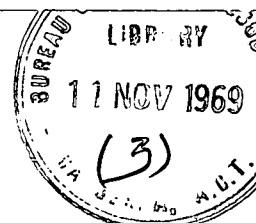


COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

Record No. 1969 / 107



007998

A Review of Commonwealth
Incentives and Encouragement
for the Australian Mineral Industry

by

R.W.L. King

The information contained in this report has been obtained by the Department of National Development as part of the policy of the Commonwealth Government to assist in the exploration and development of mineral resources. It may not be published in any form or used in a company prospectus or statement without the permission in writing of the Director, Bureau of Mineral Resources, Geology & Geophysics.



A REVIEW OF COMMONWEALTH INCENTIVES
AND ENCOURAGEMENT FOR THE
AUSTRALIAN MINERAL INDUSTRY

by R.W.L. King

Records 1969/107

The information contained in this report has been obtained by the Department of National Development, as part of the policy of the Commonwealth Government, to assist in the exploration and development of mineral resources. It may not be published in any form or used in a company prospectus without the permission in writing of the Director, Bureau of Mineral Resources, Geology and Geophysics.

TABLE OF CONTENTS

	PAGE
INTRODUCTION.	1
GENERAL BACKGROUND AND HISTORY.	1
POST WAR MINERAL DEVELOPMENT.	2
REWARDS.	4
SUBSIDIES AND BOUNTIES.	5
TAXATION CONCESSIONS	5
EXPORT CONTROLS: CONSERVATION OF RESOURCES.	7
STABILITY.	10
CO-OPERATIVE PROJECTS.	11
CONCLUSION.	12
REFERENCES & BIBLIOGRAPHY.	13
APPENDIX 1 - SUBSIDIES AND BOUNTIES.	14
APPENDIX 2 - PRESCRIBED METALS AND MINERALS.	17

INTRODUCTION

The present active mineral scene in Australia is the result of an increasing awareness on the part of both domestic and overseas companies that Australia offers an attractive combination of favourable political and economic environment and wide areas which have not been tested in detail by modern prospecting techniques.

There is no doubt that much of this interest was initially prompted by the success of the exploration programmes for iron ore undertaken following the relaxation of the export embargo that had existed for many years. Changing patterns of world trade are significant in this context. The effect of the introduction of large modern bulk carriers on sea freight rates is of particular importance when coupled with the opportunity for development of large scale operations offered by the requirements of the large and expanding markets of Japan. There was much more scope for the development of large deposits of iron ore and bauxite in the early nineteen sixties than in the late nineteen thirties (when the embargo on iron ore exports was imposed), or even in the immediate post-war years.

This paper sets out the background of Commonwealth - State relationships in administration of mineral rights and outlines the development of mining policy by the Commonwealth in the immediate post-war period. It then considers the incentives and assistance to the mining industry that operate today and the background to their development. A number of examples of co-operation between Commonwealth and State Governments and the mining industry are described.

The paper was prepared for the E.C.A.F.E. Seminar on Mining Legislation and Administration, Manila, October 1969.

GENERAL BACKGROUND AND HISTORY.

With a few major exceptions, all mineral rights in Australia are vested in the Crown.

On federation in 1901 mineral rights were not among those powers transferred to the Commonwealth. As a result, sovereign rights with respect to mineral resources are held by the State Governments within their boundaries. In the Territories of the Commonwealth these rights are vested in the Commonwealth Government.

The need for mining legislation in Australia did not become pressing until the middle of the nineteenth century when the "rushes" which resulted from publicity given to the discovery of gold in New South Wales and Victoria (and followed later by discoveries in Queensland, the Northern Territory and finally Western Australia) made the introduction of legislation imperative. However, before this time,

coal mining had been going on in the Newcastle area since 1797 and mining for base metals such as copper and lead had taken place in South Australia and Western Australia since the early eighteen forties.

The mining legislation introduced to meet the requirements of gold rush days provided for small alluvial and reef claims held by virtue of pegging under a Miners Right, and subsequent continuous work. It was later extended to cope with developments in the post gold rush period when mining for a wider variety of minerals and on a larger scale took place. Changes have continued to be made to meet changing circumstances and provision now exists for the issue of prospecting titles over the large areas appropriate for modern geophysical and other prospecting methods and for the issue of special mining leases where large scale developments are to be undertaken.

