COMMENT ON MINING ROYALTIES AND THE IMPLICATIONS OF THE NORTHERN TERRITORY GREEN PAPER FOR THE AUSTRALIAN MINING INDUSTRY

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This paper is concerned with the difficult task of commenting on two papers dealing with quite distinct aspects of the Territory's new royalty policy from the perspective of different disciplines. Ross Garnaut, as an academic economist considered the economic policy issues raised by the "Green Paper on Mining Royalty Policy for the Northern Territory". Leigh Brown, as a solicitor interested in mining law, concentrated on the *Mineral Royalty Act* 1982 which was passed by the Northern Territory Legislative Assembly on 3 June 1982.

In general, Garnaut praised the Green Paper. His major criticism was that his own work and the analysis in the Green Paper indicated that a resource rent royalty system would be preferable to an accounting profits based system of the type recommended in the Green Paper or embodied in the *Mineral Royalty Act* 1982. This criticism and other issues raised by Garnaut are discussed below. In contrast, Brown's assessment of the *Mineral Royalty Act* 1982 is rather negative. It is argued below that this criticism is not justified.

GARNAUT'S PAPER

A significant part of Garnaut's paper is concerned with praising the economic analysis and policy innovations in the Green Paper. While Garnaut's criticisms are limited, responses are necessary at least to demonstrate that the issues are not as straightforward as he has suggested. Clarificatory comments appear below. A third aspect of Garnaut's paper is his discussion of issues involving the Commonwealth as well as the Territory. These include matters such as payments to Aboriginal Land Councils, a Commonwealth resource rent tax and uranium royalties, discussed below.

Accounting Profits v. Resource Rent Royalties

While Garnaut supported the main thrust of the analysis of the Green Paper, he claimed that the recommendation of an accounting profits royalty instead of a resource rent royalty did not follow from the analysis. Nevertheless he argued that an accounting profits royalty represents a substantial improvement over existing systems in Australia. Garnaut argued that the cash-flow basis of the resource rent royalty would make it less distorting than either the profits royalty base recommended in the Green Paper or the superior profits base defined in the *Mineral Royalty Act* 1982, when rates are set to generate similar amounts of expected revenue from typical intramarginal mines. As the relative merits of accounting profits and resource rent royalties are central to Garnaut's criticism, they are evaluated in some detail below.

Economic Efficiency

In relation to the economic efficiency criterion, there is no doubt that both royalty schemes are imperfect. Determining which is the least distortionary is not as easy as Garnaut's paper implies.

A proportional accounting profits royalty will not distort exploration and mine investment decisions if it allows full loss offsets, deduction of real interest payments and economic depreciation; excludes returns to ability from the royalty base; and firms are able to finance incremental investments by borrowing.

The Territory's new profits royalty system does not satisfy any of these requirements perfectly. Indefinite carry-forward of losses and the exploration deductibility provisions are rather imperfect substitutes for full loss offsets. Historical cost depreciation allowances and deductibility of nominal interest payments do not adequately take into account the effects of inflation on assets and liabilities. Returns to managerial efficiency tend to be included in the royalty base. Finally, it is often not possible to finance projects costing hundreds of millions of dollars solely from borrowings. The extent of these imperfections and the resulting distortions are very difficult to quantify.

A resource rent royalty will not distort exploration and investment decisions to the extent that it simulates provision of full loss offsets; simulates immediate write-offs for exploration and capital investments; and excludes returns to ability from the royalty base.

A resource rent royalty does not satisfy these requirements perfectly. A project based resource rent royalty will not ensure that all unsuccessful exploration outlays and losses are ultimately deducted with interest. The very great difficulties of selecting the correct threshold interest rate or rates at which to carry-forward negative cash flows will also mean that full loss offsets and immediate write-offs are not properly simulated. The extent of these difficulties is discussed in detail in the "Green Paper".[1] In addition, the royalty base will tend to include returns to ability. Once again the extent of these imperfections and the resulting distortions are very difficult to quantify.

