Law and policy for accelerating petroleum exploration and development in New Zealand

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I. INTRODUCTION

The efficacy of petroleum exploration and production decision-making depends as much upon economic, commercial, technical and political factors as upon the legal system. Legal instruments of development, control and regulation, nevertheless, represent in a very real and practical sense the major impediments to effective decision-making. Just as the law is merely one among several aspects of petroleum development, so the legal system itself seeks to achieve or permit a compromise among several potentially conflicting interests recognised by the law: for example, the entrepreneur, the financier, the local community, other community interests, the various departments of government and indeed the national interest at large. Each of these interests will probably be seeking to achieve different objectives: some of these objectives may be consistent, others may be in conflict. Two crucial questions are who owns the petroleum and who is entitled to develop it. Equally important for both owner and developer are the procedures and policies that may constrain the public regulation or control of the development of the resource. Thus there are always at least two facets of the legal system: on the one hand the creative function that enables development positively to take place and on the other hand the restraining function that disables development or requires it to proceed in a certain way. How is the balance between these different aspects of the legal system struck in New Zealand?

II. THE HISTORY OF PETROLEUM DEVELOPMENT IN NEW ZEALAND

A. Definitions

Before considering the range of legal instruments available in New Zealand for development and regulation it will be useful to identify how the search for petroleum in New Zealand and its subsequent development have reached their present condition. For this purpose the expression "development" includes not only the activities of exploration, prospecting, extraction and production but also the subsequent uses to which the product is put and the expression "petroleum" has its

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statutory meaning of any naturally occurring hydrocarbons (except coal) or mixtures of hydrocarbons whether in a gaseous, liquid or solid state.[1]

B. Three Stages of Development

There have been three stages of petroleum development in New Zealand. Exploration began between 1865 and 1867 when the first well, appropriately named Alpha, was drilled to a depth of fifty five metres by Messrs. Carter Scott Smith and Ross at a site near New Plymouth in Taranaki.[2] Apart from some apparently non-commercial discoveries by the Taranaki Petroleum Company during the decade prior to 1914, the first period from 1865 until 1930 was generally a failure. In 1930 the very small Moturoa oil and gas field at New Plymouth was discovered and it continued in production until 1972.[3] During forty two years of production less than a quarter of a million barrels of crude oil and approximately eighty three million cubic feet of natural gas were extracted.[4] Although the Petroleum Act, designed to encourage mining for petroleum, was enacted in 1937, the third stage of development did not begin until 1953 in response, it would seem, to successful exploration in Australia.[5] Four prospecting licences were issued in that year[6] and exploration for petroleum has continued in New Zealand ever since. Exploration may not take place without a licence under the Petroleum Act[7]: thus the information about the number of licences in force at any particular moment set out in the Appendix A to this article gives an impression of the rate and scale of exploration since 1953.

C. The Rate of Exploration

The rate of petroleum exploration may be measured in several ways.[8] Between 1865 and 1984 three hundred and nine wells have been drilled in areas subject to New Zealand jurisdiction: twenty three before 1900, one hundred and nineteen between 1900 and 1952, and one hundred and sixty seven since 1953. Only thirty four of these wells have disclosed any oil or gas. Five such wells drilled early on were not developed further. The five wells at Moturoa produced oil and gas in the very small quantities already mentioned. Four wells drilled by Republic Petroleum Corporation (NZ) Ltd in 1975 and 1976 produced some oil and gas but there has been no further development. The eleven Kapuni wells, the three

1 Petroleum Act 1937, s. 2(1) "petroleum".
2 *Petroleum Wells in New Zealand 1865-1983* (Ministry of Energy, Wellington, 1983); *Development of the Maui Gas Field,* N.Z. Parliament, House of Representatives, Appendix to the Journals, 1973, D. 5A, p.25.
3 Production began in 1930 before the enactment of the Petroleum Act 1937: presumably the Common Law applied to the development.
4 These figures are based upon information in the annual statement to Parliament by the Minister of Mines and then by the Minister of Energy. They are found in the Appendix to the Journals for the relevant year. Crude oil was produced from 1930 to 1972 and natural gas from 1954 to 1972.
5 *Mines Statement,* N.Z. Parliament, House of Representatives, Appendix to the Journals, C2, p.4.
6 Ibid., 1954, C2, p.4.
7 Petroleum Act 1937, s.4(1).
8 The information in this paragraph is extracted from *Petroleum Wells in New Zealand 1865-1983* (Ministry of Energy, Wellington 1983) together with addendum for 1984.

offshore Maui wells and the four McKee wells are presently being developed and there is expectation of development at Kaimiro and Pouri. Almost all successful exploration has thus come not only after the enactment of the Petroleum Act in 1937 but particularly since 1953. The activities over the last three decades repay closer analysis.

After the grant of the first four prospecting licences in 1953, the number in force grew rapidly over the following ten or twelve years.[9] Successful exploration however has been limited to a relatively small group of institutions. In 1954 for example, Todd Bros. Ltd of Wellington held 37 out of the total of 43 prospecting licences.[10] That company had entered into an agreement with Shell for the provision of technical and financial assistance in carrying out a systematic programme. Most of the activity in the early years was concentrated in Taranaki and Shell-D'Arcy and Todd between them held most of the licences.[11] By 1957 it was the Shell-BP-Todd consortium that dominated the search for petroleum.[12] Their rewards came in 1959 with the discovery of favourable structures at Kapuni which led to the smaller of the two currently productive gas fields.[13] Negotiations between Shell-BP-Todd and the government about the use of Kapuni gas continued until 1967 when a gas purchase contract was executed whereby the Minister of Mines (now the Minister of Energy) agreed to purchase on behalf of the government most of the gas for subsequent processing, distribution and sale to domestic and other consumers.[14]

By 1967 the Continental Shelf Act 1964 had been enacted and the way was open to permit exploration of New Zealand's offshore resources beyond territorial limits. Seven prospecting licences for continental shelf areas were granted in 1965.[15] The number of such licences grew fairly rapidly in the next five or six years and reached thirty-three in 1971.[16] Those issued for the territorial jurisdiction began numerically to decline. The area covered by each offshore licence, of course, far exceeded the area for each onshore licence. Thus the momentum for offshore activity continued at a relatively consistent pace, encouraged, no doubt, by the discovery in 1969 by Shell-BP-Todd of what turned out to be the very large Maui gas field situated about 23 miles offshore west of Taranaki.[17] The government continued to encourage offshore exploration while negotiations proceeded to determine the best use of the Maui gas.

9 See Appendix A to this article.
10 *Mines Statement,* N.Z. Parliament, House of Representatives, Appendix to the Journals, 1955, C2, p.6.
11 Ibid., 1956, C2, p.7.
12 Ibid., 1958, C2, p.7.
13 Ibid., 1959, C2, p.10.
14 *Gas Purchase Contract between Shell (Petroleum Mining) Co. Ltd, BP (Oil Exploration) Co. of N.Z. Ltd, Todd Petroleum Mining Co. Ltd. and the Minister of Mines,* N.Z. Parliament, House of Representatives, Appendix to the Journals, 1967, C.2A.
15 *Mines Statement,* N.Z. Parliament, House of Representatives, Appendix to the Journals, 1966, C2, p.5.
16 Ibid., 1972, C2, p.5.
17 Ibid., 1971, C2, p.5.

The number of offshore licences had reached a maximum of thirty-three in 1971. The reason for the subsequent decline in the number was stated by the government to be not diminished interest in exploration in New Zealand but changes to the legislation proposed by the 1972 Bill.[18] This Bill was withdrawn but another was introduced in 1974 that not only extended government control over petroleum development but also provided for government participation in development activities.[19]

No new wells were drilled in 1974 and the number of licences continued to decline. In 1977 a new policy emerged: the government itself began prospecting. Six prospecting licences were granted to the Minister and a limited drilling programme initiated.[20] In 1978 the Petroleum Corporation of New Zealand Ltd (Petrocorp), a government owned company, was formed and the licences issued to the Minister were transferred to Petrocorp.[21] Much of the initiative for exploration has since come from Petrocorp either by itself or in association with other companies.