Prior to certain dates in the last century, which vary from State to State, all grants of land in fee simple severed the ownership of all minerals, with the exception of gold and silver, from the Crown. In subsequent freehold grants the Crown has retained the ownership of all minerals. There is one tract of land in Western Australia in which title to all minerals including gold and silver passed from the Crown. It is of interest to note that some of the more prospective areas for nickel in Western Australia lie within the boundaries of lands granted with mineral rights. In Tasmania and the Northern Territory the mineral rights granted with the land in the early days have been repossessed. More detailed summaries of the legislation are contained in Pearson, 1953 and Hargraves, 1965.

Although the Commonwealth has no direct control over administration of mineral resources except in its Territories, there are a number of ways in which it can influence development and production, by virtue of its statutory powers with respect to international trade, customs and excise, taxation and loan raisings. Special bodies such as the Joint Coal Board and the Australian Atomic Energy Commission have particular responsibilities in defined areas.

POST WAR MINERAL DEVELOPMENT.

The Mining Industry Advisory Panel was set up in 1944 by the Secondary Industries Commission in order to assist the Commonwealth Government in determining post-war policy for the mining industry.

The Panel was composed of representatives of the Commonwealth and State Governments and owners and employees in the mining industry. Recommendations made by the panel included taxation concessions, increased uniformity of legislation on health and safety in mines in the States and Territories and financial assistance for the rehabilitation and encouragement of the mining industry.

The financial assistance scheme as originally proposed was modified and simplified. By 1951 it was stated in the Commonwealth Yearbook that "applications for financial assistance for the development of mining projects which offer promise of contributing materially to the economic welfare of the Commonwealth may be considered by the Bureau of Mineral Resources and the Treasury after consultation with the State concerned".

About this time the Commonwealth (in response to a recommendation of the Mining Industry Advisory Panel) imported four diamond drills which were made available for hire to mining companies through the Bureau of Mineral Resources.

One example of the operation of the financial assistance scheme is the guarantee jointly by the Commonwealth and Queensland Governments of a bank overdraft for Tableland Tin N.L. in 1952. This loan of \$600,000 allowed that tin dredging company to transfer its dredge to a new area on Smith's Creek following the completion of its original area near Mt. Garnet in Queensland.

Another example is the pilot plant scale tests on tin ore from Ardlethan, N.S.W. carried out by the Australian Mineral Development Laboratories at the Commonwealth's expense. This programme confirmed the results as to recoveries and grades obtained in bench scale tests. It thus eliminated some of the uncertainties associated with proposals by a private company to commence an open cut mine in a mineralized area surrounding erratic and rich pipe - like deposits. These had previously been mined on a small scale by underground methods. The new mine has been operating since the beginning of 1964.

More recently there has been no lack of private finance for worthwhile mining projects such as might otherwise have been eligible for Commonwealth assistance along the lines discussed above.

Subsequent sections of this paper outline experience in Australia with certain ways of providing incentives for the mining industry. State Governments have for very many years provided financial and technical assistance to the mining industry in a range of fields from prospecting to diamond drilling and loans for purchase of machinery, but this is not discussed in this paper.

There are a number of Commonwealth organizations which provide assistance to the mineral industry and its development in a variety of ways. They help to provide a favourable climate for the mineral developer, however, their contribution will not be discussed in this paper.

These organizations include:

- Bureau of Mineral Resources, Geology and Geophysics.
(including the Baas - Becking Geobiological Laboratory)
- Commonwealth Scientific and Industrial Research Organization.
- Australian Atomic Energy Commission.
- Commonwealth Bureau of Census and Statistics.
- National Coal Research Advisory Committee.

The Commonwealth is also involved with other organizations in supporting groups which are concerned with specific sections of the industry. These include:

Australian Mineral Development Laboratories. (Contract research and development in ore dressing, metallurgy etc. chemical, mineralogical and petrological analytical services).

AMIRA Wire Rope Research Committee. (Research into non-destructive testing of wire ropes used in mines).

REWARDS

The practice of offering rewards to encourage exploration has been undertaken to a very limited extent in Australia. Some of the mining legislation still provides for the issue of "Reward Claims" to prospectors discovering minerals in new areas, but the practice was instituted to cope with gold rush conditions and is not of much current significance.

