or to finance development work in relation to such explora-
or mining.

The Section also applies where the taxpayer company sells the shares to a mining holding company or to a min-
ing company in consideration of shares in such mining
holding company or mining company.

The profit or gain which is excluded from the assessable
income of the taxpayer company under the provision of the
section, is referred to as "reinvestment profit." If any
part of the reinvestment profit is not used for mining pur-
poses, then it shall be taxed by the Commissioner. So
long as the reinvestment profit continues to be used by the
taxpayer company for mining purposes it will not be taxable,
but so soon as the reinvestment profit ceases to be so used,
tax is payable.

The section contains involved provisions as to calcul-
ation of the reinvestment profit, the cost of a mining share,
and the consequences of winding up.

Conclusion.

The Taxation Review Committee (Ross Committee) con-
sidered that a Section 152 or 153 company had too much
power over its tax liability, since the liability was based on
the decision to pay a dividend. This criticism has been
met by Section 152A of the Act which enables the Commiss-
oner to deem the company to have paid a dividend, if the
company has not been using its income for certain purposes.

The Ross Committee also thought that Section 152 and
153 companies should be taxed on a uniform basis where-
under all costs of exploration, development, normal out-
goings and running expenses would be accumulated; the
company would not be liable for tax until such time as its
gross revenue from sales exceeds the accumulated costs
to date; and the taxable income would be chargeable with
income tax at a rate equal to two-thirds of the rate app-
licable to ordinary companies.

Such a basis of assessment would produce results very
similar to those of the present legislation, and would remove
the somewhat arbitrary element of tax being based on a

CANADIAN TRENDS IN MINING AND PETROLEUM LEG-
ISLATION: SOME NEW ZEALAND COMPARISONS.

by Prof. A. R. Thompson, LL. B. (Manitoba),
LL. M. (Toronto), J. S. D. (Columbia), Professor
of Law, University of British Columbia.

THE SETTING.

The critic's role is often blithely assumed and as blithely
discharged. Nor is performance improved by the fact that
the critic is a foreigner. Nevertheless, I assume the role,
and shall criticize the New Zealand Mining Bill without fear
or favour, or with even a decent modesty or forbearance,
because that is what I have been invited to do. I rely on
you to recognize my limitations and my shortcomings even
if I do not.

An expert witness is cross-examined, if not to disparage
his qualifications, at least to reveal his biases; lawyers
and judges know that only with awareness of biases can
expert opinion be given an adequate evaluation. Critics
should be subjected to cross-examination, too. Since
they are not, my rule when a critic is to begin with a
confession of biases - at least of the grosser ones of
which I'm aware.

My first bias is really a non-bias. I am not a mining
man. My learning and experience derive from association
with mining's more sophisticated cousin, the oil industry.
I shall have more to say about comparisons between these
industries and need now only comment that the oil industry
is more predominantly characterized by bigness - by huge
capital investments, massive deployment of technology and
multi-faceted corporate and political institutions than is the
mining industry. While I once was a member of a pros-
pecting party and staked mineral claims in Manitoba, I have
had no abiding relationships with the mining industry and do
not have the religious views of the miner's right that is the
gospel of mining men throughout the common law world.

Second, I have never been an industry man - oil industry
or otherwise - and I try to function as an independent observer
and critic, seeking to interpret the public interest and to
inject it into the mining and petroleum legislation of my own
country on the few occasions when I have opportunity to be
influential. For western Canada, and particularly for Alberta and British Columbia, the past two decades have brought tremendous economic growth, and social development as well, and I have seen that the exploitation of oil, minerals and forests has provided the motive power for growth and development. Therefore I have a due sense of the significance of natural resource industries in the economy of a country, and I am aware of the factors of risk and uncertainty in investment decisions, of the need to increase the gross national product annually with new job opportunities for an expanding population, and of fiscal problems such as balance of payments, to name only a few of the pro­fuse and complex interests that must be accommodated in the formulation of public policy about natural resources.

In recent years, a new dimension has been added to my conceptual framework for natural resource policy. For me, the Prudhoe Bay oil discovery in northern Alaska where, until now, the migrant Eskimo and polar bear have shared the earth in natural accommodation to each other and to their fellow creatures, has had a mind-expanding effect. I have begun to see the exploitation of natural resources in a global sense and to understand some facets of man's relationships with the natural world enough to realize that the taking of oil, or of coal, or of mineral ores, cannot be viewed in isolation, one from the other, but that all must be seen in the total perspective of man and his environment. To be frank, the scientists are scaring me with their mathematics of population growth, their graphics of the closed energy cycle, and predictions of the end of life on earth as we know it within the lifetimes of our children.

(1) Even discounting the mathematical formulations as scare tactics, no reasonable person in North America today can remain indifferent to environmental problems as the exponential effects of increasing population and increasing per capita consumption blight cities and countryside alike. After all, it is startling to be told that the electrical generating plants now being planned and likely to be operating by 2000 A.D. in the United States will produce enough waste heat to raise the temperature of every drop of water that runs off the United States about 20° F. (2)

It is also startling to learn that more of the forest is cut and wasted in Alberta for the running of seismic lines for oil exploration than is cut and used for the pulp and paper and lumber industries in that province. (3)

It should be noted that the problem will seldom arise in the case of Section 152 or 153 companies, since they are taxed on the basis of dividends paid. The problem could, however, arise if a Section 152 company asserted that a payment to its shareholders was not taxable as a dividend because it represented the realisation of a capital asset: Section 4 (3).

The problem has not been resolved, but a complex new section was enacted last year which safeguards the company against tax liability so long as the profit derived is re-invested in mining activities. The new section is Section 152B.

Profit or Gain from Sale of Mining Shares. (Section 152B)

Section 152B only applies to profit or gain which is taxable under Section 88(1) (a) and (c) of the Act. It is still open to the taxpayer to assert that the profit or gain from the sale of mining shares is a capital gain outside those Sections and accordingly not taxable at all.

If, however, a taxpayer company derives profit or gain from the sale or other disposition of shares in a mining company or a mining holding company which would normally be taxable, then such profit or gain shall not be included in the assessable income of the company in that income year to the extent that the Commissioner is satisfied that the consideration received from that sale or other disposition is used, or is to be used, within the prescribed period (6 years from the end of the income year) for mining purposes.

"Mining purposes" means:-

(a) Subscribing for, or paying calls on, shares in any mining holding company or any mining company; or

(b) Making loans to a mining company for the purpose of enabling the mining company to carry on in New Zealand exploration or mining or development work in respect thereof; or

(c) Making loans to a mining holding company, where the loans are to be used to finance exploration or mining to be carried out by a mining company in New Zealand.
take the work required in exchange for acquiring a proprietary interest in the mining venture. This is commonly referred to, from the point of Company A, as a "farm-out agreement." Company A may receive a money payment from Company B, or it may sell some of its shares in its subsidiary or float a public company in order to raise sufficient finance to pay its way in the mining venture.

A problem now arises as to the taxability in the hands of Company A of the money payment from Company B, or the money received for the sale of the shares in the subsidiary. The problem may become more difficult for Company A if there is a history of farm-out agreements, and sales of shares in subsidiaries to other companies.

The Commissioner might argue under Section 88(1) (a) that Company A was in the business of exploiting mineral interests in one way or another, and that the gain derived from the sale of shares in a subsidiary or the sale of a mineral right, was not a capital gain at all, but ordinary income from its business. In the alternative, the Commissioner might argue that Section 88 (1) (c) was applicable: that Company A was in the business of selling mineral rights or shares in mineral companies, or that the shares or rights were acquired by Company A for the purposes of resale, or that the profits were derived from the carrying on or carrying out of an undertaking or scheme entered into or devised for the purpose of making a profit.