D. The Current Position

The formation of Petrocorp in 1978 created an environment for exploration that is reflected in the pattern of licences currently held in New Zealand.[22] At the beginning of September 1984 there were thirty-two prospecting licences and seven mining licences in force. Petrocorp holds an interest in thirteen of these prospecting licences: in four Petrocorp is the only licensee; in eight Petrocorp has a majority interest ranging from 90% in one case, 73.97069% in another case, 60.9537% in two instances to 51% in four cases; in one only Petrocorp has a minority interest of 25.5%. The Shell-BP-Todd consortium holds two prospecting licences and the remaining seventeen prospecting licences are held in indiscriminate percentage shares by seventy companies and one individual whose origins are in Australia, Canada, the United Kingdom and the United States apart from several New Zealand exploration companies. Petrocorp is the sole licensee in three of the seven mining licences presently in operation: those for the relatively small McKee, Kaimiro and Pouri oil fields. The Kapuni mining licence is held by the Shell-BP-Todd consortium and the Maui mining licence by the joint venture comprising Offshore Mining Company Ltd to the extent of 50% (a subsidiary of Petrocorp), Shell and BP each to the extent of 18.75% and Todd to the extent of 12.5%. The current importance of the Shell-BP-Todd consortium derives from their early successes in discovering the Kapuni and Maui gas fields and the role played by Petrocorp is crucial to the policy of encouragement of petroleum exploration pursued by the government.

18 Ibid., 1973, C2, p.5.
19 Ibid., 1975, C2, p.5.
20 Ibid., 1978, C2, p.4.
21 *Ministry of Energy Report*, N.Z. Parliament, House of Representatives, Appendix to the Journals, 1979, D6, p.28.
22 The information in this paragraph is extracted from *Current Petroleum Licence Interests* and *Licensees : New Zealand Petroleum Exploration and Mining* (Ministry of Energy, Wellington, 1984) as at 1 September 1984.

The attempt by the government to promote Petrocorp as a catalyst for exploration in New Zealand has been complemented by other changes designed to make exploration more attractive: alterations to the liability for income tax of petroleum mining companies; provision of a government contribution to exploration costs in any joint venture development; new methods for calculating rates of royalties; and a scheme for pricing indigenous petroleum.[23]

At the same time it seemed as if the demand for energy in New Zealand was likely to fall.[24] Alternative uses for the natural gas to be extracted from the Kapuni and, more particularly, the Maui fields were contemplated. Several projects were proposed. Some have been completed; others are under construction. The government, either through Petrocorp or otherwise, has a substantial interest in these developments: for example, the extension of the domestic natural gas treatment and reticulation system by the Natural Gas Corporation of New Zealand Ltd, a subsidiary of Petrocorp; the production from natural gas of urea fertiliser for domestic use and for export by the Petrochemical Corporation of New Zealand Ltd, another subsidiary of Petrocorp; the production from natural gas of chemical methanol largely for export by Petralgas Chemicals N.Z. Ltd in which Petrocorp has a 51% interest with the balance held by Alberta Gas Chemicals Ltd of Canada; the conversion of natural gas into synthetic petrol by the Synthetic Fuels Corporation of New Zealand Ltd in accordance with a joint venture in which the government of New Zealand has a 75% interest and Mobil Petroleum Company Ltd, a 25% interest; and the production from natural gas of liquefied petroleum gas (LPG) by the Natural Gas Corporation and its subsequent distribution by Liquigas Ltd in which Offshore Mining Company (a Petrocorp subsidiary) has a 25% interest and the remaining 75% distributed among the relevant subsidiary companies created by BP, Shell, Todd, N.Z. Industrial Gases and Fletcher Corporation.

E. Summary

There has been intermittent petroleum exploration in New Zealand for over a hundred years. The search intensified thirty years ago. Success first came relatively modestly in 1959 and then on a larger scale in 1970. Current programmes for exploration and development take the form very much of a regime of partnership and cooperation, arising as much from legislation as out of the exercise of contractual powers, between the public and the private sectors. The present position may be summarised in three general propositions:—

1. there is a continuing programme for exploration encouraged by the government in which Petrocorp plays a major role;
2. natural gas is being produced from the Kapuni and Maui fields on a considerable scale and oil from the McKee field on a modest scale;[25] and
3. programmes are being implemented, planned and reviewed for the use and development of the natural gas from the Kapuni and Maui fields as a fuel for

23 *Ministry of Energy Report,* N.Z. Parliament, House of Representatives, Appendix to the Journals, 1980, D6, p.13.
24 Ibid., 1979, D6, p.14.
25 Production statistics are set out in Appendix B to this paper.

domestic, commercial and industrial purposes, as a feedstock for the newly created petrochemical industry and as the raw material for conversion into synthetic petrol.[26]

III. INSTRUMENTS FOR DEVELOPMENT

The foregoing description of the development of petroleum exploration and production in New Zealand makes clear the predominant role played by the Crown, both directly and catalytically, over the last two decades. It is axiomatic that the legal system has enabled this to happen. The question is how. There is no single answer, for the economic and political structure in New Zealand is a mixture of public and private enterprise set within a context of regulation. Instruments for development include ownership by the Crown, the rights of the Crown to develop and to participate in development, the position of the Crown in the licensing regime and the influence of the Crown through its institutions for planning, co-ordination and control. These overlap in some respects with instruments for regulation. In that sense any classification by function may be misleading. Some element of analysis and classification, however, is necessary to understand the whole system of petroleum exploration and development.

A. The Sovereignty and Property Rights of the Crown

New Zealand is invested with the rights of sovereignty exercisable by a state in accordance with the rules of international law. This includes those applicable to the territorial jurisdiction together with the more limited rights exercisable in relation to the continental shelf and the exclusive economic zone. It is thus the responsibility of the New Zealand legal system, acting through the legislature, the executive and the judiciary, to provide for petroleum exploration and production within the framework of international law. The matter is governed largely by legislation and Parliament has seen fit to confer rights of several kinds upon the Crown. In this regard New Zealand follows the traditions of the Common Law of England and the Westminster system of government: the Crown thus is not only the legal symbol of the state in New Zealand but also the legal instrument through which the executive branch of government operates. The representative of the Crown in New Zealand is the Governor-General appointed by the Queen on the advice of the New Zealand Prime Minister who is himself a member of the legislature.

The Crown is by virtue of the Common Law the original owner of all land in New Zealand: this is so notwithstanding the Treaty of Waitangi signed in 1840 by the Maori chiefs and the representative of the Queen. All unalienated land thus is the property of the Crown. This would include petroleum below the surface of any Crown land, petroleum underlying the bed of any lakes, rivers and other internal waters, petroleum underlying the foreshore and probably petroleum

26 An assessment may be found in *NBR Outlook*, Special Energy Issue, August 1984 (Fourth Estate Newspapers Ltd, Wellington, 1984).

underlying the bed of the territorial sea.[27] Whether any alienation of Crown land would carry with it any underlying petroleum is not clear as a matter of Common Law.[28] This is not now important for legislation has intervened to invest the Crown generally with rights of property in petroleum in situ. The statutory position is now paramount and it requires further analysis.

Section 3(1) of the Petroleum Act 1937 declares all petroleum existing in its natural condition on or below the surface of any land, whether alienated or not, to be the property of the Crown. This overrides all other legal instruments. Subsection (2) complements this provision by deeming all alienations of land from the Crown on or after the Act to be subject to the reservation of all such petroleum to the Crown. The only exception is petroleum already mined and recovered (whether returned for storage or not):[29] title to such petroleum remains, it would seem, with the licensee who has lawfully extracted it.[30] The definition of "land" in section 2(1) refers to all land within the territorial limits of New Zealand[31] and it includes land below the sea and any other water. In effect all petroleum in situ belongs to the Crown to the outer limits of the territorial sea measured in accordance with Part I of the Territorial Sea and Exclusive Economic Zone Act 1977. The same result is achieved by the wider provisions of section 7 of that Act which vests in the Crown the seabed and subsoil of submarine areas bounded on the landward side by the low water mark and on the seaward side by the outer limits of the territorial sea.

