

## FINANCING ASPECTS OF MINING

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### INTRODUCTION

New Zealand and Australia have, of course, always had much in common. Lately encouraging signs have been seen in New Zealand suggesting the possibility of a rapid increase in tempo in the exploration and development of mineral and petroleum occurrences.

During the past decade, great oil and mineral discoveries in Australia have changed the whole economy of the country particularly when related to a population of only 12,000,000. In the unpopulated northern 40% of Australia over one thousand million dollars has been spent in the past 5 years. In the next 3 years in Australia, known mining developments will require over 400 million dollars per annum - more than a quarter of all Australian industrial spending.

In the past decade, we have learnt much on the financing aspects of mining and those problems associated with them. It is possible that in the next decade New Zealand and New Zealanders could experience a similar mining boom and, relative to the country's population, financing problems might even prove greater. However, such problems are minor compared with the great benefits stemming from a mining boom.

### GOVERNMENT PARTICIPATION/INCENTIVES.

It has been demonstrated around the world that mining offers developing countries the best chance of a fast economic growth.

Governments recognising this do well to offer incentives to the industry. Australia is an example where Government taxation incentives and more direct subsidies have indeed helped spark off the boom that the country is experiencing to-day. Unfortunately, in Australia there are signs that the goose may be killed before it truly lays the golden egg. Further, it should be realised that the rail-

roads, ports, power and the like that follow mineral discoveries often benefit other segments of the community as well as the country as a whole, and any taxation benefits available to the mining industry should surely be expanded to cover these as well.

Perhaps, the most difficult formula facing any Government in the context of a mining boom is that of degree of freedom for overseas participation and freedom for overseas countries to move out profits. On the one hand any country wishes to retain the maximum equity, on the other hand this must not be such that overseas participation is not attracted. Australia has found, as will New Zealand if major mineral discoveries are made, that local capital does not come near meeting requirements. In fact, in Australia it is doubtful whether anything like half of the total capital requirements are available from within the country. This should cause little worry as there is ample precedent that as a country becomes more affluent, it can and does buy back its natural resources.

A co-operative government must plough back some of the extracted royalty revenues into assisting in the financing of infrastructure costs. Otherwise the wealth created by venturesome mining projects can so easily be dissipated in "non-mining" areas. Often this can develop into a political situation.

There is a need for close co-operation and planning between government and mining developers to ensure that the advantages of infrastructure are of benefit regionally.

In Australia, we are very much aware of the part played by Mr. Charles Court, Minister for Industrial Development in Western Australia. Mr. Court and his department, through sensible and practical negotiations, have virtually played the role of a catalyst whereby both mining companies and his State have mutually benefited. He greatly helped projects such as Hamersley, Goldsworthy Mt. Newman and Robe River come to fruition. Capital undertakings there are in excess of \$1,000million dollars.

I am, on balance, against direct government participation financially but that, perhaps, is a personal thing.

## RETURN EXPECTED ON CAPITAL

There are few more speculative enterprises than exploring for minerals and petroleum. Even after discovery and development one must class many forms of mining as a high risk industry and hence expect higher relative returns.

It is difficult to set absolute figures, but in a small mine with volatile metal prices, one might expect to require a life of at least 10 years with return of capital plus at least 20% per annum over the life of the mine. On a larger mining project with long term fixed contracts, this figure might be lowered somewhat but even so, returns from mining must always be expected to be higher than those required from other forms of industry.

There is an urgent need for higher gearing in the debt/equity ratio, and at the same time a careful examination should be made for the possible interest rate fluctuation during the financing period. If this aspect is not taken into consideration it could have dire results on the availability of working capital during the early stages of the operations, and in certain situations could kill the project.

The stability of a country certainly to some extent must dictate the required speed of return desirability. However, as there are few, if any, more stable countries than New Zealand, this need hardly be taken into account.

## DEGREE OF VERTICAL INTERGRATION.

From the often very large cash flows from mining stem funds for other industry.

There are many examples of this around the world but we must always remember that we have to crawl before we can walk. For example, if Hamersley had been required to build a steel industry before instead of after producing raw iron ore, the project might have been set back decades.

In spite of belief to the contrary, often the major profit is to be made by mining ore and shipping in its raw form or as concentrates rather than refining and fabrication of end products.

While vertical intergration must be kept in mind in assessing the financing requirements of a new mineral deposit, the exercise should not be clouded by worrying too much about potential vertical intergration in the future. It is difficult enough to bring a mine into production without complicating the situation until such time as operations are proceeding smoothly.

### FINANCING TECHNIQUES.

Distinction should be made between: -

(a) Exploration.

As mentioned earlier, explorers are the real risk takers and certainly require incentives especially if the going gets tough as it has in petroleum exploration in Australia with funds used all being of the equity type. Then it is very necessary that taxation and mining legislation must be helpful or else it becomes almost impossible to persuade the general public to invest in this high risk/high return sector.

The major axiom in exploration financing is to spend the least for maximum information gradually expending increasing amounts as and when confidence increases. It is certainly better to risk losing something worthwhile than to "flog a dead horse", however tempting this may be. This is so in spite of examples of subsequent success by another group on that particular deposit.

(b) Development.

Development of proven ore bodies can be costly but loan finance can and should be made available locally through the banking system. This is being done in Australia where such loan finance is refinanced through the Australian Resources Development Bank which organisation in turn borrows from the public both at home and abroad. This has meant less reliance on overseas finance and greater equity held in Australian hands.

There are many sources of loan finance around the world to-day for natural resource development, particularly in stable countries. It often requires an equity "kicker" but it is there. In fact, should one find a worthwhile mineral deposit, finance need not be the major problem but rather

the shortage of technical people and knowhow to exploit it.

(c) Production.

This requires the co-operation of Government instrumentalities but need not always be a financial cost to Government.

Around the world it is apparent that the scale of mining operations is ever increasing with the mining of lower grade ores. This trend requires greater capital costs and new operations often beyond the capital resources of any one country. A joint venture approach is needed and is, in fact, becoming the normal approach.

Capital requirements for new mines are also being influenced by the need for mechanisation in countries such as New Zealand and Australia where labour is not easy to obtain and is high cost. A mechanised mine means high capital requirements.

POSSIBLE CO-OPERATION BETWEEN NEW ZEALAND AND AUSTRALIA.

It is interesting to speculate on the possibilities for greater co-operation between our two countries on the capital side if taxation and currency control situations were not prejudicial. If money subscribed for exploration in both countries qualified as a deduction for residents of either, then one could anticipate a degree of reciprocity.

Would money leaving New Zealand for Australian exploration be off-set by greater exploration in New Zealand from Australians?

Could New Zealand present the same encouraging and exciting picture as Australia in a few years?

It would indeed be an interesting experiment.

CONCLUSION

There is an old saying in the mining industry that one is never quite sure whether mines breed optimists or optimists breed mines. One thing is sure, however, and

that is that looking at any aspect of mining and particularly the financing aspects, while all care, study and caution needs to be exercised, mining is for the optimistic. While the risks may be high, the prize can be very great indeed.

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Mr. McMahan has advised that he hopes to bring with him some simplified case studies of actual mining companies which began in exploration and finished as producers, but they were not ready to attach to this more generalised paper.