provided only minor funding to the ALRM for the State-wide negotiations because of lack of overall funds from the Commonwealth Government and what it considers more pressing priorities. As a result, the State has reimbursed the ALRM for the cost of almost all of its activities in the negotiations, including the considerable cost of convening meetings of the Congress of Native Title Management Committees and of individual native title claim groups on specific issues.

This situation is far from ideal. The preferred position is that ALRM and the Congress should obtain funding through the intended source, namely ATSIC. The State is continuing its efforts to convince ATSIC of the value of the ILUA approach

over a litigious approach and of the high priority that should be allocated to this initiative.

Aboriginal Heritage

The *Aboriginal Heritage Act 1988* enables the SA Minister for Aboriginal Affairs to delegate responsibility to Aboriginal people and communities for their cultural and archaeological sites. The legislation and associated processes encourage companies to liaise with Aboriginal people to assist with the protection of Aboriginal heritage in South Australia. The State Aboriginal Heritage Act operates largely independently of native title rights.

MER is funding the collection and establishment of databases that detail Aboriginal heritage matters. Maps and information are designed to assist industry in quickly identifying areas, contacting people and communities where negotiations are required.

A review of the mechanisms currently in place to protect Aboriginal Heritage in South Australia has commenced. Known as "A Proposal to change South Australia's Aboriginal Heritage Scheme", this review is being undertaken by the ALRM, SACOME, SAFF and the SA Government through the ILUA Negotiation Team.

The need for this review arose in response to concerns held over a long period of time by the organisations above. Primarily these concerns are;

- Current State heritage scheme perceived not to provide sufficient information about aboriginal heritage sites and concerns. Current practice is that mineral exploration companies apply to the Aboriginal Heritage Sites Register for information about the location of sites on their tenements, however they are then advised that the Register may be incomplete and are provided with a list of contacts for more information. This immediately introduces uncertainty and delay for proponents. The current scheme does not identify appropriate custodians, can not provide a timely, efficient and cost effective procedure for allowing exploration to be undertaken whilst protecting heritage and does not provide certainty that various State laws will not be broken despite the companies acting on advice and operating in good faith.
- Local Heritage Committees. Local heritage committees currently offer to provide "clearances" to miners and developers, however these clearances are not provided for under the current Aboriginal Heritage Act, and do not clearly protect miners and developers from breaching the Act.
- Overlap of Native Title issues with protection of Aboriginal Heritage. As the ILUA negotiations progressed, it became apparent that there is confusion and often disputes over the identification of, and responsibility for, aboriginal heritage (primarily sites and objects). There is concern by all stakeholders as to which legislation over-rides the other, and how to reconcile the apparent differences in objectives of the State Heritage legislation versus the Commonwealth Native Title legislation.
- Aboriginal people are concerned that the current scheme does not address or understand their culture and traditions nor provide them with culturally appropriate and sufficient control over management of sites and issues.

The South Australian Government is considering the creation of a new independent Statutory Authority, similar to the arrangements in place in the Northern Territory. This proposed Authority will consult at a local level with custodians, traditional owners and native title-holders to meet agreed objectives. It will be able to issue Certificates authorising exploration or development where necessary and be able to set conditions on the operations. It is envisaged that fees and costs associated with consultation and clearances will be considered and possibly standardised. The Authority would be independent, with its own staff, managed by an Aboriginal-controlled Board with State wide representation and would manage any Registers and Site Protection Plans.

The creation of such an independent agency overseeing aboriginal heritage and native title issues and administration was a key recommendation of the Resources Task Force 1999 for improving access to land for mineral exploration in South Australia.

Extensive consultation on "A Proposal to change South Australia's Heritage Scheme" Discussion Paper is currently in progress.

Aboriginal lands

The Government of South Australia has a long, proud history of seeking to resolve issues relating to Indigenous people through discussion and negotiation, rather than confrontation and litigation.

Adopting this approach, South Australia was the first jurisdiction in Australia to implement land rights legislation (the Aboriginal Lands Trust Act in 1966). In addition, in the early 1980s, before the existence of native title was recognised legally, the Government reached agreement with Indigenous groups for the transfer to them of inalienable freehold title over the Anangu Pitjantjatjara and Maralinga Tjarutja lands in the west and north of South Australia. These lands cover 264,154 km² or 27% of South Australia and form the most significant areas of Aboriginal lands in the State.

Following the recommendations of the Pitjantjatjara Land Rights Working Party, the *Pitjantjatjara Land Rights Act* was passed in 1981, under which a corporate body, Anangu Pitjantjatjara, holds the land in fee simple; the land cannot be sold, compulsorily acquired, resumed or forfeited, nor is land tax payable.

All non-Pitjantjatjara people, except police, must apply for permission to enter the land. Exploration companies must first seek approval of the Minister for Mineral Resources Development. The *Pitjantjatjara Land Rights Act* requires Anangu Pitjantjatjara "to ascertain the wishes and opinions of traditional owners in relation to the use and control of the lands", a procedure requiring comprehensive consultative processes. The traditional owners have the right to seek compensation for disturbance to their ways of life that may result from the grant of the licence.

