

# THE LEGAL NATURE OF A LICENSEE'S INTEREST UNDER THE PETROLEUM ACT 1937 AND PROPOSALS TO REVIEW PART II OF THE PETROLEUM ACT 1937

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The paper is divided into two topics:

(a) The types of activity that can be carried out under Petroleum Mining Licence: The rights of a holder of such a licence are derived from statute alone. Under the statute a licensee can prospect under a mining licence but that this may be limited only to prospecting to enable appraisal of the original discovery. These rights may be further limited by conditions imposed by the Minister. Consequently, if a licensee locates in his appraisal work a new discovery he may not have the power to develop it under his existing licence. We discuss recent litigation touching on this point.

(b) The rights of access to Petroleum pipelines and the common carrier principle: Part II of the Petroleum Act 1937 which deals with pipelines is considered as well as comparable regulation of pipelines in the United States and Australia. The monopolistic characteristics of pipelines make them particularly prone to anticompetitive conduct. Recent Commerce Commission decisions are reviewed and we conclude that the common carrier provisions under Part II of the Act are ineffective. It is likely the provisions of the Commerce Act 1986 cannot be relied upon to prevent abuse. Statements of reform by the Government are discussed and we examine the likely means of reform.

## INTRODUCTION

In this paper we intend to deal, as will be apparent from the title, with two quite distinct issues, but both of which are topical. The first deals with the rights of a holder under a petroleum mining licence. The particular issue we consider was one of the main questions recently heard by the High Court, but a decision has yet to be delivered.

The second issue is one of the subjects covered by the recent review of the Commerce Act 1986, namely, the rights of access to petroleum pipelines. The Minister of Commerce has only just (24 August 1989) released a report outlining the decisions which have been made with regard to this issue. We consider the background to this issue and the proposed reforms.

## RIGHTS OF A HOLDER OF A PROSPECTING MINING LICENCE

### The issues

The rights of a holder of a prospecting mining licence (PML) are statutory and conferred by the Petroleum Act 1937 (the Act) but that does not mean they are always clear or certain. One aspect of uncertainty is how wide the rights of a holder of a PML are: does it enable the holder to prospect for and exploit any petroleum (regardless of its geological formation) anywhere within the area of the licence, or can the rights of a holder of a PML be restricted to exploration and development of one particular field or reservoir?

This particular issue must be one of considerable importance and significance to the petroleum industry but until recently had not given rise to any practical problems. Due to the huge costs of exploration for and appraisal of petroleum discoveries it is essential that companies involved in the exploration for petroleum can be certain of the extent of their rights to explore for and develop any hydrocarbons within the area of their licence. For example, if a holder locates a new discovery in the appraisal work will he or she have the power to develop it under the existing licence?

Essentially this issue stems from the geological nature of hydrocarbon formations. Fields of gas and petroleum can overlap in the vertical plane, yet how the Act deals with this is far from certain. The Mining Act 1981, by comparison, provides for the granting of licences for specific minerals which could theoretically overlap with each other and have in the past overlapped with coal mining rights granted under the Coal Mines Act 1979. The Petroleum Act 1937, however, makes no express provision for the creation of overlapping licences for different petroleum formations. The Act is silent as to whether this is possible. There is nothing, however, in the Act which prevents it. A related question irrespective of whether such overlapping licences are possible is whether the Minister can limit the rights of a holder of a PML to the appraisal and development of a particular formation or discovery.

Unfortunately there is little or no commentary on this aspect of the Act nor are there any comparable statutory regimes

(on this aspect) elsewhere which may be of assistance. Petroleum regulation elsewhere in Australia, Canada and the United Kingdom have all rather different approaches in the provisions dealing with licences, development and exploration and therefore analysis of these regimes provides little help to the construction of the New Zealand legislation. Nor has this aspect been previously considered by the Courts.

### The Ngaere case

The problems arising from this uncertainty in the scope of the Act was highlighted in the recent case heard by the High Court in June: Petrocorp Exploration Limited and Others v D. J. Butcher (C.P. No. 613/88). His Honour Mr Justice Greig has yet to deliver his judgment.

