



INDEPENDENCE GROUP NL
ABN 46 092 786 304

**Greenfields Mineral Exploration
and
Project Development in Victoria**

**A Submission to the
Parliament of Victoria
Economic Development and Infrastructure Committee**

August 2011

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1.0 Executive Summary

Exploration and project development capital are scarce resources that are allocated by proponents to favourable jurisdictions. A favourable jurisdiction is not solely defined by geological prospectivity, but by a mix of indicators summarised by providing “business certainty”, that is, where government permitting and operational processes are transparent, logical, timely and have predictable outcomes.

Five years of exploration and development activities undertaken at one of the few significant mining projects in Victoria likely to be developed into an operating mine in the medium term, has identified a number of barriers to greenfields exploration and project development within the State. If these obstacles remain in place it will be difficult for Victoria to make a timely step-change from the current poor resources investment perception to one of vitality and attractiveness to new mining and exploration investment.

The barriers that Independence Group N.L. (IGO) has encountered during the exploration and development of the Stockman Project include:

- A complex regulatory environment that can be opaque, time-consuming and difficult to navigate;
- A generally very poor regulator understanding of exploration and mining activities and the inter-relationship of requisite permits required to operate;
- Exploration work plan requirements that are unnecessarily large and complex for relatively low impact activities;
- The lack of a lead agency which has the competency and authority to approve exploration work plans in their entirety. This is exacerbated by:
 - The lack of formalised time lines within which the DPI would approve work plans;
 - The absence of a Memorandum of Understanding (MOU) between the DPI and any other agency (apart from the DSE) regarding work plan approval timelines;
 - A consistent failure to adhere to the MOU between the DPI and DSE regarding work plan approval time lines;
 - A lack of delegated authority between departments that could permit the DPI to approve low-impact activities without referral to other departments.
- The rigid approach to the administration of vegetation off-sets requirements:
 - focuses solely on ‘environmental’ outcomes and fails to acknowledge or achieve balanced “triple-bottom-line” outcomes for projects located on Crown Land;
 - does not credit the limited and short-term impact exploration activities have on native vegetation,
 - does not credit the temporary impact or the mandatory bonding and rehabilitation requirements for mining activities
- An EES process which actively promotes uncertainty for the proponent by:
 - having no lead agency to manage the many, many government bodies a proponent must deal with (17 individual departments or agencies so far for the Stockman project)



- lacking firm timelines for regulators to respond to proponents, especially in the decision-making phase
- having a very poor track record of timely outcomes
- the very name (***Environmental*** Effects Statement) encourages regulators to ignore balanced triple-bottom-line outcomes and focus solely on ‘environmental’ outcomes – exacerbated by no lead agency managing the many disparate departmental participants when they adopt this single focus
- introducing significant ‘litigation risk’ via the Inquiry Panel process
- lacking an appeal process if a Decision Making Authority (DMA) issues a ‘left-field’ decision contrary to the lead-up steps (TRG process; Minister’s assessment; Inquiry Panel process)
- being poorly understood by most regulators involved in the process
- having difficulty in dealing with the flexible nature of resource projects (projects change size and shape as exploration and mining progresses and detailed knowledge of previous estimations becomes apparent e.g. an ore reserve changes) – compared to a well-defined civil construction project.
- The lack of progress made by the DPI to improve the prospectivity of Victoria through generation and marketing of pre-competitive data.

The continuing existence of these barriers to companies that are part of a global industry will result in ongoing and very significant hindrance to investment within Victoria. Simply put, the scarce exploration and project development resources will be applied elsewhere.

IGO believes that many of these barriers can be removed or greatly reduced by concerted effort by Government, in consultation with industry, resulting in increased mining exploration and production activity within the State, without compromising Victoria’s commitment to good environmental and cultural heritage protection, or good social justice outcomes.



2.0 Introduction

Independence Group N.L. (IGO) is a successful, diversified precious and base metals exploration and mining company based in Western Australia. It currently operates a nickel mine and two copper-zinc mines in that State and has active exploration interests throughout Australia, in northern Europe and in South America.

Jabiru Metals Ltd (JML - now a wholly owned subsidiary of IGO) was successful in a competitive tender for the Stockman Project (the project) against 13 other companies on the basis that it would commit to spending \$19.6 million over a five year period with aim of developing a mining operation if it proved to be economically viable. The proposed five year programme submitted to the Department of Primary Industry (DPI) as part of the tender process provided for:

- a staged evaluation of the mineralisation within the tenure;
- an evaluation of the requirements for an operation to successfully mine, process and market concentrates produced from the copper and zinc-rich ore; and
- to continue with exploration activities with the aim of locating additional zones of economic mineralisation.

The project is located approximately 19 km east of Benambra in north-eastern Victoria and originally covered an area of 166km sq. km. As at June 30, 2011 (the end of the fourth year of the project), a total of 30,000m of diamond drilling had been completed with statutory exploration expenditure totalling \$19.7 million. In addition to the statutory project expenditure outlay, a further \$6.6 million of non-reportable expenditure has been incurred against the project, including \$1.85 million for off-site accommodation and private land for the vegetation offset requirements.

IGO estimates that the total expenditure by the company on single project alone amounts to ~8% of the *total* exploration expenditure for the whole of Victoria during the 2007/08 – 2010/11 period (Figure 2-1). It is estimated that expenditure on the project during the fourth quarter of F.Y. 2010-11 will comprise ~35% of the total Victorian exploration expenditure (Figure 2-2). This clearly demonstrates the relative paucity of exploration expenditure in Victoria in the context of what is a modest minerals project in global terms.

The Stockman Project is located in State Forest, at the headwaters of the Tambo River in mountainous terrain adjacent to the Alpine National Park. In anticipation that the economics of the project will be positive, the Environmental Effects Statement (EES - Victorian) and the Environmental Protection, Biodiversity and Conservation (EPBC - Commonwealth) assessments were commenced in August and November 2010 respectively under the supervision of the Department of Planning and Community Development (DPCD).

Successful completion of the current works programme and permitting activities at Stockman has the potential to yield an ongoing mining and processing operation that will create approximately 300 new jobs, create a new base metals export industry for Victoria, generates revenue of approximately \$60M million for the State from royalties and taxes and increases the Gross Regional Product (GRP) of the East Gippsland region by \$680M over the (currently known) 8 year project life.



The unique location and environmental setting of this project, the experience gained to date undertaking exploration in some of the most prospective terrain in Victoria and the lessons learnt from engaging in the permitting process have provided IGO with a detailed understanding of the issues relating to exploring for and developing resources in Victoria.