Having obtained the permission of the Minister, a petroleum or mineral exploration company may submit their application to the Executive Board of Anangu Pitjantjatjara, which then has 120 days from the date of application to grant unconditional permission, permission subject to conditions or to refuse the application. If agreement cannot be reached on conditions compensation, an appeal may be lodged with the Minister, who will appoint an arbitrator (having first considered representations from Anangu Pitjantjatjara). Royalties from minerals or petroleum are to be paid into a fund maintained by the Minister for Mineral Resources Development. These funds are to be divided evenly amongst Anangu Pitjantjatjara,

the Minister for Aboriginal Affairs for the benefit of South Australian Aboriginal people, and to State Revenue (subject to prescribed limits).

While at first reading these conditions seem onerous, in reality a partnership is developing between the mineral explorers who have followed this process and the traditional Anangu Pitjantjatjara. Nine Exploration Licences have been successfully passed through this process with full consultation at all stages. Anangu have determined their own future on the Pitjantjatjara Lands and are now exploring ways to speed up access procedures with MER to facilitate more licences being granted. For its part MER have funded the appointment of an Anangu Mining Liaison officer who reports directly to the AP executive to assist in communicating with Traditional owners. MER has also funded the establishment of a Heritage database to be used in site clearance work. Considerable funds have also been spent in flying the entire AP lands for aeromagnetic and radiometric surveys.

2. Relationships with indigenous communities

Discussion and negotiation have been the approach used by the Government of South Australia to resolve issues relating to indigenous people over many years. Likewise, a successful future for on-shore resource development in Australia will be underwritten by successful partnerships between industry and indigenous communities who speak for the country or those who would be affected by it. Statements by aboriginal leaders have been consistent. They request consultation, communication, a share in the wealth that resource exploitation can bring and employment for future generations and above all else, respect for the country for which they are custodians.

The 25th Annual Report of the Aboriginal Lands Trust for the year ending 30 June 1991 stated that, *'The Trust wishes to make it clear that it is not opposed in principle to mining on Aboriginal land, as long-term benefits to the Aboriginal people in the form of royalties and employment and training opportunities arising out of successful mining operations are apparent'*.

Archie Barton, Administrator for Maralinga Tjarutja, in speaking about his organisation's policy in December 1990, at the South Australian Department of Mines and Energy seminar, South Australia — Exploration Towards 2000, stated *'Our office door is always open to those who are prepared to meet and visit the community to discuss these things (i.e. exploration)'*. At the same seminar, Richard Bradshaw, a lawyer for Anangu Pitjantjatjara, stated that *'Anangu Pitjantjatjara's policy regarding petroleum exploration remains unchanged since 1984-85. In general terms, petroleum exploration appears to be more readily accommodated by the cultural and other restraints applying than exploration for other minerals'*.

3. Environmental and other approval processes, including across jurisdictions

National Parks and Reserves

The total area of protected land (i.e. land proclaimed or reserved for conservation purposes) onshore South Australia is 21,348,417 ha, nearly 21.6% of the State. Approximately 78% of the area of onshore, protected lands allows access for mineral and petroleum exploration and development. Approximately 4.8% of South Australia is contained in protected areas not allowing mining or petroleum rights.

Protected areas also occur offshore (e.g. the Great Australian Bight Marine Park) and are administered under the *National Parks and Wildlife Act 1972* and *Fisheries Act 1982*. Basically, the legislation is designed for conservation purposes, but there are provisions for joint proclamations and regional reserves both of which allow access for mineral and petroleum exploration and development.

Proclamation allowing mining rights is a mechanism under section 43(2) of the *National Parks and Wildlife Act* which provides for the Governor to proclaim conditions whereby rights of entry, prospecting, exploration and mining may be acquired for newly created national parks and conservation parks. This is qualified by section 43(5), which states that such a proclamation cannot be made unless:

- (a) It allows for continuing rights vested in a person immediately before commencement of the Act,
- (b) The proclamation is made simultaneously with the proclamation constituting a reserve.

Mineral exploration and mining activity are possible only with approval of the Minister for Environment and Conservation, depending on the type of reserve and individual proclamation conditions in accordance with the management plan for the park. This is also the case for petroleum exploration and production, except where a petroleum exploration licence was in force immediately prior to proclamation of the park. In this case, the proclamation may allow application for a production licence without approval of the Environment Minister. Recent large conservation and national park additions to the SA reserve system have all been made under joint proclamations that allow existing rights to continue and future rights to be acquired.

Multiple Land Use

In 1986 the South Australian Government determined that it was necessary to consider the principle of multiple land use to reconcile as and where appropriate, any conflict between the aims of conservation, Aboriginal land rights, agricultural interests and exploration for and development of subsurface petroleum and mineral resources.

A regional reserve classification was created under amendments in 1987 to the *National Parks and Wildlife Act 1972* specifically for the purpose of conservation, while at the same time permitting the utilisation of the petroleum and other resources of the reserve. An excellent example of this is the Innamincka Regional Reserve that now covers much of the productive area of the Cooper Basin operated by Santos and partners.

The State Government supports application of multiple and sequential land use principles, within a suite of land-use categories. This ensures the protection of environmentally sensitive areas whilst allowing exploration and mining with appropriate procedures and safeguards. Where there are overriding environmental, heritage or cultural reasons the State Government recognises that mining and petroleum rights may not be appropriate and will limit access to those areas in order to meet community expectations.