The background to this case shows the difficulties that are inherent in the lack of certainty of the rights of a holder of a PML. On 17 November 1987 the Minister granted a PML for the area known as Waihapa to the joint venture comprising the Minister of Energy, Petrocorp Exploration Limited and others. The boundaries of the licence were set by reference to the assumed extent of the Waihapa gas discovery in the Kaimiro Formation. However, in February 1988 oil was discovered in the shallower Tikorangi Limestone Formation. Oil had not previously been discovered in that formation, but it was still within the Waihapa licence area. The joint venture subsequently applied in March 1988 to the Minister for an extension of the Waihapa PML to include that part of the newly discovered oil formation known as Ngaere lying outside the Waihapa licence area. As is no doubt well-known, the Minister refused the joint ventures' application for an extension and granted to himself in May 1988 the Ngaere PML on behalf of the Crown under Section 36 of the Act.

The terms and conditions upon which the Waihapa PML was granted were contained in the Second Schedule to the licence. Clause 1 of the Second Schedule provided that the initial term mining licence:

".. applies only to the development of that petroleum discovery known as Waihapa within the area of land comprised in the licences' First Schedule, and if the Licensees should discover any further deposits of petroleum within the area of land comprised in this licence, then for the purposes of every such further discovery this licence shall be treated in the same manner as if the discovery were made under a petroleum prospecting licence".

Putting aside the part of this clause which dealt with the consequences of a discovery of further deposits of petroleum, the issue which this condition raised was whether the Waihapa PML could properly be restricted to assessment and development of the gas field in the Kaimiro Formation, so that the joint venture had no automatic right to obtain a PML over the Ngaere Formation or an opportunity for extension of its PML to the formation outside the Waihapa PML.

A further issue was whether the Minister in deciding to grant the PML to himself had misused confidential information given to himself as the regulatory authority.

Legal argument from both parties analysed the scheme and provisions of Part I of the Act in detail. The non-Crown joint venture parties contended that the Act conferred upon a PML holder the exclusive right to mine within the area of land covered by the PML, and that this right could not be

restricted by any conditions the Minister may impose restricting the licence activities to a particular formation under the relevant land. The Crown (on behalf of the Minister), however, argued that such an interpretation would unduly limit the Minister's powers to regulate mining operations under the Act; and that the Act envisages and requires the granting of a PML and the rights to mine solely in relation to the discovery for which the licence was granted. Although the case dealt with other issues apart from this question, the decision of the High Court will be determinative on the issue we address in this paper.

### Analysis of the Act

The Act draws a distinction between pure prospecting where deposits of petroleum are not known, but merely speculative, for which a prospecting licence is the appropriate licence; and prospecting which relates to petroleum discovery which is to be mined and where exploratory or appraisal investigations are necessary for the purpose of mining or developing that petroleum discovery, e.g. determining the bounds and extent of the reservoir of the discovery. While mining operations can include prospecting and the rights of a holder of a prospecting licence include the carrying out of mining operations, these rights *are limited*. For example:

- (i) Section 7(1) provides for the right to carry out prospecting operations, but the right to carry out mining operations is for the purpose only of prospecting.
- (ii) Section 14(1)(a) provides that right to carry out mining operations is for *that purpose*; that is, *to mine for petroleum on the land comprised in the licence*. This implies that although a PML carries the right to carry out mining operations (which includes prospecting), they can only be carried out for the purpose of mining petroleum discovered within the licensed area. In other words, prospecting can only be carried out for the purpose of mining the petroleum discovery e.g. appraisal wells to determine the extent of the discovery.