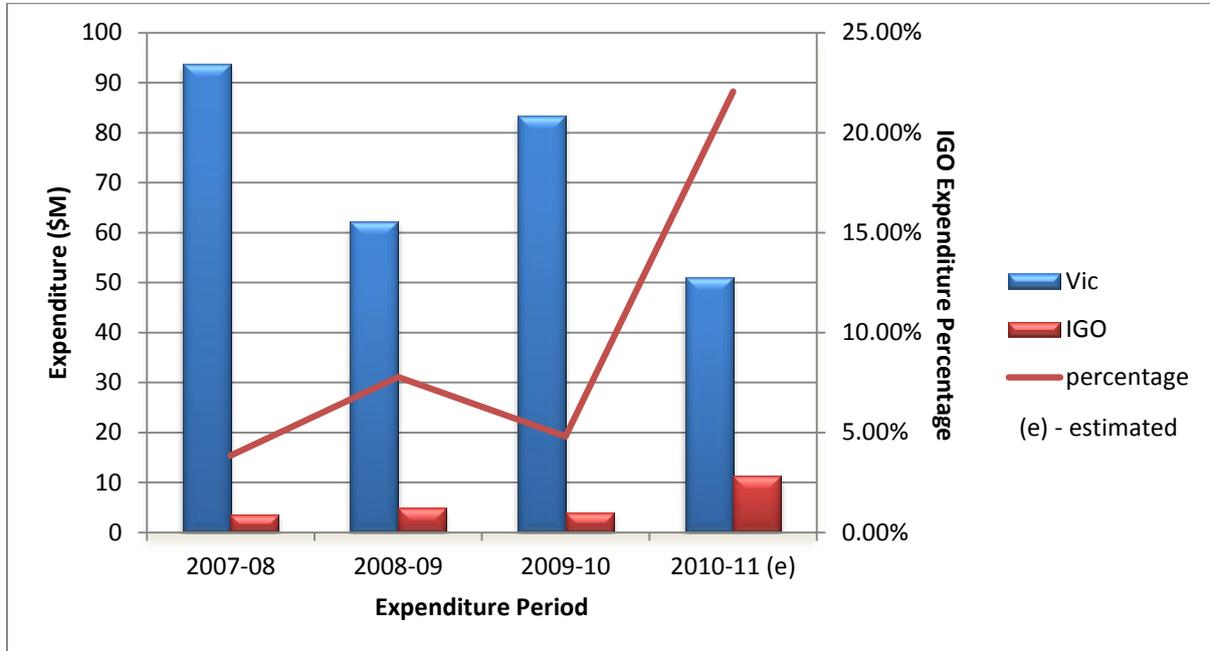


Figure 2-1: Stockman Expenditure vs. Victorian Total Exploration Expenditure 2007-2011 (data from ABS & IGO)

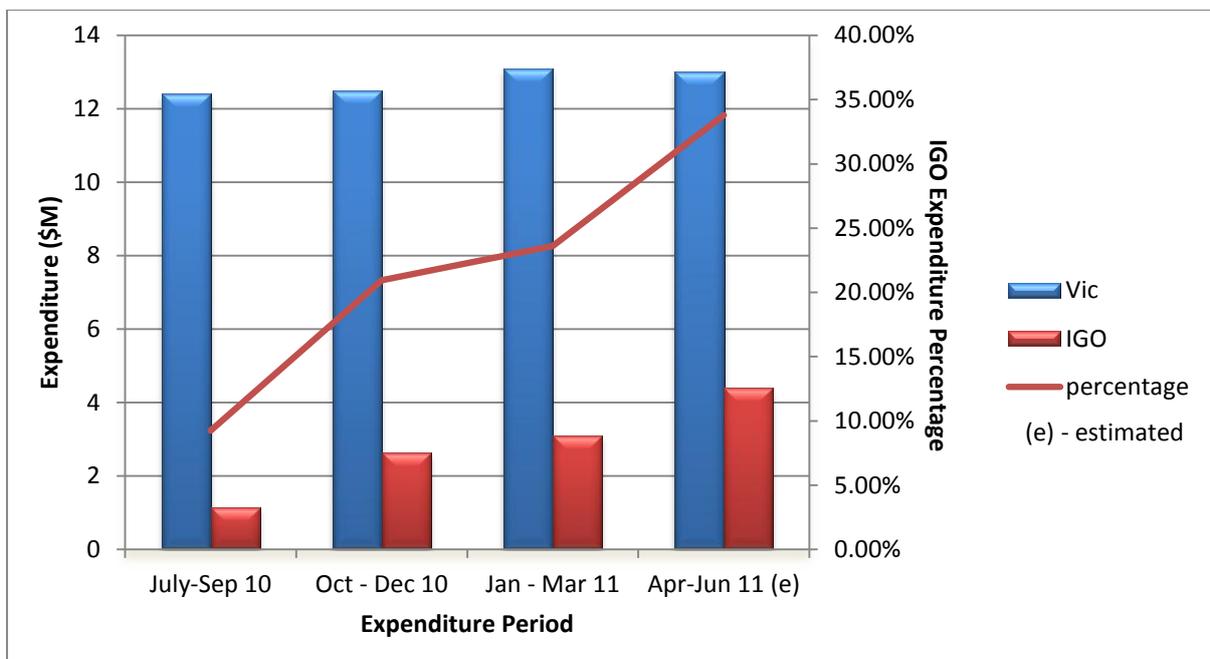


Figure 2-2: Stockman Expenditure vs. Victorian Total Exploration Expenditure 2010-2011 Financial Year (data from ABS & IGO)



3.0 Victoria's Prospectivity

...based on its knowledge of the current Victorian regulatory environment, IGO believes that it is likely that an explorer finding the geochemical anomaly that resulted in the development of the Wilga mine would question the viability of undertaking additional exploration, given the difficulties it would face permitting a potential mining operation

Victoria is in many respects reasonably well explored, however within the last decade the discovery of:

- mineral sands in the northwest
- the identification of molybdenum porphyry systems in the northeast, and
- the identification of geology prospective for gold beneath the basalt cover in the centre of the State

indicates that Victoria remains prospective for new discoveries in previously unknown locations as well as within traditional exploration targets areas. However, the combination of a number of factors including:

- rugged terrain,
- extensive areas of national park, state forest and private land
- declining Government financial support for the Geological Survey of Victoria, and
- the complex Government regulatory regime

greatly reduces the attractiveness of the state to exploration companies.