Company A might argue that the subsidiary was originally formed, or the mineral rights originally acquired, for the purpose of exploiting the minerals and not for the purpose of later selling part of the shares or mineral rights; that the sale of shares or rights was only made because Company A did not have sufficient finance to further the mineral operation and that the sale was necessary if Company A was to obtain sufficient funds to maintain at least a partial interest in the mineral operation; in short, that Company A was in the business of mining, not the business of selling shares or mining rights, and that any gain which was realised by the sale of the shares or rights was gain of a capital nature, and one that did not come within Section 88 (1) (c).

There appears to be no authoritative case law on this problem.

These considerations lead me to give full acknowledgment to the diseconomies of natural resource development, and to insist that they be weighed against the benefits before development decisions are made, however difficult the process may be.

When I referred to the Prudhoe Bay discovery as having a mind-expanding effect on me, I wanted to convey to you the idea that my entire thought processes about oil and mining took on new perspectives, and I began to question the traditional dogma of oil men and mining men. For example, what justifies the continuance of the privileged status that mining enjoys over all other resource uses? Why should the dogma of "the miner's right" give the mining men free access to public resources when all others pay? Why should miners be subsidized? What enormous risk-taking justifies the privileged tax position of the oil industry when it is predominantly an industry of major, integrated oil companies whose steady record of earnings at higher than average corporate levels shows that they are successfully containing the risk by the scale of their operations?

My asking these questions should not lead you to imply what my answers are - at least at this point in my paper. My purpose in asking them, and in making this confession of biases, is to initiate the widest scope of inquiry into the New Zealand Mining Bill that we are capable of pursuing. My purpose for the rest of this paper will be to assess the strengths and weaknesses of the Bill in the light of such a widescale inquiry.

**THE MINING PRIVILEGE.**

In Canada, in recent years, the introduction of driver demerit systems culminating in suspensions of driving licences has been accompanied by a semantic shift so that the driving licence is now referred to as a "privilege" rather than as a "right". New Zealand's Mining Bill must use the terminology of "mining privilege" with a like intention to show a break with the traditional "miner's right". In this respect, the New Zealand Bill is more progressive than its counterpart legislation in Canada and the United States, and in Australia, too.
In the United States the gospel of the mining men is the "free miner tradition". It signifies that the self-regulation of the miners who found gold in California in the 1840's was enshrined in the first general mining law enacted by Congress in 1869. (4)

This law, which survives in main outline today, grants free access to the public domain to miners who are entitled to receive freehold patents including the surface as well as minerals of the 40 acre locations on which they discover minerals in marketable quantities. This mining law is generally considered to be hopelessly out-of-date, and as inhibiting to the mining industry as it is to the efficient administration of the public lands. Nevertheless, the mining industry vehemently stands for a re-tooling of the existing law that will preserve the miner's right to locate a claim on the public lands and to perfect ownership in the minerals, rather than its replacement by a leasing system, as has been advocated by the United States Department of the Interior, at least while former Secretary Udall held office (5).

In British Columbia the gospel of the free miner tradition has legal authority as well as divine right. Section 114 of the Land Act, (6) which is the primary statute dealing with the administration of Crown-owned lands, reads as follows:

Free Miners' Rights.

114. Nothing herein contained shall be so construed so as to interfere prejudicially with the rights granted to free miners under the Mineral Act or the Placer-mining Act, or to exclude free miners from entering upon any land in the Province, except, however, all lands reserved or used for naval or military purposes, and searching for and working minerals;

No other land use is afforded such exalted treatment in British Columbia. It is true that the miner's right does not lead to freehold patent as in the United States, but it does entitle the miner to hold his claim from year to year (7) with the right to a 21-year renewable mining lease when mining work to the value of $500 has been done (8).

A similar miner's right pertains in the Yukon Territory of the services qualifying for the rebate.

Section 78 C provides a rebate of 5% of so much of the taxable income of a non-resident investment company as consists of interest from development interests.

Section 78 E provides a rebate for non-resident companies paying dividends to shareholders resident in New Zealand.

Section 203 S (2) (f) exempts Section 152 and 153 companies from payment of non-resident withholding tax. This exemption is of little benefit, since a Section 152 company will usually be a New Zealand resident company, and a Section 153 company must be a New Zealand company. A more sensible exemption, and perhaps the one that was in fact intended, would be an exemption of overseas shareholders in Section 152 and 153 companies from payment of non-resident withholding tax on dividends and interest paid by such companies.

Section 203 S (2) (g) provides an exemption from non-resident withholding tax in respect of interest derived by a non-resident investment company from development interests.

"Capital" gain

The mining industry encounters a peculiar problem with respect to taxability for gains normally regarded as of a capital nature. An example is now given.

If Company A is not a Section 152 company, is interested in mining and makes a significant discovery, then it will probably form a separate subsidiary to explore and mine the mineral. It will do this for normal business reasons, and also if the mineral is a Section 152 mineral, for the purpose of obtaining the tax concessions provided by that Section. Company A may form several subsidiaries to develop its various mineral prospects. If Company A decides that further prospecting or a commercial mining operation is justified, it may well find that it does not have the necessary capital or know-how to undertake the work required. One answer to this problem is to obtain the services of a large and experienced mining company, probably an overseas company. The large company, Company B may then under-
Section 78B provides a rebate for a "non-resident investment company" of such part of the New Zealand tax on interest and dividends derived from "development investments" as is in excess of the tax that would be payable on such income in its country of residence.

A non-resident investment company is defined in Section 2A. Briefly, it is a company which is not incorporated or does not have its head office in New Zealand, and which:

(a) derives no income from New Zealand except interest; or
(b) has 50% of its total New Zealand assets in "development investments". These are investments by way of loans or shareholding in undertakings declared to be development projects by Order in Council.

Section 78F extends the general principle to the total taxable income of a non-resident company which, through a branch office, is carrying on an industrial undertaking declared by Order in Council to be a special development project for the purposes of the Section. The Governor-General is empowered to make such a declaration where he is satisfied that the undertaking is of major importance in the development of New Zealand. To qualify the undertaking must comprise the purchase, processing, marketing and disposal of a mineral and primary metal produced from it. If a company qualifies, then it is entitled to a rebate of the amount by which the New Zealand tax on its income exceeds the lesser of:

(a) 42% of its taxable income in New Zealand, or
(b) the tax that would be payable on such income in its country of residence plus 7½% of such income.

Taxation of the company on such a basis may not exceed fifteen years. After the expiry of such period, the company may for a further period of ten years be entitled to a rebate of such tax as is in excess of the tax it would pay if it were a company resident in New Zealand.

Section 78K provides a rebate of tax to visiting experts in respect of approved services on a particular project for a period of not more than two years. The rebate is, roughly, the excess of New Zealand tax over 35% in respect of the and in the Northwest Territories of Canada which lie north of the 60th parallel across the Canadian mainland. (9) Unlike the position in the United States, there appears to be no articulate opposition in Canada urging an end to the miner's right. Rather, current pressures on the industry in Canada pertain to White Paper proposals for eliminating tax incentives that the industry now enjoys, and to pollution and environmental concerns respecting prospecting, open-pit mining, tailings-disposal and other mining and processing operations. In my opinion it will not be long before this anti-pollution, environmental-protection sentiment in Canada will focus on the miner's right as one of the major impediments to sound natural resource management.

In Australia, too, it is said by a mining man that; (10) "We see thus that the authority to mine at an early stage in our history passed from a licence to take up a claim, to the Miners' Right, and this Miners' Right remains today as the most important single document with which practical mining is concerned, and it may well be that although it was a desirable, if not an essential requirement in the late 19th Century its survival in the present day may be anachronistic,..."

What are the factors that have made the miner's right an obsolete concept in the opinions of many, and what are the evils associated with it that have aroused such strong opposition, at least in the United States?

