



**SUBMISSION TO THE
ECONOMIC DEVELOPMENT AND INFRASTRUCTURE COMMITTEE
INQUIRY INTO GREENFIELDS MINERAL EXPLORATION AND
PROJECT DEVELOPMENT IN VICTORIA**

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INTRODUCTION

i. The AusIMM

The AusIMM (The Minerals Institute) is the leading organisation representing minerals sector professionals in the Australasian region, primarily in the disciplines of mining engineering, metallurgy and geoscience. We have more than 10,600 members spread across industry, government and academia, of which over 1,200 are student members currently enrolled in undergraduate studies.

Given their technical expertise and first hand practical experience of the sector, our members are uniquely placed to comment on Greenfields exploration in Victoria, impediments to success of projects and make recommendations for future minerals prosperity in Victoria.

As a professional organisation whose members have an ethical duty to put the community first, The AusIMM constitutes a forum through which technical experts in the minerals sector can comment on policy for sustainable industry, free from private and sectional interests.

ii. This submission

This submission includes a range of member views and experiences regarding exploration, the exploration process, and how exploration is approached in Victoria by Government.

We thank the Economic Development and Infrastructure Committee for the opportunity to provide a submission to the Inquiry into Greenfields Mineral Exploration and Project Development in Victoria.

RECOMMENDATIONS

1. Review and define the role of the Department of Primary Industries in regards to exploration outside the core function of the permitting and reporting requirements.
2. Streamline exploration licence reporting requirements to minimise double reporting.
3. Allow provisions within exploration legislations and reporting frameworks for greater flexibility in the application of licensing rules and regulations in times of difficulty.
4. Provide ongoing support for the office of the Victorian Mining Warden.
5. Reclassify all historic mining sites (pre-1980) as greenfield exploration sites.
6. Provide drilling assistance for true greenfields exploration based on interstate best practice examples.
7. Government must support and promote brown coal exploration in Victoria.
8. Play a major role in disseminating factual information to the community about exploration best practices and what to expect from exploration in collaboration with Industry.
9. Provide support to The AusIMM in strongly encouraging the Federal Government to immediately task the Productivity Commission with the review of all aspects of exploration in Australia as a matter of urgency.
10. Provide a sustainable stream of funding to Geoscience Victoria to undertake geoscience and geospatial data gathering.
11. Develop and implement, in consultation with explorers, a better mechanism by which companies can provide reasonable compensation to landholders.
12. Urgently review and revise current State approvals process for the granting of private sanctuaries in areas of known mineral resources.
13. Review all current conservation agreements to ensure that they are used to only protect land which has significant conservation, biodiversity, cultural or heritage features. Where these features are not evident the Government should remove the agreement and protected status.
14. Develop and implement processes whereby all areas granted protection status or declared private sanctuary are assessed for their conservation outcomes at regular intervals. Where there is no conservation outcome, protection status should be removed.

BACKGROUND

Mining in Australia

Mining activity in Australia underpins our current prosperity. In 2010, Australia's energy and mineral commodity export earnings increased by 25 per cent to \$165 billion. Mineral resources exports are the largest contributor to Australia's exports, accounting for 39.4% of all exports and more than half of Australia's commodity earnings.

The industry contributes more than any other industry in State and Federal taxes, with revenues increasing each year. The taxes and other contributions to government that the mining industry pays are an important element in the creation of prosperity and stability for the nation. However, the full extent of this contribution is not always recognised. The economic benefits from the minerals sector also include contributions to employment, investments in infrastructure and expenditure on research and development (R&D).

The benefits of mining innovation also go far beyond the immediate economic rewards. Innovative activities in mining are often conjoined with technological developments elsewhere in industry and the economy, creating spill-over effects and generating further innovation, productivity, and prosperity. For example, the continued growth in mining activity around Australia has underpinned major expansions in supporting services, and spurred growth in the high value-add mining technology services sector which generates estimated annual sales of \$12 billion. Fifty per cent of mining related businesses in the Australian sector are exporters with combined exports of around \$4 billion annually.

Australia is a world leader in mining occupational health and safety, mine-site rehabilitation and environmentally-sustainable mining. Australia is also the leading innovator, developer and supplier of software systems and equipment that manage the world's mine planning, design, operation and maintenance. It is also leading the world in harnessing new technologies such as biotech, ICT and e-commerce for application in the mining industry.

In the longer term it is anticipated that with the continuing and accelerated growth of economies such as China and India, increasing demand for mineral resources will be realised as these countries seek to match the standards of living in the OECD.

Australia is well placed to reap the rewards of increases in minerals demand including increased demand for uranium. However, despite significant mineral endowments and the impressive number of committed projects, market share in this competitive global industry is not something that our nation can take for granted. In a highly globalised industry, multinational companies are able to shift their attention to those regions that offer the best resources at the highest profit margins, and proactive policy settings are critical to remaining competitive.

In a competitive industry that can make rapid decisions based on location and scale of existing operations and perceptions of industry, policy settings that optimise Australia's competitiveness as a supplier are dependent on:

1. The quality of Australia's known resources, viewed in light of current processing techniques, and the efficiency with which the ore can be extracted; and
2. Our ability to minimise the impact of capacity constraints, in the form of skills shortages, infrastructure deficiencies, and regulatory burden.

It is important to remember that the minerals sector will always be subject to cyclical factors due to the fluctuation of commodity prices, the impact of the Australian dollar on exports and the influence of Government policies on investment in the industry.

Exploration

The terms 'greenfields' and 'brownfields' are widely used and generally understood terms in reference to the type of minerals exploration being undertaken. However the use of these terms is dependent upon the perception of the individual or company. Greenfields exploration can mean different things to a junior explorer compared to a large multi-national miner. Differences again can arise when considering the tenement type, the stage of exploration and exploration at historic sites.