Petroleum on or in the continental shelf beyond the territorial limits of New Zealand is different. Section 3 of the Continental Shelf Act 1964 vests in the Crown all rights that are exercisable by New Zealand in relation to the exploration and exploitation of the continental shelf. Section 4 goes on to apply to petroleum in the seabed and subsoil of the continental shelf all the provisions of the Petroleum Act 1937 with the exception of section 3 of that Act which deals with the property rights of the Crown. Thus neither the Crown nor any one else has rights of property in petroleum in situ in the continental shelf. The Crown however has whatever rights are available to New Zealand in that respect. These rights are wider; they may be described as quasi-sovereign rights; but they are not rights of property in the ordinary sense of that word. This is not to say that property rights do not pass to the licensee upon lawful extraction. It means that the nature of the rights of the Crown is different depending upon whether the territorial or the continental shelf jurisdiction applies.

27 This is based on the maxim of the Common Law *cuius est solum eius est usque ad coelum et ad inferos:* see e.g. *Halsbury's Laws of England,* 4th ed. (Butterworths, London, 1982), vol. 39, pp.262 and 263, para. 377.

28 See e.g. *Trinidad Asphalt Co.* v. *Ambard* [1899] A.C. 594; *Borys* v. *Canadian Pacific Railway Co.* [1953] A.C. 217; *Earl of Lonsdale* v. *Attorney General* [1982] 3 All E.R. 579.

29 Petroleum Act 1937, s.3(3).

30 See D. E. Fisher "The legal context of petroleum development in New Zealand" (1984) 14 V.U.W.L.R. 13, 17-19.

31 See Acts Interpretation Act 1924, s.4 "Territorial limits of New Zealand".

B. The Development Rights of the Crown

The mere fact of ownership of petroleum in situ by the Crown does not mean that the Crown is free to develop or permit the development of such petroleum as it pleases. The same is also true of the quasi-sovereign rights vested in the Crown in relation to the continental shelf. In other words the exclusive position of the Crown is not enough to enable development. The reason is twofold. First, the requirement to obtain a petroleum licence for activities both onshore and offshore applies specifically to the Crown.[32] Second, it is a general rule that where the origins of the rights of the Crown are statutory, the statutory regime takes precedence over any rights available by virtue of the Common Law, for example, rights consequential upon ownership. The capacity of the Crown to develop or promote the development of New Zealand's petroleum resources thus derives from legislation and not from any rights of property in petroleum.

There are two such statutory provisions. Section 36 of the Petroleum Act 1937 authorises the Minister of Energy to hold a petroleum prospecting or mining licence, either by way of grant to himself[33] or by acquisition from someone else,[34] or to hold an interest in any such licence.[35] The Minister similarly may authorise the Secretary of Energy or any other person on behalf of the Crown to hold such a licence or an interest in such a licence.[36] Any such licensee acting on behalf of the Crown has exactly the same rights as any other licensee:[37] but a licensee acting solely on behalf of the Crown is not subject to any obligations in the legislation not expressed to bind the Crown.[38] This raises several questions: when is a licence held solely on behalf of the Crown; does Petrocorp hold licences solely on behalf of the Crown; what provisions do not expressly bind the Crown; does the requirement for the Crown to hold a licence effectively apply the whole licensing regime to the Crown? There is no authoritative answer to these questions. In principle, however, it may be that the Crown and agents of the Crown have the benefits of the legislation without suffering the obligations of the legislation.

Section 36 of the Petroleum Act 1937 also confers upon the Minister of Energy power to carry on mining operations either by himself (in practice through the Ministry)[39] or with any other person or persons.[40] The meaning attributed to "mining operations" effectively widens the extent of this power.[41] Mining operations clearly include prospecting and mining for petroleum. Also included are the extraction, production, treatment, processing and separation of petroleum together

32 Petroleum Act 1937, s.4(4) as inserted by substitution for s.4(3) by s.3 of the Petroleum Amendment Act 1982; Petroleum Act 1937, s.36(3); Continental Shelf Act 1964, s.4(1).
33 Petroleum Act 1937, s.36(1)(a), first element.
34 Ibid., s.36(1)(a), second element.
35 Ibid., s.36(1)(b).
36 Ibid., s.36(2).
37 Ibid., s.36(4), first element.
38 Ibid., s.36(6).
39 Ibid., s.36(1)(d).
40 Ibid., s.36(1)(e).
41 Ibid., s.2(1) "mining operations" as substituted by s.2 of the Petroleum Amendment Act 1982.

with the construction and operation of any works, wells, buildings, plant and equipment. But these two classes of activities are included only when carried out at or near the site either for the purposes of prospecting or mining or in association with the prospecting or mining. What is important, therefore, is that the Act applies not only to prospecting and mining in the ordinary sense but also to several activities associated with prospecting and mining and located physically near to the prospecting and mining site.

The second statutory provision conferring development rights upon the Crown is section 15 of the Ministry of Energy Act 1977. It relates to energy in general but petroleum as a source of energy is specifically included.[42] The general power conferred by section 15(1) is sufficiently important to justify quotation:—

> The Minister [of Energy] may from time to time, on behalf of the Crown, either alone or jointly with any other person or persons, carry on any business relating to exploration for or the discovery, production, processing, supply, distribution, uses or conservation of energy, sources of energy, products from energy or sources of energy, minerals and mineral products.

The commercial perspective of this ministerial power is clear. It is concerned, of course, with the operational side of the petroleum industry and the Minister may proceed as a sole entrepreneur or in conjunction with some other enterprise. The remainder of section 15(1) indicates how the ministerial power may be exercised. This emphasises the commercial aspect of the provision. Indeed the structure of section 15(1) contemplates not so much that the Minister will engage directly in petroleum exploration and production (as traditionally in the case of coal) but that he will establish an appropriate corporate structure[43] or acquire an interest in a relevant petroleum enterprise:[44] for example, a body corporate, a firm, a partnership or a joint venture. It is the corporate model that has been used by the Minister of Energy to promote petroleum exploration and development in New Zealand. The Petroleum Corporation of New Zealand Ltd (Petrocorp), for example, was incorporated in 1978 as a limited liability company in terms of the Companies Act 1955. The Minister of Finance holds 13,817,344 shares and the Minister of Energy 124,356,108 shares. Petrocorp itself holds some or all of the shares in several other companies formed to develop the petroleum resources of New Zealand: Petrocorp also has an interest in the Maui joint venture through its shareholding in Offshore Mining Company Limited which itself has a 50% interest in Maui Development Limited, the operator of the Maui gas field for the joint venture.

These statutory powers of development conferred upon the Crown are supported by a range of ancillary provisions intended to facilitate any development promoted thereunder. The Minister of Finance, for instance, may advance money to a corporate or other enterprise described in section 15(1) in which the Minister of Energy holds any shares or interests.[45] These enterprises have available to them

42 Ministry of Energy Act 1977, s.2 "energy".
43 Ibid., s.15(1)(a).
44 Ibid., s.15(1)(b).
45 Ibid., s.15(2).

by agreement the whole range of facilities of works and services provided by any department of government.[46] Quite clearly land may be required to enable prospecting or mining to take place in addition to the more limited statutory right of entry conferred upon a licensee to enter land for the purpose of exercising any rights conferred on the licensee by the Petroleum Act.[47] Mining operations, the business of prospecting or mining and the business of acquiring and dealing with petroleum by or on behalf of the Crown are treated as public works within the meaning of the Public Works Act 1981.[48] Mining operations, moreover, are regarded as a public work which is also an essential work within the meaning of the Public Works Act 1981 thereby enabling land or any estate or interest in land to be taken compulsorily.[49] Compensation is payable in respect of land entered or injuriously affected by operations under the Petroleum Act[50] and in respect of land taken under the Public Works Act.[51] Once the decision to permit prospecting or mining has been made, mechanisms thus are available to enable the Crown to put into effect on the land the development rights thereby conferred.