The obsolescence factors are institutional changes in the mining industry itself. An Australian way of expressing these changes is (11):

"The digger is the symbol of the mining industry and although the individual prospector was an essential figure in mining one hundred years ago, today, he is a vestigial remnant of the pick and shovel and wheelbarrow days".

That is the voice of an Australian legal officer of a major, international mining concern. It would certainly not be the voice of the Prospectors' and Developers' Association of Canada, or even of the Mining Association of Canada, for, while these voices would agree with the Australian (12) that "mining under modern conditions must be carried out on a very large scale", they would be quick
to affirm that the individual prospector continues to make an important contribution to the mining industry (13). The only objective evidence I have seen does, indeed, indicate that the individual prospector, with his rudimentary tools for taking rock samples at the surface, will continue to make significant mineral finds, though on a substantially diminishing scale (14). Thus, an analysis of principal discovery methods, to be credited with the finding of new mines brought into production in Canada since 1955, shows that of the deposits found prior to 1950, which form about half of the list, 85% were found by conventional prospecting. In the next sixteen years up to the present, the proportion of "conventional" discoveries dropped to 37 percent (15).

The prognosis for the future in Canada is this: (16)

"Considering the shrinking proportion of the rock surface of Canada that remains to be examined or geologically mapped, we must assume that we will rely increasingly on sophisticated methods, of which geophysics will play the major part, for the next ten or fifteen years. During this period, we might expect 60 to 70 percent of all new discoveries to be made by geophysics and/or geochemistry...."

It is the remaining 30 or 40 percent of discoveries to be made by conventional prospectors that explains why the free miner tradition still holds sway in Canada (17), and why in the Province of Saskatchewan, where the mining legislation has had up-to-date treatment under a socialist government, the free right to stake mineral claims is still maintained. (18)

What the institutional changes toward bigness in the mining industry has meant in the Saskatchewan legislation has been new provisions for combining with the traditional small claim a prospecting permit covering up to 300 square miles so that large scale geophysical and geochemical examinations can be feasible. (19)

The evils associated with the miner's right stem from the current concept that sound resource management requires that all values - aesthetic, recreational and wilderness, as well as oil, minerals and forest be taken into account in a planned effort to maintain a quality environment along with Section is that no time limit is specified within which the company must use the payment for its purposes, thereby giving the Commissioner a very wide discretion. A final point is that if the company does not use the payment for its purposes within what the Commissioner regards as a reasonable time, it is the shareholder who is penalized directly, and not the company.

Under Section 129BB a similar deduction of one-third may be claimed by a shareholder making payments to a "mining holding company" (i.e. a company which in the opinion of the Commissioner is engaged exclusively or principally in the holding of shares in, or the making of loans to, any mining company). In this case, the one-third deduction only applies to such part of the payment as is:

(a) used by the mining holding company for the purpose of subscribing for, or paying calls on shares in a mining company, or paying calls on shares in a mining company, or making loans to a mining company for the purpose of enabling the mining company to carry on in New Zealand prospecting or mining of the specified minerals or petroleum or development work in respect thereof; and

(b) used by the mining company for its purposes within a reasonable time.

Section 88D provides that the deductions allowed under Sections 129C or 129BB are to be taken into account in calculating the profit or loss made on the sale or other disposition of shares in a mining or mining holding company. Convertible notes are not 'shares' for the purposes of these Sections.

Foreign Companies and Experts:

In order to derive the benefit of Section 153 a foreign company interested in prospecting for or mining petroleum must form a New Zealand subsidiary to carry out the operations. It would probably do the same in the case of mining any of the minerals specified in Section 152, since to qualify under that Section a company's principal source of income or principal undertaking must be in New Zealand.

Other Sections of the Act endeavour to encourage overseas capital and know-how by reducing New Zealand taxation to or near to the amount of taxation that would be payable in the home country if the capital or know-how were employed
Where the exploration company repays or is deemed to have repaid a loan which a holding company has written off and claimed a deduction for, then the Commissioner may amend any assessment made on the holding company. The amendment may be made at any time, notwithstanding the 4 year limitation for amendments imposed by Section 24.

A holding company is deemed to have been repaid in two situations:

(a) Where the holding company disposes of shares in the exploration company in consideration of an amount in excess of the amount paid up on such shares, then the amount of the excess is deemed to be a repayment in part of a written off loan.

(b) Where it appears to the Commissioner that the exploration company would have derived assessable income if it had not received the tax concessions available to it under the Act, then the Commissioner has a discretion to deem the prescribed proportion of such assessable income as a repayment in part of the holding company's written off loan.

The effect of Section 153A is to enable a holding company to loan half its profits to an exploration company and to claim such loans as a deduction if the exploration company is unsuccessful. The section, then, provides a further allowance for the 'risk' factor of mining ventures.

Concessions to Shareholders:

Under Section 129c a shareholder of a mining company (i.e. a Section 152 or 153 company) may deduct one third of the amount paid by him in respect of his shares in the company, provided that the payment is used for and is necessary for the purposes of the company. If the payment is not used by the company for its purposes within a reasonable time, then the Commissioner may disallow the deduction and alter the shareholder's assessment.

It will be noted that the deduction only applies to payments made to the mining company, whether on allotment or payment of calls, and is not applicable to the purchase of shares from a third party. Another feature of the exploitation of natural resources. (20) The ideology of this management requires that a full range of options be examined and weighed in the decision-making process. If miners, or any other resource users, have priority right to appropriate the public lands for their purposes, the options are limited and the opportunity for planned management is frustrated. In day to day terms in Alberta, for example, planning for recreational use of forest land and mountainous regions is at a standstill because any such plans can be frustrated at the whim of current exploration activities for coal and oil.(21)

There is also resentment that this disruptive and ubiquitous miner's right is without payment to the state. In the United States, not only is a leasing system advocated, but it is also urged that leasing be competitive. (22) From the standpoint of economic theory, it is said that pricing the mineral claim is the only way of assuring an economic allocation of resources. That is, the market system, with mining rights being awarded to the highest bidder is the only likely way of ensuring that the most efficient entrepreneur will acquire the right to exploit the minerals. (23) In a 1969 study entitled Mining and Public Policy in Alaska, the authors say

"Nowhere have the authors encountered a respectable argument for giving away mineral rights ..., which do have a market value when there are..., parties who are willing to pay... for these rights.

In the light of these issues, how do the provisions of the New Zealand Mining Bill measure up? The first significant difference is that the Bill has reduced the traditional miner's right to a prospector's right. (25) While the prospector's right carries no mining rights, it does confer a right to enter and prospect. (26) Because this right is exercisable over the full range of Crown lands with few exceptions, (27) it violates the precept of sound resource management to which I have referred. On the plus side, because it continues the conditions under which prospecting has traditionally been carried out, the individual prospector should remain a viable contribution to the industry. In fact, the only difference now is that what he stakes out will be called a prospecting licence rather than a claim, and, instead of being entitled to hold it by reason of his staking, he will receive the licence only in the discretion of the Minister of..."
Mines and subject to the terms and conditions this gentle­
man imposes. (28) Obviously, at least as to areas of 100
acres or less (29), the exercise of the Minister's discretion
and the terms and conditions he imposes will soon, if not
at the beginning, be institutionalised so that obtaining the
licence, will from a practical point of view, be a matter
of right. At this point, the New Zealand provisions seem
to depart from the tradition of the miner's right more in
name and in from than in substance.

