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COMMONWEALTH OF AUSTRALIA

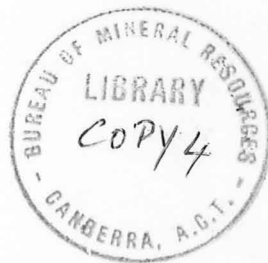
DEPARTMENT OF NATIONAL DEVELOPMENT

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

Record No. 1969 / 152

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Australian Mineral Exploration Policy



by

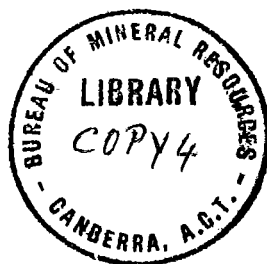
G.F. Mead

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AUSTRALIAN MINERAL EXPLORATION POLICY

by

G. F. MEAD

ECONOMIC COMMISSION FOR ASIA AND THE FAR EAST

COMMITTEE ON INDUSTRY AND NATURAL RESOURCES

SEMINAR ON MINING LEGISLATION AND ADMINISTRATION

Manila, Philippines, 16-23 October, 1969

AUSTRALIAN MINERAL EXPLORATION POLICY

Australia has had long experience in mining and in prospecting for coal and other minerals. The present legislation governing mineral exploration in the several States and Territories has evolved over a considerable length of time and is still changing. It is thought that experience gained in administering such legislation may be helpful to developing countries.

2. In the Commonwealth of Australia each State and Territory has its own mining legislation, which differs as between the several States and Territories although there are similarities. Even as between the Territories there is no uniformity of legislation.

3. Provisions governing mineral exploration are in some cases set out in great detail in statutes or regulations and in other cases amount to little more than authorizing the relevant authority to grant prospecting licences on such terms and conditions as it sees fit. Therefore the information in this paper is partly derived from printed statutes and regulations and partly from written communications from the Under-Secretaries for Mines of Queensland, New South Wales and Western Australia, the Secretary for Mines of Victoria and the Directors of Mines of Tasmania, South Australia and the Northern Territory, to all of whom the author's thanks are hereby gratefully expressed.

4. At first the only legal method of prospecting on Crown land was by possession of a miner's right, which was originally only for the purpose of prospecting for and mining alluvial gold but was extended in scope to cover other forms of mining and other minerals. These provisions still exist and can be and are still used for the purpose of mineral exploration but with some exceptions are not of any great importance.

5. With the development of modern methods of mineral exploration it was found that the areas which could be held under the old forms of tenure were much too small for proper use of these methods and at various times in the past 42 years provisions were made by the States and the Northern Territory to permit the licensing of large areas for mineral exploration. The names of these forms of tenure and the dates at which they were introduced are tabulated below:

(a)	Queensland, Authority to Prospect,	1930
(b)	New South Wales, Exploration Licence,	1963
(c)	Victoria, Exploration Licence,	1964
(d)	Tasmania, Exploration Licence,	1958
(e)	South Australia, Special Mining Lease,	1927
(f)	Western Australia, Temporary Reserve,	1957
(g)	Northern Territory, Prospecting Authority,	1962

6. An attached table shows the areas currently held under these forms of tenure.

7. These forms of tenure are, except in the case of South Australia, merely a licence to occupy land for the purpose of mineral exploration and not to mine or to remove material except for sampling or testing. The South

Australian Special Mining Lease nominally allows for actual mining operations but its short duration prevents any full scale mining operations.

8. Exploration licences, or their equivalent under another name are granted by the Administrator of the Northern Territory, by the Minister for Mines with the consent of Parliament in Western Australia and by the Ministers for Mines in the other States, except South Australia, where the Special Mining Lease is granted by the Governor. In Tasmania and the Northern Territory the application is advertised in a local newspaper, and any person claiming a prior interest in the subject land may object to the granting of the licence.

9. In all States and the Northern Territory they are grantable to "any person" but the term "person" includes a company. In Queensland and Victoria the said company must be one registered in that respective State.

10. They are not usually surveyed, except where there is no other way of settling a dispute between licensees of adjoining areas, or marked on the ground, with two partial exceptions, i.e., in Tasmania one corner is marked by posting a notice of application and in Western Australia one datum peg is erected after approval of the application. Otherwise application is made by description or a marked plan and the approved area is usually described in a schedule to the licence and shown by marking on an attached plan.