A resource rent royalty will tend to levy returns to ability more heavily than a profits royalty because of the need for a higher royalty rate to yield a given amount of revenue from the smaller royalty base. On the other hand, a resource rent royalty should more adequately handle the effects of inflation and provide superior loss offsets, particularly if it follows the Royalty Act's innovation of allowing transfers of exploration expenditures between projects. However, this will depend upon how skilfully threshold rates are chosen. This task is particularly difficult when the resource rent royalty is applied on a pre-tax basis because there are important unresolved theoretical issues relating to the appropriate pre-tax threshold rate. The paucity of information available and the tendency in the literature to avoid the task do not provide one with great confidence that reasonable threshold rates would be used in practice.

Equity and Long Term Revenue Adequacy

Both the equity and long term revenue adequacy criteria indicated a need for higher royalties. However, they also indicated that royalties should not be so high or the system so insensitive to revenue and costs that exploration and development

are discouraged and the long term base for royalties thereby jeopardised. Clearly, performance in respect of these criteria will depend upon one's assessment of the relative merits of the Territory's profits royalty and a resource rent royalty in terms of the economic efficiency criterion. This is problematical as indicated above.

Short Term Revenue Adequacy and Stability

Short term revenue adequacy and stability criteria generally carry little weight with economists but tend to be regarded as important by governments. A resource rent royalty may defer revenue from a new mine for several years while a profits royalty yields an earlier flow of revenue. In addition, a resource rent royalty is more vulnerable to significant fluctuations in yield because new investments significantly affect the cash flow base. Under a profits royalty, new investments merely add to depreciation. A resource rent royalty could provide a higher yield in the short term if applied to existing mines with no deductions for past investments. However, this could run into strong political opposition due to the harsh treatment of existing mines.

Administration

The main administrative differences between a resource rent royalty and the Territory's profits royalty are that the former requires selection and updating of interest rate thresholds and administrative procedures for accumulating negative cash flows with interest, while the latter relies on conventional depreciation procedures and must tackle potential transfer pricing of interest and manipulation of debt to equity ratios to avoid royalty.

The tasks of selection and maintenance of threshold rates would require significant effort by government authorities, particularly in the setting up stage. Compliance costs associated with threshold rates should be relatively small. Companies will need to maintain new sets of accounts to comply with a resource rent royalty system because of its markedly different approach to conventional accounting and taxation requirements.

The accounting profits system will be more familiar to mining companies and royalty accountants, easing initial administration and compliance problems. The straight line, historical cost, economic life of asset approach to depreciation is the most common method employed by mining companies in their own accounts. Under the *Mineral Royalty Act*, much of the burden of checking depreciation allowances will be borne by mining companies' auditors. Preventing royalty avoidance via the interest deductibility provisions will require administrative effort not required in respect of a resource rent royalty. Once again, separate accounts will be necessary, but will not need to be as radically different from existing accounts as those required under a resource rent royalty regime. Overall, in terms of the administration criterion, there is likely to be little separating the resource rent royalty and accounting profits system.

Other Criteria

Garnaut expressed surprise that the *Mineral Royalty Act* contained certain undesirable features when the body of the Green Paper showed considerable awareness of economic issues. He suggested that certain political factors may have been responsible for this:

The company income tax base is better known.

Political reaction may be determined by the absolute size of the tax rate.

Mining lobbies are strongly opposed to the resource rent tax concept which is closely linked with proposals for a third tier levy on the mining industry by the Commonwealth.

These factors were, in fact, influential when the recommendations of the Green Paper were being formulated and when the original proposals were being reviewed following receipt of comments. They are, of course, relevant political considerations when a government is trying to gain acceptance of a new royalty regime in the face of strong political opposition from the industry.

Compromise Between Criteria

The Green Paper stressed that since no royalty system would perform better than all others in respect of all criteria, a compromise between criteria is required when selecting a royalty system. Because of the difficulties of weighting objectives and quantifying effects of the various systems, an element of judgement was necessary when choosing the system representing the best compromise.[2] There is little doubt that Garnaut's judgements about the effects of accounting and economic profits royalties and the weights that should be attached to different criteria differed from those used by the Territory Government in determining the conclusions of the Green Paper.

For example, Garnaut and other ANU economists have tended to place greater weight than the Territory on minimizing inefficiencies in the use of resources in the economy (the economic efficiency criterion) and on long term revenue adequacy as distinct from short term yield. Since a major Territory concern was the low royalties paid by existing mines, it is not surprising that the Territory Government attached significant importance to a high royalty yield in the short term, at least at the time when the Green Paper and draft Bill were written. This weighed against a resource rent system that defers royalty payments until accumulated cash flow is positive.