With respect to prospecting licences exceeding 100
acres and up to 10,000 acres, the Bill appears to require
that applications be given closer scrutiny, with specific
information to be supplied by the applicant as to the kind
of minerals sought and the method and programming of
operations. (30) The conditions to be imposed by the Mini­
er can then be tailored from these operations. The six
year duration of prospecting licences (with renewals) (31)
are similar to the maximum terms allowed for mineral
claims in Canada, (32) but the provision for licences of
large areas over 100 acres and up to 10,000 acres has a
counterpart only in the Saskatchewan legislation where a
claim block up to 15,360 acres may be staked out. (33)
The enlargement of an area for the performance of work
obligations is normally accomplished in the Canadian juris­
dictions by the claim holder exercising a privilege of group­
ing or aggregating his contigious claims up to a maximum
number (e. g. 18 in the Northwest Territories). (34)

More significant differences are introduced in the New
Zealand Mining Bill with respect to the mining licence.
The Canadian practice is to give the claim holder the right
to convert all his claims to mining leases provided he has
performed the stipulated work requirements and otherwise
complied with the legislation. The New Zealand provision
strikes me as an old and unworkable compromise, especi­
ally since a majority of the exploitable discoveries today
will be low-grade deposits covering large areas. (35) The
Minister is to decide how large a mining licence the pros­
specting licence-holder is to obtain up to a maximum of
1,000 acres. (36) However, because the prospecting lic­
ence might have covered up to 10,000 acres, the licence
holder will naturally assert that he should have a claim
on any exploitable portion of the acreage in excess of the
mining licence acreage allowed by the Minister. After

to a Section 153 Company.

Companies holding Shares in Exploration Companies (Section
153A):

Section 153A provides tax concessions for companies
(referred to as "holding companies") which hold shares in
companies mining or prospecting for minerals or petroleum
(referred to as "exploration companies"). A company need
hold only one share in an exploration company to be a holding
company for the purposes of the section. An exploration
company is a New Zealand company engaged in exploring or
searching for or mining in New Zealand any of the minerals
specified in Section 152 or petroleum.

The section enables a holding company which makes loans
to an exploration company to claim a deduction for any of
such loans which it writes off, but the deduction is limited
by the amount of the holding company's own taxable income,
and by the amount which the exploration company has in fact
done spend on development work in New Zealand in relation to pro­
specting or mining for any of the specified minerals or for
petroleum (referred to as "development expenditure").

In more detail, the limit of the holding company's ded­
ung in any year is the smaller of:-

(a) Half its own taxable income for the year, or
(b) The total amount for all years of the development ex­
penditure of the exploration company, reduced by the
total of all amounts allowed to the holding company as
deductions under the section in any earlier year or
years;

PROVIDED that where an exploration company has more
than one holding company, then the limit of each holding
company, under this paragraph (b) is a 'prescribed propor­
tion' of the total amount of the development ex­
penditure of the exploration company, the amount eq­


e uivalent to such proportion to be reduced by previous
deductions under the section as aforesaid. The 'pre­
scribed proportion' is the proportion which the holding
company's total loans (less repayments) bears to the
total loans (less repayments) made by all the holding
companies.
Petroleum Mining Companies (Section 153 Companies):

Under Section 153 of the Act, taxable income of companies which mine or explore for petroleum or carry on development work in respect thereof (other than service companies) is based on the amount of dividends paid to shareholders. The basis of assessment is similar, then, to that of Section 152 companies, but with the following important differences:

(a) To be eligible, the petroleum mining company must be a New Zealand company.

(b) The taxable income is, subject to (c) below, the amount of dividends paid to shareholders, and not half the amount until the dividends paid exceed twice the paid-up capital of the company.

(c) Tax is not payable at all, until the aggregate amount of dividends paid exceeds the aggregate amount of the company’s "irrecoverable expenditure". The term "irrecoverable expenditure" means the amount spent by the company in development work reduced by the selling value of assets (excluding petroleum under the ground) resulting from that expenditure. Thus in any income year, the taxable income of a Section 153 company cannot be more than the amount by which the total dividends to date exceed the total irrecoverable expenditure plus the total taxable income to date.

The Section 153 concessions are not available to a company which carries on refining, distribution or transportation of petroleum or any other business not incidental to mining for petroleum. If a Section 153 company should commence such activities, then in the year of commencement it would be liable to income tax as if all the receipts theretofore derived by the company, reduced by the sum of its irrecoverable expenditure and aggregate taxable income in former years, were taxable income. Thus the risk and depletion allowances would be lost, and the company would be no better off than if it had always been taxed under Section 91.

The excess retention tax provisions of the Act do not apply to Section 153 companies, but Section 152A (discussed when dealing with Section 152 companies) does apply. Part VI B of the Act, relating to bonus issue tax, does not apply all, it was his investment in exploration activity that established the mineralization of the area. The answer given by clause 63 (3) of the Bill is to confer on the licence holder a priority right to receive any additional mining licences that might be granted during the continuation of the prospecting licence. My mind cannot grasp the circumstances in which the additional mining licences could fairly be withheld from the prospecting licence holder who decides to claim them. The effect of this provision, in my opinion, is to thwart the licensee’s development plans by leaving doubt as to the acreage he can acquire for mining purposes and to place the officers in the Mines Department in the invidious position of having a discretion - the exercise of which by withholding acreage is bound to lead to changes of nepotism and unfair dealings. If the purpose of these provisions is to gain for the Crown a portion of the fruits of a mineral discovery by withholding some of the proven acreage which might then be sold to the highest bidder or exploited by a Crown corporation, their purpose can more soundly be achieved by permitting the prospecting licensee to select a stated proportion of the acreage over which he will have the right to receive mining licences.

The most significant change with respect to mining privileges is the introduction of the exploration licence. This licence is a recognition of the institutional changes in the mining industry to which I have referred. The privilege of exploring over an area up to 200 square miles with the right to take prospecting licences over the entire portion of the area that is open to mining and not already taken up by existing mining privileges gives a large company the incentive to deploy its technology and capital in highly sophisticated exploratory programmes. The short two-year term is appropriate to ensure that large areas will not be tied up too long by any one company. In fact, the two-year period is probably too short, considering that such programmes quite usually encounter severe access and operating conditions entailing unavoidable delays. This type of prospecting incentive is also a relatively new feature in Canadian mining legislation, having been introduced in the Canada Mining Regulations applicable in the Northwest Territories in 1962 and, in the Saskatchewan Mineral Disposition Regulations, 1961 (39) about the same time. The Saskatchewan permits cover up to 300 square miles and are valid for three years. An amendment in
in 1969 (40) has authorised the granting of two extensions of one year each, indicating that even three years is not always adequate time for completion of an exploratory program.

In summation, as to mining privileges the New Zealand Bill takes a step forward towards a stronger intrusion of public policy in the initiating stages of mining activity, but it in no way represents the kind of bold new approach being advocated by many outside the industry in North America. The miner's right is gone from the New Zealand Bill in name only. The new exploration licence recognises changes taking place in the mining industry. But mining still has a priority position without need to justify its claim other than with respect to national parks, public reserves, orchards, cemeteries and the like. (41) The mining privilege remains free, not only for the individual prospector, but also for the large mining company. By now you will appreciate that I do not believe in any historically-justified miner's right.

If this right is to be justified in terms of supporting a population of prospectors and developers in New Zealand, or of overcoming deficiencies in the supply of minerals needed in New Zealand, or of increasing earnings and revenues in New Zealand, or of overcoming balance of payment difficulties, I would ask that these benefits be examined and weighed against all the costs of development - the social and public costs of providing roads and schools and hospital services in remote areas, the displacement costs of alternate resource uses precluded by the mineral development, and the environmental costs of diminished wilderness, recreational and aesthetic values; (41) and I would ask that this weighing be done, not all at once in advance when this Bill is dealt with by the New Zealand Parliament, but at the times when development decisions are being made. I would also insist that this weighing take place, not behind closed doors in negotiations between officers of the Mines Department and mining men, but in some kind of open forum where the full range of affected interests can be heard. Of course, this philosophy of approach must accommodate practical considerations when it is put to practice, and changes of this kind proceed slowly. I will only say now that the system I envisage is one where mining must be justified ad hoc as a land use in the same way that the establishment of a...
Example 1: All of the companies earn a profit of $100.00, the total amount of which, less tax, they decide to distribute as a dividend.