C. The Participation Rights of the Crown

In addition to exercising these statutory rights to develop petroleum, the Minister of Energy has an exclusive right to participate in any licensed activities.[52] The manner in which this right is exercisable is significant. Section 5(1) of the Petroleum Act 1937 gives to the Minister of Energy power to grant a prospecting licence to the applicant on such terms and conditions as he may specify. According to section 5(2) a condition of the licence may comprise the terms on which the Minister or any other person authorised to act on behalf of the Crown (in this case Petrocorp) shall be entitled to participate in prospecting under the licence or in mining under a licence granted under section 11. Section 12(2) of the Act provides for participation in mining under a mining licence by or on behalf of the Crown in exactly the same manner. It is thus clear that the Crown may participate in licensed prospecting or mining either directly or through an agent and the means for rendering that right effective against the licensee is the attachment of a condition to that effect when the licence is granted. The use of the expression "participate" indicates that the potential licensee cannot be excluded from the licence, although the share retained by the licensee is a matter for the Minister.

Uncertainty arises as a result of the provisions of section 11. This gives to the holder of a prospecting licence a qualified entitlement to a mining licence. This is an important matter. Section 11(1) states:—

> Subject to the provisions of this Act, if the holder of a prospecting licence satisfies the Minister that —
>
> (a) he has discovered, within the limits of the land comprised in the licence, a deposit of petroleum; and

46 Ibid., s.15(7).
47 Petroleum Act 1937, s.28.
48 Ibid., s.38.
49 Ibid., s.35; Public Works Act 1981, s.22.
50 Petroleum Act 1937, ss.32 and 39.
51 Public Works Act 1981, s.60.
52 Petroleum Act 1937, ss.5(2) and 12(2).

> (b) if a mining licence is granted to him, he will comply with the conditions of the mining licence,
> he shall have the right, on applying under section 12 of this Act before the expiry of the prospecting licence, to surrender that licence . . . and to receive in exchange a mining licence.

What then is the relationship between sections 5(2) and 12(2), which provide for Crown participation, and section 11(1)? Clearly participation by the Crown may be required at either the prospecting or the mining stage. Can the Minister of Energy attach a condition giving participation rights to Petrocorp, for example, in a mining licence when Petrocorp played no part in prospecting? The answer is not without either prior notice to the prospecting licensee or the consent of the prospecting licensee. The reason is twofold. Section 5(2) refers to the condition of Crown participation able to be included not only in a prospecting licence but also in an "exchanged" mining licence under section 11. So the legislature clearly expects the Minister of Energy to anticipate the possibility of Crown participation in the event of successful prospecting. Then there is section 12(4). No terms or conditions may be included without the consent of the licensee in a mining licence granted under section 11 other than those specified in the prospecting licence to be included in any mining licence that might be granted under section 11. Although this does not refer specifically to the condition of Crown participation it effectively requires the Minister to indicate in the prospecting licence that Crown participation will be a condition of any mining licence exchanged for a prospecting licence under section 11. There is no such restriction upon the Minister of Energy in relation to the grant of a mining licence under section 12 not exchanged for a prospecting licence under section 11.

Participation by the Crown in prospecting and mining activities is central to the policy of the New Zealand Government for petroleum development. The legislation leaves it to the discretion of the Minister of Energy when and how to exercise this statutory power. It is however the practice of the government to exercise this power through Petrocorp. Indeed "Petrocorp itself resulted from the need to integrate the government's own rapidly growing commercial involvement into a vehicle more suited for the co-ordination and development of long-term commercial interests."[53] Thus if Petrocorp holds an interest in a licence as a joint licensee as the result of a condition for Crown participation in the licence, it presumably does so "on behalf of the Crown" within the meaning of either section 5(2) or section 12(2). Otherwise it acts quite independently of the Crown. Whether this makes any difference is perhaps a matter of conjecture. In any event current practice since 1986 is clear and may be summarised in four propositions taken from the Government's statement of policy[54]:—

1. the Minister of Energy will be granted an 11% non-contributory interest in all prospecting licences issued after 1986;

53 R. J. Hogg "The New Zealand experience—public sector participation in the New Zealand oil industry" in International Bar Association and Lawasia Research Institute *Energy Law in Asia and the Pacific* (Matthew Bender, New York, 1982) p.384.

54 *New Zealand—Petroleum Licensing Provisions and Policy* (Ministry of Energy, Wellington, December 1985).

2. in the event of a commercial discovery the Ministry of Energy will be granted an 11% contributory interest in the relevant mining licence;

3. the Minister will be entitled to acquire an additional contributory interest of 15% or less in any prospecting licence and in any subsequent mining licence provided this right is exercised when the prospecting licence is granted;

4. Petrocorp acts as the agent for the Minister's interest in these licences.

D. Catalysts for Development

Participation by the Crown in petroleum exploration and development along these lines may not only encourage the private sector to engage in exploration; it also gives the Minister of Energy an indirect interest in and influence on the development of New Zealand's petroleum resources. Crown development directly or by participation however is not the only catalyst for development. It is important to consider the energy planning functions of the Ministry of Energy, the role of the Energy Advisory Committee and of the Liquid Fuels Trust Board, the nature of the concessionary regime established by the Petroleum Act and the accelerated decision-making process contemplated by the National Development Act 1979. These may be considered in turn.

Although it is the Minister of Energy who is invested with the power of decision-making in relation to petroleum exploration and development, the obligations created by the Ministry of Energy 1977 are imposed upon the Ministry and not upon the Minister.[55] The functions of the Ministry are to advise the Minister[56] and to provide the technical, investigatory, administrative and planning support in relation to energy policy formulation, coordination and implementation.[57] The concept of energy planning is extensive. It includes by statutory mandate a consideration of the technical, industrial, commercial, economic, environmental and social aspects of energy development, production, use and conservation from international, national, regional, sub-regional, local and individual perspectives.[58] This is a major responsibility with clearly conflicting claims and directions. But that is of the essence of planning and policy formulation. The legislation imposes two obligations in particular upon the Ministry as part of its general advisory and planning functions in relation to energy, which, of course, includes energy derived from petroleum or petroleum products. They are:—

1. to assess the levels and patterns of demand in New Zealand for energy, and for sources of energy, and wherever desirable formulate effective methods of influencing such demands in relation to available resources,[59] and

2. to promote, encourage and stimulate exploration for and the discovery of any

55 See generally D. E. Fisher "Energy law and energy planning in New Zealand" (1984) 14 V.U.W.L.R. 3, 8-11.
56 Ministry of Energy Act 1977, s.11(1).
57 Ibid., s.11(2).
58 Ibid., s.11(3).
59 Ibid., s.11(4)(a).

kinds, forms, and sources of energy, and the co-ordination of such activities and, if the Minister so directs, itself undertake or commission such activities.[60]

Thus petroleum exploration and development are very much the responsibility of the Ministry of Energy but in the wider context of energy conservation and environmental protection. In practice if not in law the powers of the Minister may be expected to be exercisable consistently with the imperatives created by this legislation.

These responsibilities are complemented by those of the Energy Advisory Committee set up under section 8 of the Ministry of Energy Act 1977 and the Liquid Fuels Trust Board established by the Liquid Fuels Trust Act 1978. The *Energy Plan,* published each year since 1980 by the Ministry of Energy, is the formal mechanism whereby the Ministry transmits its advice to the Minister on the plans and policies required for effective and efficient development of the energy sector.[61] Other government departments and the industrial and commercial organisations involved in energy no doubt make their views known to the Ministry in whatever way is appropriate. The energy legislation in general and the petroleum legislation in particular do not provide an opportunity for the public at large to comment on the wider aspects of petroleum decision-making. The Petroleum Act, indeed, confers no rights upon the public to comment even on a proposal for a specific project. One of the functions of the Energy Advisory Committee is thus to provide an opportunity for the public to comment on the *Energy Plan* and for those comments to be considered by the Committee in preparing for the Ministry their own "independent critique" of the Plan.[62] The Committee is the only means of public access to the energy planning process.