11. In no case except Tasmania is there any restriction on the number of tenures which may be held at any time by a person, except that in New South Wales the number is at the discretion of the Minister, in Victoria regard is had to the area already held under licence and in South Australia the financial and technical capacity of the applicant is taken into account. In Tasmania an individual may hold only one exploration licence and a company more than one.

12. They are, in general readily transferable except in Queensland, where the consent of the Minister for Mines must be obtained.

13. Three States, New South Wales, Victoria and South Australia have a legal maximum of 1000 square miles which may be granted in any one tenure but in practice the maximum area granted in any one tenure is as listed below:

Queensland, 1000 square miles except in known mineral areas
of great interest, where the usual maximum is
100 square miles.

New South Wales, 1000 square miles.

Victoria, 500 square miles.

Tasmania, Unlimited.

South Australia, 1000 square miles.

Western Australia, Unlimited.

Northern Territory, Unlimited.

14. New South Wales has a legal minimum area of 100 square miles but less than this may be granted at the discretion of the Minister. Other States and the Northern Territory have no legal minimum area which may be granted but in some cases there are cheaper forms of prospecting tenures for small areas.

The combination of provision for a maximum area for an exploration licence and the ability to hold more than one licence (possibly adjoining) may seem contradictory, but it is justified by enforcing the required conditions of work and expenditure on each of the licensed areas separately.

16. An exploration licence (or its equivalent under another name) has excluded from its operation all existing mining leases, miners rights claims, land included in other exploration licences for the same minerals, and usually town lands and some forms of cultivated land. Land which is included in its operation comprises Crown Land only in South Australia and Western Australia, land in which the minerals are the property of the Crown (i.e. Crown land and private land in which the minerals were reserved when the grant was made) in Queensland, Victoria, Tasmania and the Northern Territory and Crown land and private land in New South Wales, including land in which the minerals are privately owned, except where they are actually being worked by the owner.

17. It is granted to explore for a named mineral or a group of associated minerals or in some cases for "all minerals". The policies in this matter which are followed by the several States and the Northern Territory are summarised below:

- a) Queensland. Authorities to prospect may be issued for coal, for petroleum, or for other minerals, and in the latter case usually for "all minerals including gold but excluding coal and petroleum". In the past some Authorities to Prospect were issued for specific minerals but this practice has been discontinued. It is not the practice to issue two Authorities to Prospect (Minerals) over the same ground but an Authority to Prospect (Minerals) may overlap an Authority to Prospect (Coal) or an Authority to Prospect (Petroleum).
- b) New South Wales. Exploration Licences are issued to search for all minerals named in the licence. Overlapping of licenced areas is rare and is usually confined to such instances as "metallic minerals" and "clay", or "metallic minerals" and "coal and shale".
- c) Victoria. Exploration licences may be issued to explore only for tin, phosphate, lead, copper, gold, antimony, molybdenum, nickel, silver, titanium, zirconium and zinc. The last seven in this list were added in 1968 as a result of requests for a form of licence to cover search for these metals. Presumably if a demand arises for addition of other minerals or metals to the list it would be met. There is a provision in the Victorian Act for overlapping exploration licences for different minerals.
- d) Tasmania. Licences are issued to search for "all minerals, alluvial tin and associated minerals, metallic minerals, non-metallic minerals, and petroleum". Overlapping licence areas

are rare and are usually confined to such instances as "kaolin" and "metallic minerals", or "limestone and dolomite" and "metallic minerals."

- e) South Australia. Special Mining Leases are issued to search for "all minerals". Special Mining Leases were issued in the past to search for specific minerals but this has been discontinued.
- f) Western Australia. Temporary reserves are made for the purpose of permitting search for specified minerals (including coal) usually comprising all possibly associated minerals. Overlapping areas are granted only for entirely different minerals.
- g) Northern Territory. Licences are issued to search for "all minerals except coal and petroleum". The licenced area may overlap an area covered by a licence to prospect for coal or a petroleum permit.