<table>
<thead>
<tr>
<th>Company A</th>
<th>Company B</th>
<th>Company C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit</td>
<td>$100.00</td>
<td>$100.00</td>
</tr>
<tr>
<td>Taxable Income</td>
<td>$40.00</td>
<td>$66.66</td>
</tr>
<tr>
<td>Tax</td>
<td>$20.00</td>
<td>$33.33</td>
</tr>
<tr>
<td>Dividend</td>
<td>$80.00</td>
<td>$66.66</td>
</tr>
</tbody>
</table>

Example 2: All of the companies earn a profit of $100.00 and decide to put $20.00 in reserves, and distribute the balance less tax, as a dividend:

<table>
<thead>
<tr>
<th>Company A</th>
<th>Company B</th>
<th>Company C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit</td>
<td>$100.00</td>
<td>$100.00</td>
</tr>
<tr>
<td>Taxable Income</td>
<td>$32.00</td>
<td>$53.32</td>
</tr>
<tr>
<td>Reserve</td>
<td>$20.00</td>
<td>$20.00</td>
</tr>
<tr>
<td>Tax</td>
<td>$16.00</td>
<td>$26.66</td>
</tr>
<tr>
<td>Dividend</td>
<td>$64.00</td>
<td>$53.32</td>
</tr>
</tbody>
</table>

These examples show that Section 152 contains allowances of considerable value for the risk and depletion factors inherent in any mining venture.

The risk factor is allowed for by providing a very low rate of tax until the company has distributed profits which exceed twice the company's paid up capital, and thereafter an effective deduction of one-third of the company's profits (that is, assuming the company pays out its total profits as in Example 1 above). A tax advantage clearly flows from the company having a large paid-up capital. Accordingly, investment in the company by way of share subscription rather than loan advances may be preferable.

The depletion factor is allowed for by permitting the company to retain profits tax free to be used for further exploration or development work (as in Example 2 above).

Three further taxation features should be noted:

(a) Mining companies eligible under Section 152 (here-
guide the exercise of discretion as to the terms and conditions to be imposed in licences so that these provisions give no assurance that advocates for competing resource uses and for a quality environment will be heard with respect to exploration and development decisions. In fact, this injection of ministerial discretion into the granting of mining privileges is, in my opinion, and it is a North American viewpoint, almost entirely the wrong kind of decision-making to introduce into the mineral disposition system, and this subject is my next main heading.

MINISTERIAL DISCRETION

I am not opposed to ministerial discretion. On the contrary, I am entirely pragmatic about the decision-making process and realise that the diversity of matters about which decisions have to be made obviously requires variety in the methods of decision, including the exercise of ministerial discretion. My concern is to match the right decision-making process with the right set of circumstances calling for a decision. With respect to the grant of mining privileges, I believe there are two over-riding considerations - one is that the method of decision as to the grant of a privilege should reduce rather than increase uncertainties at the time the person desiring the privilege has to make a decision as to the investment he is willing to make; the other is that the method of decision should provide, so far as possible, for equal treatment of all those who seek the privilege. The reason for the first consideration is an economic one - the entrepreneur who has a choice of various investment opportunities will, in deciding among them, apply a high discount factor for uncertainties. Therefore uncertainties should be avoided. For example, under the Saskatchewan law, the holder of a claim block (up to 15,360 acres) can acquire all the acreage under mining leases if he so elects. Under the New Zealand Bill the holder of a prospecting licence (up to 10,000 acres) is entitled to only one mining licence up to 1000 acres, with the grant of any additional licences being at the discretion of the Minister. The Minister might decide that it would be appropriate to grant mining licences over the entire acreage of the prospecting licence, he might announce his intention to do so in advance, and it might be highly probable that would do so. Nevertheless, the entrepreneur, choosing between a Saskatchewan claim block and a New

without assuming part of the risk of the mining venture.

The specified minerals are as follows:

(a) Antimony, asbestos, barite, bentonite, bituminous shale, chromite, copper, dolomite, feldspar, gold, halloysite, kaolin, lead, magnesite, manganese, mercury, mica, molybdenite, nickel, perlite, phosphate, platinum group, pyrite, silver, sulphur, talc, tin, titanium, titanomagnetite, tungsten, uranium, wollastonite, zinc, or zircon; or

(b) Any other mineral which is declared in the Gazette by the Minister of Finance to be a qualifying mineral. Factors to be taken into account by the Minister are the importance of the mineral in the industrial development of New Zealand, or as a means of reducing the quantity of industrial minerals or industrial rock required to be imported into New Zealand, or as an item of export from New Zealand.

If a mining company meets the above requirements, then its taxable income is a notional one based on the amount of dividends paid to shareholders. The taxable income is one half of the dividends paid to shareholders during the year until total dividends paid since the company began exceed twice the amount of the paid-up capital of the company. From then on it is the full amount of the dividends paid to shareholders during the year.

To find the company's paid-up capital, contributions of property or other assets are taken into account at a true value. Bonus shares and other forms of capital issues which do not require payment of fully adequate consideration are excluded.

The effect of taxation under Section 152 may be seen from the following examples. The tax is calculated at maximum rates.

Company A is a Section 152 company which has not paid out dividends of twice the amount of its paid up capital,

Company B is a Section 152 company which has paid out dividends of twice the amount of its paid up capital, and

Company C is an ordinary trading company which is not eligible for taxation under Section 152.
Foreign companies may derive the benefit of the incentives by forming New Zealand subsidiaries. In addition there are provisions aimed at making New Zealand's tax no more onerous than the tax payable in the home country.

In the above ways, the tax legislation seeks to meet the special requirements of the mining industry.

An unexpected problem has arisen with respect to ability of profits or gains received on the sale of shares in a mining company. This has been met by a new provision which exempts such profits or gains from taxation so long as they are being used for mining purposes.

The legislation will now be discussed in more detail.

Companies engaged in mining for certain minerals (Section 152 Companies):

(a) that its sole or principal source of income is the business of mining in New Zealand any one or more of certain specified minerals, or

(b) that its undertaking is in New Zealand and comprises solely or principally the carrying on in New Zealand of exploring searching for or mining any one or more of the said minerals or the carrying on of any development work relating to such exploring searching or mining.

Clause (a) above relates, then, to companies which are engaged in actual mining operations, whereas Clause (b) relates to companies which are engaged in prospecting or development work. Clause (b) was inserted by Section 20 of the 1969 Amendment (No. 2) to the Act, and it is subject to the rider set out in the Amendment (inserted as subsection 1A of Section 152), namely that a company shall not be eligible if its prospecting or development activities are performed as a service to any other person for reward, unless the Commissioner is satisfied that the main purpose of the undertaking is to provide that service for a reward which is solely or principally related to and dependent upon the production of any one or more of the said minerals or the participation by that Company in any profits from the production of any one or more of the said minerals. The purpose of this rider is to exclude companies which provide a prospecting or development service for other companies.

The reason for the second consideration needs no elaboration. However equitably the Minister may believe he is treating different entrepreneurs, when exercising his discretion as to the grant of licences or as to terms and conditions to be imposed in licences, the entrepreneurs, themselves, will believe that he is unfairly discriminating between them. The comment is often heard among North American business men that they do not object to justifiably harsh measures in the public interest so long as their competitors have to operate under the same terms and conditions. This possibility of discrimination does not exist if terms and conditions are made known in advance and the mining privilege is awarded to the highest bidder in open competition.