In addition, the academics have tended to place lower weights than the Territory Government on the effects and practical difficulties associated with the higher royalty rates for a given royalty yield and the problems of selecting threshold rates associated with a resource rent royalty. While it was not discussed in the Green Paper, the Territory, unlike the academics, also gave some weight to the industry's strong opposition to resource rent taxes and the adverse psychological impact of the high royalty rates needed for a reasonable royalty yield under a resource rent system.

Lump Sum Bidding

Lump sum bidding (lease auctions) is more than just an unusual type of royalty system that charges a price for minerals in advance of discovery and development. It is also a means of allocating rights to explore and mine. Until recently, discussion in Australia has been concerned almost exclusively with the former aspect of lump sum bidding.

The Green Paper pointed out that conventional tenement allocation systems, which make security of tenure dependent on the timing and amount of exploration outlays, tend to distort the allocation of exploration outlays and

dissipate the royalty base. The Green Paper demonstrated that a lump sum bidding system of allocating tenements would overcome this problem.[3] Garnaut reiterated these arguments in his paper. However, he ignored the Green Paper's argument that a resource rent royalty would institutionalise the tendency of conventional tenement allocation systems to dissipate the royalty base. Of course, as Swan has noted, if a lump sum bidding system is teamed with a resource rent royalty, the problem would be eliminated.[4]

Some academic economists have favoured the use of lump sum bidding as a substitute for royalties.[5] However, Garnaut supported the argument in the Green Paper that this would not be appropriate on revenue grounds, but lease auctions could be used in conjunction with royalties in areas of known geological prospectivity where competition is good. Recent work by ANU economists has greatly strengthened this argument.[6]

As a result of the arguments and recommendations of the Green Paper, Garnaut appears to have assumed that the Territory has adopted a policy of auctioning of leases or lump sum bidding. This is not so. The proposals of the Green Paper concerning lump sum bidding have not been accepted or rejected by the Territory Government.

The Royalty Rate

Garnaut's comment that the Green Paper would have been better if more effort had been put into defining an appropriate royalty rate is a truism, but it is not very helpful. Selection of an appropriate royalty rate is a very difficult task. The economics literature, including Garnaut's work, is largely silent on the matter. Perhaps we could appeal to Garnaut and his colleagues at ANU to research the question of the appropriate size of royalty rates under different systems in some detail.

Garnaut indicated that the 35 per cent rate in the Green Paper was set without regard to a specific bench-mark. This is not correct. The bench-mark was the range of rates applying to major export mines in Australia. Under the assumption of Australian average mining profitability, the royalty rate and base suggested in the Green Paper were approximately equal to an ad valorem rate of 10–12 per cent of sales. This is within the bench-mark range.

Because of the Territory Government's concern about inter-jurisdictional mobility of exploration capital, the bench-mark chosen for the royalty rate and base in the *Mineral Royalty Act* 1982 was the significantly lower Australian average ad valorem rate of 5 per cent.

Of course, as Garnaut has observed, the Territory profits system is much more sensitive to economic circumstances than an ad valorem system. Hence, in a good year an average mine would pay more than 5 per cent and in a bad year it would pay less. Similarly, a better than average mine would pay more than 5 per cent ad valorem and a mine that is less profitable than the average would pay less.

Payments to Aboriginal Land Councils

The definition of "eligible operating expenditure" in the Act explicitly disallows deductions in respect of a number of possible payments including

payments in the nature of royalty and compensation payments for the use or disturbance of land in excess of those that would be payable under the *Mining Act* 1980 if the land concerned was private land.

The principle behind these exclusions is that the people of the Territory, through the Government, are the owners of mineral resources and that royalty, as the price of the right to mine the mineral, is the first charge on the resource. Deductibility of charges such as Commonwealth income taxes, excises, tribute payments or rentals to earlier lease holders and payments to landholders in excess of reasonable compensation for surface rights would diminish the legitimate price due to the Crown and facilitate transfer of potential royalty revenues to individuals, groups or other governments who have the ability to extract revenue from the mining industry. In effect, it would mean partial Government abrogation of the people's sovereignty over the resource in favour of other Governments or particular interests.

