

Irwin, Debbie (REPS)

11 JUL 2002

From: Fielder, Sarah (REPS) on behalf of Committee

Sent: Wednesday, 10 July 2002 1:57 PM

To: Committee, ISR (REPS)

Subject: FW: Inquiry into Resources Exploration Impediments

This submission arrived in the Committee mailbox.

-----Original Message-----

From: Colin Brooks [mailto:colbrx@attglobal.net]

Sent: Wednesday, 10 July 2002 9:48 AM

To: committee.reps@aph.gov.au

Cc: mike_rpgeo@optusnet.com.au; Greg Corbett

Subject: Inquiry into Resources Exploration Impediments

House of Representatives Standing Committee
on Industry and Resources

Submission No: 10

Date Received: 11 JULY 2002

Secretary: *P. Forbe*

This submission is from

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and

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We are both experienced exploration geologists, with more than 70 (seventy) years of experience between us. This ranges from technical to managerial in geology, geophysics, geochemistry, mine feasibility, planning and construction including extensive work overseas and in remote parts of Australia.

We first worked together in the Exploration Division of the Australian Atomic Energy Commission in 1975 when Lindsay was a geologist in Northern Territory and I was the Director of Planning, based in Sydney.

Our main concern is that the problem being addressed, which impacts on our personal lives (very little work), has had a long gestation period and will take at least 30 (thirty) years to rectify, if a "crash" programme be initiated. More likely it will take 60 (sixty) years, which is well beyond the ken of most politicians a bureaucrats.

In addition to the realities of the geoscientists' employment scene, one naturally tries to see why we have come to such a pass, how the situation arose and how long it will take to rectify it.

If we wish to follow Argentina's track into a financial morass, all we need to do is to maintain status quo in the general field of education. We dumped our teachers' salaries below reasonable professional levels some 60 years ago - it took 30 years to drive most of our highly intelligent altruistic potential teachers from the market and the level of basic education has been on a slide ever since.

We can achieve the same in our minerals industry. Indeed, a look at university training for geologists, geophysicists, geochemists, mining engineers and primary metallurgists is reflecting that trend already. Professors' salaries are about one third of those of their industry peers, for example.

Back to the main problem, as perceived, today - viz. exploration expenditure.

People are leaving the industry in droves - see Leggo, 2002.

A major cause of fall-off in exploration is known to be the lack of adequate rates of return from mines. Several papers have been published over the years in which the rates of return have been dissected, to show that some companies have good rates of return, some moderate, and too many unacceptable. Barry Cusack of

Rio Tinto Australia said as much to the Melbourne Mining Club in October 2001 in an address widely distributed, of which I assume the Committee has a copy.

Rarely have the causes been analysed - all too often the companies in the latter categories are so structured that the decisions as to whether to put resources into production and the actions of achieving production are made by people without sufficient detailed specific knowledge and experience of geology, ore reserves, mining engineering and primary metallurgy to permit critical assessment of proposals. They know about the law, finance, people management and corporate politics - but very often these are not enough.

Such companies are often structured in ways that encourage senior executives, in their own interests, to push for production from underexplored, marginal or even clearly (to a knowledgeable person) sub-economic deposits. So many of these executives have succeeded that we are seeing over-production, at losses, in many commodities - Karl Marx's ambition of "from each according to his ability, to each according to his need" is being achieved by died-in-the-wool capitalists, who, in their own interests, have achieved very low base metal prices worldwide, thereby causing this lessening of interest in financing exploration.

Four examples of Australian initiatives, one each in N.S.W., P.N.G., S. America and Indonesia have recently been reviewed by my peers and me. Total capital outlays were several billion dollars, even though the mines ranged from small to large.

You can see why we believe that the levels of self-discipline and recognition of limitations in the board rooms of some of our major companies in the past have created the present major problem for our industry and hence for society. None of the four deposits that I have recently reviewed has, nor will, come remotely near returning bank interest on its total invested capital, despite some really "creative" accounting and reporting!

The more executives, board members and shareholders that are aware of these forms of potential traps, the less chance of repeating these errors and hence the quicker we can get our industry back onto a sensible financial basis. The Committee needs to focus on this aspect now in the best interests of Australia.

With these things in mind we have prepared the attached submission for your consideration.

Yours sincerely,

Colin C. Brooks B.Sc.(Hons)

Reference: Leggo, M. 2002, Where have all the geoscientists gone? AIG News No. 68, May 2002, pp. 24-27

Canberra Submission on exploration - notes

This paper does not attempt to address general impediments to mineral exploration but will focus on critical aspects of the 'operational climate' for explorers.