This view is supported by Sections 14A to 14C of the Act which relate to work programmes of mining licences. In summary, these sections provide:

- (i) A mining licence has an initial term of up to four years during which time the licensee must prepare a work programme for the development of any petroleum discovery within the limits of the land. The licensee can not commence construction of any permanent works until the work programme is approved by the Minister and the licence is extended to a specified term.
- (ii) Where the Minister does not approve the work programme and revokes the mining licence, the Minister is obliged to reimburse the ex-licensee for:
  - (c) The necessary actual costs of the geological and geophysical review, evaluation work, and *exploration work (including appraisal wells)* carried out *during the period of the prospecting licence* for which the mining licence was exchanged *and the initial term of that mining licence*; and
  - (d) The reasonable evaluation and exploration costs in respect of the preparation of the work programme, - expended directly on that petroleum discovery in respect of the area comprised in the mining licence,...."(see Section 14A(13): our emphasis)

This clearly rests on the expectation that some exploration work (in the nature of appraisal wells) will and can be conducted during the initial term of a mining licence (simi-

early Section 14B(2)(b)(ii)(A) and (B) relating to postponement of development).

Consequently, exploratory investigations in the form of appraisal wells to discover the bounds and extent of a petroleum discovery are intended to be permissible within the initial term of a mining licence. In practical terms, they are essential for the development of proper work programmes.

Section 11 of the Act provides that a holder of a prospecting licence shall have the right (upon satisfying the Minister of various matters) to be granted a mining licence. In particular, Section 11(2) provides:

“A mining licence granted in accordance with subsection (1) of this section shall be granted over the area of land surrendered or over *such smaller area as the Minister determines will be reasonably adequate to enable mining operations* to be carried out in respect of the reservoir or field intended to be mined in accordance with recognised good oilfield practice.” (our emphasis)

This provision, although it uses the expression *to enable mining operations* in relation to a mining licence does not extend the rights of the licensee to enable him to conduct prospecting operations *per se*. Section 11 itself does not confer rights upon the licensee, but gives the prospecting licensee the right of exchange. Section 11(2) merely provides for the isolation of the necessary amount of land which needs to be included in the mining licence in order to enable efficient and effective mining of the particular petroleum discovery. It indicates an intention that the mining licence granted as a consequence of the discovery of petroleum, be in respect of that particular discovery.

This is consistent with one of the objects of the Act. The Preamble to the Act is as follows:

“An Act to make better provision for the encouragement and *regulation of mining for petroleum*, and to provide for matters incidental thereto” (our emphasis).

It is surely common sense that the regulation of mining of petroleum is best achieved by regulating the development of discoveries as and when they are made. A view of the Act which has the result of a holder of a PML granted in respect of a discovery of a particular reservoir being able to prospect for, find and develop another reservoir does not, in our view, achieve the best regulation of mining.

Therefore, we consider that a holder of a mining licence cannot conduct prospecting operations for purposes other than for mining the *petroleum discovery* for which the mining licence (and for which the right to mine) was granted.

There is nothing in the Petroleum Act 1937 which *prohibits* different mining licences over the same or overlapping areas of land being granted to *the same licensees*. Section 12(5) of the Act prohibits a mining licence being granted over land for which a prospecting licence has been granted, unless the licensees are the same or, if the licensees are different, the prospecting licensee consents. The reasons for the exception to the prohibition is that the different exclusive rights (namely, the right to mine under the mining licence and the right to prospect under the prospecting licence) do not compete if they are granted to the same licensee or if the prospecting licensee consents i.e. he/she can still prospect for different

and new petroleum discoveries in the area of land required by the mining licensee to develop the discovery. Similarly, in the case of more than one mining licence held by the same licensee in respect of entirely different discoveries held over the same or overlapping areas of land, the exclusive rights granted by the licences do not compete.

If it eventuates that more than one mining licence held by the same licensee (in respect of different discoveries) over the same or overlapping areas, are in fact in respect of a single reservoir the Minister may require (if necessary) development of the reservoir as unit under Section 40 of the Act. This provision is, of course, more likely to be used where adjacent licence areas are held by different licensees but they are in respect of a single reservoir. In practice, in Australia and USA, cases of petroleum reservoirs crossing licence boundaries have frequently occurred (Gerlach, 1986).