The first steps toward an aluminium industry in Australia were undertaken by the Australian Aluminium Production Commission. A reward was offered by the Commission for the discovery of significant deposits of bauxite. Although some claims for payment of a reward were made, the scheme is not regarded as having been of much significance in encouraging the search for bauxite deposits capable of supporting an alumina industry. It was withdrawn in 1952.

The offer of tax free rewards for the discovery of uranium deposits by the Australian Atomic Energy Commission was much more successful. It was current from January 1948 to 31st March 1961. A maximum reward of \$50,000 was offered.

During the currency of the offer, payments totalling \$225,500 were made to 35 individual prospectors, syndicates and companies. Some details are set out in Table 1 taken from Stewart, 1966.

TABLE 1
Summary of rewards paid by A.A.E.C. for
uranium discoveries

State	Total amount	Major rewards
N. Territory	\$128,800	Rum Jungle
		\$50,000
		El Sherana
		\$36,000
		Eva deposit
Queensland	\$ 91,900	\$31,400
		Sleisbeck
		\$ 4,000
		Adelaide River
		\$ 2,000
N.S.W.	\$ 1,800	Mary Kathleen
		deposit
		\$50,000
Tasmania	\$ 1,600	Anderson Lode
		\$30,000
W. Australia	\$ 1,200	Skal
		\$10,000
S. Australia	\$ 11,700*	Myponga
		\$10,000

* All but \$200 paid by South Australian Government.

The reason for the success of the programme is certainly related to the fact that the search for uranium could be carried out using a simple and portable piece of equipment (the Geiger counter) which gave a positive indication of the presence and strength of radio-activity. These instruments, although rather expensive, could be hired out for short periods and their use by week-end prospectors equipped with four wheel drive vehicles meant that extensive areas with old mine dumps and other indications of mineralisation could be tested fairly easily. The Bureau of Mineral Resources provided maps showing anomalies detected in airborne radiometric surveys and these were eagerly sought and the anomalies followed up by prospectors. The glamour attached to the new science and the prospecting tools, coupled with stories of rich finds by individuals in north America served to heighten the interest of many members of the public.

The search had its "fringe benefits" in that at least one mining operation (Ravensthorpe Copper Mines in Western Australia) had its beginnings in the investigation of radioactive minerals discovered in old mine dumps during the early days of the uranium search. The company is still operating today.

SUBSIDIES AND BOUNTIES

From time to time the Commonwealth has agreed to pay subsidies and bounties to certain mineral producers or processors. The basis for these payments has usually been the maintenance of established communities which were principally dependent on mining operations and faced with the possibility that the mines on which they depended could close down due to rising costs and fixed or depressed prices. Gold and copper mining are examples of this situation. In other cases the assistance was originally paid in times of world shortage to encourage manufacturers to instal plant capable of treating indigenous materials. It has been continued in the interest of equitable treatment of these manufacturers who later found themselves at a commercial disadvantage once the shortage was over. Sulphuric acid manufacturers and pyrites producers are examples of producers of this kind. Other bounties are intended to assist the end user of the mineral product, as is the case with phosphatic fertilizers.

Subsidies and bounties of this nature can hardly be described as incentives, but their very existence assures mineral producers and processors that the Commonwealth is not insensitive to the needs of the industry in adverse circumstances. A detailed description of these particular forms of assistance is set out in Appendix I derived from the Commonwealth Yearbook, 1968.

TAXATION CONCESSIONS

The amount of income subject to income tax in Australia (the taxable income) is determined in accordance with the provisions of the Income Tax Assessment Act 1936, as amended. Under this Act, taxation concessions are allowed to the mining industry in a variety of ways. Some concessions, such as that allowing deduction of capital expenditure, recognize the fact that as a mineral deposit is worked the time when it will be exhausted comes closer and the value of the assets associated with the working of the deposit diminish.

Others, such as the exemption from tax of one fifth of the net income (which applies to certain specified minerals only), are straightforward incentives to reduce the impact of taxation and make development of mineral deposits more attractive.

Some details of the concessions are set out below:

1) Deductions for capital expenditure.

A. Exploration or Prospecting Expenditure.

A deduction is allowable from income of the year in which exploration or prospecting expenditure is incurred up to the amount of net income derived during year from a mining business or associated activities (section 122J). Any balance of the expenditure not so deducted is deductible over the life of the mine.