The exclusions do not prevent a miner from making payments required by law or resulting from negotiations. However, they mean that these payments are his responsibility entirely. Due to the form these "excess" compensation payments or payments in the nature of royalty have usually taken, they result in adverse economic efficiency effects similar to those engendered by traditional royalty systems. Their non-deductibility does not ease this problem.

In respect of the specific issue of payments to Aboriginal Land Councils, Garnaut has suggested that direct company to Land Council payments be replaced by direct Commonwealth or Commonwealth and Territory grants. Presumably this would involve an extension of existing arrangements whereby the Commonwealth makes payments to the Aboriginal Benefits Trust Account calculated in accordance with royalty rates on Aboriginal Land when the Aboriginal Land Rights Act commenced.

This proposal, if adopted, would certainly remove a major disincentive to exploration for and development of mines on Aboriginal land in the Territory. The question is, would the Commonwealth or Territory Governments accept this financial burden? The Territory could reasonably argue that the Commonwealth should bear the full financial burden since the problem of payments to Land Councils was created by Commonwealth legislation.

Garnaut has suggested that the proposed direct grants from the Commonwealth to the Land Councils in respect of new mines on Aboriginal land should be broadly similar to payments flowing from the Ranger and Jabiluka agreements. These are superior mines. Surely, payments similar in either absolute or ad valorem terms could not be justified in respect of less attractive deposits.

Royalties and Commonwealth Resource Rent Taxes

Many people think that a Commonwealth resource rent tax is inevitable in the not too distant future. Being a payment in the nature of a royalty, such a tax would not be deductible under the new Territory royalty arrangements, since that would facilitate partial appropriation of royalties due to the Territory. Garnaut's suggestion that state royalties and Commonwealth resources levies should be replaced by a resources rent tax is likely to be strongly resisted by the States because the chances of an amicable agreement on the size of the levy and distribution of revenues are likely to be very slim indeed.

Uranium

Garnaut has suggested that the Territory should remove uncertainty about future royalty arrangements for uranium by announcing now that the new royalty regime will apply to uranium in future. However, this was done in the Minister's Second Reading Speech on the Mineral Royalty Bill in March 1982. Garnaut has also suggested that the Commonwealth should reduce uncertainty by adopting the Territory's new scheme for uranium mining leases finalised after the enactment of the scheme. This proposal is sound. As Garnaut has noted, an important aspect of the Territory's new royalty policy is to set stable "general rules of the game" in advance of financial commitments.

BROWN'S PAPER

Brown's paper is concerned with two basic themes. The first of these is the Territory's right to impose royalty and the second is a specific analysis of the Territory's assertion of this right in the *Mineral Royalty Act* 1982.

The Territory's Power to Impose Royalty

The Territory's power to levy royalty stems from ss.6 and 69(4) of the *Northern Territory (Self Government) Act* 1978. Section 6 empowers the Legislative Assembly to make laws for the peace, order and good government of the Territory while s.69(4) in part passes all interests of the Commonwealth in minerals in the Territory to the Northern Territory. Thus, the power of the Territory to levy royalty is similar to that of the States. However, the Self-Government Act also imposed some very substantial limitations on the Territory's royalty levying power with the effect of placing it in a very disadvantageous situation relative to the States. These limitations are as follows:

The Commonwealth retains ownership of prescribed substances under the *Atomic Energy Act* 1953.[7]

The terms and conditions of interests in land transferred from the Commonwealth to the Territory are preserved.[8]

The Territory does not have the power to acquire property on other than just terms.[9]

These limitations are very substantial in both legal and practical terms.

The first is by far the most straightforward. Brown correctly argued in his paper that the Territory cannot at present levy royalty on the mining of prescribed substances, including uranium. However, he implied that it appeared to be the Territory's intention that the provisions of the draft Bill would apply immediately to both existing and future uranium mines. This is not so. While the Territory strongly maintains that it should have the same right as the States to levy royalty on uranium mining, it has always been very aware that it does not have this power and did not try to prepare a draft Bill that would impose royalty on uranium before ownership was transferred to the Territory.