Although it was not specifically put in issue before the High Court in the *Ngaere* case, it appears open to argument that PMLs can in fact be stratigraphic, that is confined to particular strata or formations. The non-Crown joint venture parties (in the *Ngaere* case) emphasised that Section 14 of the Act provides the licensee has the “exclusive right to mine for petroleum *on the land* comprised in the licences”; the “land” being the area of land described in the licence and not only the structure which is to be mined but all the land and everything contained in it down to the centre of the earth. It is certainly the common law rule that “land” in terms of ownership includes, in addition to the surface of the soil, all things embedded in it, and the earth below the area of the surface including all mines and minerals: frequently summarised by the familiar phrase *cujus est solum, ejus est usque and coelum et usque ad infernos* (Adams, 1961, p. 6).

However, this argument overlooks the various meanings which can be ascribed to the term *land*. Clearly in the context of Section 14, what is meant is not land in the sense of a legal estate or interest in land but in the sense of the actual physical entity, the *physical land* (Kerr, 1927, p. 27). As such it is important to realise that the common law allows considerable fragmentation of the physical land and the boundaries of land may be horizontal as well as vertical. (Hinde, 1978, para. 2.200). The definition of the term *land* in the Act is not definitive one way or the other. Ownership of parts of the land can relate to different strata of the subsoil as well as to particular minerals or particular parts of the subsoil. Consequently, there is little force in the argument that the granting of rights to mine *the land comprised in the licence* must mean *all* formations below the delineated land area.

The Act in providing for the description of the land affected by a licence under the Act merely requires that the description conform with a graticular system (Sections 6(3)(a), 11(1)). That is, the boundaries of the land in the vertical plane must conform with the prescribed mapping system. There is nothing in the Act which prohibits the description of the land being defined in horizontal plane as well. We consider therefore it is open to the Minister to limit the *land comprised in the licence* to particular strata.

#### **Alternative options for a holder of a PML**

What then, are the steps a holder of a PML should take where a new discovery takes place as a result of appraisal work? Obviously the proper course of action must depend on the outcome of the *Ngaere* case, any relevant statements the

Court will make and the particular terms of each licence. However, regardless of the outcome it appears that the safest course of action would be as follows:

- (i) To take the following steps:
  - (a) Apply for a prospecting licence over adjacent land likely to contain the reservoir of petroleum that was discovered i.e. the new discovery.
  - (b) Explore the same formation as the new discovery for that reservoir in the prospecting licence area.
  - (c) Upon discovery, exchange the prospecting licence for a mining licence under Sections 11 and 12.
  - (d) Finally, apply under Section 12 and obtain a new initial term mining licence (and surrender the old mining licence in respect of the original discovery) in respect of the area in which the new discovery was made.
- (ii) Apply for a new mining licence under Section 12 (and surrender the old mining licence) in respect of the new discovery over the same or an overlapping area. This option is suited to the case where the original discovery showed no promise or was uncommercial and new discovery suggested a reservoir in the old licence area e.g. as in the case of Waihapa; or
- (iii) Apply for a new mining licence under Section 12 (and retain the old mining licence) in respect of the new discovery. This option is suited to the case where the original discovery remains promising so that both discoveries can be appraised and developed under different mining licences over the same or overlapping areas.

### Resource Management Law Reform

It is not known whether the new provisions dealing with petroleum development in the new Resource Bill, said to be introduced to the House this year, will clarify this issue or indeed address it at all. It is known that the present proposal that the applicable regime will also deal with exploration and production of all minerals, coal, as well as petroleum. As a result there may well be a danger that the specific problems associated with petroleum may not be fully addressed.

## RIGHTS OF ACCESS TO PETROLEUM PIPELINES

### Background

The right to access of petroleum pipelines is presently regulated by provisions contained in Part II of the Act. It is widely recognised that in a deregulated market these provisions would be ineffective to enable access or prevent anti-competitive behaviour. But until recently the industry has been subject to public ownership and potential problems have been suppressed. However, with the Government now adopting a policy of removing industry specific regulation and with the divestiture from public ownership of many of the major players in the industry these issues have become more a matter of concern.

The Government as well as reviewing the resource management laws has been reviewing the Commerce Act 1986. Government has decided not to incorporate the provisions in Part II of the Act in the new resource laws. The provisions dealing with regulation of access to pipelines which in effect is designed to deal with anti-competitive behaviour is seen as more properly falling within the sphere of the Commerce Act 1986.