The Liquid Fuels Trust Board is funded by a levy on all liquid fuels sold or used after 1978.[63] The primary function of the Board is to engage in various activities that have as their purpose "the reduction of the use of imported fuels for transport purposes in New Zealand."[64] The other functions of the Board are also linked to transport purposes and include the use of petroleum, alternative indigenous fuels and alternative means of propulsion.[65] The emphasis is thus on using New Zealand's sources of energy as liquid fuels for transport; alternatives to liquid fuels are given a minor role. The activities and recommendations of the Board have proved to be significant, especially in relation to the use of LPG and the conversion of natural gas into petrol. In that sense the Board is an excellent model as a technical catalyst for development.

The concessionary regime established by the Petroleum Act 1937 takes the form, of course, of a licensing system. New Zealand has never adopted the model of what is sometimes called "franchise agreements" or agreements between the partners

60 Ibid., s.11(4)(b).
61 *1983 Energy Plan* (Ministry of Energy, Wellington, 1983), N.Z. Parliament, House of Representatives, Appendix to the Journals, 1983, D.6A, p.8.
62 Ibid., p.5.
63 Liquid Fuels Trust Act 1978, s.25(1).
64 Ibid., s.4(1).
65 Ibid., s.4(2).

for development subsequently ratified by legislation.[66] Special legislation in New Zealand has dealt ad hoc with a problem that requires immediate solution, never comprehensively with all aspects of a project. The grant of licences is governed by sections 5, 11 and 12 of the Petroleum Act. On the face of it the Minister of Energy has an unfettered discretion whether or not or on what terms and conditions to grant a licence. The Act contains no criteria for the exercise of these powers nor any statement of purpose or policy to guide the Minister. The title of the Act inter alia refers to the encouragement of mining for petroleum. Certain limitations on exploration and mining are contained in this Act and in other statutes.[67] In any event the limitations in the Petroleum Act relate more to the manner of exploration and development rather than the decision whether to permit these activities. The general tenor of the Petroleum Act is nevertheless the promotion of petroleum exploration and production and this is the way, it would seem, that it has been interpreted and applied.

Finally there is the National Development Act 1979. It provides a means for bypassing the procedures for obtaining statutory consents or approvals under a range of statutes by referring each of the applications to the Planning Tribunal for inquiry and report[68] and enabling the Governor-General in Council to declare the project to be a work of national importance and to grant such of the consents considered by the Tribunal as he thinks fit.[69] Applications for a licence under the Petroleum Act are proposals to which the National Development Act may be applied.[70] So far the Act has not been applied to any application for a petroleum prospecting or mining licence. But two of the three projects to which the Act has been applied concern the downstream use and development of the natural gas resources of Kapuni and Maui: namely, the proposal by Petralgas Chemicals N.Z. Ltd to construct a methanol plant[71] and the proposal by New Zealand Synthetic Fuels Corporation Ltd to construct a synthetic petrol plant,[72] both using Maui natural gas as the chemical feedstock. The purpose, but not necessarily the effect, of the legislation was to expedite decision-making on projects of national importance by providing one decision-making process and limiting the jurisdiction of the court to review that process. It is the policy of the recently elected New Zealand Government to repeal the National Development Act but some of its features are likely to be reintroduced by modifying the land use planning procedures under the Town and Country Planning Act 1977.[73] The distinction between development and regulatory legislation is at times narrow. The emphasis of the following part of this paper moves from development to control or regulation.

66 Such agreements are common in certain Australian states.
67 These are discussed in the next part of this paper.
68 National Development Act, 1979, s.4(1).
69 Ibid., s.11.
70 Ibid., Sched.
71 *Re an application by Petralgas under the National Development Act* (1981) 8 N.Z.T.P.A. 106.
72 *Re an application by N.Z. Synthetic Fuels under the National Development Act* (1981) 8 N.Z.T.P.A. 138.
73 See D. E. Fisher "Environmental policy developments in New Zealand" (1984) 1 Environmental and Planning Law Journal 387.

IV. INSTRUMENTS FOR REGULATION

The efficacy of petroleum decision-making reflects not only the use of the instruments for development described in the foregoing paragraphs but also the instruments for the regulation of any such development now to be considered. The facts and circumstances are the same. It is the perspective that is different. The legal system by recognising these different and potentially conflicting perspectives does no more than afford the opportunity for another legal interest to be protected. The result may be complex, time-consuming and expensive. It is simply the price that a relatively sophisticated society must pay for seeking to achieve economic, social, environmental and other objectives simultaneously.

There is such an extensive range of regulatory mechanisms in New Zealand that it is neither possible nor desirable to consider them comprehensively in this paper. The applicability of any particular regulatory mechanism, moreover, is a matter of the facts and circumstances of the project in question. So what is important in one case may be irrelevant in another. In relation to petroleum exploration and production, however, instruments for regulation may be classified in a number of ways: those intrinsic to petroleum and those extrinsic to petroleum. The former category may itself be divided into two elements: factors intrinsic to petroleum that are physical in effect, for example, control of the use of the prospecting or mining site, the rate of development of the petroleum deposit, the need for conservation of the resource, questions of depletion; and those that are commercial or at least non-physical in effect, such as the impact of taxation, price control, rates of royalty, control of the importation and exportation of capital and other funds. Factors extrinsic to petroleum, on the other hand, include the environmental and social effects of the development, the problems of site selection, alternative sites and the appropriate infrastructure, the requirement of water supply and discharge and, particularly important in New Zealand, the impact upon the Maori community.

If all of these factors are to be taken into account, several questions must be answered. Who is the proponent of the project? Does that person, in particular the Crown, have any special privileges or immunities? What is the precise nature of the project — prospecting, extraction, construction, storage, distribution? The impact of the regulatory mechanism may depend on the relevant function. And, finally, where will the development take place and what will be its physical and other consequences? The question omitted from this list is whether the project should go ahead: that is the issue underlying the instruments for development already discussed.

A. The Petroleum Legislation

Nothwithstanding that the policy of the Petroleum Act 1937 is to promote and encourage petroleum exploration and development, there are several restrictive features of the petroleum legislative regime. Many of these are technical and operational requirements designed to provide government with a basis of information on petroleum matters, to ensure effective use of the petroleum resources and to protect those involved in the industry. They apply to offshore activities as well as

to onshore operations.[74] It has already been mentioned that prospecting and mining are prohibited without a licence and that this provision applies to the Crown.[75] Whether the Crown is bound to obtain all the other consents required by the petroleum legislation is not so clear. For example, construction of any works for the development of the discovery may not commence until inter alia a work programme has been approved by the Minister.[76] This power together with other provisions in the legislation effectively enables the Minister of Energy to determine what rate of development best suits the national interest.[77] The general right of entry on to land conferred upon a licensee to exercise the rights of a licensee under the Act[78] is itself limited. The consent of the relevant Minister is required for entry on to certain kinds of public reserve;[79] the consent of the owner or occupier is necessary for entry on to specified areas of agricultural and urban land;[80] the consent of the holder of coal mining rights and of mining privileges is required in relation to areas of land subject to such rights and privileges.[81] In these cases the Minister may grant consent if the owner, occupier or licence holder refuses to do so.[82] In any event notice of entry must be given but it is only this last requirement that is stated to bind the Crown.[83] The others presumably do not. Similarly no pipeline shall be constructed or operated without a pipeline authorisation under the Act.[84] This provision does not bind the Crown. A further series of consents and approvals are required by the Petroleum Regulations. For example, the consent of the Chief Inspector is required for geophysical prospecting,[85] for well-drilling,[86] for suspension of well-drilling[87] and for the abandonment of a well.[88] The day-to-day operations of a well, moreover, are under the supervision of the inspectorate. They are either prescribed in the regulations or left to the discretion of the inspector. The standard expected of the operator is generally good oil and gas field practice.[89] The Crown presently does not, of course, engage directly in prospecting, mining or any of these operations. These requirements do not expressly bind the Crown. So the Crown presumably is not affected by them.[90] On the other hand, Petrocorp does engage in these activities and, whatever may be the technical position of Petrocorp in relation to the Crown, it appears to be the practice for Petrocorp