1 R&D STATUS OF MINERAL EXPLORATION

EXPLORATION IS R&D FOR SUSTAINABLE RESOURCES, UNEQUIVOCALLY! and should be treated as such on all occasions within the framework of Government Legislation, Policy, and processes

It is long past the time of the lucky 18th century prospector finding a million dollar gold nugget beneath a saltbush or spinifex whilst working as a stockman. Exploration since about 1960 has been fundamentally a highly technical process. It is different from CSIRO agricultural research and laboratory based investigations principally because **it cannot ever be replicated at a small scale**. This reality even applies to industrial R&D, where trial commercial scale demonstration plants are an accepted reality.

2 EXPLORATION FUNDING

A NEW TAXATION REGIME NEEDS TO BE PUT IN PLACE SO THAT RESEARCH PROGRAMS UNDERTAKEN BY BUSINESS CAN BE FUNDED ON AN AS-NEEDED AND SUSTAINABLE BASIS.

AN R&D INDUSTRIAL SUPER SCHEME WOULD HAVE NEGLIGIBLE COST IMPACT ON EITHER PUBLIC OR PRIVATE SECTOR BUT WOULD RE-ORIENT INDUSTRY TO UNDERTAKE SUCH WORK ON A SUSTAINABLE BASIS BY SMOOTHING OUT THE HIGH VOLATILITY OF BUSINESS CASH FLOW WHICH IMPACTS ON R&D SUSTAINABILITY.

Discussion:

Exploration is a very expensive form of R&D. On any one project the probability of a positive \$ return is exceedingly small. Every discovery today is usually the result of either the elimination of mineralisation possibilities in a given area, completion of testing where a given explorer gave up through lack of funds or a pseudo-discovery where technology has rendered known mineralisation viable.

Because of the volatility in commodities' prices on a world-wide basis and of the current expectation/requirement that annual profitability be maintained, corporate managements relegate exploration funding to a discretionary tax buffer biscuit tin, to be used when income is high, that must be expended in a given fiscal year.

This is a fatal fundamental flaw driven by taxation law. The management of business is getting more remote, in terms of personal expertise, from the R&D process. In fact the understanding by many in management of the effect of R&D on long term corporate health is poorly recognised and even when it is, attention is often diverted or even swamped by short term matters.

Consequently management behaves as if exploration is a service that can deliver on a quick fix basis and does regularly fire the manager who gives a "can't be delivered" message when short term funding to fix a tax issue is made available. In any one fiscal year cyclic late approvals of funds (and over expectation of performance in exploration results) inevitably leads to adverse management reaction to justified budget overruns, or other perceived management failures due to land access issues etc.

R&D success comes from a sustained application of brainpower and resources which ultimately delivers a result. The terms of exploration tenure recognise this fact. Sustained priority access to explore for initial exploration periods of up to 5 years, with rights to extend in multiples of five years, contingent on progressive demonstration of progress, are enshrined in legislation. Coupled with the reality that many regions are re-investigated, SUSTAINABILITY of resource replacement will only ever be delivered when the tax and funding regimes match the reality recognised by tenure legislation.

Conclusion:

FISCAL TAX POLICY NEEDS TO RECOGNISE THAT DISCRETIONARY CAPITAL IS CREATED IRREGULARLY WITHIN BUSINESS and SUSTAINABLE RESOURCE REPLACEMENT and OTHER FORMS OF R&D NEED LONG TERM RELIABLE FUNDING TO BE SUCCESSFUL.

FAILURE TO ADDRESS THIS MATTER HAS AND WILL CONTINUE TO ENSURE THAT RESEARCH SKILLS AND VALUE-ADDING TO AUSTRALIAN INDUSTRIES WILL BE EXPORTED PERMANENTLY.

This is the reason that we have a so-called "brain drain". The "clever country" has a major un-rewarded export – people expertise. The consequences of this in respect of mining & exploration is a massive loss of potential GDP which is set to escalate at an increasing rate as existing resources are depleted at ever increasing rates of extraction. Ironically the mineral industry will look healthy in the short term, a phenomenon somewhat similar to the terminally ill on occasion.

The disparity between REQUIRED SUSTAINABLE R&D funding and EXISTING TAXATION ARRANGEMENTS is untenable. The ineffectiveness of the stop-go makes a mockery of all R&D concessions in this field. Indeed it is a wonder that they work at all. A significant portion of foregone R&D tax concession revenue (lost public dollars) is therefore ever doomed to go to waste while the current arrangements remain. This is extremely poor governance. That it has been so during the last 30 or more years is an indictment of government at all levels and of all persuasions – It underlines the fundamental ignorance of the importance of R&D to Australian well-being at the political level. Without corporate support of R&D over the years the mining industry in Australia would be about 10% of its current GDP size. Similarly for agriculture and in the future on the environmental front. It is indeed ironic that recent government funding for environmental research and out-comes recognises the long lead-time for results but other activity areas receive no such understanding.