Consequently, the Commerce Act Review has also addressed the possible mechanisms for guaranteeing access to *essential facilities* within an industry. We intend therefore to look at the need for such access regulation, the particular New Zealand situation, and the implications of the proposed reform.

### The common carrier provisions

Part II of the Act applies to all pipelines designed to carry oil natural gas at high pressure or dangerous goods. It provides procedures governing construction of such pipelines and their operation. But it also contains a mechanism for enabling the use of these pipelines by persons other than the holder of the pipeline authorisation. In brief, these provisions (Sections 62-5) provide:

- (a) The holder of a pipeline authorisation may agree to let another person use the pipeline (Section 62).
- (b) Another person can apply to the Minister for the right to use an authorised pipeline (Section 63).
- (c) The Minister can require the holder to convey the other persons goods and regulating the charges for that conveyance (Section 64).
- (d) The holder can apply for a variation to the requirement on the basis that he requires additional use of the pipeline, and the Minister if satisfied this is the case, shall reduce the extent to which the other person can use the pipeline (Section 64(5)).

These provisions are often referred to as *common carrier* provisions. This term is not used in the Act and its meaning is derived from the common law. Historically, a common carrier has been defined as "...any man undertaking for hire to carry the goods of all persons indifferently." (*Gisborne v Hurst* 91 ER 200 (1710)). Associated with the concept of common carrier is the idea that such persons operate in the public interest and consequently they have a duty to contract with and serve impartially all who apply for their services. (For a detailed discussion see King, 1986). These concepts have been applied in New Zealand and in other jurisdictions not only to the conveyance of petroleum but other industries where the transmission of certain substances are regarded as being in the public interest. Such industries include those where natural monopolies can easily exist but where provision of alternative facilities would be wasteful. These other industries include telecommunications and electricity distribution. Distribution in these areas, including petroleum has until recently been subject to industry specific regulation. That is, regulation of distribution and entry within the statutory regimes dealing with that particular industry.

*Common carrier* provisions then, are usually designed to regulate two aspects of pipeline operation. The first is rights of access to pipelines by persons other than the owner of or, in the New Zealand case, the holder of a pipeline authorisation, on a non-discriminatory basis. Secondly, the charges for that access or the prices which can be imposed by the owner of the pipeline who frequently has a monopoly.

### The need for regulation of access

Pipelines are an essential part of the development, production and delivery of petroleum in New Zealand. In particular, with regard to natural gas, which is the most significant substance transported by means of pipelines in New Zealand, there is often no real alternative to this form of distribution. The planning for and construction of pipelines is also very capital intensive and in New Zealand until

recently only the Government or its agencies have had the capability to provide a distribution network of pipelines. Usually such capital costs can only be undertaken in the case of significant discoveries. However, once established they provide the cheapest and safest form of transportation.

Where the control of such distribution networks is held by one company the power to control access to the pipelines, in the absence of regulation, creates the potential for abuse and anti-competitive behaviour. Such company could deny access or dictate terms of carriage, including price. In the case of a developer of a small gas discovery no other alternative may exist but to obtain access to another's pipeline due to the cost factors of establishing an alternative pipeline system.

In America, earlier this century, the Standard Oil Company capitalised upon their natural monopoly by requiring producers to sell their product before carriage by means of the pipeline. By this means, Standard Oil was able to dominate the market (King, 1986). Such a scenario in the New Zealand situation could well occur here without adequate statutory regulation.

### The New Zealand situation

In New Zealand in broad terms two bodies perform wholesale distribution functions. They are Gas and Geothermal Trading, a division of the Ministry of Energy (GGT) and Natural Gas Transmission Ltd (NG Transmission), a wholly owned subsidiary of Natural Gas Corporation (NGC). This in turn is now a wholly owned subsidiary of Petroleum Corporation of New Zealand Ltd (Petrocorp). NGC was established by the Natural Gas Corporation Act 1967. Its functions were (Section 12) *"to purchase, transport, and market natural gas procured from the Kapuni field or from other sources within or beyond New Zealand, to promote the economic utilisation of natural gas, and, so far as is possible, to provide for the continuous supply of natural gas to its customers."* In 1977 legislation was passed to enable the privatisation and sale of NGC. Petrocorp itself was, until 1988, wholly owned by the Crown.