Other land use restrictions

There are many other land use categories which impact on the availability of land for petroleum and mineral resource exploration. Key areas in this discussion include

Commonwealth land and infrastructure sites, in particular, the Woomera Prohibited Area.

The Woomera Prohibited Area (WPA) represents 13% of the total area of South Australia and covers the northern half of the mineral rich Gawler Craton and overlaps part of the Officer Basin that has potential for petroleum resources. Recent significant mineral finds within the WPA include the Challenger Gold Mine, the SASE (South Australian Steel and Energy) iron ore and coal deposits and the Prominent Hill discovery. Olympic Dam and the Coober Pedy Opal Fields were once within the WPA and were excised from it in during the development of the Roxby Downs Indenture. Access to the WPA, and all activities within the area are strictly controlled by the Defence Forces. The restrictions imposed by the Department of Defence on mineral explorers and developers are having a serious effect on the bankability of any development projects in the region. These restrictions include the requirement that all operations be shut down and evacuated during testing periods. This certainly is not feasible for larger-scale operations, particularly those involving chemical processing, smelting and/or power-generation. In addition, the Defence Department seeks indemnities from developers for any damage that may be incurred as a result of Defence operations.

The Commonwealth Space Activities Amendment Bill 2002, which is subject to an enquiry by the Senate Economic Legislation Committee, may also have the potential to impact on resource development in so far as the Bill seeks to limit existing liability and insurance arrangements for commercial and research space launches (i.e. non-defence activities). Proposed amendments to this Bill require proponents undertaking launch activities to procure insurance for each launch up to a defined maximum probable loss or \$750 million, whichever is the lesser. Beyond this amount, it is proposed the Commonwealth will accept liability of a further \$3 billion in respect of Australian nationals. MER is currently assessing potential impacts of the Bill and its amendments on resource development within the WPA.

Minerals Group of MER are currently collaborating with other government agencies, both State and Federal, to ensure that business imposts and costs are reduced and that new legislation and policies take into account the significant contribution mining and petroleum have made to the State's economy.

See Figures 4 and 5 for maps showing SA land access restrictions.