A clause in the Bill providing for ministerial discretion that I must criticise as strongly as possible is clause 229 providing for the granting of concessions in respect of new mineral discoveries. The reasons for my vehemence are that it is the experience of most resource administrators in the United States and Canada that rewards after discovery of this uncertain nature are ineffective as incentives and hopelessly difficult to administer. (48)
Finally, as to ministerial discussion, the North American practice with respect to oil and mining privileges is to specify work requirements in advance, sometimes in the statute, itself, more often in regulations, and on occasion through calling for tenders on a work commitment basis. In all these circumstances, the entrepreneur knows in advance what his minimum investment must be to retain his privilege, and he knows that other entrepreneurs will face the same commitment. With this background of experience, North American mining men are bound to oppose clause 59 (4) of the Bill which gives the Minister discretion in any particular case to prescribe the amount of work expenditures required to maintain a prospecting licence in good standing. The question for New Zealand in this instance is whether the discretion to decide work commitments in each case rather than prescribing them in a general way in advance is worth the adverse effect this discretion will unquestionably have on the willingness of North Americans to invest in mineral exploration in New Zealand.

SURFACE RIGHTS AND COMPETING LAND USES.

Characteristic of the free miner tradition is open access to the publicly-owned minerals even where the surface of the land is owned or occupied by someone else or for some other purpose. The New Zealand Bill has two kinds of classifications for determining what lands are open and what the terms of entry will be. One classification pertains to the use to which the land is currently applied; for example, as a house or garden, etc. (49) The other derives from legal title to minerals. More specifically, this classification separates cases where the surface is privately owned and minerals are reserved to the Crown with the right to enter and work from cases where the surface is privately owned and minerals are reserved to the Crown but without the right to enter and work. These latter cases are lumped together with cases where a private person owns both the surface and the minerals and together they are called "private land" (51) as distinguished from "Crown land".

(a) The Use Classifications.

The "use" classifications represent the priority assignments made by the Bill between mining and other land uses. Generally speaking, the Bill gives priority to mining. Compensation must be paid to surface owners and

TAXATION OF MINING COMPANIES IN NEW ZEALAND.

by Peter Rowe, LL.M., J.D. (Chicago).

The development of a mineral industry is of great importance to New Zealand's economy. One of the ways in which it is encouraged is by special taxation provisions and incentives.

Mining operations have three factors which require special treatment:
(a) the high cost of mineral exploration and exploitation;
(b) the speculative nature of mining including prospecting;
(c) the depletion of the minerals.

In New Zealand, a fourth factor is the need to attract overseas capital and know-how.

The first factor is met by permitting a mining company to write off all classes of expenditure, whether capital or revenue, over the life of the mine (Section 91). This is a usual sort of provision and applies also to the timber and flax industries.

However, New Zealand's tax legislation has some unusual features applicable to a mining company which mines for specified minerals of importance, or for petroleum. Such a company is not taxed on the basis of profits made, but on the basis of dividends paid to shareholders. As a result, the company's taxable income is reduced by at least 33 1/3 % and can be reduced by a much greater percentage if the company retains earnings to carry out prospecting and development activities.

These allowances are of great benefit once a mining company has begun to make profits.

Provisions also exist to encourage investment in mining companies before they have reached the profit-making stage. Shareholders are entitled to a deduction of up to 33 1/3 % in respect of payments for the allotment or meeting of calls on shares in companies mining the specified minerals or petroleum. Companies may write off loans, up to a certain limit, which they have made to mining exploration companies in which they hold shares.
that is that looking at any aspect of mining and particularly the financing aspects, while all care, study and caution needs to be exercised, mining is for the optimistic. While the risks may be high, the prize can be very great indeed.

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

occupants for damage done by mining, but these owners and occupants (subject to the exception as to "private land" which I shall comment on later) have no say as to when or where the miner may enter, or as to how much of the surface he may use, or as to what kind of operations he will carry on unless the miner proposes to invade the very site on which his building stands, or his garden or orchard is located. Even here, the local Magistrate is to authorise entry if "the land is bona fide required for mining purposes," (52) with nothing in the Bill suggesting that the Magistrate should weigh the competing land uses and possibly decide that even a bonafide mining purposes is not as important as undisturbed continuance of the site as a garden or an orchard or a building, or that the proposed entry and operation should be modified so as to be as compatible as possible with the existing land use.

With respect to payment of compensation for surface damage, my only comment is to draw attention to what appears to me to be defects in drafting. The matter of compensation is referred to at six different places in the Bill, and in each case different wording is used to describe the standard of compensation to be applied. Thus,

Cl. 7 (3) dealing with new Crown alienations reserving minerals and the right to enter and work - refers to compensation "for all damage done to improvements belonging to him".

Cl. 24 (2) the Magistrate may permit entry on house and garden sites subject to - "compensation for improvements (but not for the value of the land) injurious affection and all other losses or damage,"

Cl. 42 providing for the taking of land for mining purposes - no standards of compensation are prescribed in this very difficult valuation situation.

Cl. 44 (3) authorising geological surveys subject to "compensation for any damage caused,"

Cl. 220 the general compensation provision - "for all loss or damage suffered or likely to be suffered,"

Cl. 222 (2) dealing with the assessment of compensation by a Magistrate - severence damage to be included.
Lawyers experienced in expropriation cases know how difficult valuation is without the added difficulty of confusingly different statutory standards of compensation.

The "entry subject to payment of compensation" approach signifies a public policy determination that the benefits of mining override the public interest in upholding individual rights of property. The New Zealand Bill even goes so far as to permit expropriation of privately-owned mineral rights, presumably so they can be granted to other private interests who are prepared to undertake prospecting and mining. Apparently a private owner of minerals is not to be given the opportunity of deciding that he would rather forego the benefit of mineral production than suffer the surface damage that production operations will cause. However, he can forestall the expropriation by "lawfully" mining the land himself. These clauses opitomise to me the preoccupation of the Bill with mining for its own sake, whether or not it is a best use of the land. Who is in a better position to assess the benefits and liabilities of a mining operation than the person who, as owner of both the surface and the minerals, has only his own interest to serve whichever way he decides? I can understand that there is some justification for an expropriation provision to deal with cases where a mineral deposit has been discovered which includes a portion of privately-owned minerals and the private owner is holding out for an unconscionable sum because his portion is highly desirable to mining men who are prepared to invest large sums if they can get control of the entire deposit. If the aim of the expropriation powers in clauses 37-43 is to deal with holdouts, the provisions should say so and the expropriation power should be exercisable even if the private owner of the minerals is, himself, carrying on mining operations which frustrate the development plans for the entire mineral deposit. But in Canada, so far as I know, no jurisdiction has given compulsory acquisition powers with respect to minerals except in Saskatchewan where compulsory unitisation of oilfields operates as a form of expropriation of petroleum rights. In Alberta, not even this situation has evoked compulsory acquisition, and the oil companies find that the hold-out can usually be brought to reasonable terms.

In Canada, as in New Zealand, the public interest in efficient development of mineral resources has resulted in the shortage of technical people and knowhow to exploit it.

(c) Production.

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

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

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

POSSIBLE CO-OPERATION BETWEEN NEW ZEALAND AND AUSTRALIA.

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

Would money leaving New Zealand for Australian exploration be offset by greater exploration in New Zealand from Australians?

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

It would indeed be an interesting experiment.

CONCLUSION.

There is an old saying in the mining industry that one is never quite sure whether mines breed optimists or optimists breed mines. One thing is sure, however, and
While vertical integration must be kept in mind in assessing the financing requirements of a new mineral deposit, the exercise should not be clouded by worrying too much about potential vertical integration in the future. It is difficult enough to bring a mine into production without complicating the situation until such time as operations are proceeding smoothly.