Junior explorers generally undertake greenfields exploration because they have, more often, the capacity to do so more economically and efficiently than the "major" companies (notwithstanding current taxation anomalies). The juniors effectively provide the pipeline for the majors, who will often acquire prospective tenements from juniors once that have been discovered and the relevant resource estimated at a high level of confidence.

Australia, and Victoria, needs a sound supply pipeline underpinned by sustained exploration, production and processing. Exploration for new deposits will result in discoveries that will sustain production and exports over the longer term. Encouraging adequate levels of investment in the search for new deposits is essential if discoveries of a national significance are to be made.

Government and industry have recognised the case for new measures to improve Australia's minerals exploration performance. Exploration has strong backward and forward linkages with the rest of the economy and is a labour intensive activity. In the longer term, more drilling of targets upgraded by smart exploration technologies increases the chances of making a discovery that can ultimately be converted to a new mining project.

New mining projects deliver major benefits to all Australians via significant expenditures on goods and services, shareholder returns to investors, and high wages and salaries to direct and indirect workers. Additional discoveries also increase government revenues through royalties and taxes as resource deposits are developed.

The pipeline of minerals resource projects for future generations in Australia appears uncertain at best based on current exploration trends. Enabling regulatory and taxation frameworks are required to drive exploration in Australia, especially for smaller, entrepreneurial operators disadvantaged by existing arrangements.

Despite a pick-up in expenditure in recent years, real mineral exploration activity (measured by metres drilled) although increasing slowly in greenfields areas, is well down on levels recorded in the 1990s.¹ Data shows that there has been increased investment by mining companies in exploration activities throughout Australia. However this increased investment does not define what proportion of investment is allocated to increased exploration activity and how much is consumed by higher costs associated with inputs, labour, fuel or energy needs and advances in technology and equipment costs.

There has been an increasing trend for exploration to be conducted with 5kms of an existing mine site due to a number of inherent difficulties that will be outlined in response to the Inquiry Terms of Reference.

¹ ABS, 8412.0 Mineral and Petroleum Exploration, Australia, 2010

Companies will pursue exploration opportunities themselves and find their own opportunities if government act to minimise the negative aspects of regulatory restrictions. This does not mean no regulation; it simply means that unnecessary duplication of efforts to get the necessary exploration approvals should be avoided.

Global exploration rankings

Since 1997, the Fraser Institute has conducted an annual survey of metal mining and exploration companies to assess how mineral endowments and public policy factors such as taxation and regulation affect exploration investment. Survey results represent the opinions of executives and exploration managers in mining and mining consulting companies operating around the world. The survey now includes data on 79 jurisdictions around the world, on every continent except Antarctica².

The survey looks at a dozen factors that influence exploration investment decisions, and groups these into the two composite issues of Policy and Mineral Potential. The Policy Potential Index (PPI) is scored out of 100, the higher the score the better performing the country is perceived to be.

In 2010, for the first time, the Institute prepared a mid-year update of the mining survey to capture the impact of the announcement of the Resources Super-Profits Tax (RSPT). With this announcement, Australia's average score fell dramatically in the Policy Potential Index (PPI), from 63 in the 2009/2010 survey to 41 in the survey update. After the survey closed in June and the government backed away from the super tax and promised extensive consultations with the industry, Australia's average score rebounded to 64 in the 2010/2011 survey. With the reinvention of the Mining Resources Rent Tax (MRRT) coupled with the Carbon Tax, it is highly likely that confidence in Australia's minerals sector will fall dramatically again to record lows, in the 2011/12 survey.

Looking at the 2010/11 survey results, Victoria when compared to other States and Territories performs poorly on nearly all measures in encouraging investment in exploration except for infrastructure and trade barriers. Victoria ranks worst in Australia in the duplication of government departmental processes; environmental regulation; and in the general administration of legislation and differences in interpretation of regulations and processes, particularly inconsistencies with the enforcement of gazetted penalties.

Victoria's land use restrictions are seen as a strong deterrent to investment in exploration and the inconsistent declaration of parks and protected lands are a major contributor to this. Victoria is also seen as the worst State for inter-departmental overlap of processes and resource management.

Much can be done to improve Victoria's image within the global minerals industry, primarily through the leadership of the State Government. In addition to concerns around regulation and land access, there is much room for improvement in Victoria's legal system as it relates to exploration and land disputes; taxation arrangements; and socio economic and community conditions.

The Victorian Government should be aware that at the same time, Australian companies are increasingly "voting with their feet" and going to more exploration-friendly regions overseas. In 2010, Australian-headquartered companies are estimated to have spent 52 per cent of their exploration budget within Australia, with the balance going overseas. This is 10 percentage points lower than the level of exploration spending within Australia a decade ago³.

² <http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/mining-survey-2010-2011.pdf>

³ ABARES

SUBMISSION

Terms of Reference

(a) Victoria's mineral endowment (often referred to as 'prospectivity') across a portfolio of commodities (including energy earth resources and extractives products)

Victoria's economic development has been largely built on its natural, world class mineral endowment. The discovery of gold in 1851 and the subsequent gold rushes transformed the quiet colony of Victoria into the financial centre of the country. Today, the emerging world class heavy mineral sands province in northwest Victoria has the potential to continue the pivotal role the minerals industry has played in the economic development of Victoria⁴.

Department of Primary Industries

Mineral Potential is meant to be read to mean more than 'are there undiscovered mineral deposits' but to include 'are appropriate mineral deposits likely to be found'; meaning increasing the 'findability' of minerals influences Mineral Potential. The attractiveness of Victoria as an exploration destination is only going to be substantially improved by addressing 'Mineral Potential' through significant investment in exploration.