FIGURE 4

**AREAS SUBJECT TO MINERAL
EXPLORATION ACCESS RESTRICTIONS**

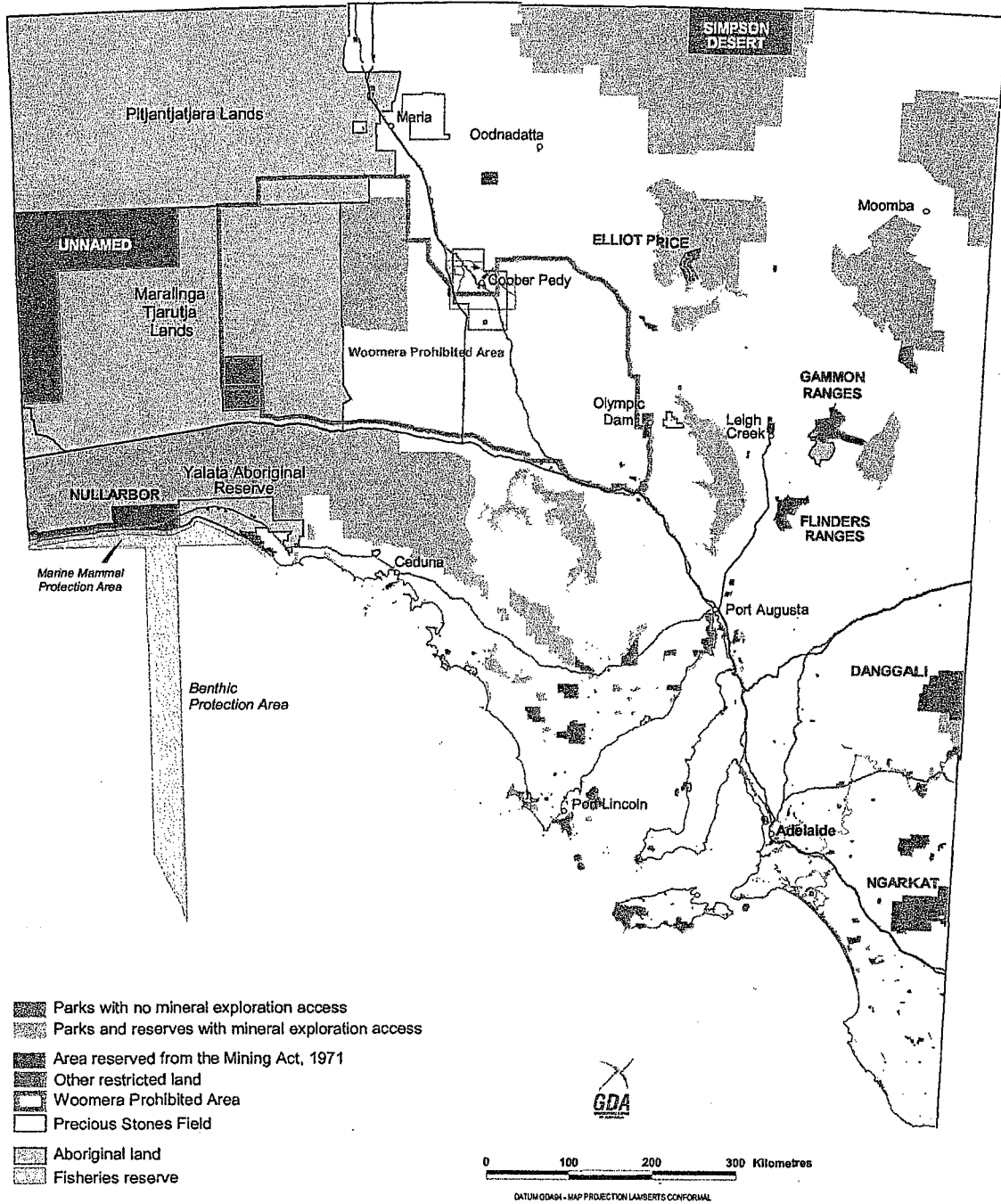
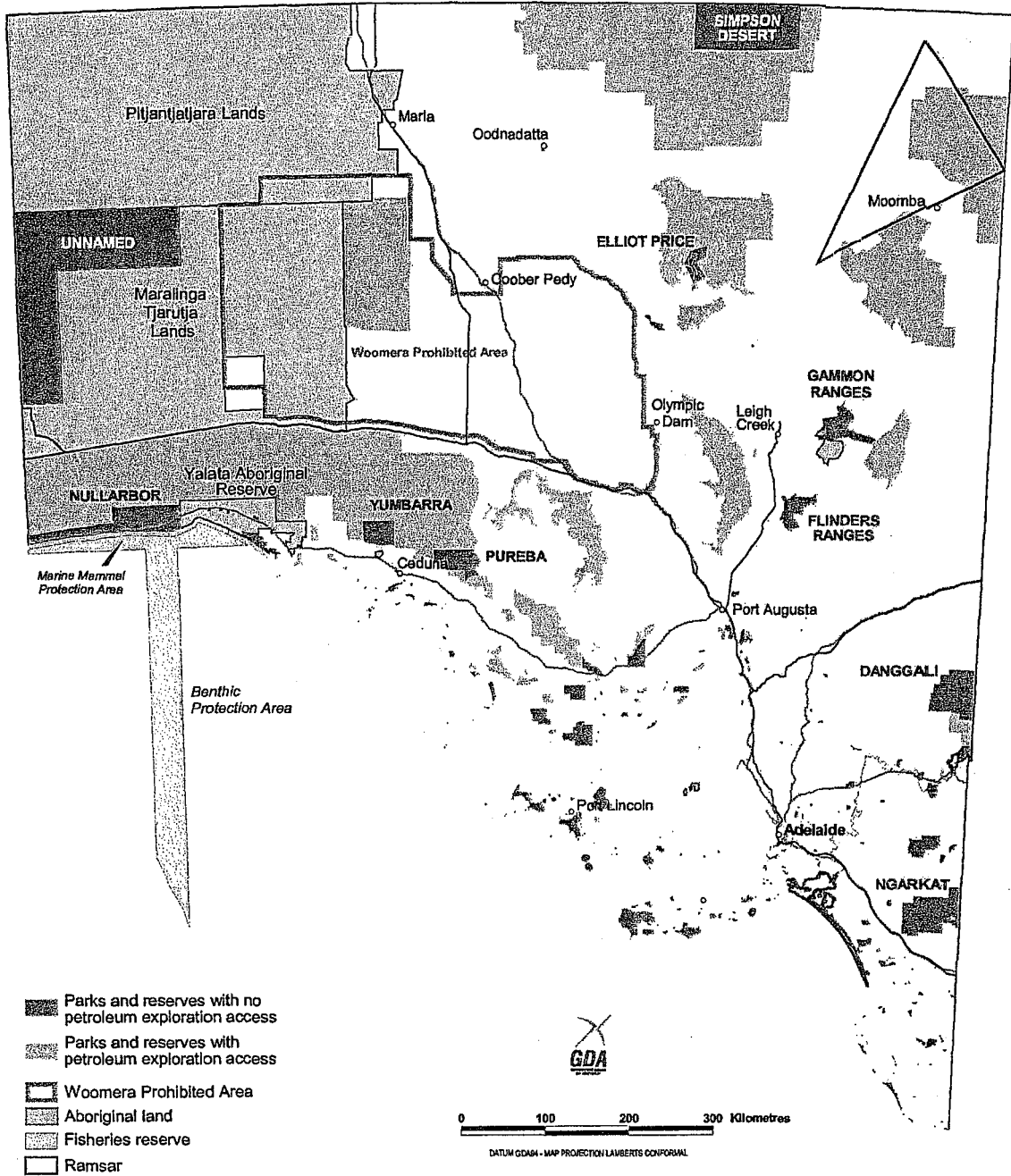
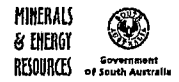


FIGURE 5

AREAS SUBJECT TO PETROLEUM EXPLORATION ACCESS RESTRICTIONS



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Environment Management and Approvals

MER acts as 'one window into government' for petroleum and mineral explorers by monitoring and facilitating company activities and emerging developments. This typically involves coordination of companies, other State agencies, local government, federal government and community consultation.

Petroleum

Changes in community expectations, in particular to environmental issues and a call by industry for a move away from restrictive prescriptive regulation to more objective based regulation to enable the adoption of ever changing and improving technologies were key underlying themes to the development of The Petroleum Act, 2000 in South Australia.