FINANCING TECHNIQUES.

Distinction should be made between:

(a) **Exploration.**

As mentioned earlier, explorers are the real risk takers and certainly require incentives especially if the going gets tough as it has in petroleum exploration in Australia with funds used all being of the equity type. Then it is very necessary that taxation and mining legislation must be helpful or else it becomes almost impossible to persuade the general public to invest in this high risk/high return sector. The major axiom in exploration financing is to spend the least for maximum information gradually expending increasing amounts as and when confidence increases. It is certainly better to risk losing something worthwhile than to "flog a dead horse", however tempting this may be. This is so in spite of examples of subsequent success by another group on that particular deposit.

(b) **Development.**

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

There are many sources of loan finance around the world today for natural resource development, particularly in stable countries. It often requires an equity "kicker" but it is there. In fact, should one find a worthwhile mineral deposit, finance need not be the major problem but rather statutory rights of entry and uses of privately owned surface lands for prospecting, mining, drilling and pipelining, but in recent years these rights have been modified to give the expropriation tribunal the power not only to determine compensation but also to define in advance the time and place of entry and the method of operations, and even, in some cases, whether entry should be authorised at all. I venture to say that the privileges of entering and working on privately owned surface land given by the New Zealand Bill, without consent or an authorising order, would not be acceptable in Canadian jurisdiction today. I also venture to say that my sense of property would be less offended by a general expropriation of mineral rights in favour of the Crown without compensation as has been done in the Australian states and in New Zealand with respect to petroleum than it is by the right given by the Bill to take minerals in specific cases. Where owners are now producing their minerals, they could be given mining licences.

One last comment will complete my consideration of the entry and working provisions of the Bill as they compete with use and occupation of the surface by private persons. Clause 83 says that mining may take place though it destroys the surface of the land because the minerals taken form the surface and subsoil of the land. In Canada, sand and gravel are not considered to be minerals but to be part of the surface ownership. In the United States, the term "common variety" is used to signify these surface-occurring deposits and they are excluded from location under the mineral laws. The rationale is that their taking is too inconsistent with surface use to be tolerated except under the disposition of the surface owner. They are ordinarily minerals of low unit value that are taken in large quantities if they provide a source near to the point where they are to be used, as in the case of gravel required for road-building. The public interest in having these minerals included in the New Zealand Bill (55) may be to ensure their supply for road-building and other such general uses at reasonable prices. An economist might advise that private ownership with an open market regulating the prices at which owners will sell would more likely ensure long-run reasonable prices, than the system that treats them as subject to mining privileges but with the obligation of paying compensation for the damage this extraction does to the
surface. In other words, owners of sand and gravel free to sell in competition with each other may well charge lower prices than the amounts they will claim and receive by way of compensation for surface rights when sand and gravel are treated as minerals.

So far my criticisms with respect to entry and working privileges have been limited to conflicts with private interests in land. Now I wish to comment about conflicts between mining and public uses of the land. National parks in Canada are sacrosanct as natural preserves for future as well as present generations. (56) No prospecting or mining is allowed. The policy of the New Zealand Bill is to tolerate mining in national parks and in other public reserves provided the government authority administering the park or the reserve gives consent. (57) Such an authority is entrusted with deciding whether the benefits of public use as a park or reserve outweigh the deterioration that these areas will suffer if mining proceeds. In Canada I would have reservations about such a system of protection for parks and reserves. The Ministry of Lands usually has junior status in Cabinet where conflicts between Ministers are decided. Ranging alongside the Minister of Mines who wants to open a park for an exploration licence will be the Minister of Finance, thinking about revenues and balance of payments, and the Minister of Labour, thinking about wages and employment. In Canada, and in the United States as well, conservationists insist at the very least on public hearings in cases where established parks or reserves are to be placed in jeopardy.

My last comments about competing land uses will refer to the exploration licence. This licence may be granted over land whether or not it is open for mining or subject to existing mining privileges, (58) the only restriction being that in the case of a national park the Minister of Lands must consent. (59) It confers exploration privileges that can be exercised without a surface owner's consent except in the case of a house or garden site, etc, and without the consent of the holder of an existing mining privilege unless the latter is actually prospecting or mining. (60) It leads to prospecting licences and thence to mining licences. (61) It is the disposition that gives a mining company tenure of a sufficiently large area (up to 200 square miles) to justify the undertaking of large scale exploration using modern

RETURN EXPECTED ON CAPITAL

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

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

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

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

DEGREE OF VERTICAL INTEGRATION

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

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

In spite of belief to the contrary, often the major profit is to be made by mining ore and shipping in its raw form or as concentrates rather than refining and fabrication of end products.
roads, ports, power and the like that follow mineral discoveries often benefit other segments of the community as well as the country as a whole, and any taxation benefits available to the mining industry should surely be expanded to cover these as well.

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

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

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

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

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

gerophysical and geochemical techniques with mechanized equipment and aircraft as the means of transportation. I believe there is no doubt that this form of tenure is the key to a modern mining industry in New Zealand, and if I were to advocate any changes in the privileges it confers, these changes would be towards liberalisation of the right to convert the exploration licence into a mining licence. But in the context of competing land uses, I wish to express two cautions. The first caution is against assuming that a geophysical or a geochemical survey such as may be authorised under clause 44 (apparently whether or not a mining privilege has been granted), or may be carried out by an exploration or prospecting licensee, is merely a cursory use of the land with little tangible evidence afterwards that an entry has been made. The logistics of modern exploration require great mobility of men and equipment. Instead of the traditional digger on mule or horseback, today's prospecting team will comprise half a dozen vehicles carrying portable drills, test laboratories, housing and supplies making track by bulldozer through valley and forest in geometric pattern. I have already alluded to the fact that seismic exploration, which is a form of geophysical survey, accounts for more cutting of the forest in Alberta than do the pulp and paper and the lumber industries. Nor can this cutting be deviated to respect stream or lake or wildlife habitat because the interpretative technology requires that the surveys be run on straight lines at regular intervals. The second caution is against assuming that exploration licences can be granted and yet the power be retained of refusing mining licences, should refusal be necessary, to protect other land uses such as parks or reserves. Once a licence has been granted and a substantial exploration investment made, it is extremely difficult for a government to deny the grant of mining privileges claimed by the licensee.

(b) The Mineral Title Classification.

In the western provinces of Canada the legislators were faced very early with the fact that private mineral ownership and the right to win and work were haphazardly distributed owing to the fortuitous circumstances as to when the land was first settled and whether it was acquired by the original homesteads as Crown land, railway land, or Hudsons' Bay Company Land. The decision made in the early coal mining regulations was to ignore the historical accident of whether or not the original mineral sever-
ance reserved the right to enter and work and to say that compensation should be paid in all cases where there was a surface occupier of lands entered for mining purposes. (62) This policy is continued today (63) and is generally accepted for its fairness, with the added protection that the compensation tribunal can also impose conditions on the place and method of entry so as to minimise surface disturbance. I find the classification in the New Zealand Bill based on the vagaries of the wording of reservation clauses in mineral grants to be an unwarranted recognition of property rights. It might appeal to Soames Forsyth that the owner of the surface from whose title the right to enter and work minerals has not been reserved by the Crown along with the minerals should be in a preferred position over his neighbour who owns the surface but has had the right to enter and work reserved from his title as well as the minerals some many years in the past, but the proposition does not appeal to Canadian farmers and ranchers and is not likely to appeal to New Zealand dairymen and sheep farmers. Nor is it particularly defensible in law, for this claim to preferential treatment is not supported by consideration unless New Zealanders habitually investigate the status of the right to enter and work minerals when they buy land and pay a higher price if the right to enter and work minerals has not been reserved. This preferred position is not insignificant. The land will not even be open for mining without the consent of the surface owner where the right to enter and work has not been reserved by the Crown along with the minerals. (64) Therefore, by refusing consent, he can protect his surface use, subject to an elaborate procedure under clause 36 whereby the Minister can declare the land to be open without consent. Even when he consents to having his land opened for mining or it is opened by the Minister this preferred surface owner is given added protection under clause 64 when a mining licence is applied for. He is given the right to specify the conditions under which mining is to proceed so as to prevent or reduce injury to the land and so as to ensure restoration of the surface after mining is completed, and a hearing by the Magistrate should these conditions be considered unreasonable by the licensee. In my opinion, more of this kind of protection should be given to all surface owners and occupiers, and the distinction based on the status of the right to enter and work minerals should be abolished.