Exploration is a high financial risk business, and exploration capital is scarce and mobile, sensitive to many factors beyond mineral prospectivity. The perceived attractiveness of a region to explorers is strongly influenced by a company's ability to undertake its business activities in a cost-effective and timely manner with minimal sovereign risk. Victoria has for a long period of time held a reputation for being a difficult state in which to work. In the modern era (post 1980) the extremely protracted permitting exercise the then Western Mining Corporation was burdened with during their attempts to re-open the Bendigo goldfields created a strong perception of the State processes being labyrinth and needlessly time consuming. In addition, construction projects in Victoria are perceived to invariably become mired in union instigated delays and frustrations.

Like most reputations, good ones take a long time to generate and bad ones take a long time to repudiate. Timely reversal of Victoria's current poor reputation in relation to mineral exploration and development will require three distinct changes or actions to occur;

1. reversal of the condition that caused the initial poor reputation i.e. improved regulatory process, and
2. an external event acting as a catalyst such as government incentives to attract attention e.g. financial incentives (tax or royalty rebates); government generated data (geological surveys)
3. real examples of success under the new regime i.e. successful permitted and operating case studies



Under the current regulatory regime; if the Wilga deposit (the original discovery deposit within the greater Stockman project) was defined as a newly delineated geochemical anomaly rather than an established deposit, it is likely that most explorers reviewing the project would seriously question whether undertaking additional exploration was a worthwhile investment of time and money, given the difficulties it would almost certainly face permitting a mining operation even if an attractive deposit were to be found. Under such a scenario, it will have been the regulatory system rather than the innate mineral prospectivity of the project which would have prevented investment from proceeding.



4.0 The Regulatory Environment

...regulatory environment is both labyrinthine and opaque....

...vegetation off-set requirements do not deliver a robust “triple-bottom line” outcome....

...The unequal treatment of vegetation loss off-sets between two value-adding primary industries [Mining and Forestry] is a little known, but significant impediment to project development on Crown Land...

...lack of a lead agency with decision making authority is a significant impediment....

...the EES process is poorly informed in relation to mining activities and decision making processes....

The regulatory environment and its relationship to exploration and development activities in the context of the Stockman Project is both labyrinthine and opaque. While individual Acts and Regulations and their inter-relationship between other Acts and Regulations are reasonably clear, the knowledge of which Acts, Regulations and Policies are relevant to given set of circumstances is not readily apparent to proponents or regulators, particularly when activities are conducted in State Forest located on Crown Land.

For new exploration entrants into Victoria, this lack of transparency creates an immediate cost in time and money as they attempt to understand and navigate their way through the regulatory environment. In addition, as a project progresses towards active development, it is clear that those responsible for the day to day administration of the regulatory environment are less likely to understand the interactions and requirements of each relevant piece of legislation. By the time a mining project reaches the permitting stage, the regulators lack of knowledge of both mineral development processes and the inter-relationships of the requisite permits results in additional time delays while these are resolved.

This poor outcome is further exacerbated as there is no clearly defined, step-by-step pathway or ‘roadmap’ of the sequencing of approvals that may be required and the timeframes in which regulators are required to respond. IGO’s experience to-date suggests that this sequence of approvals may actually be defined “on-the-run”, particularly in the latter parts of the EES process.

Attempts by regulators to inform proponents are designed by the regulators without a knowledge what the proponents really need to know or more importantly how they require that knowledge to be delivered.

The development time lines that proponents need to work to maximise the benefits of economic cycles are often critical to the long term economic viability of projects. However there appears to be little understanding within regulatory agencies of these issues, or no reflection of this within the agency approvals timelines. Experience has shown us that when one individual within a department goes on leave, resigns is reassigned, or an interagency issue arises, the approvals process stops.

Adherence to defined timeframes, improved transparency, and approvals process tracking would assist in overcoming some of the key issues related to the Victorian regulatory regime.



Improvements in these areas have been made in other jurisdictions, and have resulted in greatly increased confidence by mining and other companies in the requirements and procedures for project approvals.

4.1 Exploration Activities

Minerals exploration in Victoria is hampered by the unduly bureaucratic work plan requirements, and the general focus is on process rather than outcomes. Exploration activities are governed by the *Mineral Resources (Sustainable Development) Act 1990*, which is administered by the DPI, with the DSE acting as the responsible land manager in crown land areas such as State Forests within which IGO for the most part currently operates.

Work plans

Work plans are required for all exploration activities which are not defined as “low impact” activities. In areas such as the Stockman Project which is located in State Forest and with work areas that often impinge upon an area of environmental or cultural sensitivity, (e.g. proximal to a water course); a work plan may need to be reviewed by the following agencies:

- Department of Primary Industries (DPI);
- Department of Sustainability and Environment (DSE);
- Catchment Management Authorities (CMA);
- Worksafe, and
- Aboriginal Affairs Victoria (AAV) (required for approval of the Cultural Heritage Management Plan)

Although this level of review is appropriate for large projects which have the potential to have significant impact, it is excessive for most exploration activities. In many cases, a work plan will take significantly longer to write and have approved than the period undertaken to complete the proposed drilling program. The use of exploration guidelines, environmental bonds, the requirement to adhere to other Acts such as the Aboriginal Heritage Act, and ultimately the ability of the Minister to remove tenements from non-compliant companies means that there are sufficient controls in place and the risk of non-compliance is already low. Furthermore, because of the small scale and ephemeral nature of exploration activities, the overall environmental impact on a site over the medium to long term is typically very low.

A risk based approach to dealing with issues arising from exploration activities, involving an initial screening to identify likely risks and possible consequences, would in IGO’s view, streamline the process. Those activities identified as low risk could be simply subject to compliance with concise guidelines (rather than requirements for complex workplans), with other higher risk activities subjected to further requirements and tighter guidelines.

The DPI and DSE have a Memorandum of Understanding (MOU) under which the DSE will respond to a work plan within 28 days of receiving it. In practice, this is often not met, and there is no such requirement placed on any other agencies, nor on the DPI itself. In some cases, the DPI has had a



work plan for several weeks before referring it. Any timeline needs some consequence for the department that is failing to meet its obligations.

An effective solution would be for the DPI to become the lead agency with delegated authority (from other agencies) to approve all work plans without requirement for inter-agency referral, or alternatively to have the power to approve a work plan if other agencies fail to respond within a well-defined time period. Both these scenarios would require DPI to be better resourced and the staff better trained than they currently are so that they can make suitably informed decisions i.e. a higher level of competence than currently exists.

Vegetation offsets

Under the *Native Vegetation Framework* (the Framework) native vegetation which is cleared must be offset at an alternative location and is designed for situations where the vegetation removal is permanent. However, the Framework is not designed for temporary impacts and therefore activities such as forestry are exempt as it is recognised that revegetation (both natural and active) will replace the vegetation which is removed. Mineral exploration activities are not exempt, even though the impacts are demonstrably less than forestry, both in terms of total vegetation cleared and the potential to decrease ecological diversity, and the bonded rehabilitation requirements of tenements.