The philosophy adopted in the development of the new legislation was grounded on the understanding that the main area where government intervention is required is where there is an absence of readily identifiable incentives for the industry to voluntarily serve the public interest in the pursuit of economic profit. In the absence of such incentives the costs of any negative impacts of industry activities such as pollution, land degradation and unsafe practices are likely to be passed on to other sectors of the community. This is a form of market failure and it is in this situation that government intervention through some form of regulation is justified.

The long term viability of the upstream petroleum industry is strongly reliant on maximising access to land for undertaking exploration and development activities. Fundamental to achieving this is the need to establish and maintain community confidence in both the industry and regulatory regime governing the industry. The regulatory regime needs to be responsive to community expectations to attain such confidence. The Petroleum Act, 2000 aims to improve the confidence of all stakeholders in both the ability of the resource industries to conduct their activities in an ecologically sustainable manner, and in the regulatory regime that governs these activities.

The SA legislative framework seeks to achieve the above through meeting the following key objectives:

- To protect the natural, cultural, heritage and social aspects of the environment from the risks associated with the activities governed by the Act; and
- To provide for constructive consultation with stakeholders, including effective reporting of industry performance to other stakeholders.

Stakeholder consultation is one of the major improvements contained in the Petroleum Act 2000. The potential impact of the activity determines the approvals process. On the basis of an activity's environmental impact report and publicly declared criteria, the Minister will determine the level of environmental significance of a proposed activity. Subject to the level of environmental significance determined, the Minister will then classify the activity as low, medium or high impact. An appropriate approval process that reflects the environmental significance of the activity is then followed.

In SA, the Petroleum Act 2000 allows some flexibility in activity approvals for companies with established and proven high level compliance cultures and offers 'rewards' to good performers such as reductions in licence fees. By classifying activities as either low or high supervision, the most cost effective level of regulatory intervention needed to ensure compliance can be selected on a company-by-company

basis. To reflect the lower costs to the regulator to enforce compliance of low supervision activities, a reduction of up to a 50% on annual licence fees such activities can be made.

It must be stressed however, that regardless of the level of supervision, the primary regulatory focus is on the achievement of the objectives as documented in the statement of environmental objectives. Only in the case of high supervision activities does the regulatory focus also extend to the practices and procedures adopted by the company to achieve the objectives.

Minerals

Consideration of environmental issues is a key priority in the regulation of all mineral exploration activities. The Mineral Resources Group has a key role in ensuring responsible and environmentally sound development of South Australia's mineral resources by coordinating the many interactions between Government and project proponents. This is done through the development of formal Memoranda of Understanding with relevant Government agencies regarding environmental regulation, timely assessment of all aspects of the exploration and mining proposals, and the grant of necessary mining tenements.

In response to recommendations identified by the Resources Task Force, the Land Access Branch within MER was established in order to facilitate the legislative and policy framework for continued access to land for exploration and development.

The Mining Act, which is currently under review, addresses and incorporates environmental considerations. As part of its review it is expected that matters relating to environmental provisions will be further developed, and are likely to be based upon principles similar to those in the Petroleum Act 2000.

MER is working towards the concept of integrated environmental management for exploration such that both operational and environmental factors will be addressed in the planning and operational phases of exploration.

When determining exploration licence (EL) conditions the environmental and social cultural values of an area are fully considered. Various conditions and a bond may be required of an EL holder in order to ensure proper management of environmental impacts. The holder of an EL must rehabilitate land in accordance with approved work plans, conditions of the licence and to the satisfaction of the Minister for Mineral Resource Development.

To facilitate responsible mineral exploration, assistance to industry is provided via information sheets, regulatory forms, guidelines and verbal advice. All internal MER activities relating to exploration are required meet the same environment conditions as industry.

EPBC Act

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* came into operation on 16 July 2000. Under the EPBC Act, applications made under other legislation (such as the SA Petroleum or Mining Acts) may involve actions that need to be referred to the Federal Government for a determination as to whether or not they effect National Environmental Significance triggers, (i.e. that the action will, or is likely to, have a significant impact on them). The onus is on the proponent to make the referral if they think the action might trigger the Environment Protection and

Biodiversity Conservation Act.

If the action is found by the Commonwealth Environment Minister to be a controlled action, the proponent needs to have the application for such an action assessed and approved by the Commonwealth Minister. The assessment and approvals processes under the Act run in addition to any other assessment and approvals process (e.g. State approvals) that may apply to the whole project.

MER Petroleum Group has participated in workshops facilitated by APPEA at which industry, government (State and Federal) and community representatives attended to present and discuss experiences with the EPBC Act in the upstream petroleum industry. MER Minerals Group is currently monitoring impacts of this legislation on industry; particularly costs associated the preparation of referrals and any delays to project schedules.

To summarise, the EPBC Act is complex and involves additional approvals processes, adding to industry costs and lengthening approval timeframes.

4. Tenement Management

Access to land for both petroleum and mineral exploration can be negatively impacted by companies holding large, long term tenements, possibly not doing much exploratory work, and preventing access to new players with new ideas and money. This needs to be balanced against the need for security of title for existing tenement holders. However the community is the ultimate 'owner' of the mineral and petroleum resources of the State and therefore regulatory frameworks must ensure the community's best interests are met.