It is recognised that a high proportion of current production can be attributed to discoveries made more than 20 years ago. Recent global economic pressures and changing circumstances have led to an increased focus on reassessing current and depleted mining areas previously considered to be uneconomic with a view to extracting additional reserves rather than the more high risk activity of greenfields exploration.

Victoria suffered one of the largest proportional falls in exploration funding following the global financial crisis (33.0%). However, with the gradual improvement in the world economic situation and the continued strong demand for bulk commodities from Asia, the outlook for mineral exploration in Victoria is more promising. If the continued high price of gold for example is maintained or increased further, investment in gold exploration should add further impetus to exploration as a whole and by association Victoria's prospectivity.

Victoria is a world-renowned gold province with a variety of deposit types. The gold prospectivity is very high based on the exceptional historic production (mostly pre-1900) and modest exploration efforts during the modern era (1980s onward). There are several publications over the last 10 years which support this⁵ and with advancements in technology and industry understanding of the geological features of Victoria, gold prospectivity should remain very high.

Known gold resource estimates support a further 16 years of gold production in Victoria based on the 2009 production rate. Although this estimate is an average figure, the relatively short life suggested highlights the importance of maintaining substantial short and medium term exploration programs in order to increase access to Victoria's gold and other minerals endowment.

Geological environments favourable to exploration for industrial minerals are widespread in Victoria. However, there are less common and less well understood materials that could, with further research, increase the State's mineral wealth. These include bentonite, diatomite, gypsum, feldspar, peat, gemstones and dolomite. Prospectivity for other base metals in Victoria is modest, with some unusual occurrences of interest in eastern Victoria of Molybdenum-Copper-Gold. Overall there is a low prospectivity for uranium.

⁴ www.dpi.vic.gov.au.

⁵ Phillips et al. (2001), Gold Prospectivity in Victoria.

Mineral sands also have a high prospectivity in Victoria and recent expansions of capacity at Illuka's mineral sands processing plants in the west of the State demonstrate this. A significant portion of mineral sands in other States are in areas quarantined from mining because they are largely incorporated in national parks. Geoscience Australia estimates that around 17% of ilmenite, 15% of rutile and 16% of zircon identified in Australia⁶ is unavailable for mining⁶, placing Victoria in a good position for future exploration and production of these minerals.

High prospectivity also exists for brown coal. As the Government is aware, Victoria has one of the largest brown coal resources in the world. Victoria accounts for 96% of Australia's identified resources of brown coal with approximately 87% deemed to be accessible. Australia has about 25% of world recoverable brown coal and is ranked first globally in terms of reserves? Yet we produce about 7% of the world's brown coal, ranking us as the fifth largest producer globally. The reopening of the Maddingley coal mine at Bacchus Marsh is a promising sign for the industry.

The Victorian Government's 2009 announcement of the \$16 million funding initiative for new clean coal research and the establishment of Brown Coal Innovation Australia (BCIA) should provide opportunities to develop low emission brown coal technology. In addition to further planning for the long term extraction, development, use and rehabilitation of Victoria's coal resources this initiative should improve investment opportunities and exploration for brown coal (where permitted).

The Government's approach to exempting land over significant coal resources because of their value to the State is important for the future prospectivity of the State and although planning for "its orderly future development" is responsible governance in one sense, this approach also creates a degree of uncertainty for investors and explorers in Victoria around the level of Government intervention and control that may be likely for future projects.

(b) The regulatory environment

Administration

There is a general consensus among AusIMM members and explorers that Victoria employs the principle of "paperwork for the sake of it". Excessive paperwork and processes that could **not be** described as streamlined in Victoria can bury companies and tie up valuable resources that could be better utilised in real exploration. For example, a typical junior exploration company, that has all its licenses in place (and keeping in mind that they typically employ less than 10 staff at set-up phase) will be required to supply an annual report, a high-impact work plan for work not yet intended, a report on which area you wish to reduce, a reduction report on the area then reduced, schedule 15 on expenditure, and other demands on virtually every tenement in a single year.

As expected, this ties up the staff of a small company when they are trying to undertake exploration at the only times they can (e.g. when the farmer or landholder says yes, when there is no high fire danger, when there are no floods and when the Department does not close roads for winter etc.) Real and genuine problems are, in the experience of our members met with the response: "do it or we'll cancel your tenement".

It would be so much easier if an Exploration Licence (EL) reduction report (i.e. a final report on all data and work ever done by a company in a segment of an EL) could be made at the same time as the annual report for the year. The company has to compile and process all data at year end for the entire area, and it would be more efficient for the company and government to receive one comprehensive report each year rather than multiple reports that are subsets of other reports.

⁶ Geoscience Australia 2010. Australia's Identified Mineral Resources 2010

The downstream influences from harsh administration processes on mining activity will and does affect companies' willingness to explore in Victoria. For example, a two year wait for planning permits or permits to discharge water make it very difficult to manage an operating and evolving mine or reinvest in exploration or R&D.

Land access

In general, the procedure for accessing land needs to be explained better, especially to companies based in Western Australia and overseas who are responsible for the majority of available industry exploration dollars. As detailed in the Fraser Institute rankings, industry sees it as too hard to access land in Victoria for exploration and mining. The small percentage of budgets spent on drilling compared to other states is overwhelmingly caused by the difficulty of accessing land.