Procuring land suitable for vegetation offsets is potentially very expensive and time consuming, and may in fact be practically very difficult. Furthermore, the delays incurred by a proponent's ability to source an off-set and obtain it in a timely manner to enable exploration to commence works against the requirements to meet expenditure commitments under the MRSDA as:

- Off-site expenditure for vegetation off-sets is not an approved MRSDA Schedule 14 item,
- A licence holder is still required to meet its expenditure obligations, whether or not off-sets have been obtained.

The issue of availability of off-sets and their prohibitive cost is dealt with in relation to development activities below.

Cultural Heritage Management Plans

Cultural and Heritage Management Plans (CHMPs) are required for all ground disturbing activities within defined areas of cultural sensitivity. Where exploration occurs within these areas, work plans will not be approved without first having a CHMP prepared and approved. CHMPs are expensive to complete as they require archaeologists and representatives of the local aboriginal groups to complete detailed site visits, and can result in significant delays while this work is undertaken. However, the risk of exploration activities destroying sites of *significance* is very low. In the majority of cases a risk assessment, completed by an archaeologist and traditional owner representatives, would be adequate in identifying areas to be avoided. Site monitoring during physical exploration activities will also assist in ensuring no inadvertent damage to sensitive sites.



4.2 Development Activities

The labyrinthine nature of the regulatory process is further exaggerated when a project is located on Crown Land and situated in a sensitive environmental setting, however this only becomes apparent when the EES process commences, and then seemingly on a somewhat ad-hoc basis.

The lesson learnt to-date by IGO as the Stockman Project progresses through the EES process is that the regulatory environment is overly complex, convoluted and significantly flawed when applied to projects of substantial size such as Stockman. This opinion is supported by the following observations:

Number of agencies involved – The location of the Stockman Project on Crown Land in State Forest, adjacent to the Tambo River, coupled with its proximity to the drainage divide between the Murray Goulburn Rivers and the presence of three bio-regions provides a number of unique challenges for this regionally significant project. The EES process (and parallel EPBC assessment) together with community consultation activities requires contact, or negotiation with 17 agencies or semi-government bodies (Table 4-1), without any agency taking a lead or co-ordination position. With the exception of the Commonwealth (the EPBC assessment, which is managed under the EES process through a bilateral agreement), the majority of these bodies are also represented on the Technical Reference Group (TRG) to advise (but not necessarily align) on the requirements for preparation of the EES documentation.



Table 4-1: Agencies Involved Through the EES Process or Direct Consultation

State
Department of Primary Industries (DPI)
Department of Sustainability and Environment (DSE)
Environmental Protection Authority (EPA)
Department of Planning and Community Development (DPCD)
Aboriginal Affairs Victoria (AAV)
Native Title Services Victoria (NTSV)
Regional Development Victoria (RDV)
VicRoads
East Gippsland Shire Council (EGSC)
ParksVic
Alpine Shire (AS)
Southern Rural Water (SRW)
Goulburn Murray Water Authority (GMWA)
East Gippsland Water (EGW)
East Gippsland Catchment Management Authority (EGCMA)
North East Catchment Management Authority (NECMA)
Commonwealth
Department of Sustainability, Environment, Water, Population and Community (DSEWPac)

Decision making time frames – Adherence to the timelines outlined in the MOU between the DPI and DSE are often not kept with little or no explanation to the proponent as to the cause of delays. Routine approvals involve lengthy, frustrating and at times inexplicable delays and clearly documented process timelines are ignored, e.g.:

- **EES referral timeline** - Based on its understanding of the issues involved, IGO volunteered to undertake an EES, and the requisite EES Referral was submitted for a decision on 26/05/2010. The Minister for Planning is required to give a ruling on whether an EES is required within 20 business days however the decision was not made until 16/10/2010, a total of 103 working days and well outside the required timeframe. Thus, in this example the very first time guideline (and that of a completely non-controversial or difficult issue) was massively over run.

By way of contrast, a referral to DSEWPac under the requirements of the *Environment Protection and Biodiversity Conservation Act 1999* (Cwth) was made on 02/11/2011 and a decision that an EPBC assessment was required was made on 29/11/2010.

- **Routine, day to day approvals** - These are stifled by excessive bureaucracy. The most extreme example of this to-date has been the handling of the an application to drill



monitoring bores on Crown Land which are required as the result of a direction from the EES Technical Reference group (TRG), of which the DSE is a party. Thus far this simple request has required input from at least seven officers in three regional offices.

This suggests that the decision making structures and processes within the DSE are significantly flawed and are not geared to providing timely resolution of permitting issues, particularly for projects which have the potential to provide significant regional benefits.

Failure to acknowledge the importance of “triple bottom line” outcomes – A clear inference from the current EES evaluation of the Stockman Project is that “triple bottom line” outcomes for the project are the sole obligation of the proponent and that government agencies, the DSE in particular, are not obliged to consider anything other than environmental outcomes.

Given that the guiding principal behind an Environmental Effects assessment (*Ministerial Guidelines for Assessment of Environmental Effects under the Environment Effects Act 1978; DSE 2006*) is to evaluate the potential environmental *and* economic *and* social effects of a project *and* relevant alternatives, this is a poor outcome and requires immediate attention.

Inflexible nature of “the Framework” - The *Native Vegetation Management: A Framework for Action (DRNE, 2002)* establishes the strategic direction for the protection, enhancement and revegetation of native vegetation across Victoria. Its stated goal is: “A reversal, across the entire landscape, of the long term decline in the extent and quality of native vegetation, leading to a net gain”. Two examples of the inflexible nature of the Framework when applied to achieving the stated goals at the Stockman Project are described overleaf:

Example 1

The Stockman Project area is located in densely forested Crown Land which possesses diverse and abundant flora that has demonstrated significance resilience to the effects of the recent 13-year duration drought and the 2002-2003 region-wide devastating bush fires. A direct consequence of the projects’ location within State Forest is that mineral exploration and proposed mine development activities will incur significant vegetation off-set obligations. To enable the Stockman Project to be constructed and operated in an economically viable manner will require the clearing of vegetation for infrastructure such as a processing plant and subsurface access.

The clearing required to enable the construction of the anticipated infrastructure and to provide a safe and efficient operating environment is located at the junction of three bio-regions:

- East Gippsland Uplands (EGU);
- Highlands – Northern Fall (HNF), and
- Victorian Alps (VA).

