

One way in which this tariff penalty could be overcome would be to invest Australian capital in processing facilities abroad. Thus trade barriers would be hurdled by the export of capital rather than the export of higher value trade goods. It is true that value added represents a contribution to our national income but each case must be considered on its merits. Leaving aside for the moment whether the resources used in adding value, - i.e. labour, power, etc. - might not be better employed elsewhere in the economy, what will be the effect on the environment and so on, there is the question of which alternative, further local or overseas processing, will give the best return to shareholders and the Australian community. If Australian capital is to have any particular role internationally, selective investment in mineral processing overseas is surely an appropriate avenue. If other countries benefit by investment in Australia's mineral industry, it seems logical to me that Australia should benefit by investment in their areas, particularly as we have the technological skills necessary to ensure success. Depending on political climate abroad investment could take the form of controlling interest, joint venture or large minority interest.

I am afraid I have not spelt out the future in any fine detail, but you will appreciate the industry is in little better position to do this just now than anyone else who is interested in reading the signs. If we ignore those periods of speculative fever in the past, when in the words of Lord Keynes, "the bubbles on the mainstream of investment" became themselves the mainstream, across the board investment in Australian-based mining companies has proved worthwhile. If shares ownership available to overseas residents is going to be more restricted in future, I think that everything else being equal we can anticipate a period of higher yields ahead. This would in turn bring the earnings/price ratio of Australian mining investment more in line with overseas experience.

If this prediction is correct Australian investors will have no quarrel with the future.

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#### AN INTRODUCTION TO MINING

By L.J. Thomas (Hicks, Smith & Sons) 1973

The Great Australian Mining Boom of 1966-1970 brought forth many books and articles on how to understand virtually overnight what mining and mining investment was all about. By the very nature of the boom, the majority of these "instant" books were superficial, covering only stockmarket aspects, and neglecting much, if not most, of the basic fundamentals of the mining industry.

In contrast, Dr Thomas' book is written "against the background of a vigorous and expanding mining industry" rather than with an ephemeral stockmarket boom in mind. During the boom if the more serious investor wished to study mining in more depth than by reading "hints on how to invest in mining stocks", the only sources of reference were overseas books, which were mainly too compartmentalised, outdated, over-technical or irrelevant to Australian conditions. In comparison, this book has been written particularly for Australian conditions, and in this respect it is probably the first of its kind on the subjects covered.

After a brief but thorough explanation of the most important mining and geological terms, the book proceeds through a logical, comprehensive sequence of exploration, progressing from geophysical exploration to diamond and percussion drilling, then

to determination of ore reserves and feasibility studies to see if the mine is worthwhile. This first section is very relevant for a lot of small exploration companies and investors as it takes a critical view of how not to waste money, and tries to put exploration spending in perspective.

The second section gives basic mining methods for metalliferous and coal mines, both surface and underground, with the case studies being largely from Australian mines. The third section dealing with practical rock mechanics and subsidence will, however, hold little interest to the non mining engineer. Throughout the book the emphasis is on why, rather than how, so that readers can understand why the methods are used.

The text is amply supported with monochrome photographs and line drawings, and each chapter has a long list of additional reference material mostly from Australian sources.

Although the prime purpose of Dr Thomas' book is to provide basic material for first-year mining engineering students, it is also suitable for everyone including stockbrokers, institutions and analysts with a financial background, who wish to understand the more important in-depth aspects of the mining industry.

- N.M.

## THE MINERAL INDUSTRY AND AUSTRALIAN DEVELOPMENT

By R.T. Madigan, June 1973

This topical review of the Australian mineral industry was given by Mr. Madigan, Chairman of Hamersley Holdings Limited, as the Sir Robert Menzies Lecture to the Western Australian Division of the Liberal Party of Australia in Perth on 12 June, 1973.

It makes a strong case for continuance of private capital, which took the initiative and risks and whose enterprise has led to massive economic benefits - a strong balance of payments, a wide range of supporting industries, a higher rate of economic growth, a larger migration intake and a better standard of living.

The support and co-operation of governments was essential to this achievement, and even more government-industry consultation is desirable in the future to meet the increasing interest in national economic planning. But some overseas attempts at such planning have failed and "target" planning should certainly be rejected. There should be collaboration between government and industry to establish broad objectives, but in a situation of economic, political, scientific and technological changes "you can't make cut and dried plans for many years ahead".

The points are made that only industry has the experience and knowledge for day-to-day decision making, and its activities could be seriously inhibited by a hostile attitude to the concept of profit. A proper acceptance of the profit motive by people and government is essential to economic progress. Whilst Australian participation and ownership will gradually increase, foreign capital will continue to be needed in the mining industry; the need for an international approach and association with international corporations will be the greater if there is to be a movement into secondary processing.

The limitations on "resources diplomacy" are underlined but the powers of government to provide an infrastructure in remote areas are equally emphasized. The desirability of development in the Pilbara is given as an example, but such a development would require "closer Government/Industry relationships than anything previously known in Australia."

- K.J.H.