The establishment and allocation of petroleum and mineral property rights is a key role for MER. It is necessary to have an effective regulatory framework in place that facilitates open and fair competition for such rights and for providing security of title to such rights.

Tenement Management - Petroleum

The Petroleum Act, 2000 is considered leading edge in terms of its land access philosophy, especially regarding acreage availability and acreage management.

- Petroleum exploration licence terms have been reduced from 20 years to 15 years in frontier areas (with 3 relinquishments of 1/3 the original tenement area every five years), and to 10 years in mature, producing basins (with 2 relinquishments of 1/2 the original licence area every five years),
- Reduction of the maximum size of petroleum exploration licences from 25,000 to 10,000 km²,
- Introduction of mandatory competitive bidding rounds for vacant acreage in mature basins (e.g. the successful phased release of blocks for competitive bidding in the Cooper and Otway basins from 1998 to the present),
- Specification of appropriate penalties, including forced relinquishments or retention of bonds for non-performance of work programs in existing tenements.

Tenement Management - Minerals

Similar provisions to ensure more efficient turn over of exploration ground are currently being developed as amendments to the Mining Act, together with increases in rental payments and expenditure commitments in the latter years of a licence.

Water Resources

South Australia is the driest state in the driest continent. The location, yield and quality of water supplies are critical for operations in the State, especially in the harsh low rainfall/high evaporation areas north of Goyder's Line where surface water is virtually non-existent and groundwater is critical. Delineation of groundwater resources in SA for use during exploration operations and resource development is required.

Water Resources in South Australia are managed by the Department of Water, Land, Conservation and Biodiversity via the *Water Resources Act 1997* which aims to manage and allocate water in a manner that achieves the following:

- Ecologically sustainable development;
- Provision for environmental water needs;
- Promotion of efficient and effective water use;
- Account of existing use; and
- Provision of flexibility to deal with new information, technology and uses.

The key values for water resources use and management, as defined in the State Water Plan, are:

- Availability of water of sufficient quantity and quality for human use and the environment is fundamental to maintaining and improving the quality of life of all South Australians;
- South Australia's water resources are precious and must be managed and used according to the principles of ecologically sustainable development through which water is used so as to maximise its economic, social and environmental returns on a sustainable basis;
- The State's water resources must be managed in an integrated manner with all other natural resources; and
- South Australians have the right to be informed, consulted and involved in the management of water.

As water is very important to the operation of the mining and petroleum industries, the provisions of the *Water Resources Act 1997* aim to protect the water resources for these, and all other users. The provisions of the Act are not considered to be an impediment to resource exploration in South Australia, however the scarcity of water itself may be an impediment.

5. The structure of the industry and role of small companies in resource exploration in Australia

Mining Industry

Exploration expenditure reached new peaks between 1990-97 with \$1,149 million total expenditure on mineral exploration recorded during 1996/97. Mineral exploration within Australia declined in 1998 chiefly due to the Asian economic crisis and lower commodity prices. Increased production of metalliferous commodities produced an oversupply and also contributed to the downward pressure on metal prices. As a result of this, the return to shareholders has greatly decreased applying pressure to share prices and the ability of junior exploration companies to raise investment capital, particularly for greenfields exploration.

The lack of venture capital available to junior/small companies has had an adverse effect leading to closure and/or reduced exploration. Larger mining companies have

restructured and significantly reduced their exploration. Most are actively seeking joint venture agreements with smaller companies, rather than conduct greenfields exploration. Exploration expenditure within Australia is largely biased towards the brownfields (around mine site) level, with greenfields exploration savagely reduced.

This is a high-risk scenario for future growth in the resources industry and Australia's growth in general.

The success of Minotaur Resources Ltd in discovering significant new iron-oxide copper gold prospect at Prominent Hill has been a major stimulus to the exploration industry in South Australia. Despite that, however, exploration expenditure in South Australia in 2002 is still anticipated to be around \$30 million, significantly less than the peak of \$52 million in 1997.

Petroleum Industry

One of MER's key roles is to encourage exploration investment and it is well recognised that the entrepreneur or small exploration company is to be encouraged. For example, Santos Ltd grew out of the association in 1954 of J.L. Bonython and R.F. Bristowe, who were interested in the possibility of oil in South Australia. Santos has since grown into one of Australia's largest petroleum exploration and production companies with national and international interests.

However, community requirements impose increased costs and resultant barriers to the entry of smaller companies because the perceived risk of negative impacts of their activities is greater. The costs of potential negative impacts as a result of the activities of smaller companies such as pollution, land degradation and unsafe practices are likely to be passed on to other sectors of the community. There is therefore an expectation that explorers will have the resources available to manage these risks to the environment appropriately and to cover the costs of remedial actions if required.

In SA, these community expectations are being managed by the Petroleum Act, 2000 which has flexibility with provisions for high and low supervision activities so that the most cost effective level of regulatory intervention needed to ensure compliance can be selected on a company by company basis.

Smaller exploration companies can access petroleum acreage in SA due to increased turnover of land (through smaller maximum licence areas and shorter terms) and the program of gazettals for work program bidding in producing basins. The market sets the price of acreage in these basins, MER has no control over the value industry places on entry into these basins, nor should it. A number of smaller companies and entrepreneurs have current petroleum exploration licence applications in frontier as well as mature SA basins.