There are 10 Ecological Vegetation Classes (EVCs) present with the following conservation status:

- 7 of Least Concern;
- 1 is Depleted;
- 1 is Vulnerable, and



- 1 is Endangered

The distribution of the EVCs present, their conservation status and the availability of secured off-sets in relation to the percentage of area anticipated to be cleared is shown in Table 4-2.

Table 4-2: EVC Availability for Off-Setting Purposes

EVC Status	% of Cleared Area	Available for Purchase	Off-sets Secured	Land Tenure of Off-sets
Least Concern	95.0	✓	✓	Private
Depleted	2.5	✓	✓	Private
Vulnerable	2.0	✓	✓	Private
Endangered	0.5	✗	✗	Crown

The DSE have indicated that their preference is that development proponents utilise Bush Broker for locating and securing vegetation off-sets; however in IGO's experience, this market system is substantially flawed as:

- The Bush Broker market lacks transparency;
- EVC stocks are limited in distribution and availability, and
- There is no control by the proponent over offset management program quality, i.e. potential reputational risk.

The Bush Broker system also lacks significant scope, further compounding the lack of transparency which is demonstrated by recent trading history for all Habitat Hectares (HHa) across the whole of Victoria:

- Total HHa traded to-date: 234HHa, and
- The largest trade undertaken in a single parcel is ≤60HHa.

The prices achieved for the HHa's traded to-date varies according to bio-regions, however can be summarized as:

- \$35k - \$216k per HHa across all bioregions;
- There is no separate pricing available for trades in EGU or VA bio-regions, and
- Prices achieved in "all other bioregions" was \$134k per HHa (The Stockman Project is assumed to fall into this category)

The vegetation off-sets requirements for Stockman under the current proposal are:

- 147 HHa inclusive of fire breaks (equivalent to **63% of all Bush Broker trades to-date**), and
- 5,088 Large Old Trees (LOTs).



If the vegetation off-sets required for Stockman were available through Bush Broker, then based on the pricing for “All other bio-regions”, the project would incur the following costs:

- HHa – 147 x \$134,000 = **\$19.7 million**, and
- LOTs – 5,088 x \$1,500 = **\$7.6 million**.

At \$27.3 million, the potential cost of Bush Broker sourced off-sets represents a substantial increase in project capital expenditure. In stark contrast to this, private land purchased by IGO at less than 5% of the Bush Broker option have successfully secured 99.5% of the off-sets required.

The EVCs which cannot be secured on the open market, or within Bush Broker, amount to 0.5% of all clearing required. These EVCs can be classified in general as *Alpine Sphagnum Bogs and Associated Fens*, which have the following attributes:

- They occur in narrow, cold, damp streamlines, generally at +1000m elevation;
- Appear to be only located in State Forest and National Parks;
- Have no off-setting criteria, and
- Based on extensive enquires, are not available on the open market, therefore it is assumed that no off-sets are available or will become available in the medium term.

The limited distribution of this particular EVC is reflected in its listing under the Victorian Flora and Fauna Guarantee Act 1988 (FFG Act) and the Commonwealth EPBC Act. In addition, this EVC is poorly documented and is under threat from feral horses, deer and cattle. The inflexible nature of the Framework in achieving an equitable outcome in off-setting this particular EVC is highlighted by the lack of agreement achieved to-date during discussions held as part of the EES process, i.e.:

DSE believe:

- That the proponent must approach landholders to purchase land.
- If no offsets are available, then the tailings dams and mill should be shifted elsewhere, incurring huge additional operational cost over the project life (+\$50M)
- The legitimate “*Payment in lieu*” option as an off-set action should be refused.

Whereas IGO’s position is:

- That the Company refuses to be a “market-maker” for a market that doesn’t exist;
- That a negotiated settlement is the best outcome, i.e. the best method to maintain the viability of existing EVCs of this type is to:
 - Support research into maintenance and propagation of the EVC, and
 - Fence and manage the largest patches of the EVC to exclude feral animals.

Given that one of the complimentary goals of the FFG Act is to “...*manage potentially threatening processes...*”, and that feral horses are also regarded as a threatening process under the same Act, it is unclear why the DSE refuse to acknowledge the benefits of achieving a negotiated outcome and, as a consequence, deliver an outcome that will ultimately contribute to biodiversity protection and enhancement.



Clearly a situation like this, in particular if it develops into a full impasse, is real disincentive to project proponents. It could however be easily resolved through a more flexible approach to offsets via 'payment in lieu' processes, or binding proponent commitments to rehabilitate degraded or currently poorly protected relevant habitat areas.

Example 2:

The treatment of temporary vegetation loss incurred during mine development is the same as for forestry activities.

The Framework recognises that *"...The harvesting of naturally-established native forest has environmental consequences but is clearly a different level of impact to permanent clearing..."* (DRNE, 2002, p26). While this recognition is related to harvesting of native forest on private land, clearing of State Forest for mine development is treated differently for vegetation off-set purposes. In addition, it appears that timber harvesting including clear felling activities on Crown land, are also exempt from the requirements of the Framework (DSE, 2007).

The treatment of areas of the Stockman Project when developed into a mine, which will result in temporary loss of vegetation under the Framework when compared to forestry activities in the same district, is demonstrably inequitable.

The unequal treatment of vegetation loss between two value-adding primary industries is a little known, but significant impediment to project development. The logic behind the adoption of this position is not clear.

4.3 Regulatory Impact on "Triple Bottom Line" Outcomes

Acts and regulations such as the Framework are prescriptive and have a single focus, which does not extend to consideration of economic and social impacts. Consequently, if determination of vegetation off-set requirements is difficult or impossible to achieve when the issues to be assessed fall outside of the accepted norm, it is likely that an acceptable "triple bottom line" (TBL) outcome will also not be achieved.

The inflexible nature of this type of regulation is a **significant deterrent** to exploration and development of mineral resources in Victoria. Clearly, if the Government is committed to TBL outcomes, revision of the various Acts, regulations and other instruments currently impacting on proponents to ensure alignment is an important issue.



5.0 Fees, Charges and Royalties

...failure to adequately capture all relevant exploration or development expenditure relating to a tenement does the State a disservice...

...the revenue stream provided by royalties should be directed at providing support for regional infrastructure in areas where none exists or is in a poor state of repair....

5.1 Allowable Expenditure

Schedule 14 (s14) of the MRSDA Regulations is highly prescriptive in the items that are considered to be allowable annual expenditure on a tenement. While this is an acceptable administrative requirement aimed at trying to ensure on-ground expenditure, it fails to take into consideration all of the obligations that a proponent must meet under other legislation and regulations in order for it to undertake on-ground activities. In situations where these obligations incur expenditure, which is not directly attributable to activities on a licence, then that expenditure cannot be accrued towards the annual commitment required for the licence.