B. Allowable Capital Expenditure on Mining and Certain Treatment of Minerals.

This expenditure may be deducted, at the option of the mining enterprise, on any one of the following bases:

- (a) annual deductions over the life of the mine (section 122D).
- (b) a deduction for the expenditure in the year in which it is incurred (section 122E).
- (c) where income of a year is appropriated for expenditure to be incurred in the next year, a deduction in the year in which the income is derived of the amount so appropriated (section 122G).
- (d) annual deductions as depreciation allowances for mining plant (section 122H).

C. Expenditure on Housing and Welfare.

At the option of the mining enterprise, this expenditure may be deducted:

- (a) over the life of the mine (section 122D); or
- (b) over a period of five years (section 122F).

2) Deductions allowed to Shareholders.

Under certain conditions, one third of the calls paid by shareholders in companies or syndicates whose principal business is prospecting or mining may be deducted from the taxable income of the shareholder. Depending on the particular section of the Act under which the deduction is claimed, it may extend to moneys including application and allotment moneys as well as calls. In the latter case, however, the company forgoes a corresponding amount of the special deductions to which it would otherwise be entitled in respect of capital expenditure under the mining provisions of the income tax law.

3) Exempt income.

Bona fide prospectors who dispose of rights to mine in Australia or Papua - New Guinea for gold or a metal or mineral prescribed by regulation are under certain circumstances, entitled to an exemption from tax on income resulting from the sale of those rights.

Income from working a mining property in Australia or Papua New Guinea is exempt from taxation where it is undertaken to obtain gold alone, or where the income from gold exceeds the income from all other products. In the case of mining for gold and copper, exemption is allowed where gold accounts for at least 40 percent of the value of total output in the year in question and further that income from gold and copper together must have exceeded half the total income from all minerals since the commencement of mining on the property. Income from pyrites production is not exempt, however, even when associated with gold and copper production.

An exemption from tax of 20 percent of the net income derived from the production or sale of prescribed minerals is provided under section 23A. The principal minerals not prescribed and so not attracting this exemption are coal, iron ore, lead, zinc and silver. A list of the prescribed minerals is given in Appendix 2.

4) Exemption of dividends.

Dividends are exempt from tax when paid exclusively out of net exempt income from mining operations or sale of rights to mine, if the exemption of income is derived from the provisions of the Act mentioned above. Profits from mining and treatment of uranium were exempt up to the end of the 1967-68 financial year.

The taxable income having been determined in accordance with the deductions allowed by the Act, taxation is then payable by mining companies at the same rates as any other company.

EXPORT CONTROLS: CONSERVATION OF RESOURCES.

Export controls over certain minerals and metals are maintained by the Commonwealth under its constitutional powers. These controls are provided by means of the Customs (Prohibited Exports) Regulations as amended from time to time by Statutory Rules.

The mineral products at present controlled and the Commonwealth authorities responsible are listed below. A clearance to export must be obtained from the authority concerned in each case.

Department of National Development - iron ores, beneficiated iron ores and iron concentrates; mineral sands in all forms (including concentrates) containing zircon, rutile or ilmenite; manganese ores; beryllium ores and concentrates; tin and tin in concentrates; refined copper and certain types of copper scrap and residues.

Department of Primary Industry - phosphate rock, phosphate and superphosphate, and fertilizers containing phosphate or superphosphate.

Australian Atomic Energy Commission - uranium and thorium minerals including monazite; uranium, thorium, beryllium, hafnium, and lithium metals, compounds and alloys; hafnium-free zirconium metals, alloys and compounds; very pure calcium metal; nickel metal in certain forms; minerals, raw and treated (including residues and tailings), containing more than 0.05 percent of uranium or thorium, singly or together.

In recent times export controls on copper and copper bearing materials have been imposed. These have been administered by the Department of National Development with the object of retaining locally produced copper from primary and secondary sources to ensure that local requirements are met before exports are permitted. The controls were made necessary by domestic shortages resulting from industrial trouble at the major domestic producer.

The fact that export is subject to a control does not necessarily mean that export is prohibited entirely. Some examples of the way in which controls have been used to direct the course of development of segments of the industry are set out in the following paragraphs.

In the case of iron ore a complete ban on export was introduced in 1938 when known deposits of ore that could be exploited under the prevailing economic conditions were only sufficient for the domestic iron and steel industry's requirements for a relatively short period.