18. An exploration licence, or its equivalent under another name is exclusive in the sense that during its currency no other licence to search for the same mineral on the same ground will be granted and in general no mining lease for the same minerals will be granted except to the licensee. New South Wales reserves the right to cancel parts of the licenced area which are required by another applicant to search for other minerals. Tasmanian and Victorian legislation contain a provision for granting a mining tenement within the licensed area to another person with the consent of the licensee.

19. The duration of an exploration licence varies as between the several States and the Northern Territory but in all cases is fairly short. Extensions of duration are possible but even with all possible extensions the total allowable time is not long. The actual licence durations and possible extensions are as follows :

- a) Queensland. Usually for two years but up to five years has been granted. Extensions may be granted if the conditions of the licence have been carried out.
- b) New South Wales. For not more than one year but an indefinite number of six-monthly extensions may be made.
- c) Victoria. For two years but two renewals of six months each may be made.
- d) Tasmania. For six months but may be renewed for further periods of six months if the terms of the licence have been substantially carried out.

- e) South Australia. For not more than two years but it may be renewed by negotiation.
- f) Western Australia. For six to twelve months but renewals may be granted.
- g) Northern Territory. For one year but a renewal may be made.

20. On renewal of the licence, or in some cases during the term of the licence, a reduction of the area covered by the licence is required. The actual practice followed in this regard as is follows:

- a) Queensland. For areas not greater than 200 square miles, a reduction of one-half of the area after one year. For areas greater than 200 square miles a reduction to not greater than 100 square miles after one year. Such reductions are not always enforced if the licensee has fulfilled all conditions of the licence.
- b) New South Wales. A reduction of area by 50 percent after the first twelve months.
- c) Victoria. Reduction of the area is not compulsory on renewal but the licensee is encouraged to do so.
- d) Tasmania. Reduction of area is not compulsory on renewal but it is sometimes required by the Minister particularly if interest is shown in the area by other persons.
- e) South Australia. Reduction of area is an item considered when renewal is under negotiation.
- f) Western Australia. A 50 percent reduction of area annually is usual.
- g) Northern Territory. No reduction of area is required on renewal.

21. An annual fee or rental is charged for an exploration licence or its equivalent but in all cases this is quite low and would only cover the cost of administration. For the maximum area which can be held the fees are:

- a) Queensland, \$1,600 plus 10 cents per square mile in excess of 1000 square miles.
- b) New South Wales, \$500.

- c) Victoria, \$275 plus 20 cents per square mile in excess of 100 square miles.
- d) Tasmania, \$25 plus 10 cents per square mile in excess of 25 square miles. This rental is increased by 25 per cent after two years and by up to 100 percent for licences of long standing.
- e) South Australia, \$400 plus 2½ percent of the value at the mine of any mineral produced.
- f) Western Australia, For iron ore, \$8 per square mile. For all other minerals \$400 for 12,000 square miles or greater.
- g) Northern Territory, \$1 per square mile.

22. A refundable bond or a cash deposit is usually required as a surety that the terms of the licence will be fulfilled, or as a guarantee against damage to private land. These also are not large being as follows :

- a) Queensland, \$1,000 for up to 100 square miles and \$2,000 for larger areas.
- b) New South Wales, Not less than \$2,000 or a greater sum if required by the Minister.
- c) Victoria, As required by the Minister.
- d) Tasmania, As required to cover possible damage to private land.
- e) South Australia, \$2,000 or such greater sum as the Minister requires.
- f) Western Australia, None required.
- g) Northern Territory, \$0.25 per acre of private land included in the licensed area.

23. The principal requirement of an exploration licence or its equivalent is that the licensee shall carry out a programme of work designed to explore the area for minerals. This requirement is expressed in various ways in the States and the Northern Territory as follows :-

- a) Queensland. "The holder is required to continuously prospect the lands on an appropriate scale which is determined usually by specifying the minimum expenditure to be incurred each year. The standard scale is :

<u>Initial Area</u>	<u>First Year</u>	<u>Each Following year</u>
0 to 1 square mile	\$10,000	\$15,000
1 to 10 square miles	\$15,000	\$20,000
10 to 100 sq. miles	\$20,000	\$30,000
100 to 1000 sq. miles	\$30,000	\$50,000
1000 to 10,000 sq. miles	\$50,000	\$100,000

Geological and geophysical examinations and aerial surveys are considered to be continuous prospecting but petrological studies, beneficiation and feasibility studies have also been permitted.