74 Continental Shelf Act 1964, s.4(1).
75 Supra.
76 Petroleum Act 1937, s.14A.
77 See D. E. Fisher "The legal context of petroleum development in New Zealand" (1984) 14 V.U.W.L.R. 13 at 26, 27, 31 and 32.
78 Petroleum Act 1937, s.28.
79 Ibid., s.29.
80 Ibid., s.30.
81 Ibid., s.31.
82 Ibid., s.30(4) and s.31(1).
83 Ibid., s.33.
84 Ibid., s.50.
85 Petroleum Regulations 1978, r.22(1).
86 Ibid., r.39.
87 Ibid., r.72(2).
88 Ibid., r.74.
89 See D. E. Fisher "The legal context of petroleum development in New Zealand" Supra n.77, 27-29.
90 Acts Interpretation Act 1924, s.5(k).

to comply with the requirements of the petroleum legislation as if it were a private entrepreneur. It should not be overlooked, however, that the Minister of Energy has a discretionary power to override the legislation by exempting any mining operations from all or any of the provisions of the Petroleum Act.[91] "Mining operations", it will be recalled, is given an extended definition for this purpose.[92]

B. The Planning Legislation

The Town and Country Planning Act 1977 contemplates two functions: the formulation of plans governing not only the use of land at the regional[93] and local[94] levels but also the use of any properly constituted maritime planning area,[95] namely any area between the high water mark and the outer limits of the territorial sea;[96] and the implementation of development control in accordance with any such plans. Plans take the form of schemes prepared and promulgated in accordance with the Act and there is little doubt that petroleum exploration and development are matters that may competently be dealt with in regional,[97] district[98] and maritime schemes.[99] Where there is no operative scheme, the consent of the local council is required for any use of any land or building not of the same character as the use which immediately preceded it.[100] Again there would be little doubt that petroleum prospecting and mining would fall within that description.

What are the criteria for planning in New Zealand? The granting of any such consent depends upon the public interest and the likely effect of the proposed use upon local amenities and the welfare of local residents.[101] The purposes of planning in general are stated to be —

(1) the wise use and management of the resources of the area,
(2) the direction and control of the development of the area,
(3) the promotion of (1) and (2) in such a way as will most effectively promote and safeguard the health, safety, convenience and the economic, cultural, social, and general welfare of the people, and the amenities of the area.[120]

This statement of purposes has effect against the background of section 3 which declares several matters to be of national importance and consequently to be recognised and provided for in the planning processes. Included are the wise use and management of New Zealand's resources,[103] environmental conservation

91 Petroleum Act 1937, s.2(2).
92 Supra.
93 Town and Country Planning Act 1977, s.9.
94 Ibid., s.38.
95 Ibid., s.104.
96 Ibid., s.95.
97 Ibid., s.11(2) and 1st Sched., para. 3.
98 Ibid., s.36 and 2nd Sched., paras. 1 and 10.
99 Ibid., s.104(2) and (3) and 3rd Sched., paras. 1 and 3(m).
100 Ibid., s.33(1).
101 Ibid., s.33(3).
102 Ibid, s.4(1).
103 Ibid., s.3(1)(b).

and preservation,[104] the protection of valuable agricultural land[105] and the relationship of the Maori people and their culture and traditions with their ancestral land.[106]

The planning legislation, on the face of it, contemplates a wide approach to decision-making. The subject matter of the planning system has however been restricted to land and the use of land. The issue is thus whether a proposal is a desirable and acceptable use of land. This limitation is particularly important in relation to an extractive activity such as mining. The process of extraction constitutes, it would seem, a use of land but the use of what has been extracted is not a use of land. This fine distinction may be illustrated by an example.

One of the issues for the Planning Tribunal and thence for the Governor-General under the National Development Act 1979 in relation to the siting of the synthetic petrol conversion plant was the application of the planning legislation. The Tribunal consistently with existing practice[107] confined itself to a consideration of conflicting uses of land that arose "within the site" proposed for development. They were not "called upon to decide whether the use of natural gas for the production of synthetic petrol is indeed the best or wisest use of that natural resource". Consequently they declined to admit "evidence directed to persuade us that alternate fuels derived from natural gas or alternative synthetic petrol processes would better represent the wise use or management of resources".[108] The recently elected New Zealand Government has indicated that it will amend the legislation to ensure that the Tribunal will determine such an issue.[109] At the moment however the planning legislation is directed towards a consideration not of the best use of the resource in question but merely whether the use of the land for the proposed purpose is acceptable or not.

How, then, does the planning legislation relate specifically to petroleum exploration and development? The activities of prospecting and mining in the sense of extraction involve the use of land even if they are not in themselves uses of land. The petroleum in situ, it should be recalled,[110] belongs to the Crown and not to the licensee. For practical reasons, therefore, apart altogether from the legal nuances of fragmented ownership and divided ownership, these activities require planning consent. Prima facie any activities on land associated with petroleum development, for example, the construction of extraction plants, conversion plants, petrochemical works, pipelines and all ancillary facilities, similarly fall within the planning legislation. The effect is that the whole petroleum exploitation process, from prospecting through extraction and processing to distribution and storage, involves activities that need planning consent.

104 Ibid., s.3(1)(a) and (c).
105 Ibid., s.3(1)(d).
106 Ibid., s.(3)(1)(g).
107 E.g. *Smith* v. *Waimate West County Council* (1980) 7 N.Z.T.P.A. 241.
108 *Re an application by N.Z. Synthetic Fuels Corporation Ltd under the National Development Act 1979* (1981) 8 N Z.T.P.A. 138.
109 See D. E. Fisher "Environmental policy developments in New Zealand" supra n.73.
110 Supra.

That is not an end of the matter. What is the relationship between the planning legislation and the petroleum legislation? Prima facie they are directed towards different purposes: the former is concerned with use of land and the latter with title to land.[111] On that analysis there is no inconsistency and both legislative systems apply. The Court of Appeal however, has decided that to require a proposal to obtain planning consent after the Minister of Energy has granted a licence under the Mining Act might lead to the negation of a Ministerial decision made in the national interest by an inconsistent decision of a local body.[112] Such a position would be unacceptable. The mining legislation according to the Court of Appeal was intended to be an "exclusive code" in respect of the use of land for mining purposes under mining licences granted under that legislation.[113] The reasoning of the Court was based partly upon the nature of the planning and the mining legislation and partly upon the immunity of Crown land from the planning legislation. Similar arguments apply to coal mining as they do to mining in general. Do they apply to the petroleum legislation?

There are two responses to this question. Sections 7(3) and 14(3) of the Petroleum Act 1937 make it clear that the holder of a prospecting or mining licence is not exempt from the obligation to comply with the requirements of other legislation that may affect or apply to any operation carried out under the licence. If the operations of a licensed private entrepreneur include activities to which the Town and Country Planing Act applies, then the licensee must obtain whatever planning consents are necessary. It is important that the rights of a mining licensee include not only the exclusive right to mine but also the right to carry out "mining operations" as defined.[114] To this extent the reasoning of the Court of Appeal does not apply to the Petroleum Act and that Act is not an "exclusive code" in respect of the use of land for petroleum or mining purposes.