By the end of the nineteen fifties some changes had taken place in the economics of iron mining and marketing and exploration of known and newly discovered deposits had increased known reserves. This exploration had been carried out by State Governments and the Broken Hill Proprietary Company as these were the only two groups with any real incentive for iron ore exploration during the currency of the complete embargo on export.

Because of these changes and the recognized potential for further discoveries the Commonwealth decided to allow limited exports from deposits other than those main deposits on which the domestic industry depended and in which most of the demonstrated reserves of iron ore occurred. This new policy was introduced in December 1960. The incentive for exploration was thus restored and the new policy was so effective that by 1963 a further easing of the control was found possible by the Government. Reserves had been increased from a few hundred million tons to several thousand million tons over this short period.

Although the control still exists, each application for export is considered on its merits and in determining the quantity and rate of export the Government has regard to the effect of any particular application on Australian development, particularly the possibility of extending operations to include processing within Australia and to the pricing of ore sold.

A somewhat similar situation existed in the case of manganese ore. An indifferently defined policy of limited export was replaced by a policy permitting the export of a proportion (in practice one third) of the additions to reserves resulting from exploration and development work on new or previously known deposits. With the discovery of the very substantial deposits at Groote Eylandt it has been possible to further liberalize the conditions of control on manganese ore, and individual applications are now treated on their merits.

The control on exports of beach sand minerals; rutile, zircon, etc., dates from the early days of the industry when mixed concentrates were being exported with little or no prior treatment in Australia.

The control prohibited the export of mixed concentrates and ensured that only parcels that met the commercial specification for separate rutile or zircon concentrates were exported.

This action ensured the technical development of the domestic industry and enhanced the value of the concentrates exported. The development of the industry thus brought about when high grade material was readily available, is probably a major factor in the present technical strength of the domestic industry which is capable of profitably working very low grade deposits.

In the case of uranium the future policy to be followed in control of exports was detailed in 1967. The policy defined had the dual object of conserving known uranium resources for future essential needs and at the same time encouraging exploration to establish new reserves. Prospecting companies were given an assurance in advance that approval would be given for the export of specified quantities of uranium from known or newly discovered deposits as a percentage of new reserves discovered.

The size of deposits as well as date of discovery are relevant under the new conditions which provide for export as follows:

- (a) From deposits containing less than 100 short tons of recoverable uranium oxide, the uranium may be exported in full;
- (b) From deposits containing between 100 and 200 tons of recoverable uranium oxide, up to 100 tons may be exported;
- (c) From deposits containing between 200 and 2,000 short tons of recoverable uranium oxide, not more than 50 percent of the predicted reserves of uranium may be exported;
- (d) From deposits exceeding 2,000 short tons of recoverable uranium oxide, and discovered after 1 January 1967, permission to export more than 1,000 tons will be subject to special negotiations.

In the above cases all discoveries by the same company within a radius of 5 miles will be regarded as a single deposit. For deposits exceeding 2,000 short tons of recoverable uranium oxide, proved before 1 January 1967, approval to export any portion of the uranium will depend on the discovery of new economically recoverable reserves of uranium oxide equal to the quantities for which permission to export is sought. Companies which already had established mining operations, and which secure an entitlement to export by making new discoveries after 1 January 1967, could provide concentrate for export from established mines instead of from newly discovered reserves.

The control of most items listed under the Australian Atomic Energy Commission is maintained because of the strategic nature of these materials and their use in production of atomic energy.

Complete embargoes or ill defined controls on export have, in Australian experience, tended to inhibit exploration for the minerals so controlled. From the point of view of mineral conservation i.e. increasing known reserves, positive results are obtained when active exploration and development programmes to discover and work new deposits are undertaken. These can be most effectively encouraged by a removal of all restrictions on export.

In cases where it is considered vital to maintain a minimum level of ore reserves for basic or strategic industries, worthwhile encouragement can still be provided by a modification of the control so that a generous proportion of a company's new discoveries are made available for export.

Unless domestic sales can account for the balance of production from a given deposit controls should be so administered that retention of a proportion of newly discovered reserves is done in a separate deposit or deposits, if at all possible. This will avoid constraints in working deposits for export which might otherwise increase operating costs and render ventures less attractive.