The reason for the addition of s.3(7), which excludes prescribed substances from the Bill, was not belated recognition of the limited power of the Territory, but rather an attempt to simplify the assent procedure by putting beyond doubt that there is no case for the Administrator to reserve the Act for the Governor General's pleasure.

The second and third of the limitations outlined above are far more complex and are of considerable import as they relate to the Territory's power to change royalties applying to existing tenements. In considering the temporary exemption of existing mines, Brown has argued that a mining tenement is an interest in land and therefore, its terms and conditions are preserved under s.69(3). He claimed this prevented the Territory from changing royalty rates specifically fixed in a mining tenement granted prior to 22 June 1978. However, only two mines have leases in which royalty arrangements are fixed: Nobles Nob, a small gold mine near Tennant Creek, and Gove. It is worthwhile to reiterate the caveat in Brown's paper that his interpretation of s.69(3) would only apply where the lease documents contain specific royalty provisions.

Brown did not directly address the common situation where tenements do not have specific royalty conditions incorporated in their leases. The standard royalty clauses in these leases refer to the royalty provisions of the Mining Act either "from time to time" applying or "for the time being in force". The Territory Government is of the view that it would succeed in applying the new Act to such leases, but has made a policy decision to provide a conditional exemption.

The Mineral Royalty Act

The Provisions of the Act

In his paper, Brown described the major features of the Act. Surprisingly, however, he did not discuss the very important definition of the royalty paying unit. This is, of course, a crucial definition greatly affecting the operation of the Act and is one to which considerable attention was given in drafting the legislation.

The Act imposes royalty on a production unit basis, the production unit consisting of those mining tenements which are being worked as part of an integrated operation together with such facilities as are necessary for the production of a saleable mineral commodity. This definition is substantially qualified by discretions. Its import is that royalty is to be levied on a project rather than company basis and is not to fall on the returns to processing beyond the stage where the product first becomes commercially marketable.

Uncertainty

By far the most difficult aspect of drafting the Act was the need to counter royalty avoidance. Basically two routes were open to the Territory, the first being to attempt to closely and exclusively define everything, the second being to express principles and intent and rely on the use of administrative discretions. The first of these routes was rejected largely due to the manifest failure of the *Income Tax Assessment Act* in countering tax avoidance. It was therefore decided to adopt the second route despite the significant uncertainty this would entail.

As Brown has documented in his paper, the Bill contains a large number of Secretarial and Ministerial discretions. There can be little doubt that in its first years of operation, royalty payers will be subject to some uncertainty in calculating their liability. However, it is the Territory Government's belief that as operational experience is gained and precedents established, this initial uncertainty will

diminish substantially. The reader should reflect on his reaction if there was no company income tax and the *Income Tax Assessment Act* (ITAA) was introduced tomorrow.

It should also be noted that uncertainty or lack of precision is a feature of most royalty legislation in operation in Australia today. For instance, the basis of determination of value is often left unstated and where references have been made to profit it has usually been left undefined. Some, including Brown, have argued that such uncertainty could be considerably reduced if royalty were to be levied on profit as defined in the ITAA. This is unsatisfactory for a number of reasons, not the least of which is the failure of the ITAA to adequately counter tax avoidance. Other factors include the Territory's wish to allow deductions not permitted in the ITAA and to vary others that are included in the ITAA. Further, it must be recognised that the ITAA is used by the Commonwealth as an instrument of macroeconomic policy and thus that profit under the ITAA is often an arbitrarily determined sum to meet the broader objectives of the Government of the day. The Territory does not wish its royalty base to be subject to such manipulation which is beyond its control.

Perceived Inequities in the Act

Brown criticised certain provisions of the Bill which he perceived to be inequitable. His perceptions appear to arise out of two factors, misinterpretation of the Act and policy decisions.

Perceived inequities in the first of these categories include uncertainty as to the carry-forward of losses and exploration deductions, the levying of royalty on product stockpiled away from the mine and the extent to which transport expenses are deductible.

In fact, s.10(2) of the Act specifically allows for an indefinite carry-forward of losses, while the definition of "eligible exploration expenditure" allows a royalty payer to time his exploration deductions as he wishes, subject to the 25% limitation dealt with later. Specific provision is made in s.8 for the carry-forward of undeducted portions of expenditures verified by means of exploration expenditure certificates.