In some circumstances the carrying out of a specified programme may be required".

- b) New South Wales. A proposed scheme for the exploration of the land including a geological survey or other surveys must be lodged with the application, together with the proposed methods of exploration and proposed expenditure. If the application is approved, the proposed scheme and expenditure must be carried out. The applicant must also furnish evidence of his financial standing with his application.
- c) Victoria. As for New South Wales.
- d) Tasmania. The terms and conditions are laid down in the licence document and in general require the licensee to implement the programme of work which he submitted in support of his application.
- e) South Australia. The exploration programme, including expenditure commitments is as negotiated with the applicant.
- f) Western Australia. The proposed programme of work must be approved by the Minister.
- g) Northern Territory. The applicant is free to submit any form of prospecting programme and to state the amount of finance available. There is no standard for deciding on the type of work or expenditure which will be approved.

24. Another conditions of an exploration licence or its equivalent is that reports must be made to the Mines Department or Branch giving details of work done, expenditure incurred and results obtained. These reports are usually made available to other enquirers after expiry of the licence. Details are as follows :

- a) Queensland. Quarterly reports of work done and expenditure incurred are required. An annual report giving all results of work done during the year is required within six months after the end of the year. These results are confidential during the term of the Authority to Prospect. When land is surrendered in order to take up mining leases, or the Authority to Prospect expires, the holder may release all reports or may make a separate non-confidential report on the surrendered lands. Additional information is often required.
- b) New South Wales. Quarterly reports are required giving full particulars of prospecting operations, expenditure incurred, and location plans showing actual operations conducted. Further information may be required if requested by the Geological Survey. The information in the reports is confidential during the tenure of the exploration licence but is available for public information when the licence is relinquished.
- c) Victoria. Quarterly reports are required within 14 days of the end of the quarter. These reports are required to give details and results of all exploration activities and of money spent. If the reports are not satisfactory, further information may be required. The reports remain confidential at all times and are not available to enquirers except by arrangement with the ex-licensee.
- d) Tasmania. Monthly progress reports and final reports and plans containing all available information must be furnished. The information in the reports is available to other persons when an area is surrendered.
- e) South Australia. Reports are required quarterly, including copies of all technical data, maps and records. They are required to provide a full coverage of all work completed. On surrender or expiration of the licence the reports are placed on open file.
- f) Western Australia. Quarterly and annual reports and a final report are required. They have to include such information as may be required by the Geological Branch.
- g) Northern Territory. Monthly and final reports are required. The monthly report is a brief summary of work done and money expended. It is only intended for administrative control. The final report is a comprehensive document covering all work done.

25. In South Australia the leasee of a Special Mining Lease has a statutory right to ordinary mining leases within the licensed area on application. In Tasmania, it is administrative policy to allow this. In the other States and the Northern Territory the licensee has a preferential right to apply for leases and these are usually, though not necessarily granted. Queensland and Victoria may require a licensee to apply for mining leases over any discovery that he has made.

26. The Mines Departments of the States and the Mines Branch of the Northern Territory Administration were requested for their views as to whether their respective systems for granting and administering exploration licences worked satisfactorily and whether any changes were proposed. A summary of the replies follows :-

a) Queensland. The system works satisfactorily. Some improvements in procedure could be made. In other States or countries it might be advisable to restrict the licensed area to considerably less than 1000 square miles. The Queensland system, in which the terms and conditions of the Authority to Prospect are in the licence document rather than in the statutes and regulations permits flexibility and change to suit particular circumstances.

b) New South Wales. The Department is generally satisfied with the working of the system. Changes have already been made to remedy discovered defects. Others will undoubtedly be made. There are some factors of land tenure and private ownership of minerals which have had a greater effect in New South Wales than in other States. This has affected the legislation. The Minister has a considerable amount of discretionary powers.

c) Victoria. The legislation is generally satisfactory but it is thought that periodical reduction of area would be desirable and that 1000 square miles is too large a maximum area for Victoria.