An alternative to the course of action outlined above is for a government itself to undertake detailed exploration for the more important minerals. In Australian experience, however, government effort in the field of mineral resources is best applied in the provision of basic data such as regional geological mapping. This provides a sound general picture of the geology of the country and helps to delineate for private companies those areas where techniques of detailed mineral search are most likely to lead to discovery. General development of an area, including transport systems etc. is best based on a knowledge of the likely natural resources of the area, and for this a knowledge of the geology is an essential background.

Competent technical support will be required for those government officers negotiating with companies over particular development projects and special mining leases and to advise in consideration of the details of any partial controls on export that may be introduced. Such technical support will also be necessary to make sure that, where proportional export only is to be permitted, claims for the establishment of given tonnages of ore reserves are soundly based and realistic in terms of cut off values used.

STABILITY

Political and economic stability is a significant factor considered by mining companies reviewing the international scene to select countries in which to undertake exploration. Some remarks on this subject are contained in papers submitted to the CENTO Symposium on Development and Utilization of Mineral Resources held in Karachi in April 1968.

Stability must refer not only to the policies followed with regard to mineral rights but also to prices of electricity, water, wages and conditions of employment, royalties, incidence of taxation etc. Australia is fortunate in having built up a good record in this field over the years.

The Government recognizes the importance of international relations to the mineral industry. Australia contributes to the stability of international markets by active participation in such groups as the International Tin Agreement, the International Lead-Zinc Study Group and the Tungsten Conference. Stability in mineral commodity markets is important to us because Australia is an important world supplier of products such as lead, zinc, mineral sands and iron ore. The domestic industry largely depends on export markets in the case of these commodities.

CO-OPERATIVE PROJECTS.

The functions of some of the various Commonwealth Authorities and the way in which they encourage the mineral industry have been outlined above. Some examples of co-operative action between Commonwealth and State Governments are mentioned below.

Joint Coal Board.

The Board was set up jointly by the Commonwealth and New South Wales Governments to ensure that the New South Wales coal mining industry would be able to meet the demands of increased production in the post war years. Its powers and functions are as follows:

a) to ensure that coal is produced in the State in such quantities and with such regularity as will meet requirements throughout Australia and in trade with other countries;

b) to ensure that coal resources of the State are conserved, developed, worked and used to the best advantage in the public interest;

c) to ensure that coal produced in the State is distributed and used in such manner, quantities, classes and grades and at such prices as are calculated best to serve the public interest and secure the economical use of coal and the maintenance of essential services and industrial activities; and

d) to promote the welfare of workers engaged in the coal industry in the State.

The Board has played an important part in the stabilization, modernization and development of the industry in New South Wales which is now well equipped to meet future domestic demands and export opportunities.

Australian Minerals Council.

The first meeting of the Australian Minerals Council in November 1968 was held at the invitation of the Commonwealth Minister for National Development.

It consists of Ministers for Mines from the State Governments and Commonwealth Ministers with responsibilities in the mining field.

As well as providing a forum for useful discussion of common problems it is hoped that the Council's discussions may eventually lead to a more uniform mining legislation that will be of direct assistance to those interested in exploration and development of mineral deposits throughout Australia.

The Conference of Chief Inspectors of Mines and Conference of Government Geologists also provide for useful exchanges of views and co-operation between State and Commonwealth representatives in their particular fields.

CONCLUSION.

Some of the incentives offered by the Commonwealth Government for mineral exploration and development have their origin in the recommendations of the post-war Mining Industry Advisory Panel. The concept of conservation of resources by ensuring that an incentive existed for the search for additional resources was first tried out in the case of manganese ore. This policy of allowing the export of a proportion of newly defined reserves has since been extended with success to iron ore and uranium.

These incentives supplement natural advantages to place Australia among the more attractive areas for mineral exploration in the world today.

REFERENCES.

- HARGRAVES, A.J., 1965. Mineral holdings available for prospecting and exploration. EXPLORATION AND MINING GEOLOGY. Eighth Commonwealth Min. Metall. Congr. Melb. 2, 12-18.
- PEARSON, H.F., 1953. Legislation controlling the mining industry in Australia, MISCELLANEOUS FEATURES AND PRACTICES. Fifth Empire Min. Metall. Congr. Melb. V, 120-136.
- STEWART, J.R., 1966. The Search for uranium in Australia. Atomic Energy in Australia Vol. 9 No. 3. July 1966.