MER also works to ensure operators comply with their work programs so that exploration in the state and any potential stream of royalty payments are not delayed by non-performing licencees.

Access to markets and infrastructure for petroleum

Access to petroleum markets has been facilitated by the establishment of free markets for oil, and in the removal of barriers to interstate gas trade. The South Australian Government initiated a study of Southeastern Australian gas supply and demand and a formal Request for Submissions was made for a major new competing source of gas for the State, resulting in the two southeastern Australian gas pipeline proposals.

Access for new oil and gas discoveries to petroleum infrastructure has been addressed for gas transmission and distribution pipelines, but no regime exists for gas and oil gathering and processing facilities. This has caused lack of confidence in the broader Australian industry about access to Cooper Basin facilities, however, Santos are now showing greater flexibility on this key issue.

Access to markets and infrastructure for minerals

Commonwealth assistance has been sought to assist with transport infrastructure and competitive transport costs to access mineral deposits in the far north of South Australia. The Commonwealth/South Australian Government/Industry Gawler Craton Infrastructure Study highlighted this. Improving transport and other infrastructure that facilitates exploration and mining will, in part address SA's adverse geographical location, which could otherwise disadvantage such developments.

6. Impediments to accessing capital, particularly by small companies

The South Australian Government response to the Resources Task Force Report identified (Action L) the flow-through share mechanism as a tax-based incentive that can be effective in meeting the Government's policy objectives of encouraging exploration in Australia, to:

- Escalate and enhance the search for and development of mineral and petroleum resources in Australia and South Australia;
- Assist junior (typically non-taxpaying) exploration companies whose access to internal sources of financing (i.e. cash flow) may be limited; and
- Promote equity based investments in mining and petroleum companies.

The use of flow-through shares can encourage investment in mineral and petroleum exploration and development companies and thereby directly stimulate mineral exploration in Australia and South Australia. Promotion of the concept of flow-through share funding in Australia has already begun with a submission to the Federal Government by the Australian Gold Council and AMEC.

Flow-through shares are a specialised financing arrangement designed to provide financial incentives for investment in mining and petroleum exploration and development companies. Their features render them the most readily accessible of various financing alternatives and they have been used in other countries, most notably in Canada. Canada has experienced less of a decline in exploration expenditure than Australia. This appears to be partly the result of Canada's taxation incentives, particularly a "super flow-through shares" scheme which stimulated capital raising by junior companies for "grassroots" exploration.

For eligible mining and petroleum companies, flow-through shares are made available and issued as equity to new investors. For every flow-through share purchased from a mining or petroleum company under such an agreement, investors received an equity interest in the company plus the right to income tax deductions associated with new expenditures on exploration and development incurred by the company.

Exploration companies are entitled to an immediate deduction for exploration expenditure. However, many explorers do not generate taxable income and, as such, are not in a position to immediately benefit from the tax relief of the exploration deduction against corporate income. Therefore, companies are often willing to forgo

these deductions by transferring them to investors through the issue of flow-through shares. In essence, mining and petroleum companies transfer unusable or unused tax deductions relating to expenditures incurred by the company to investors.

Exploration is vital to ensuring that mining and developments of new discoveries contribute to the prosperity of the South Australian community into the 21st century and to address issues raised by globalisation. Assisting small exploration companies will result in the enhanced supply of prospects to the major companies, help to build new mid-sized Australian companies and employed our many skilled professionals in South Australia. Recent exploration successes in South Australia provide practical proof on the ground of this hypothesis and offer opportunities for replication.

The implementation of a flow-through share scheme in Australia would provide a mechanism that has proved effective in stimulating exploration elsewhere.

APPENDIX 1 – DISCUSSION OF OTHER IMPEDIMENTS

1.1 Public provision of geoscientific data

Access to key data by national and international exploration companies is the investment driver that MER has the highest ability to influence. Low cost, ready access to archived data in useful formats can assist in attracting investment, reducing exploration risk and reducing expensive re-acquisition of data, which ultimately decreases environmental impacts.

Data are generated by regulated company activities and also by MER in the form of pre-competitive surveys or research projects, funded by State and Commonwealth initiatives (e.g. SA Exploration Initiative – SAEI, Targeted Exploration Initiative SA (TEISA), Broken Hill Exploration Initiative – BHEI).

Mineral and petroleum exploration companies have regulatory requirements to submit data generated by licence activities to MER. MER's role is to ensure industry compliance with data submission requirements through data verification, then to catalogue, safely store and archive data and, where relevant value add data into consolidated datasets or maps. Basic company exploration data are released to other explorers and the public after a regulation confidentiality period. Acquisition of data and submission to MER is part of the costs of exploration and its public release enables the Crown and the public to capture its share of the value of mineral and petroleum resources.

South Australia led the way in Australia with exploration initiatives in the early 1990s and also with the provision of free or cheap pre-competitive exploration data to the public and explorers. A major program funded by the Targeted Exploration Initiative SA (TEISA) to capture paper petroleum company exploration data into digital form has just been successfully completed and a range of data sets are now readily available from MER on CD-ROMs.