There is a general lack of understanding in Victoria of the commercial value of a mineral tenement and how this relates to its security of tenure. Essentially the following equation applies to exploration: ***Less secure = less valuable = less expenditure.***

There appears to be a misguided perception, in Victoria in particular, that exploration companies are competing for tenements and if a tenement is taken off an inactive explorer, someone else will step up. The reality is that there is plenty of vacant ground and opportunities for exploration in Victoria but there is very little competition. Evidence of this can be readily found if Government conducts research to review the price at which tenements change hands.

More details regarding land access and the impact of the regulatory environment on exploration will be addressed later in this submission.

(c) Fees, charges and royalties

Fees & Charges

The current DPI website is not intuitive. It currently takes 5 web clicks to reach any forms to download and 7 web clicks to determine costs⁷. A cursory glance at the DPI website page detailing the fees charged for the granting of an exploration licence shows that the fees and charges section is immediately followed by penalties for not meeting regulatory requirements. Although this provides access to all regulatory provisions on one page, the simple inclusion of penalties with fees continues to perpetuate the punitive approach by the Victorian Government towards exploration and mining.

The mining and exploration industry has an excellent track record in Victoria and takes its social licence to operate, including reporting requirements, very seriously. Implying that a company should be aware of penalties for non-compliance before exploration can commence is not an appropriate approach for the minerals industry if exploration and investment are to be encouraged.

Royalties

In regards to expenditure requirements on tenements, our members make the suggestion that it would be more useful to have a lower dollars limit and only include expenditure in the field (actual exploration) and not head office costs. The separation of high impact and low impact expenditures is a crude and inaccurate reflection of actual exploration practice in many Victorian operations, and is the wrong expenditure metric for exploration.

⁷ <http://new.dpi.vic.gov.au/earth-resources/pipelines/approvals/fees/earth-resources>

(d) National and international perceptions of Victoria's prospectivity and regulatory environment

National perceptions

Generally speaking, the Victorian Government and the Department of Primary Industries is perceived by State, National and Global explorers as taking an overly adversarial approach to exploration. This was most evidenced by our members during the Global Financial Crisis (and similar situations) where other States have supported junior explorers, yet Victoria does not allow any flexibility and strictly applies rules and regulations, often with the added threat to struggling companies of removal of tenements and financial penalties. The GFC was a particular example of how only minimal extensions were granted (legislated 28 day extension) without any further opportunity to negotiate during difficult times. The lack of flexibility and general lack of recognition of the nature of exploration and the future economic benefits of the minerals sector for Victoria, especially in a time when world economies were crumbling and stimulus packages distributed, remains a disappointment to industry and a disincentive to future exploration in Victoria.

Although The AusIMM has no doubts that the DPI employs highly skilled administrators, the majority of those employed to support regulatory functions do not have exploration experience and often no formal qualifications in mining or geology. In dealings with the Department, our members report that there is an underlying current that permeates many interactions and that is the (unfounded) belief among some staff that they know how to explore better and know more about exploration than highly qualified, highly skilled and highly experienced exploration professionals. In stark contrast is the actual experience of explorers who report that the naivety of some staff and decisions makers about general aspects of exploration is apparent, especially when compared with other States or Territories, and does not instil confidence in the Department or the regulatory environment in Victoria.

Similarly the Department's break-up of Geoscience Victoria and the reported plan to have less emphasis on being primary custodians of data or generating new regional data, in favour of advising on exploration and interpreting, in a non-number crunching sense, for exploration is very worrying. Providing technical advice without technical expertise should not be a function of a Government department.

The inconsistency in approaches from year to year is also a matter of continued concern among our members and within the sector more broadly. For example, the insistence of the Department on moving to high-impact exploration in one year because they believed that low-impact exploration has already been done in the past. This is a total misconception as much of the past low-impact exploration is almost worthless especially due to the availability of new technologies and exploration methods. The Government would understand this if appropriate consultation was undertaken in informing such policy decisions and appropriate technical expertise sought from explorers.

Our members also report that the government, too often, seems oblivious to the changing seasons as they apply to exploration, whether in forests or on farms. Adverse weather events such as natural disasters and flooding, on top of normal seasonal changes, further compound this issue and have a significant effect on exploration activities and access to land. These changing environmental conditions in addition to changing global financial conditions reinforce the need for Government to remain open to new approaches and remain flexible to adapt to fluctuating markets and adverse events.

There is general respect within Victoria's minerals industry for the Mining Warden and the role the Warden plays as an independent statutory office holder in arbitration and dispute hearings. Threats

to the existence of the Mining Warden's court is of grave concern in Victoria, and the lack of annual report for the Office for the 2009 and 2010 reporting periods appears to support the lack of Government support for this essential function.

There is also a national perception that the Victorian Government does not understand that junior explorers make many discoveries that then lead to larger operations. With respect to gold, majors like RioTinto and BHP, are not likely to be interested in exploring for gold in Victoria today. They and others however will be interested in future mining opportunities arising from demonstrated reserves that are discovered through junior exploration activities.

It is unlikely that Victoria could ever be a mecca for every mineral commodity, nor that the community would allow uncontrolled exploration throughout the state. A targeted commodity and area approach is necessary where ideally Victoria is perceived as a premier State to target gold and brown coal. Until recently this was the case.

Global perceptions

As highlighted earlier, the recognised standard for the reporting of global perception of exploration and mining activities is the annual Canadian Fraser Report that indicates that Victoria is not well regarded by exploration managers globally. The survey looks at a dozen factors that influence exploration investment decisions, and groups these into the two composite issues of Policy and Mineral Potential.

Their surveys over recent years have indicated a decline in Victoria's attractiveness as an exploration destination. Part of the reason for the decline is related to policy issues such as uncertainty over protected land, declaration of parks and Native Title disputes together with unnecessary and onerous duplications in regulatory processes. There is much room for improvement in all aspects of exploration and mining activities in the State.