Consideration of issues such as away-from-mine stockpiling and the treatment of transport expenses depend very much on the definitions of "value" and "production unit". It is intended that where stockpiling away from the mine is necessary, for instance because of wet season transport difficulties, such facilities will be included in the production unit and the point at which value is determined will be adjusted accordingly. Similarly it is intended that all transport costs to the point where value is determined are to be deductible.

Policy based inequities perceived by Brown include the non-deductibility of royalty-like payments to Aboriginals and others, the distinction between exploration work carried out in the Territory and that on Territory exploration carried out elsewhere, and the 25% limit on exploration deductions.

The Territory views the first of these, the non-deductibility of royalty-like payments as an important matter of principle. This matter is dealt with in the discussion of Garnaut's paper.

On the matter of the exploration provisions in the Act, Brown has criticised the distinction made between Territory exploration work carried out within the

Territory and that done outside the Territory. This distinction was introduced to discriminate between these activities precisely in the way that Brown said it will. The mining industry often makes much of its multiplier benefits, but in the Territory these have been very substantially reduced by leakages to the southern states and overseas. By allowing a broader scope for deduction of exploration work actually done within the Territory, the Government hopes to encourage exploration companies to increase those multiplier benefits by establishing local offices and having their assays carried out within the Territory.

The 25% limit on the extent to which the exploration deduction can be used to reduce royalty liability in any one year is required in order to protect revenue because of the major innovation incorporated in the Bill allowing the transfer of exploration expenditure to successful mines. Without such a limitation it could be possible for some production units to avoid paying royalty altogether.

Space precludes a detailed refutation of the remainder of criticisms of the Act in Brown's paper. Suffice to say that we consider these criticisms to be more matters of detail or opinion than matters of substantive importance.

CONCLUSION

Ross Garnaut's and Leigh Brown's papers confirmed that the Northern Territory has embarked on a new and innovative approach to royalty policy in Australia but only after a very detailed examination of the relevant economic factors and very close consultation with the industry. As pointed out in Garnaut's paper, there can be no doubt that the system adopted will be far more sensitive to the economic conditions faced by the industry than any other royalty system currently applying in Australia.

Inevitably, there have been and will continue to be some problems in putting such a system into practice. As Brown's paper indicated, there are fundamental legal restrictions on the Territory's power and complex drafting problems had to be faced in the translation of the system into legislation. Moreover, there will be some uncertainty regarding liability until precedents have been established.

As Garnaut commented, the Act represents a praiseworthy effort to establish general and stable rules for the mineral industry. The very substantial consultative efforts made by the Territory Government with respect to this legislation must be taken as evidence of its goodwill towards the industry. It is the Government's belief that the industry will come to recognise the very significant benefits of this form of royalty legislation.

FOOTNOTES

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1. Northern Territory of Australia, "Green Paper on Mining Royalty Policy for the Northern Territory", Department of Mines and Energy, Darwin, February 1981, 96–99.
2. Ibid., 3.
3. Northern Territory of Australia, op.cit., Appendix B.
4. Swan, P.L., "A Review of the Northern Territory Government's 'Green Paper on Mining Royalty Policy for the Northern Territory' ", *Centre for Economic Policy Research, Discussion Paper No. 39, Dec. 1981, Australian National University.*

5. Dowell, R., "Auctions and Investment Dilution Alternatives to the Resources Rent Tax", Autumn Forum, Economic Society of Australia and New Zealand (Vic. Branch), Melbourne, 27 May 1981; Nellor, D., Clarke, R. and Porter, M.G., "An Evaluation of the Northern Territory of Australia Draft Mineral Royalty Bill", *Centre of Policy Studies, Monash University, October 1981.*
6. Emerson, C. and Lloyd, P., "Improving Mineral Taxation Policy in Australia", *Discussion Paper No. 36, Centre for Economic Policy Research,* October, 1981, *Australian National University.* Emerson, C. and Garnaut R, "Mineral Leasing Policy: Competitive Bidding and the Resource Rent Tax given Various Responses to Risk", Department of Economics, May, 1981, *Australian National University.*
7. Section 69(4).
8. Section 69(3).
9. Section 50.