FINANCING ASPECTS OF MINING

INTRODUCTION

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

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

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

GOVERNMENT PARTICIPATION/INCENTIVES.

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

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


2. Other parts of Minnesota were comprised of one edge of the Louisiana Purchase and a segment of the Red River Valley of the North.

3. P. 20

4. This last is relatively new and represents revenues from the lease of lands beyond the three-mile limit. In 1953, an act of Congress opened up these submerged lands to mineral exploitation and production. Producing leases increased from 138 in 1956 to 399 in 1965. The run-away oil wells which have caused heavy pollution in the Santa Barbara Channel off Southern California are under federal lease.

5. 30 U.S. Code, sec. 612


ENVIRONMENTAL CONCERNS.

In my introductory remarks I explained my conversion to an ecological persuasion, viewing mineral development in the total perspective of man and his environment. This persuasion moves me to make demands on mining legislation in the interest of avoiding pollution of air, land and water, and of preserving the natural environment so far as possible. Clause 25 contemplates that Ministers may exact conditions protecting natural features, flora or fauna when national parks and public reserves are opened for mining. But so far as other provisions of the Bill are concerned, and so far as mining privileges are given with respect to water in the Water and Soil Conservation Amendment Bill, one would conclude that there are no natural features, flora or fauna in New Zealand outside of national parks and reserves, and that water pollution is of minor importance. Should I be thought unfair in this criticism, I plead that I have lived in New Zealand and know something of its natural beauty and of the special relationship that New Zealanders have with their land, and I am distressed that, along with 64 clauses regulating mining in the interests of public health and safety, there are no clauses regulating mining in the interest of the physical environment in which people are supposed to live in health and safety. Nothing is said about the disposal of tailings, the control of erosion, the cutting of geophysical survey lines, the operation of heavy equipment in areas sensitive to ground disturbance, or the methods of open-pit mining, and the power to make regulations governing the working of mines given in clause 232 does not even contemplate these problems. I should explain that they have come to the forefront in Canadian jurisdictions only in recent years, and they are the subject of continuing controversy today. For example the federal government is now preparing Land Use Regulations (65) which will protect the northern lands under the onslaught of increasing mining and oil exploration. British Columbia public outcry about the strip-mining of coal in the mountain regions has resulted in the enactment in the Mines Regulation Act (66) of a detailed programme for surface reclamation while mining proceeds. In Alberta, the Surface Reclamation Act (67) requires oil operators to restore the surface when abandoning any drill site or other location.

I am aware that clauses 87 and 88 give the Minister of
Mines discretion to impose conditions for the protection and restoration of the surface of land. But these clauses apply only at the stage of a mining licence, ignoring disturbance by the holders of prospecting and exploration licences, and no specific requirements are spelled out. The Minister of Mines is not the person to be the defender of surface rights, for, as I mentioned earlier, he is bound to be an advocate for mining advised by department officials whose concern is the mining industry.

I would urge that land use and reclamation provisions be introduced into the New Zealand law. But I wish to add that such remedial provisions will never provide an adequate substitute for provisions enabling sound resource planning to be accomplished before the mining venture is authorised.

CONCLUSION

These are other provisions of the Bill that are equally as important as those I have selected for criticism. In some cases I have ignored them because I have no criticism to make. For example, I agree that Warden's Courts should be abolished (68) and that efficient administration requires centralization of records, (69) with telex communication providing service at the local level. I agree that mining privileges should be registered in the land titles office so as to be generally available to public search and investigation, (70) I applaud the provision in clause 91 (5) whereby the Minister may revise royalty rates every ten years except that I believe the ten years should run from the date the mine goes into production rather than from the date of the mining licence, and I believe that the altered rate should be the going rate at the time for the particular mineral at the time of revision and not a rate negotiated for the particular licence. Other provisions I have ignored because I am without competence to deal with them. I refer for example, to the provisions dealing with Maori lands (71) and the abolishment of "goldfield revenues."(72)

Now I must sum up. My role has been to criticise. I have chosen to apply the broad crush of a policy criticism rather than to perform the detailed analysis of a legal criticism. In doing so I have found many shortcomings in the Bill. Many of these reflect my own - some would say rad-

To summarise from the American experience, these matters seem to be important:
(a) in areas designated as of superior value for their natural quality, with the associated values of wildlife, streams, lakes, flora and scenery, mining exploration and mining activity are out of place and should be prohibited;
(b) where lands are reserved in a status less restrictive than that of national parks or wilderness, mining activity should be closely controlled to the end that claims are staked out and maintained for legitimate purposes and not for the ulterior one of providing a convenient place for a summer home or cabin;
(c) that mining claims should never be subject to patent, and that upon the cessation of mining operations, the land be restored, so far as possible, to a natural state. This last would require, for example, that were soil is removed for strip-mining the land be restored by recovering with soil and planting with grass or trees as may be most in keeping with its original character.

I would particularly emphasise the first of these points - that in areas designated as national parks, including especially such areas as are designated as wilderness, there be a complete prohibition on mining exploration and survey work. This principle has been accepted in the United States but only with reluctance and after many struggles. One typical object has been the rain forest within Olympic National Park in the state of Washington. When timber prices rose in the 1950's pressure was exerted to open up this area to logging. Again the forces of conservation rallied. It has not been invaded, despite the fact that no doubt much merchantable timber has been kept off the market.
almost permanently removed it from any possibility of use. Wisconsin and Minnesota have very little remaining of the great forests that covered them. But the big timber companies have moved to the Pacific Northwest and they are, on can honestly report, some of the best conservationists in the private sector.

Without professing to be an expert on mining, it is my strong impression that the biggest threats to the national forests come not from the valid, productive mining operations, but from the thousands of mineral "claims", staked out by those who, whatever their original intentions, see in the 1872 mining law a simple and effective means of getting a site for a summer cabin. The 1955 Act prohibited the use of unpatented mining claims for purposes other than mining. It also removes sand, gravel, and other building materials. But it does not apply to existing claims.

In 1955 the Chief Forester of the U.S. Forest Service estimated that not more than 15 percent of all unpatented mining claims would ever go to patent. This means that as to this 85 percent, the claimants were simply enjoying the use of government land for $100 per year, a peppercorn rental in the truest sense.

To really highlight this picture, consider this situation. A gentleman named Coleman filed claims under the "building stone" provisions of the mining laws and, asserting that he had complied with the requirements for expenditure of capital ($500 per claim) and other requirements and should receive a patent to 720 acres of land. The case, after an adverse decision by the Secretary of the Interior, reached the United States Supreme Court. The Court, reversing the Court of Appeals, found that the minerals in question, quartzite, did not qualify under the law as "valuable minerals." The Court noted, in passing, that the fact that Coleman's claims were in the San Bernardino National Forest, that he had built, at considerable cost, a home on the claims, and finally, that the location was within two hours time of Los Angeles, had some bearing on the question of his intention in seeking the patents. Certainly $500 capital expenditure per claim plus $5 per acre is somewhat of a bargain for title to national forest land.