(e) The success and failure of projects in Victoria's mining development pipeline

Context

The modern gold sector in Victoria has a long story of struggles and successes. It is a conundrum that while Victoria had such a superb gold endowment exploited in the first gold boom (1850s) and later 1800s, there has never been much success in the modern boom from the 1980s onwards. Attempts by small companies (often poorly capitalised) have not assisted with Victoria's reputation in this regard. Difficulties regarding land access, urban planning and government policy over the last 30 years or so have also not assisted the success rates.

The failure of several high profile Victorian gold projects has had a dampening effect globally. You can speak about Victorian gold in Toronto, Denver or London and expect someone in the audience to make reference to the recent-past failures of Ballarat, Bendigo, and Stawell's Kewell prospect. There is a strong geological undercurrent in these incidents.

Despite all of Victoria's mineral potential, the economic return to Victoria from gold in particular since 1979, has not been encouraging. Exploration expenditure directed to gold based on return rate suggests that the current approach to gold exploration in Victoria is not sustainable. To attract continued exploration investment, the discovery rate (using 'tonnes of gold per million dollars of exploration') needs to rise and be more consistent with the Australian average. With the current low

success rate for gold exploration in Victoria, minimal profits are coming from gold mining to reinvest into R&D and into further exploration. This lack of investment continues the cycle of poor return.

The effects of the market failure structural impediments confronting junior explorers are compounded by the prospect of a slowdown in the global economy restricting capital liquidity and volatile commodity process, while operating costs remain relatively high.

Drilling effectiveness

A comparison of drilling effectiveness between WA and Victoria conducted in the last decade suggested that three times as many metres of drilling were achieved for each million dollars of exploration expenditure in WA as were achieved in Victoria. In real terms in 1997, this translated into 12km versus 4km of drilling per one million dollars exploration expenditure. The comparison has not improved in recent years.

Several explanations might account for this difference such as different types of drilling, but it is widely viewed by Industry that compliance costs, corporate overheads, delays, and permitting are taking a proportionately larger slice of exploration investment in Victoria. Economies of scale definitely favour exploration in Western Australia and South Australia at the moment and will not change without immediate action by the Government.

(f) Different approaches and programs applied in other Australian and international jurisdictions to foster increased investment in Greenfields exploration for, and development of, minerals and energy earth resources

Collaboration

Victoria has some excellent, broad-based university geoscience departments according to most national or international rankings. It is disappointing to many in industry how poorly some of these like-minded organisations work together with one another and with industry. The Victorian situation is in contrast to some excellent partnerships and collaborations in other states, enabled through strong State Government leadership.

The work of Geoscience Victoria is by definition focussed on the framework of Victorian geology, and this framework underpins any exploration project in the State. Exploration breakthroughs will come from the combination of better understanding of mineralisation, and the integrating of geological processes across the geosciences.

We know that highly innovative science has come from many teams of one to five researchers in the minerals sector. What is required to fully harness this existing intellectual capability is tight, lasting linkages that include Geoscience Victoria and universities, university-university, and all of these linkages tightly tied into industry to ensure that there are highly skilled explorers, and a natural flow of ideas emanating from the very best pure research put together with local geological framework in the exploration environment.

Government support for on-going, in-service workshops needs to be provided. These need to be international in flavour bringing the world's best together, assisting the industry in more readily identifying problems and empowering them to go to the next stage to solve them. There also needs to be debate involving the best minds to challenge old and new ideas so that improvements emerge.

The status quo is probably not an option for Victorian exploration at the moment. Risks need to be taken with new ideas, but these need to face scientific scrutiny.

Government support

Drilling assistance for true “greenfields” exploration has been helpful in many States and would also benefit Victoria. Victoria has very good regional magnetic and gravity understanding but even more detail could be added. Deep soundings with electrical methods (e.g. MT), particularly in the covered parts of the Murray Basin would be helpful to both map depth of cover and look for basement features of interest. The reclassification of historic sites (pre-1980) as greenfield sites would also be beneficial if drilling assistance at these sites was forthcoming.

(g) The different roles of government (this may include, but is not limited to, targeted industry engagement, facilitation and generation of geological survey information)

Geological data

A key finding of the Australian Government Policy Transition Group Report on Minerals and Petroleum Exploration in 2010 was that access to high quality geoscience information is fundamental to the assessment of prospectivity and area selection as it substantially reduces exploration risk⁸. The Victorian Government must provide a sustainable stream of funding to Geoscience Victoria to undertake geoscience and geospatial data gathering in addition to work being undertaken at a Federal level.

The Government must support Geoscience Victoria in ensuring that basic geological frameworks and geophysical data are collected, shared and utilised for exploration. More emphasis must be placed on Government being the primary custodians of data and generating new regional data. This does not need to be a function of the Department of Primary Industries and may be better placed to site with Geoscience Victoria as a more independent and technically focussed organisation, however Government must retain responsibility for this essential task.

Whilst the Department of Primary Industries must continue to play an important role in providing advice and guidance to explorers on exploration regulation and administration processes and in supporting Geoscience Victoria, it can also play an integral role in facilitating the permitting processes and support explorers in the early engagement with landholders who are generally unfamiliar with their rights and the rights of mineral explorers.

Taxation

The AusIMM has argued since 2006 for changes to the Federal taxation system to encourage junior explorers to invest in greenfields exploration and development. This exploration is critical to ensure that Australia continues to have a viable minerals sector well beyond the next decade. However the Policy Transition Group (PTG) when considering possible taxation schemes seemed to ignore the fact that exploration in Australia is falling, that exploration is not underpinned by current high commodity prices and high commodity prices do not by themselves drive further exploration activity.