MER uses the provision of cheap, accurate, readily accessible exploration data as a means of encouraging explorers to take up acreage, spend millions of dollars in exploration and hopefully make discoveries. Sales revenue from data is not a primary consideration, in fact many data products are now available for free or at cost of production only. MER recognises that money raising from data sales is orders of magnitude less than resultant exploration expenditure and flow-on benefits to the State's economy and to the community.

1.2 An assessment of Australia's resource endowment and the rates at which it is being drawn down

Prospectivity, or the fundamental geology and resource endowment of the State, is something MER has the least ability to influence. However a key role of MER is to change industry perceptions of our State's mineral and petroleum prospectivity to encourage exploration.

South Australia is geologically well endowed with two of the world's great ore bodies in Olympic Dam and Broken Hill. While NSW can legitimately claim Broken Hill within that state's borders, the preponderance of prospective ground lies in South Australia. Broken Hill is a good example of the problem Australia faces if sustained, high quality exploration is frustrated. Even supergiant ore bodies such as Broken eventually run out of ore and when they do, the communities that grow up with them suffer enormous social upheaval and a direct problem for the government of the day.

Both SA and NSW realise the urgency. The Office of Minerals and Energy, NSW Wales Department of Mineral Resources and Geoscience Australia are collaborating on a new Broken Hill Exploration Initiative which will see research undertaken to target the gaps in knowledge that are preventing explorers from detecting the next orebody in the Broken Hill block. This sort of collaborative initiative dissolves state boundaries and focuses on the target geological province.

Olympic Dam is another “supergiant orebody”. While its reserves are large, WMC has recently announced plans to look at tripling production from the current 200000 t pa. In late 2001 Drill hole URN 1 drilled by Minotaur Resources Ltd intersected significant copper, uranium and gold mineralisation similar in style to Olympic Dam. Prominent Hill is located approximately 80 km southeast of Coober Pedy within a prospective region known as the Mount Woods Inlier. The discovery of Prominent Hill shows that Olympic Dam style mineralisation occurs away from Olympic Dam itself and it is not a “one off”. The discovery of Prominent Hill has been a major boost for mineral exploration with exploration companies returning to South Australia to search for iron-oxide copper gold style mineralisation. The discovery of Prominent Hill by Minotaur Resources Ltd, a junior exploration company within an area that was extensively explored has shown the importance of the right exploration model and persistence.

Turning to the oil and gas arena, SA basins range from mature producing basins by Australian as opposed to North American standards (e.g. Cooper/Eromanga), through to semi-mature (e.g. Otway Basin), to frontier basins (all the others). Large areas of on and offshore prospective SA basins are currently under application or under licence.

Looking at the future, the petroleum potential of the State is considered to be at least as significant as discoveries made to date. The State’s total recoverable reserves of raw gas were $235.0 \times 10^9 \text{ m}^3$ (8.3 tcf), of which $135.9 \times 10^9 \text{ m}^3$ (4.8 tcf) has been produced; and total recoverable reserves of oil totalling $20.7 \times 10^6 \text{ kL}$ (130 mmbbl), of which $17.0 \times 10^6 \text{ kL}$ (107 mmbbl) has been produced.

In other words, half of the State’s estimated gas reserves and 80% of the State’s oil reserves have been depleted.

However estimates are that there is an even chance that a further 1520 PJ ($40.6 \times 10^9 \text{ m}^3$ (1.4 tcf)) will be discovered in conventional structures in the Cooper Basin (i.e. equivalent to over nine-years supply at current production rates). The Otway and Bight Basins in particular are also considered to have significant potential, as do the extensive Cambrian and older frontier sequences.

In the longer term, huge reserves of gas in low permeability rocks exist (e.g. in the Nappamerri Trough area of the Cooper Basin) and Santos has committed significant funds to investigating this potential (\$50 million over the initial 6 year licence term).

In general, South Australia has a proven endowment of world-class minerals, oil and gas but it remains under explored and offers significant potential for further discoveries.

1.3 Contribution to regional development

The mining industry is a major contributor to the regional economies of Australia. Within South Australia, major townships including Whyalla, Roxby Downs, Coober Pedy, Port Pirie and Leigh Creek are built upon mining and mineral processing and without the mining industries these townships would decline. The mining industry not only provides employment for rural people, it also makes major contributions to their social (e.g. schools, health facilities) and infrastructure (e.g. road, rail) frameworks.

Mining companies can make major contributions to regional economies in various ways including;

- Encouraging downstream opportunities to increase economic value,
- Stimulating and enhancing diverse and allied activities in addition to mining and mineral processing,
- Actively increasing the skills/competencies of employees to enable active participation in the mining (and other) industry,
- Provide safe working environments and well maintained townships which provide a good standard of living to encourage a skilled workforce, and
- Limiting or preventing impacts of their activities on land, water, air pollution and biological communities and promoting environmental education.

Included with submission no. 70 were the following attachments which have been taken as Exhibits 14 - 16:

Appendix 4. Office of Minerals and Energy Resources. June 2002, **Minerals and Petroleum South Australia 2002**, 71p. (Exhibit 14)

Appendix 3. Matthew, Hon Wayne, et al. 2001, **Deed pursuant to Section 31 of the Native Title Act 1993**, multiple pages.(Exhibit 15)

Appendix 2. Government of South Australia. June 2000, **South Australian Government response to the Resources Task Force Report**, 37p. (Exhibit 16)