Solution:

- a) A business identifies a given percentage of revenue/profit for any fiscal year for future R&D.
- b) Those funds are tax exempt so long as they are placed in the industrial equivalent of a personal superannuation fund.
- c) Funds may be with drawn for any purpose at any time.
If applied to fund R&D activity, including mineral exploration, there is no tax levied.

Funds with drawn and used for non-designated R&D activities are taxed at the average tax rate of the business in the previous fiscal year at the time of withdrawal.
- d) Investment revenue of the industrial R&D Super is compounded within the fund and attracts tax according to (c).
- e) There will be rules of management and operational requirements for these funds as for personal superannuation so as to prevent both short and long-term tax avoidance.
- f) Such as: the fund may not hold more than 2.5 times the projected long term (5 year) R&D programme or more than 20% of the total annual turnover, of a commercial operator for example. A junior explorer or business with seed capital should also be able to place a high percentage of market capital into such a super fund. Any investment return on the stored capital is then retained and the full primary value of the original funds remains available for the purpose for which it was provided.

The total R&D expenditure must roll the value of the fund over by 90% within any 10-year period or be reduced at the end of each financial year. Funds would have to be lodged with entities that were totally independent of the business.

g) Certificates and notices of withdrawals would need to be lodged with the taxation authorities showing that the activities upon which the expenditure was applied met eligibility criteria to be tax exempt, as is currently the case for typical special purpose funding applications.

Consequences & benefit:

The above model would ensure R&D funding is available and maintained ensuring such work would be ongoing. Its fiscal benefit and ups and downs buffering would ensure that corporate managements would find the justification to be R&D aware, invest some effort and become knowledgeable. Indeed, R & D might become a permanent part of corporate culture, which is clearly not the case at present.

3) PERSONAL CAREER and SUSTAINABILITY of EXPERTISE LEVELS

PROFESSIONALS IN MANY FIELDS OF ENDEAVOUR NEED INCOME AVERAGING TAX OPTIONS. FOR EXPLORATION THIS MAY WELL DETERMINE WHETHER PEOPLE RETIRE PREMATURELY AND WITHDRAW THEIR EXPERTISE PERMANENTLY OR NOT.

SHORT TERM EXPEDIENCY BY GOVERNMENT IN THIS CASE WILL DELIVER FATAL IRREVOCABLE FAILURE TO EARTH SCIENCE-BASED SUSTAINABILITY POLICIES, STRATEGIES & GOALS IN AGRICULTURE, MINING AND OTHER DEPENDENT ACTIVITIES IN THE LONG TERM.

IF YOU DON'T HAVE THE PEOPLE SKILLS YOU CAN'T DELIVER A RESULT!

Discussion:

History of employment opportunity in the mineral exploration industry is terrible from the perspective of a nationally SUSTAINED LEVEL OF EXPERTISE. In the next few years the majority of experienced personnel, probably > 50% of the total exploration personnel will retire permanently and with **them 85% of the experience** because of past graduation rates, premature professional departures and losses to overseas.

The present graduation rate for geologists, geochemists and geophysicists is at an all time low and underscored by diminution of the University teaching base and shrinking/abolition of geoscience faculties in the face of an ever increasing need to manage our planet on an ECO-SUSTAINABLE basis. These facilities also previously trained the smaller professional groups of civil engineering geologists (foundation engineering) soil scientists, hydrogeologists & hydrogeochemists (integral to salinity & pollution management, agricultural land management at large) who are ultra-specialised geologists, geochemists and geophysicists. This problem is getting more acute on a monthly basis!

Corporate R&D expenditure behaviour means the employment fortunes of mature experienced industrial consulting professionals are chaotic to say the least. Income can vary from <\$20,000 to >\$100,000 in consecutive years. Provisional tax in the past was punitive beyond belief. The new tax regime is better but as before does not cope well with wild oscillations of income on a monthly or quarterly basis because work for many is not in the least predictable. Anticipated field programmes are frequently deferred because of external factors or volatility in funding at short notice, obversely circumstances may change and there may be an urgency to undertake unexpected work.

4) LAND ACCESS and MANAGEMENT

LACK OF LEGAL DEFINITIONS IN LEGISLATION DIRECTLY LEADS TO CONTENTION

OBLIGATORY CORRESPONDENT PROVISIONS SHOULD BE IN ALL LAND MANAGEMENT LEGISLATION and REGULATIONS

ANY CLAIM MUST PASS MINIMUM TESTS

Discussion:

Land access is a vexing issue on many fronts. Much of this problem arises from POORLY DRAFTED LEGISLATION and REGULATIONS.