Specific significant items currently excluded from s14 when not directly attributable to a tenement are:

- Off-site expenditure for vegetation off-sets (required under *the Framework*);
- Capital works required to support the on-tenement activities, and
- Expenditure related to the EES process.

For a project like Stockman, the amounts involved are considerable (Table 5-1).

Table 5-1: Stockman Project Expenditure Excluded From Schedule 14 Reporting

Item	Capital Expenditure	% Excluded from s14
Vegetation off-set properties	\$1.2 million	100%
Accommodation	\$0.6 million	100%
EES Studies and activities	\$2.0 million	less than 20%

The current inability of the existing expenditure reporting requirements to capture all associated costs for activities undertaken on, or associated with a tenement does not enable an accurate picture to be developed of the annual expenditure being directed at exploration and development in the State and as such does the State a disservice. A flow-on effect of this is that not capturing total exploration and development expenditure and then breaking it down into relevant components fails to deliver to new prospective mining entrants the true cost of “*doing business*” in Victoria.



5.2 Use of Mining Royalties to Support Development

The Stockman Project is located in a relatively remote area of the State. In common with many non-urban areas in Victoria, the regional infrastructure in the vicinity of Stockman is either run-down or cannot support the demands of a significant new industry. In particular, the northern part of the East Gippsland Shire has a variable quality road network, inadequate and unreliable electricity supply and poor telecommunication facilities.

For a new export industry such as Stockman, the lack of, or inadequate nature of these facilities, on which it is reliant in order to be competitive, is a significant impediment.

It has been IGO's contention from the outset of this project, that the company's prime focus and responsibility is to explore for, develop and mine the resources present at Stockman, and that it is not responsible for the construction and operation of large scale regional infrastructure that will ultimately be utilised by the broader community, which is the responsibility of the State.

Where regional infrastructure is either non-existent, run down or incapable of supporting new industry, it is appropriate that the State utilise revenue generated from royalties to provide the required support. Failure to be seen to be providing the fundamental infrastructure such as is available in urban centres to regional areas where significant mining development is anticipated is considered by IGO to be a significant disincentive to investment and a poor outcome for the local communities in terms of lasting benefits as well as to hamper the potential cluster effect of new businesses that are 'grub-staked' by an active mining operation.

6.0 Perceptions of Victoria's Prospectivity and Regulatory Environment

The Fraser Institute Annual Survey of Mining Companies (*McMahon and Cervantes, 2011*), has undertaken annual surveys of mining and exploration companies since 1997 to assess how mineral endowments and public policy factors such as taxation and regulation affect exploration investment. One of the outcomes of this survey is a composite index called the Policy Potential Index (PPI) which measures the overall attractiveness of all the jurisdictions surveyed. The PPI is normalised to a maximum score of 100, thus a jurisdiction which ranks first under the "Encourages Investment" response in every policy area would score 100; conversely one that scores last in every category would have a score of zero.

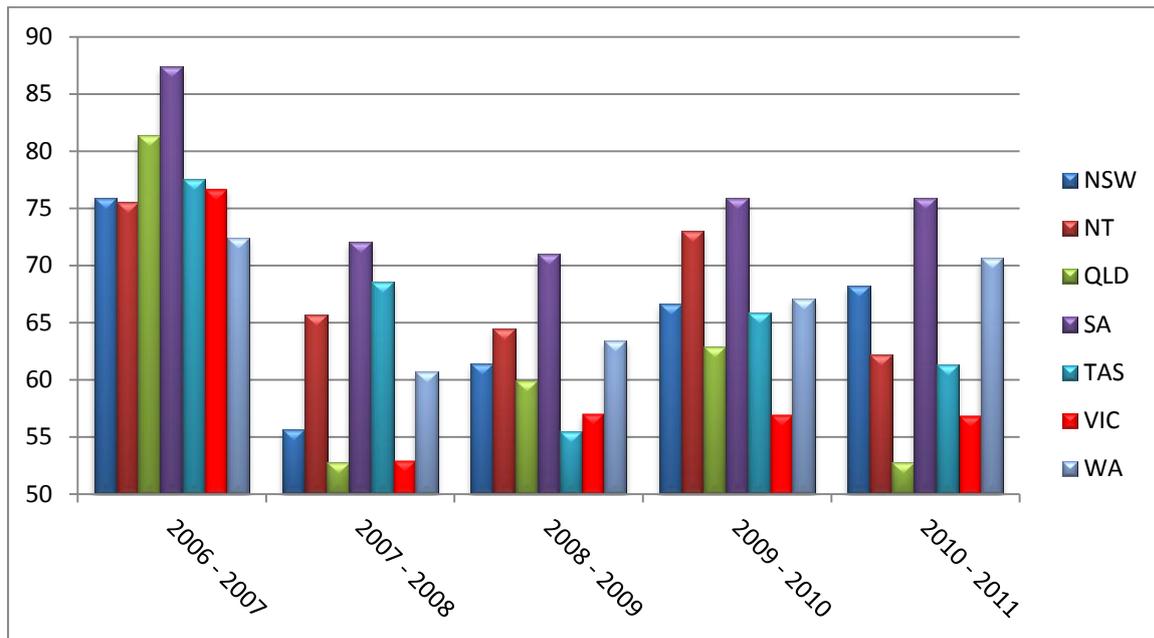


Figure 6-1: Victoria's Policy Potential Index Compared to other Australian States

Figure 6-1 summarises Victoria's position compared to the other Australian States, where it can be seen that for four out of the last five years, Victoria is either ranked last or close to last. Conversely, South Australia has consistently scored the best of all States, in part due to a consistent and focussed effort to provide precompetitive data with innovative exploration prospectivity models.

It is possible that Victoria scores more poorly than really should be the case due to the lack of new projects which means that old prejudices and perceptions linger without being demonstrated to be false. If this 'vicious circle' really is the case, then a catalyst to actively promote the reality of the State's prospectivity and regulatory environment is needed.

Efforts by Geoscience Victoria to be such a catalyst and to attract capable exploration and mining companies to Victoria have lagged well behind similar efforts in jurisdictions such as South Australia. The can in part be ascribed to a variety of factors including:

- A lack of funding for Geoscience Victoria that would permit creation of relevant pre-competitive datasets.
- A lack of geoscientists within the department that have a recent, relevant and robust industry background with commensurate global industry contacts, in part be due to the low levels of remuneration relative to the wider minerals industry.
- A focus on deposit styles that are not attractive to mid-tier and major companies that have the resources to prosecute successful exploration and development campaigns

6.1 Comparison of Regulatory Environments

Comparison of the development timeframe for the Stockman project with two similar projects in Western Australia is instructive of the difficulties faced in Victoria.



