CANADIAN TRENDS IN MINING AND PETROLEUM LEGISLATION: SOME NEW ZEALAND COMPARISIONS.

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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 prospecting 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 2000A. 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)

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 40acre 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 MineralAct 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

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 anachronstic...."

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 wheel-barrow 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

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 gentleman 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 Minister can then be tailored from these operations. The six year duration of prspecting 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 jurisdictions by the claim holder exercising a privilege of grouping 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, especially 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 prospecting licence-holder is to obtain up to a maximum of 1,000 acres. (36) However, because the prospecting licence 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

all, it was his investment in exploitation 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 with-holding 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.(37) 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 (38) 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 proram.

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, cemetaries 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

national park or a national forest must now be justified. The decision to open Crown lands to prospecting and mining should be made from time to time and region by region after hearings in which the burden will be on the Mines Department and the mineral industry to show that mining should be given a priority use, with opportunity to rebut this showing, and, if it is decided that mining should proceed, with a determination of special terms and conditions that should apply in order to achieve a maximum mix of resource and environmental benefits. Once an area is opened for mining, there should be competitive bidding for mining privileges. If no bids are forthcoming, and it is determined that prospecting should be permitted despite the zero market value of the prospecting right, (42) the area can be opened for prospecting in the true miner tradition.

Such is my view of the future for mining privileges. An oil man will recognize this forecast as in some degree approximating the systems that now applies in Canada and Australia with respect to oil permits and leases. My oil industry bias no doubt affects my forecast, but there is also a good deal of evidence that the systems of oil and mineral dispositions will merge, with the oil system setting the pattern, as the discovery technology and the financing and other institutional arrangements of the two industries come closer together.

It might be claimed that, apart from the competitive bidding requirement, the provisions of the New Zealand Bill do incorporate the approach I am advocating. Clause 23 of the Bill does authorize the withdrawal of Crown lands from mining purposes, and the provisions of the Bill establishing prospecting licences(43) and exploration licences (44) give the Minister discretion to impose terms and conditions as he thinks fit. Hence, it will be argued, the statute does provide a machinery for sound planning of resource use and for controlling each exploration and development decision. But this machinery provides but a pale shadow of the system I am advocating. The authority to withdraw lands from mining under clause 23 is given to the Minister of Mines who, in the very nature of things, must be an advocate for mining advised by departmental officers whose concerns are the concerns of the mining industry. The same exclusivness of concern for mining problems will

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 his 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.(45) 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. (46) 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. (47) 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

Zealand prospecting licence, would have to take into account that under New Zealand law the Minister could decide not to grant additional mining licences because of uncertainty about the matter, the entrepreneur would offer much less for an otherwise equivalent New Zealand prospecting licence than he would for the Saskatchewan claim block. Should someone comment that no one pays for mining privileges in New Zealand, he must understand that my reference to what the entreprenuer is willing to offer is a reference to what investment, whether in fees, rentals, or exploration or otherwise, he is willing to make. Another way of stating this argument is to say that New Zealand pays heavily in reduced mining investment for the opportunity of deciding in each individual case whether a prospecting licensee should receive mining licences over all or merely over a portion of his acreage. This uncertainty discount would disappear altogether if the Bill provided a system for determining in advance of taking out a prospecting licence what proportion of the acreage could be retained under mining licences.

The reason for the second consideration needs no elaboration. However equitabely 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 minieral 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

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, (53) 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 clause. However, he can forestall the expropriation by "lawfully" mining the land himself. (54) 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 hold-outs, 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

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

geophysical 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 techology 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 provincesof 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 preferentialtreatment 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.

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-

ical, but I would prefer to say advanced-views as to how the public interest should be nurtured in the mining legislation. I have refrained from advocating what is in the interest of the mining industry except where this interest has coincided with the public interest. The reason for my ignoring the industry's interest has not been any hostility but simply my awareness that the industry is fully capable of presenting its own case. Finally, may I say that the New Zealand Bill on the whole is as advanced as any mining legislation in western Canada, Saskatchewan's coming closest and infinitely more advanced that the mining law in the United States. Should my criticisms have seemed harsh it is because I know New Zealand's record in law reform and I look to it to take the lead in a new approach to mining law.