The AusIMM supports the following Statement made by the Department of Primary Industries in their recent submission to the draft MRRT Bill (2011):

⁸ www.futuretax.gov.au/content/Publications/downloads/Minerals_and_Petroleum_Exploration_Report.pdf

Victoria laments the conclusion of the PTG that because Australia has efficient capital markets there is no need to consider Commonwealth support for greenfields exploration, and also notes that despite this the PTG suggested a mechanism by which this support could be provided. With a Commonwealth resources tax it would seem reasonable that the Commonwealth sustains the industry that provides that revenue stream. [It is generally considered that new resource discoveries are not keeping pace with the rate of exploitation of Australia's mineral wealth. The fiscal incentives to promote exploration that were originally proposed under the RSPT were expected to have a relatively high impact in Victoria. The PTG announced that there is currently no compelling case for such incentives and has withdrawn its commitment to this⁹.

The AusIMM seeks the Victorian Government's support in strongly encouraging the Federal Government to immediately task the Productivity Commission with the review of all aspects of exploration in Australia as a matter of urgency including taxation and other barriers to investment and exploration in general.

Brown coal

Given the recent public antipathy to brown coal exploration, there is little incentive for exploration in this area. Government can play a major role in disseminating factual information and not allowing marginal lobby groups to engage in scare tactics that are not based on science or experience.

The issue of brown coal is tied up in emotional debates over carbon and the false perception of many about alternate energy sources providing sufficient base load energy needs in the future. The Government must continue to play an important role in providing reasonably priced energy to Victorians. This is best achieved through coal at this stage. If the Government cannot support and promote brown coal exploration the mineral prosperity of the State is severely limited.

Environmental regulation

A recurring theme in this submission is that there is a lack of serious land-use evaluation when declaring parks and reserves in Victoria. In some instances the Government has in the past sought input to environmental management practices and then changed their mind and undertaken a closed process with limited notice and without reasonable explanation.

The Victorian approach to environmental regulation is viewed by the minerals sector as excessively obstructive in restricting exploration in some non-park reserves essentially making them the same as national parks. This is an inconsistent application of environmental protection principles and what conservation laws are designed to achieve. It again displays a lack of understanding of exploration, the exploration process and land management practices utilised in exploration activities. Many of our members have experienced situations where parks have been declared or restrictions put in place that prohibits exploration contrary to best practice and often common sense. These actions immediately devalue the company's exploration assets and their ability to contribute to Victoria's prosperity.

⁹ <http://www.treasury.gov.au/documents/2113/PDF/VicDPI.pdf>

CASE STUDY – WESTERN AUSTRALIA

The Exploration Incentive Scheme (EIS) is a WA Government initiative that aims to encourage exploration in Western Australia for the long-term sustainability of the State's resources sector. The \$80 million initiative, funded by Royalties for regions over five years, is designed to stimulate increased private sector resource exploration and ultimately lead to new mineral and energy discoveries.

Most of the activities in the EIS are focused on under-explored greenfield regions. New mineral and energy discoveries in these areas will also significantly increase knowledge of the State's geology and resources, and help increase employment opportunities.

The EIS will be managed by the Department of Mines and Petroleum (DMP), the State's lead agency dedicated to servicing the future development of Western Australia's resources industry. DMP has worked alongside the Department of Local Government and Regional Development in developing and approving the initiative's six programs.

The EIS is made up of the following six programs:

Exploration and Environmental Coordination in DMP

Program 1 (\$1.5 million) - Improving online mineral and petroleum tenement application processes.

Innovative Drilling

Program 2 (\$26.9 million) - Supporting innovative drilling in greenfield areas.

Geophysical and Geochemical Surveys

Program 3 (\$32.5 million) - Providing new data through airborne geophysics, seismic, gravity and geochemical surveys.

3D Geological Mapping

Program 4 (\$13.8 million) - Developing a system that allows all geoscience databases to be accessed seamlessly online.

Promoting Strategic Research with Industry

Program 5 (\$2.3 million) - Supporting the rapid transfer of new geoscience concepts, skills and technologies into the minerals exploration industry.

Sustainable Relations with Indigenous Communities

Program 6 (\$3 million) - Providing initiatives designed to assist indigenous and environmental approvals for exploration production.

For more information go to http://www.dmp.wa.gov.au/documents/090082_EIS_Brochure32.pdf

(h) Opportunities to increase the net benefits from Victoria's minerals and energy earth resources, and to potentially provide for self-sufficiency in low cost energy and extractive materials, consistent with the principle of economic efficiency

The Victoria Government does not have a good history in increasing the net benefits from minerals resources consistent with the principles of energy efficiency. The best example is the location of the Portland aluminium smelter without consideration for the cost and economic inefficiencies in providing the smelter with its energy needs. Although this was accepted as a political action at the time, it has provided great learnings for today and should not be repeated in the future.

The Australian mining industry is renowned for its innovation. Companies will actively pursue opportunities themselves and find their own ways to reduce costs by self-generation of energy through processing efficiencies and the use of low or zero emission energy technologies. If government takes action to minimise the regulatory duplications and unnecessarily obstructive restrictions, efficiencies can be achieved more readily by industry.

Raw potential

Victoria's economic history has been strongly influenced by the discovery of gold in 1851, the development of brown coal resources in the Latrobe valley in the 1920s which together with the discovery of oil and gas in Bass Strait in 1965 has ensured low energy prices. In Victoria's history, no other metal has matched gold with respect to its economic importance; but even gold's significance to the State's economy has been in decline since 1900. Many reasons explain this present circumstance for gold, but lack of further gold in the ground does not appear to be one of these, and based alone on area unexplored, a further 5000 tonnes of gold appears to be possible¹⁰.