IGO through its subsidiary companies operates copper-zinc and nickel mines in Western Australia. It recently discovered significant zinc-copper mineralisation (Bentley) some 4 kilometres away from the existing Jaguar Mine and proceeded to permit it to provide additional feed to the existing mill; this is a routine brownfields activity in a State with a substantial mineral endowment. It has been particularly unclear during the current Stockman EES process (despite specifically querying the various leading regulators) whether discovery of new ore bodies within the project area in addition to the known Wilga and Currawong deposits would result in a complete new EES process. The fact that nobody within Victoria knows the answer to this question is damning.

Another company, Sandfire Resources NL, discovered a new geologically similar copper-gold resource (DeGrussa) in Western Australia at approximately the same time as the Bentley discovery and commenced permitting activities in parallel with ongoing exploration and development programmes. As a new discovery, there were no pre-existing processing facilities, no recent historical workings nor mining associated infrastructure present in the immediate vicinity and as such is classified as a greenfields discovery.

Even though the physical environment of the two Western Australian projects may be different to that of Victoria, the permitting processes required for the two WA examples in WA (summarised in Table 6.1) describe activities and processes that are analogous to those required under Victorian legislation. Virtually all of the same foundation technical studies, assessments and permits are required. Figure 6-2 is a schematic summary of the of the key projects stages from initial evaluation, to permitting, development and then full operation. This summary clearly shows that for similar scale projects, the permitting process is the one area where there are significantly different timeframes.

There is no evidence to suggest that the extra permitting time required for a Victorian project results in a superior outcome, for anyone. In fact, the opposite can be argued; the extra time required to navigate the bureaucratic processes only results in increased project compromise to focus groups (compromise that is illogical within a balanced triple bottom line assessment) and increased desperation from an exasperated proponent to pragmatically salvage some return on the investment and get operating.

In any business the old adage “time equals money” applies. An extra year of permitting at Stockman carries a direct cost of approximately \$2M plus the opportunity-cost of not generating cash flow with this particular chosen investment. These extra costs and ‘in-desperation’ compromises only serve to reduce the overall robustness of a project, decreasing the available cash flow that can be re-invested into continued operation (e.g. low grade extensions of the deposit) or into exploration and new project development. Thus the potential life of a project will be inherently shorter than may have been in an process-efficient jurisdiction. In reality, extra permitting time equals extra permitting cost which has a cumulative effect in reducing the attractiveness of any investment decision.

Based on IGO’s experience in the two jurisdictions of Victoria and Western Australia, the key differences are:



- Permitting and approval processes in Victoria:
 - A lack of clear, consistent timelines; If statutory timelines do exist, they are not consistently adhered to by the regulators;
 - A lack of clear guidelines regarding the extent and nature of requisite supporting documentation;
 - A lack of publically available benchmarks or checkpoints against which a proponent can gauge progress through the approvals system, and
 - Regulators are unable to provide prompt feedback to proponents when issues arise.
- There is no apparent understanding by regulators that active facilitation of the process is a necessary counterpoint to good regulation;
- The majority of Victorian regulators appear to be process driven and not outcome focussed,
- There is a decentralised spread of regulatory agency offices and each agency has a different set of geographic boundaries over which they have control. This weakens communication between departments. For example; the DPI based in Benalla and DSE based in Swift's Creek and Bairnsdale administer aspects of the Stockman project, even though DSE have a presence in Benalla.
- There is a lack of delegated authority for approvals by other departments as is found in other jurisdictions (e.g. Western Australia where some aspects of safety and environmental regulation is delegated to the Department of Minerals and Petroleum via MoU and other processes), and

Although it appears that a broad perception exists in Victoria that mineral exploration and subsequent development can, when efficiently administered, provide lasting, beneficial outcomes, regulators involved in the approvals process in Victoria, unlike those in Western Australia, are poorly briefed on the nature of mineral exploration, development activities and processes and the benefits to the wider community that may occur.

6.1 Potential Outcomes

Given IGO's current experience of the regulatory environment as applied to mineral exploration and development in Victoria (Section 4 above), coupled with the overall ease of permitting activities in other jurisdictions (e.g. WA), there is a risk that without rapid and substantial change, exploration activities will continue to decline.



Table 6-1: Western Australian and Victorian Project Approval Timelines

Activity	Bentley (WA) (Brownfields)	DeGrussa (WA) (Greenfields)	Stockman(VIC) (Greenfields / Brownfields) ⁽¹⁾
Significance at State level	Minor	Medium	High
Significance to Company	High	High	Medium
Nearest township	Leonora, 60km to south	Meekatharra, 120km to south west	Benambra 19km to east
Land use	Pastoral Leasehold	Pastoral Leasehold	State Forest
Discovery announced ⁽²⁾	11/03/2009	30/04/2009	Known prior to tender process
Mineralisation style	Volcanic-hosted massive zinc-copper-silver-gold sulphides	Volcanic-hosted massive copper-gold sulphides	Volcanic-hosted massive zinc-copper-silver-gold sulphides
Mining Lease lodged	13/08/2009	19/03/2010	06/09/2009
Land access agreements/Native Title process finalised	N/A – part of larger Jaguar Project	09/12/2010	18/10/2010
Mining Lease granted	03/02/2010	09/12/2010	10/11/2010
PER ⁽³⁾ or EES required, commenced	N/A (PER not required)	N/A (PER not required)	EES, 26/05/2010
PER or EES completed	N/A	N/A	EES, Possibly Q1 2012
Regulatory approvals formal start - finish	Q3 2010 - Q4 2010	Q3 2010 - Q2 2011	Q4 2010 - possibly Q3 2012
Mining type	Underground	Open pit and underground	Underground
Mining commenced	Q4 2010 (Decline access to underground)	Q4 2011 (Decline access to underground)	Possibly Q1 2013 (Decline access to underground)
Processing plant construction, anticipated capacity	N/A, already exists. 0.65M tonnes per annum	Q3 2012 1.5M tonnes per annum	Possibly Q1 2013 1.0M tonnes per annum
Key contracts announced, anticipated costs	29/04/2010 Underground development (\$32M)	02/06/2011 Underground mining & processing plant (\$270M plant and infrastructure; \$130M mine development).	None confirmed, Est. \$200M
Full commercial production expected	Q1 2012	Q1 2012 – direct ship ore Q3 2012 – concentrate production	Possibly Q2 2014
Anticipated mine life	8 years	7 years	7 – 8 years
Export products	Yes	Yes	Yes