The Minister has a fair amount of discretionary powers.

d) Tasmania. The system has proved satisfactory in practice although some small changes in administrative procedure may be made.

The areas granted (the largest has been 3,100 square miles) are not considered to be too large. "In our experience the imposition of upper or lower limits on sizes of areas leads to devices to overcome the legislation."

- e) South Australia. The system appears to be best of those available. The size of area is satisfactory. Many of them are less than 100 square miles. It is proposed to change the name to "Exploration Licence" and to make some changes in administrative procedure.
- f) Western Australia. The system has in the past proved very effective. The present "boom" conditions have created some temporary difficulties.

An upper limit of size is desirable. The granting of smaller areas for a larger period would produce better results.

- g) Northern Territory. Some changes are proposed in the system, i.e.

- (i) To change the name to "Exploration Licence".
- (ii) To set a maximum area of 1,000 square miles with a total maximum area of 5,000 square miles held by one person and a minimum area of one square mile.
- (iii) To have a duration of not more than four years for an area of one square mile or less and not more than seven years for an area greater than one square mile.
- (iv) To enforce a 50 percent reduction in area after the second year, or a reduction after the first year, or a greater reduction than 50 percent in subsequent years.

27. After proposed changes are taken into consideration, it is apparent that there is a substantial consensus among the Australian States and the Northern Territory on mineral exploration policy. Common to all Australian systems are the following:

- (1) Licences are for mineral exploration only and carry no right to win minerals.
- (2) The duration of the licence is fairly short.
- (3) Fees are light, and are not intended as a substantial source of revenue.
- (4) The licence is commonly for all minerals or for a large group of associated minerals.

- (5) The licence is exclusive for the named minerals within the area for which it is granted.
- (6) A large area may be licensed at first but substantial reductions in area are enforced after a short period of time.
- (7) A substantial amount of approved exploration work must be regularly performed under penalty of cancellation of the licence.
- (8) Information gained by the licensee from his exploratory work is not his sole property but must be passed on to the State or Territory Administration and, in most cases, is available for public information after expiry of the licence.

28. It is thought that these principles could well be used by developing countries in forming their mineral exploration policies with some possible variations as set out below :

- (1) The area originally covered by the licence depends on what is already known about the subject area. It should not be assumed that results and conclusions drawn from former work are necessarily correct, particularly if it is fairly old work.
- (2) It is thought that the system of granting a licence for a very short period, followed by short term extensions, is clumsy and that better results might be obtained by licensing for a longer duration, say five years.
- (3) A reduction in the area of the licence after the reconnaissance stage is a sound principle but it is thought that there is an area, say 25 square miles, below which no reduction of area should be enforced. However, at this point the scale of exploration commitments per unit area could be increased.
- (4) A system of complete discretion by the relevant authority in approving an exploration licence requires competent technical staff to advise on the merits of applicants' proposals. The same applies to the checking of technical reports to see whether the terms of the licence are fulfilled.
An alternative is a nominated scale of expenditure on the licensed area which can be verified by administrative staff.

However, in this case care should be taken that the expenditure is actually on or concerned with the licensed area and not inflated by a share of head office costs or unrealistic hiring or contract charges for work done by associated companies.

- (5) It would be desirable to make the right of the licensee to mining leases within the licensed area more definite, by a formal agreement if necessary.

TABLE 1. AUSTRALIAN MINERAL EXPLORATION TENURES CURRENTLY HELD

State or Territory	Area of State (square miles)	Number of exploration tenures	Area of exploration tenures (square miles)	Average size of exploration tenure (square miles)
Queensland (1)	667,000	172	51,226	298
New South Wales (2)	309,433	89	28,551	321
Victoria (2)	87,884	44	12,549	285
Tasmania (2)	26,383	46	15,189	330
South Australia (3)	380,070	127	40,280	317
Western Australia (4)	975,920	600**	246,000**	410
Northern Territory (5)	520,280	228	99,452	436
TOTALS	2,967,909*	1,306	493,247	378

(1) Authority to Prospect.

(2) Exploration Licence.

(3) Special Mining Lease.

(4) Temporary Reserve.

(5) Prospecting Authority.

* Includes Australian Capital Territory.

** Approximate only.