There are only a handful of places around the world that have matched this State and produced as much gold from an area comparable in size to central Victoria. Except for Victoria, most of these areas have been extensively explored since 1980, and have yielded many modern discoveries, additions and extensions, that are now in production. Western Australia, which remained subordinate to Victoria as an all-time gold producer until after 1980, now produces more gold per year and worth than Victoria.

Improving the discovery rate

Gold exploration in Victoria is not particularly attractive at current exploration costs. Any changes in drilling efficiencies (measured as metres drilled per \$1M exploration spending) will translate to lower exploration costs. Streamlining policies, synergies of size in exploration efforts, and reducing regulatory delays will all assist. But there is also a limit to this 'cost cutting', and eventually the point is reached where further gains need to come from increased discoveries per metre drilled.

Improved exploration methods are one of the few ways to raise the discovery rate. New technologies for Victorian situations can assist, but critical will be relevant ideas to enhance gold exploration. Ideas, in fact, permeate almost all stages of the exploration process from selling the concept and raising finance, to regional area selection, to drill campaign siting, to interpretation of ambiguous results.

New technologies and new ideas will assist to lift the discovery rate, change the perceived probability of making discoveries, and improve the Fraser Institute's Mineral Potential rating for Victoria.

¹⁰ Phillips et. al (2001) Gold Prospectivity in Victoria.

As geological understanding of the State and of gold increases, the geological opportunities in Victoria increase. The 2500 tonnes mined so far have come from a limited part of the Victorian gold province that is exposed at the surface. There is potential around existing goldfields and especially under cover for a further 5000 tonnes given the large area underlying weathered and younger rocks.¹¹ Much of this area is not too difficult to access.

The AusIMM/The industry hopes that there is room for major increases in gold discoveries in particular in Victoria if exploration success rates can be lifted, and exploration activity levels increased. Six million ounces per year represents not only revenue of \$3 billion, new mine-based jobs in regional centres but more importantly a much greater manufacturing, service and support industry linked into those mines.

It is also worthwhile exploring in areas of outcrop to determine what was left behind in historic sites given our exploration forefathers did not have our understanding of the regolith profile, so therefore had no way to recognise or respond to gold depleted zones near the surface. The scope remains for more discoveries in outcrop areas.

(i) Consideration of the costs and benefits of Greenfields minerals exploration (economic, social and environmental), and whether there are opportunities to improve the management of potential conflicts between exploration and other land uses

Clearly there are significant benefits for economic development if exploration is successful. Mining generates significant revenues for the Local, State and National economies together with direct and indirect employment opportunities. Mining also assists in building and maintaining local infrastructure such as roads, services and amenities.

When exploration and subsequent mining occurs in rural and isolated areas there are additional benefits. Rural and isolated populations often have limited access to development opportunities. However, there are numerous examples within the minerals industry, where our companies provide a range of opportunities for these communities to develop their own capacity through education and training initiatives, employment and their general well-being.

Land Access

Private sector conservation in Australia has attracted increasing attention in recent years and has become a political tool to attempt to block exploration and mining in Australia. Australia has not, until very recently, had a tradition of privately owned parks, protected land or sanctuaries. Nor has it historically had private philanthropic trusts set up specifically to purchase and manage lands for conservation purposes. This picture has rapidly changed over the last decade with several groups now involved and being given a stimulus by government to do just that – block future resources projects and block Victoria’s pathway to improved prosperity.

Over the last decade or so, more than 2,000 farmers and graziers have placed conservation covenants on parts of their working properties. South Australia leads the way, with more than 1,400 covenanted properties. In Tasmania, there are more than 500 individual covenants, with over 100 negotiated as part of the innovative Protected Areas on Private Land Program.

Twentieth century environmentalists generally thought that the answer to declining vegetation and wildlife was to declare protected area status over areas. The call was generally for a national park. Nature was ‘safest’ in an area formally declared under legislation and managed by a government

¹¹ Phillips et. al (2001) Gold Prospectivity in Victoria.

nature conservation authority. After declaration the task, as encouraged by activist groups is to defend this sanctuary from any human impact which would undermine its natural values.

However, both an increasing knowledge base on biodiversity and an awareness of proliferating threats have shown that the private sanctuary model does not effectively assist in conservation efforts. There is now a broad scientific consensus that while Government must continue to engage in long-term, informed conservation and biodiversity programs, the increased focus on private lands through a piecemeal approach will not result in long term biodiversity gains¹².

By bringing conservation into the private sphere of property rights and purchasing power, conservation is removed by degrees from the public realm of political debate. This is not a fair and equitable approach to land access given every aspect of exploration and mining is widely and publicly debated. It is evident that the private approach to conservation is increasingly ideologically and politically motivated and that two sets of rules exist in Victoria in relation to land access that appears based on support or opposition to exploration and mining.

We also have a system of governmental grant making and environmental fundraising that rewards the doomsayers and alarmists. The Government's unquestioning support for this approach deflects attention away from the legitimate conservation and biodiversity projects and confines debate and action to what can be achieved by the market.

This approach will mean that the Government will inevitably sidestep important equity considerations about the private ownership of endangered species and remnant ecosystems, including questions about the private appropriation of common heritage, public accountability, and community participation. When conservation is turned into a political enterprise that is deliberately designed to create unnecessary barriers for one Industry over individual interests, the Government needs to reassess their approvals process for private sanctuaries and measure the long-term outcomes.

The current Commonwealth government believes that private conservation is a cost-effective way to meet biodiversity conservation targets. The National Reserve System Program (NRS) assists in funding the establishment of Private Protected Areas which are defined as:

A private protected area is a protected area other than a formally gazetted status protected area, managed for nature conservation and protected by legal or other effective means¹³.