Is this true of petroleum exploration and development by the Crown or on behalf of the Crown? Although section 4 of the Petroleum Act, which requires a licence for prospecting or mining, binds the Crown, neither section 7 nor section 14 says anything about its application to the Crown. This is not surprising because these provisions do not create obligations: they confer rights. Subsection (3) of each of these sections is in a sense merely declaratory of the legal position anyhow. So the question for the Crown is not whether the Petroleum Act is an exclusive code but whether the Town and Country Planning Act applies to land of the Crown. According to the Court of Appeal the Crown is not bound by the planning legislation.[115] Any prospecting or mining activities for which the Crown has a licence under the Petroleum Act, therefore, require no further authorisation under the planning legislation.

111 See Tony Black "Planning for petroleum development" (1984) 14 V.U.W.L.R. 35, 37.
112 *Stewart* v. *Grey County Council* [1978] 2 N.Z.L.R. 577; see also *Kopara Sawmilling Co. Ltd* v. *Birch* (1981) 8 N.Z.T.P.A. 166.
113 Ibid., at 548.
114 Petroleum Act 1937, s.14(1).
115 *Wellington City Corporation* v. *Victoria University of Wellington* [1975] 2 N.Z.L.R. 301.

Then there are pipelines. The Petroleum Act deals with pipelines separately from prospecting and mining. The construction and operation of a pipeline require an authorisation granted by the Minister under Part II of the Act.[116] Even if pipelining were an activity to which the Town and Country Planning Act applies, there would be no need to seek planning consent, for Part II of the Petroleum Act would probably be regarded by the Court of Appeal as an "exclusive code" in respect of the use of land for pipeline construction and operation in accordance with their arguments in *Stewart's* case.[117] There is no provision in Part II of the Petroleum Act equivalent to sections 7(3) or 14(3) in Part I; nor is there any suggestion that Part II binds the Crown. The circle of reasoning is thus complete. The construction and operation of a pipeline requires an authorisation by the Minister and nothing else. Where the project is a Crown development, no authorisation at all is required.

C. Other Regulatory Mechanism

The petroleum legislation is the principal means for providing an exclusive right of access to this public sector resource; the planning legislation is the principal means for providing public control over land and land-related resources in the private sector. The other regulatory mechanisms considered in the following paragraphs are concerned largely with the use of public sector resources. Two interests protected by the law are included although they are rather different in character: they represent a perspective in resource management that pervades the whole legal system simply because of the nature of the protected interests, namely the recognition of Maori cultural interests and the recognition of the public interest in the environment at large.

The position of the Crown as the owner of all unalienated land in New Zealand ensures that the Crown as a matter of practice has particular responsibility for the use and management of most of New Zealand's physical resources. Legislation applies to most if not all of the Crown's activities: the Land Act 1948 deals with the classification and alienation by grant, lease or licence of Crown lands, the Forests Act 1949 with land set aside as state forest land, the National Parks Act 1980 with the administration and management of national parks, the Reserves Act 1977 with other reserves, the Water and Soil Conservation Act 1967 with natural water within the outer limits of the territorial sea, the Harbours Act 1950 with land reclamation and the disposal and use of the foreshore in harbour areas, the Marine Reserves Act 1971 with the management of certain coastal areas as marine reserves and the Marine Farming Act 1971 with the development of marine farming. This is not a comprehensive list. It is nevertheless obvious that the administration of these statutes is likely to conflict from time to time with the administration of the Petroleum Act. There is no general rule. It is for consideration in each case what is the relationship between the Petroleum Act and the other statute in question. In functional terms the question is to what extent and under what conditions may petroleum exploration and development take place in an area having the status of a national park, a state forest, a harbour, a marine

116 Petroleum Act 1937, s.50.
117 Supra. n.112.

reserve or whatever. The legislative solution is frequently to indicate in the legislation that both statutes are effective and it is for the ministers responsible for each statute to achieve some sort of administrative or political compromise between or among the conflicting claims.

That approach however raises at least one important legal question. This may be considered in relation to section 29 of the Petroleum Act and section 47 of the Marine Farming Act. The issue simply is which statute governs the relevant decision-making process. Consider first section 29 of the Petroleum Act. It applies to several classes of land that belong to or are under the management of the Crown:[118] for example, national parks, state forests, river beds, the foreshore, the territorial sea and the continental shelf. The effect of section 29(2) is that no person shall enter on any such land or commence or carry on any mining operations thereon except with the prior written consent of the appropriate minister and in accordance with any conditions attached to any such consent. Thus to engage in petroleum extraction in a national park even after the grant of a mining licence requires the consent of the Minister of Lands and Survey. The principle to be applied in the administration of the national parks legislation is quite clearly the preservation in perpetuity of relevant areas of Crown land for their intrinsic worth and for their use and enjoyment by the public.[119] It is not however an absolute principle for national parks are to be administered so that "they shall be preserved as far as possible in their natural state."[120] The problem is that the power of the Minister of Lands to consent to petroleum mining operations in a national park is found in the Petroleum Act while the principle that governs the application of the National Parks Act and the administration of national parks is contained in the National Parks Act. Does the Minister of Lands follow the principle of the National Parks Act or the policy implicit in the Petroleum Act? There are arguments either way. So far there is no authoritative answer.

Section 47 of the Marine Farming Act 1971 clarifies, first, that the Petroleum Act 1937 applies to any area of land leased or licensed under the Marine Farming Act and, second, that the rights of a prospecting or mining licensee under the Petroleum Act are not affected by the provisions of the Marine Farming Act. Any conflict between petroleum mining and marine farming is resolved administratively by the Minister of Energy acting with the agreement of the Minister of Agriculture and Fisheries.[121] The procedure is set out in the proviso to section 47(1) enabling the Minister of Energy with the consent of his colleague by notice to direct that the holder of a petroleum licence shall not carry on any operations in the area leased or licensed under the Marine Farming Act or in any part of such area except in accordance with any conditions necessary to protect the structures, fish and marine vegetation in the area. This procedure is quite different from section 29 of the Petroleum Act. In this case it is the Minister of Energy who is

118 Petroleum Act 1937, s.29(1).
119 National Parks Act 1980, s.4(1).
120 Ibid., s.4(2)(a).
121 In whom the administration of the Marine Farming Act 1971 is vested by s.3(2) of and the Sched. to the Ministry of Agriculture and Fisheries Act 1953.

responsible for taking the initiative for the protection of marine resources likely to be affected by petroleum development. So much is clear. It is perhaps less likely that the Minister of Energy will use his powers to protect marine resources than that the Minister of Lands will use his powers to protect a national park.

Finally there is the protection afforded to Maori cultural interests and to the environment at large. The Maori people and their cultural relationship with their ancestral land are matters of national importance for the purposes of section 3(1) of the Town and Country Planning Act 1977 and aspects of Maori culture are provided for in regional and district planning schemes.[122] Land set aside as a Maori reservation under section 439 of the Maori Affairs Act 1953 is an area to which section 29 of the Petroleum Act 1937 applies.[123] Petroleum mining operations on such land thus require the consent of the Minister of Maori Affairs. Although the Treaty of Waitangi of 1840 has not been accorded any legal status within the New Zealand system based on the English Common Law, the Waitangi Tribunal set up by the Treaty of Waitangi Act 1975 is empowered to inquire into and make recommendations upon any claims that a Maori or any group of Maoris is or is likely to be prejudicially affected by any legislation, any policy or practice of the Crown or any act done by or on behalf of the Crown.[124] Such a claim was made in relation to the discharge of sewerage and industrial waste on to or near traditional fishing grounds and reefs of the Te Atiawa tribe from the proposed synthetic petrol plant in Taranaki. The claim was upheld by the Tribunal and it was recommended that a different means of discharging the effluent be substituted for the ocean outfall at Motonui.[125] This recommendation was not, of course, binding on the Government. But the Synthetic Fuels Plant (Effluent Disposal) Empowering Act 1983 was enacted to cancel the existing right and substitute one less objectionable to the Maori community. The Maoris thus have no enforceable right to their cultural heritage. At most there are means for recognising and considering their interests.