BIBLIOGRAPHY.

- Official Yearbook of the Commonwealth of Australia.
Income tax for the Mining Industry.
Australian Mineral Industry Annual Reviews.
CENTO Symposium on Development and Utilization of Mineral Resources, Karachi April 1968.

APPENDIX I.SUBSIDIES AND BOUNTIES

Assistance to the gold-mining industry. Assistance to the gold-mining industry by subsidy was introduced at a time of rising costs in the industry and fixed official world price for gold. Because many producers were faced with the likelihood of closing down, the Government decided to subsidise marginal producers in Australia and the Territories of Papua and New Guinea. Under the Gold-Mining Industry Assistance Act 1954 a producer, the value of whose gold output exceeded 50 percent of the total value of his mine output, was eligible for assistance, subject to certain conditions, on the production of gold from 1 July 1954. The assistance scheme has been reviewed on a number of occasions since the Act was originally passed, and some liberalisations have been approved, including increases in the rates of subsidy payable authorised in amendments enacted on 22 October 1957, 22 May 1959 and 2 June 1965.

The rate of subsidy payable under the original Act was increased under amendments enacted on 22 October 1957 and 22 May 1959. The Act was again amended on 2 June 1965. Under the Act as it now stands the subsidy payable to small producers whose annual deliveries do not exceed 500 fine oz is \$5 per fine oz, irrespective of costs of production. For large producers, subject to certain provisions, the rate of subsidy payable is an amount equal to three-quarters of the excess of the average cost of production over \$27 per fine oz, with a maximum amount of subsidy of \$8 per fine oz. A producer whose deliveries during the year exceed 500 fine oz may elect to be treated as a small producer. In this case the subsidy rate payable per fine oz on total deliveries is \$6 reduced by 1c for each fine oz by which deliveries exceed 500 fine oz. The benefit under this provision terminates when deliveries in a year reach 1,100 fine oz. Where a producer receives an amount in excess of the official price of \$31.25 per fine oz as a result of sales on overseas premium markets or otherwise, the subsidy payable is reduced by the amount of the excess. Prior to 1 July 1965 subsidy payable to large producers was subject also to a limiting provision that the annual net profit of a producer was not, with the addition of the subsidy, to exceed 10 per cent of the capital used in the production and sale of gold. The limitation has now been removed. The latest amendments also provided for the removal of two other restrictive provisions. A large producer's entitlement to subsidy is no longer subject to reduction if the amount of expenditure on development included in costs exceeds a certain amount, or if the grade of ore being mined falls below a certain level. On the other hand, the Act now provides that subsidy may be adjusted if it is considered that operations are not conducted in accordance with good mining practice. With effect from 1 July 1965 a large producer is able to include in his costs for subsidy purposes one-half of net costs incurred in approved exploratory diamond drilling elsewhere than on his mining property. Payments under the amended Act are to apply to production until 30 June 1970. Payments under the Act commenced in March 1955, and the amounts paid to gold producers in the various States and Territories of Australia in each of the years 1963 to 1967 are shown in the table below.

The purpose of the Gold Mines Development Assistance Act 1962 was to provide assistance to gold producers in Australia and the Territories of Papua and New Guinea not receiving subsidy under the Gold-Mining Industry Assistance Act 1954-1962, in order to increase the rate of their development work and so to add to their proved reserves of gold-bearing minerals. With the liberalisation of the Gold-Mining Industry Assistance Act from 1 July 1965, the Commonwealth Government decided not to extend the development assistance legislation, which, accordingly, lapsed on 30 June 1965.

Assistance to the copper mining industry.

After a Tariff Board investigation, assistance was accorded to the industry in 1958, partly by import duty and partly by bounty. The assistance was continued until 31 December 1965. However, because of the unsettled conditions in the industry at this time, it was decided to defer a Tariff Board Inquiry and to continue the existing bounty assistance until 31 December 1968 unless an earlier date of cessation was proclaimed. Under the Copper Bounty Act 1958-1966 bounty was payable, subject to specified conditions, on refined copper sold for use in Australia. The rate of bounty was \$70 per ton when the overseas price, as determined by the Minister for Customs and Excise, was \$580 (£stg 232) or less. When the overseas price rose above \$580, the bounty fell by the same extent, so that no bounty was payable when the overseas price was \$650 (£stg 260) or more. The Act lapsed on 31 December 1966. Payments under the Act in each of the years 1963 to 1967 are shown below. The import duty continues in operation, and is imposed on imports of copper when the overseas price falls below \$580 a ton, to the extent of \$1 for each \$1 that the price falls below \$580. Including freight and other charges, the landed cost of import copper is thus expected not to fall below \$610 a ton.