Government through the tax system also supports the trend for private lands and private interests in "conservation". The taxation regime has been modified and has created more tax effective incentives for gifts of land and more recently for any loss of land value created by entering into a conservation covenants.

Under the program, a requirement of the funding is that the private protected areas will be managed principally as IUCN categories I-IV¹⁴. However a much broader concept of protected area is emerging. The concept of what is a 'sanctuary' or protected area has expanded in recent years into non-legislative forms like the IPA and 'multiple use' concepts like the bioregional model. This is blurring the previously well understood notion that protected areas are the primary mechanism for biodiversity conservation in Australia and that the primary function of protected areas is to promote the persistence of biodiversity. This deliberate blurring of what a protected area includes is strongly

¹² Sydee & Beder, 2006.

¹³ www.deh.gov.au

¹⁴ IUCN categories http://www.iucn.org/about/work/programmes/pa/pa_products/wcpa_categories/

influenced by political views about why and how we conserve nature and who are appropriate stewards of nature.

One mechanism to facilitate the conservation activities on private land is the use of conservation agreements (covenants, easements and other agreements) that enable values associated with conservation to be formally recognised and bound to land tenure. There is a growing demand in Australia for such agreements from individual landholders and conservation groups. This growing demand highlights the need for efficient and effective administrative and institutional arrangements.

Concerns about the ability of private sanctuaries and protected areas to adequately protect biodiversity stem from observations that public sanctuaries may:

- be poorly selected and thereby poorly represent biodiversity;
- be too small on their own to maintain viable populations of individual species and ecological processes necessary to sustain natural communities in the long term;
- face high costs;
- suffer off-area degradation encroachment.

When a decision making process regarding land access is arbitrary, without consideration of the wealth of knowledge mining and exploration companies have around land management and rehabilitation processes, instead relying on only a small part of the information available, the broader political and ethical values of the relevant communities and industry can easily be overlooked, misunderstood or ignored and conflicts invariably ensue.

This lack of consultation with affected parties is of great importance because it reflects the manner in which the adoption of property rights for exploration purposes in Victoria is intimately related to the politicisation of ecological issues.

As Government is responsible for approving protected areas, care should be taken to ensure that priority to applications should only be given to land areas that are highly threatened and ecologically significant examples of Australia's wildlife habitats and plant communities. The Government is urged to review conservation agreements to ensure that they are used to only protect land which has significant conservation, biodiversity, cultural or heritage features. Where these features are not evident the Government should remove the agreement and protected status.

CASE STUDY – BACCHUS MARSH

Bacchus Marsh has had a strong and sustained history of mining from 1915 onwards when stibnite was excavated in a mine that was one of the country's major antimony producers. Brown coal has been mined since the early 1940s. From the 1970s to 1990 coal from the Maddingly mine was used as a power source by the now closed cardboard manufacturing facility.

Throughout the 1990s the coal was used as a soil conditioner and natural fertiliser replacement for super phosphate. In 2004 the Calleja Group completed a 16,000 tonne per annum pilot plant to demonstrate the Coldry Process. The Coldry Process remains the only commercially viable technology to achieve dewatering of brown coal without government subsidy or negative environmental impacts.

Despite this strong history in mining and brown coal, many residents of Bacchus Marsh forget the mine and its considerable resources exist. This has been evidenced in the last few weeks where approvals have been granted to reopen the dormant coal mine. Yet a number of vocal residents, political hopefuls, and sensationalist journalists have reported a “new” open cut mine only have

detrimental effects on the community of 13,500 people who largely commute for employment. Only a select few have reported the economic benefits such as long-term local employment for 200-300 people for a minimum of 10 to 20 years, not to mention the indirect employment reopening the mine will create.

Even before the commencement of any new mining, politically motivated lobby groups have advocated that reopening of the mine will take the focus away from generating hypothetical jobs in industries related to climate change. Others have expressed concern over the impact mining on the existing site will have on non-related farm and agricultural land.

The Local Shire Government and State Government have been very quiet in trying to dispel myths and fears around mining in Bacchus Marsh.

RECOMMENDATIONS

1. Review and define the role of the Department of Primary Industries in regards to exploration outside the core function of the permitting and reporting requirements.
2. Streamline exploration licence reporting requirements to minimise double reporting.
3. Allow provisions within exploration legislations and reporting frameworks for greater flexibility in the application of licensing rules and regulations in times of difficulty.
4. Provide ongoing support for the office of the Victorian Mining Warden.
5. Reclassify all historic mining sites (pre-1980) as greenfield exploration sites.
6. Provide drilling assistance for true greenfields exploration based on interstate best practice examples.
7. Government must support and promote brown coal exploration in Victoria.
8. Play a major role in disseminating factual information to the community about exploration best practices and what to expect from exploration in collaboration with Industry.
9. Provide support to The AusIMM in strongly encouraging the Federal Government to immediately task the Productivity Commission with the review of all aspects of exploration in Australia as a matter of urgency.
10. Provide a sustainable stream of funding to Geoscience Victoria to undertake geoscience and geospatial data gathering.
11. Develop and implement, in consultation with explorers, a better mechanism by which companies can provide reasonable compensation to landholders.
12. Urgently review and revise current State approvals process for the granting of private sanctuaries in areas of known mineral resources.
13. Review all current conservation agreements to ensure that they are used to only protect land which has significant conservation, biodiversity, cultural or heritage features. Where these features are not evident the Government should remove the agreement and protected status.
14. Develop and implement processes whereby all areas granted protection status or declared private sanctuary are assessed for their conservation outcomes at regular intervals. Where there is no conservation outcome, protection status should be removed.

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