Some of this is a consequence of declaring intent and timetables by Government without undertaking the slightest in-depth consultation or other form of investigation prior to making the commitment.

CRITICAL WORDS SHOULD BE DEFINED IN ALL CASES WITHIN THE LEGISLATION

Experience shows that much of present day legislation assumes many aspects of the circumstances that are not so, and in particular an extraordinary lack of appreciation that language does not have universal meaning to each special term. In short, words with special meanings of critical relevance are often not given carefully *crafted definitions within* acts.

In a multicultural society with diverse linguistic backgrounds the quality and number of definitions are hopelessly inadequate. Probably the most contentious word today is "SACRED". In Caucasian and Aboriginal terms the word has the same meaning within each cultural context, but, because of differences in cultural classification, the application of the term is dramatically different and extremely controversial.

RIGHTS of ACCESS CONTROL REQUIRE ACCEPTANCE OF RESPONSABILITY

Much recent legislation about management of resources, access to carry out activities or compensatory arrangements where such activities are impeded in some way, requires a proponent "to negotiate", but there are no obligatory provisions on the co-respondent. In these circumstances the 'right-of-control party' can deny negotiation by simply ignoring the proponent. This should be unacceptable.

Invitation to exercise a RIGHT of access control, be it to undertake a task or to negotiate a compensatory arrangement, should place the owner(s) of the rights under an OBLIGATION to participate and respond in a responsible manner.

Failure to elicit a meaningful response, within an acceptable time frame, to a project proponent should absolve the proponent from entering into a consultation and agreement for the proposed work and permit progressing activities without repercussions.

Frequently individuals placed in this situation by a proponent are under resourced to cope with a sensible response which is partial cause and the model: "don't do anything and it will go away" is the adopted posture. There should be an avenue for such individuals to seek help informally from an ombudsman-like Government agency, not from a "legal court". The fee structure of the legal fraternity precludes involvement here.

The proponent seeking to progress in such a manner would be required to action a prescribed public declaration that includes evidence of communication efforts. An authority would then issue an approval certificate for the programme to be undertaken in lieu of the non-responding 'respondent'.

Such obligations should be incumbent on all parties to land management, be they individual, community group, private, corporate, or public instrumentalities.

CLAIM of a RIGHT no longer seems to be testable. This is extremely noxious to all parties. At present the legislation would seem to imply that an immigrant from almost anywhere where past records were unclear could claim to be an Aboriginal and the "Minister" could not contest such a claim.

Such provisions are abhorrent in legislation and any claim of right must be tested to ensure that the benefit goes to the intended persons and not to freeloaders. All claims of any sort must meet minimum criteria/hurdles of some sort. After all, application of strong boat people, employment benefit criteria/policy, etc. should be even-handed across all areas because human nature does not change.

5) CORPORATE MANAGEMENT and SUSTAINABILITY of RESOURCES

A MIND SHIFT IN CORPORATE MANAGEMENT on SUSTAINABILITY IS REQUIRED

Discussion:

Very few top corporate managers in industry actually have ever had their hands dirtied in the businesses they now manage. Even fewer have had a career within their particular industry. Downsizing strategies have removed the "old hands = experience" as well from within corporate cultures. Management therefore tends to be dominated by MBA's, CPA's etc. rather than people with technical expertise. Management is no longer "hands on" and is almost exclusively driven by annual cost return benefit thinking which is fundamentally incompatible with implementation of sustainability. The very fact that sustainability is being discussed at all is a symptom in its own right of the current malaise.

Many commercial enterprises have been badly hurt in recent times because of this lack of top level corporate expertise.

The problem is twofold:

One academic corporate structural modeler said what has become an adopted tenet:

"If you can manage one enterprise well you can manage any other enterprise just as well"

This is baloney in the extreme. No one can ever expect to manage well anything at all without primarily understanding sustainability fundamentals of the area of business and having a good working knowledge of sound business principles. Primary understanding does not happen overnight and may take several years for an out-of-context appointee.

If an appointee takes a "teams" approach, appreciates and uses in-house expertise, there is a chance of long term success where a fast learning curve is accepted.

If appointees are power conscious and find objectors in the corporate ranks they tend to remove the dissenting voices and appoint power oriented 'loyal' opportunists who are often non-technical. This is even worse where the appointee has been given a target objective which is unrealistic. Internal hostility becomes endemic. The consequential re-structuring places inept political managers into positions of technical responsibility who continually fail to understand technical advice and, when the inevitable disasters occur, contrive to hold the technical people responsible for the outcomes the latter probably predicted in the first place. That such a business is going to fail becomes inevitable unless a maverick comes along who is supported by the Board and the whole corporate culture is reconstructed. Big organizations seldom ever achieve such reconstructions, although there has been a very public attempt recently!