Assistance to producers of sulphuric acid and iron pyrites.

Following recommendations of the Tariff Board, the Sulphuric Acid Bounty Act 1954 was extended for a period of five years from 1 July 1960. Arising from these same recommendations, the Pyrites Bounty Act 1960 was enacted on 15 December 1960 to be operative for a period of four and a half years from 1 January 1961. The Acts provide for bounties to be paid, subject to specified conditions, on sulphuric acid produced from prescribed materials of Australia origin and to producers of iron pyrites. In June 1965 it was announced that assistance under these Acts would continue until 31 December 1965. Both of these Acts have now been extended by legislation to 30 June 1969. Payments under the above Acts in each of the years 1963 to 1967 are shown in the table below.

Payments to producers of phosphate fertilisers. The Phosphate Fertilisers Bounty Act 1963-1966 provides for a bounty to be paid on superphosphate and ammoniated phosphate fertilisers manufactured and sold for use in Australia on and after 14 August 1963. The bounty is based on the fertiliser value of superphosphate as measured by its soluble content of phosphorus pentoxide. A standard grade of superphosphate containing 20 percent, plus or minus 0.5 percent, soluble content of phosphorus pentoxide qualifies for the full bounty of \$6 per ton. When the phosphorus pentoxide content of the superphosphate is less than 19.5 percent or above 20.5 percent, bounty is payable at the rate of \$30 for each ton of contained phosphorus pentoxide. Bounty in respect of ammonium phosphate is payable at the rate of \$30 for each ton of the phosphorus pentoxide content of the ammonium phosphate. In addition to standard grade superphosphate, 'double' and 'triple' superphosphate, containing 40 percent and 50 percent phosphorus pentoxide respectively, are produced in Australia, and bounty on these products is payable at the rate of \$12 a ton and \$15 a ton respectively. The intention of this Act is to assist consumers of superphosphate (primary producers). The Act is due to expire on 31 October 1969. Payments under the above Act in each of the years 1963 to 1967 are shown in the following table.

COMMONWEALTH GOVERNMENT PAYMENTS TO THE MINERAL INDUSTRY
AUSTRALIA, 1963 TO 1967
(\$)

Year	Gold mining (a)	Copper mining (b)	Pyrites mining (c)	Sulphuric acid production (d)	Phosphate fertiliser production (e)
1963	1,614,600	1,297,704	960,334	2,590,248	1,908,252
1964	1,382,124	1,065,782	1,320,668	2,046,542	22,772,978
1965	1,984,966	5,262	1,113,964	2,138,914	22,604,562
1966	3,784,241	1,314	288,319	1,397,679	25,817,516
1967	3,858,763	..	45,714	1,382,485	25,543,785

(a) Gold-Mining Industry Assistance Act 1954-1966 and Gold Mining Development Assistance Act 1962 (expired 30 June 1965).

(b) Copper Bounty Act 1958-1966.

(c) Pyrites Bounty Act 1960-1965.

(d) Sulphuric Acid Bounty Act 1954-1966.

(e) Phosphate Fertilisers Bounty Act 1963-1966.

APPENDIX 2METALS AND MINERALS PRESCRIBED BY REGULATION FOR
SECTION 23 OF THE INCOME TAX ASSESSMENT ACT.

Asbestos	Ores of - Antimony
Bauxite	Arsenic
Chromite	Beryllium
Emery	Bismuth
Fluorspar	Cobalt
Graphite	Columbium
Ilmenite	Copper
Kyanite	Lithium
Magnesite	Mercury
Manganese Oxides	Molybdenum
Mica	Nickel
Monazite	Osmiridium
Pyrites	Platinum
Quartz Crystals	Selenium
(piezo-electric quality)	Strontium
Radio-active ores	Tellurium
Rutile	Tin
Sillimanite	Tungsten
Vermiculite	Vanadium
Zircon	