This is true also of the environment at large. In New Zealand there have been three approaches to environmental management. The first is executive in character. Certain environmentally harmful activities are either prohibited or controlled in accordance with some kind of licensing system: for example, the protection of wildlife,[126] noise control,[127] the restriction of air pollution[128] and the limitation upon discharges into watercourses.[129] It is common for petroleum prospecting and mining and for petrochemical plants to require consents under the Water and Soil Con-

122 Town and Country Planing Act 1977, First Sched., para. 9(d) and Second Sched., para. 3.
123 Petroleum Act 1937, s.29(1)(e).
124 Treaty of Waitangi Act 1975, s.6(1).
125 *Report of the Waitangi Tribunal on an application of Aila Taylor for and on behalf of the Te Atiawa tribe in relation to fishing grounds in the Waitara district* (Ministry of Maori Affairs, Wellington, 1983).
126 Wildlife Act 1953.
127 Noise Control Act 1982.
128 Clean Air Act 1972.
129 Water and Soil Conservation Act 1967.

servation Act and the Clean Air Act. The second approach is to incorporate environmental perspectives into decision-making at the planning and policy formulation levels as a matter of mandatory deliberation.

The planning legislation, for example, requires that attention shall be paid to environmental matters.[130] So does the National Development Act.[131] The Petroleum Regulations refer in two places to environmental assessment;[132] and the Petroleum Act has one reference.[133] The principal mechanism of environmental management, however, is not strictly a matter of law at all. The Commission for the Environment, an agency of government set up not by statute but by administrative edict, has the responsibility of administering the Environmental Protection and Enhancement Procedures.[134] These procedures apply a system of environmental impact assessment and reporting to government and government-funded works and decision-making processes that may have environmental implications.[135] A decision on an application for a prospecting or mining licence or a pipeline authorisation under the Petroleum Act, for example, may attract these procedures. The conception of environment for the purposes of these procedures is wide[136] and provision is made for public participation.[137] The law thus provides for recognition and limited protection of the environment in several ways, both formal and informal. As in the case of Maori cultural interests, there is no legally enforceable right to an environment of a particular standard or quality.

V. THE McKEE OIL FIELD DEVELOPMENT

The foregoing paragraphs demonstrate the interaction of the several components of the petroleum legal system in New Zealand. Not every set of circumstances engages each of these elements. One of the more recent and smaller developments in New Zealand has been the discovery by Petrocorp of the McKee oil field in Taranaki. Even this development discloses the complexity of the law in practice. It is proposed to conclude this analysis of the law and policy for accelerating petroleum exploration and development in New Zealand by describing as simply as possible the legal steps taken to bring it about.[138] The development comprised four stages: exploration drilling; the construction of production facilities; the construction of pipelines; then of storage facilities.

130 Town and Country Planning Act 1977, s.2(1) "amenities", s.3(1)(a) and (c), s.4(1), s.33(3)(b), First Sched., para. 3, Second Sched., paras. 5 and 8(b) and Third Sched., paras. 2 and 8(b).
131 National Development Act 1979, ss.3(2)(f) and 5.
132 Petroleum Regulations 1978, rr.7(1)(g) and 40(3)(b).
133 Petroleum Act 1937, s.51(4).
134 So far as they apply to petroleum exploration and development, see Joan Allin "Environmental impact evaluation and petroleum development" (1984) 14 V.U.W.L.R. 51.
135 Ibid., 52.
136 Ibid., 53 and 54.
137 Ibid., 56-59.
138 The information in these paragraphs has been supplied by Petrocorp whose assistance has been much appreciated.

Exploration drilling requires a prospecting licence under the Petroleum Act, a process which took one to two months. Consent to drill the well is required from the petroleum inspectorate under the Petroleum Regulations.

The inspector may request changes to the proposed drilling plan. In this case this occupied again between one and two months. Water rights are necessary for the operation of the drilling rig under the Water and Soil Conservation Act. These were obtained from the Taranaki Catchment Commission in the form of a general grant of rights for the defined area in which exploration is to take place followed by specific requirements related to each particular site. These procedures occupied three to four months. Negotiations commence directly with the landowner to secure access to the site in the form of a lease and to compensate him for nuisance and disturbance.

A series of consents was necessary for the contruction of the production facilities —

1. Planning permission for the use of the site to construct the production plant is obtained from the local council under the Town and Country Planning Act. In this case it took four months to obtain the consent of Clifton County Council. This involved the preparation of an environmental assessment report which took two to three months. Contributions were made by the Commission for the Environment; objections were lodged by the public; public hearings were held. The matter was decided by the county council. There was no appeal to the Planning Tribunal. A number of conditions were attached to the consent by the county council.
2. Water rights are required under the Water and Soil Conservation Act for the diversion of streams, for the construction of a water intake and for the discharge of effluent and storm water. Application was made to the Taranaki Catchment Commission. A complication arose as to the river from which the water was to be taken. This involved a further application under the Town and Country Planning Act for consent to construct the relevant intake facilities. There was no appeal. The whole procedure lasted five months.
3. The Petroleum Act requires a mining licence. This in turn requires the submission of a development programme for the oil field and an assessment of the environmental effects of the proposal. The conditions imposed by Clifton County Council and Taranaki Catchment Commission were regarded as suitable. A further three months were needed for this set of approvals.
4. Five further consents were obtained —
   (a) from the Department of Health under the Clean Air Act;
   (b) from the petroleum inspector under the Petroleum Regulations for the design of downhole and wellhead facilities;
   (c) from the Marine division of the Ministry of Transport for the design of pressure vessels;
   (d) from the Department of Trade and Industry for import licences; and
   (e) from the dangerous goods inspectors under the Dangerous Goods Regulations.

The final two stages were the construction of cross country pipelines and of storage facilities. The former were authorised under Part II of the Petroleum Act:

a process taking about three months. The storage site was leased from the Ministry of Energy which had already obtained permission under the Town and Country Planning Act. Water rights to dispose of stormwater were obtained under the Water and Soil Conservation Act; the loadout pipeline was approved under the Petroleum Act; and the wharf facilities were authorised by the Taranaki Harbours Board under the Harbours Act. A further three to four months were needed for these purposes. In summary a relatively simple development such as the McKee oil field is unlikely to reach the production stage in under two years. In most instances a longer period may well be predicted.

APPENDIX A

I — Prospecting licences in force

Year	*Territorial*	*Continental Shelf*	*Total*
1953	4		4
1954	43		43
1955	120		120
1956	141		141
1957	151		151
1958	155		155
1959	159		159
1960	174		174
1961	224		224
1962	288		288
1963	311		311
1964	331		331
1965	333	7	340
1966	303	13	316
1967	295	13	308
1968	302	14	316
1969	291	25	316
1970	329	32	361
1971	317	33	350
1972	211	29	240
1973	140	23	163
1974	117	16	133
1975			61
1976			34
1977			23
1978			22
1979			22
1980			12
1981			24

N.B. After 1975 territorial and continental shelf licences were not separately identified in the Annual Reports of the Ministry.

II — Prospecting licences issued

Year	Territorial	Continental Shelf	Total
1977	6	1	7
1978	1	1	2
1979	0	0	0
1980	1	7	8
1981	2	21	23
1982	8	5	13
1983	2	5	7
1984	0	3	3

APPENDIX B

Production statistics

Year	Field	Gas	Condensate	LPG
1977	Kapuni	2256.56m.	860973	
1978	Kapuni	2124.65m.	724012	
1979	Kapuni	1047.249m.	352477	
	Maui	21360.00m.	124416	
1980	Kapuni	465.889m.	235271	24407
	Maui	603.160m.	183760	2369
1981	Kapuni	429.506m.	272089	35434
	Maui	856.334m.	265064	5526.1

N.B. These figures are in cubic metres.
Oil is currently being produced from the McKee field at the rate of about 3000 barrels per day. This is expected to increase to 5000 barrels per day in the near future and possibly beyond that in association with other small recently discovered fields.