Note (1): - The Stockman site has hosted a previous modern-era mining operation, but a closure and rehabilitation phase had been undertaken

Note (1): - Dates as per ASX announcements listed on each Company's web site

Note (2) – PER = Public Environmental Review

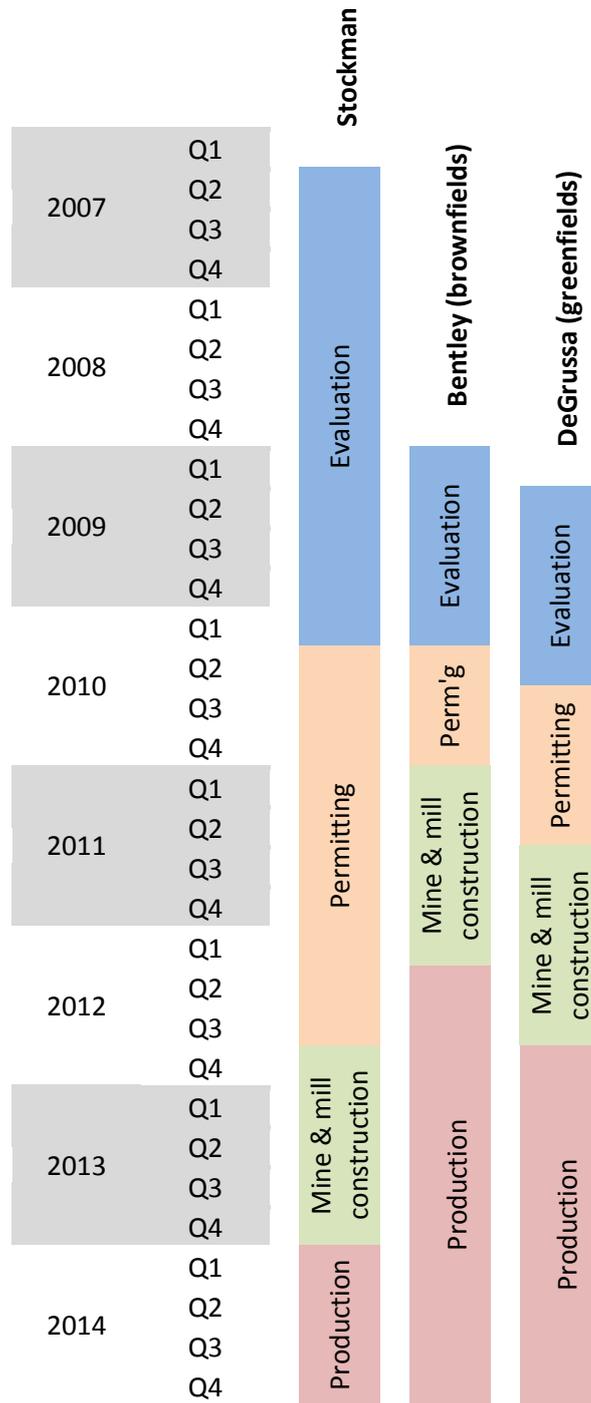


Figure 6-2: Schematic comparison of project development timelines in Victoria vs. two projects in Western Australia



7.0 Role of Government

If Government sees the exploration for and development of economic mineral deposits from the endowments that are known or anticipated to present to be of value to the State, then it must plan to be successful, in the same manner as other jurisdictions such as Western Australia, South Australia and New South Wales.

Our recent experience suggests that the processes leading to the development of natural resources in Victoria are poorly developed, not well understood by most regulators, and not transparent to proponents. In particular we believe all regulators with decision making roles relating to exploration and mining projects need to be better educated regarding the benefits that well managed mining projects can bring to communities and the State as a whole, and to the key factors driving investment in the resources industry.

Examples of activities and actions that have helped form this view are:

- Modern explorers and developers such as IGO expect that the State and its agencies would require that activities relating to the location and mining of mineral resources would deliver outcomes that meet all of the requirements of the “Triple Bottom Line”. Conversely, explorers and developers should be able to anticipate that the decisions of all agencies that they engage with would deliver on the same ideals. Currently this is *not* the case and our recent experience suggests that agencies will either ‘cherry-pick’ the elements of the “Triple Bottom Line” that they will adhere to or ignore them completely, while insisting that a project proponent deliver on all three elements.
- The positive historical legacy that mining of a diverse mineral endowment has brought to Victoria has been largely forgotten to the point that although there are successful mineral sand and gold mines plus brown coal mines, there is no in-depth and wide spread recognition or understanding amongst regulators regarding how the exploration and mining industries “work”. For example, the mining of brown coal is actually seen as an activity relating to the generation of electricity, rather than a mining activity which results in electricity generation.
- In a relatively densely populated state such as Victoria there are competing activities for resources such as land, water and minerals which have to be balanced against environmental needs and the aspirations of the community. This has resulted in an extensive environmental and planning regulatory environment which overlies and impacts in a variety of ways on the activities of explorers and developers. A direct but unnecessary consequence is that there is a considerable administrative burden relating to both understanding and then meeting all aspects of the *relevant* regulations. There is no lead agency set to act as a “one-stop-shop”, mentoring or proactive facilitation available to new explorers or aspiring resource developers to Victoria, which is an impediment that could easily be rectified.



- Projects which will have a significant impact on local employment, regional development, State and local GDP such as Stockman receive no recognition or support from during their formative stages.

8.0 Economic Efficiency, Costs & Benefits

Failure to facilitate a vibrant exploration industry through a well-informed regulatory process will continue to hamper Victoria's ability to attract competent explorers and their discretionary exploration budgets, which in turn reduces the likelihood of substantial discoveries being made in the State.

It then follows that a reduction in the discovery rate will mean the gradual loss of mining-related expertise to other States, a net loss of employment opportunities and ultimately a net impact on the State's GDP and all Victorian's living standards.

Mining developments are no different from any other industry; they need the support of appropriate physical infrastructure and the ability to draw on skills applicable to their sector. Failure to provide support to either of these areas will reduce the economic efficiency of individual projects and those explorers and developments will move to other jurisdiction where the support is forthcoming or where they can gain a better return on their investment.

Mining has shown in many other jurisdictions to be a sustainable, modern industry that provides regional employment and economic growth and in many cases acts as a 'colonising' industry that provides the necessary base-load activity to enable the development of hubs of varied support industries.

Additionally, most mining operations involve substantial levels of re-investment of surplus cash flow into further regional projects making the industry an excellent recycler of economic activity.



9.0 References

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