However, NG Transmission and GGT sell to different markets. All Maui gas is sold to the Crown and is onsold to specific customers, the New Zealand Synthetic Fuels Corporation (Synfuels), Petralgas Chemicals Ltd (Petralgas), NG Transmission and Electricity Corporation of NZ Ltd. GGT owns and operates pipelines in respect of its sales to Synfuels and Petralgas. NG Transmission is a pipeline company and its market is the transmission/transportation market. NGC owns all the pipelines used for bulk transmission of gas except for the Oaonui to Huntly line which is owned by Maui Development Ltd (Brierley/Petrocorp, Commerce Commission, Decision No. 215).

NGC is therefore the sole wholesaler of gas to the utilities franchised under the Gas Act 1982 for the retail reticulation and distribution market. NGC has no competition in the transmission/transportation wholesale market. The Commerce Commission has commented:

"30. Competition is technically possible at the wholesale level by way of duplication of part or all of the existing transmission network or by other persons using NGC's network to transport gas. Duplication of the existing network would seem highly improbable given:

(a) the natural monopoly characteristics of the industry; and

(b) that all the known commercial fields are in Taranaki. A competing network would be possible if gas were produced elsewhere in the North Island.

31. The opportunities for use by other persons of the existing network under the present regulatory environment and the three supply contracts mentioned above would seem most unlikely. There is a common carrier provision under the Petroleum Act 1937 but, as discussed elsewhere in this report, it is administratively complex, and was not enacted to meet today's conditions. The contracts, as they stand, effectively tie up existing supplies for NGC and, except for GGTG to a limited extent, preclude other persons from gaining access to reliable and continuous sources of gas. Under clause 9.4.1 of the Maui Gas Supply Contract, GGTG's ability to compete against NGC is constrained by the fact that over a certain level all profits must be passed to the Maui partners. In addition, the Maui partners could attempt to restrain a sale if it considers the selling price to be below the *market* price. This could discourage GGTG from selling large quantities of gas to third parties."

(Brierley/Petrocorp, Draft Determination dated 20 January 1988)

### Effectiveness of the Petroleum Act 1937 provisions

It is recognised that several features of the Petroleum Act common carrier system make the system weak and at worst ineffective. This has been commented upon by the Department of Trade and Industry in its Discussion Paper on the Review of the Commerce Act 1986 and on a number of occasions by the Commerce Commission. However, as competition in the gas market has been so limited there has been little pressure on the operation of these provisions. The first application under these provisions did not occur until May 1989 (Ministry of Commerce, Reports and Decisions: A Review of the Commerce Act 1986, 1989, p.4). It is not known what the outcome of that application has or will be.

The inadequacies of these present provisions were succinctly summarised by the Commerce Commission (Brierley/Petrocorp, Draft Determination).

The Commission stated at page 41:

"101. There are several features of these provisions which render this common carrier system weak or ineffective. The first relates to access and who has priority to use NGC's pipeline. Before granting access, under section 63(3) the Minister of Energy must be satisfied that the pipeline has sufficient capacity to convey the combined quantities of all existing users plus the applicant's. Consequently, all gas already being transmitted has priority over any gas the applicant may wish to have transported. While there is justification for NGC to have some priority, the approach taken here contrasts with that in New York (see paragraph 63), whereby all firm transportation quantities have priority over all interruptible quantities. Furthermore, under section 64(5), a permit issued by the Minister can be weakened subsequently, if NGC or a person to whom section 62 applies, wishes to increase its volumes. Consequently, it is clear that any person who has to rely upon section 63, will always have the lowest priority in terms of access to the pipeline and the threat of post entry predatory behaviour by NGC

would be real. It would be very difficult for a section 63 applicant to guarantee uninterrupted supplies to a customer in these circumstances.

102. Secondly, the provisions for regulating charges are quite unsatisfactory. They are vague and provide no guidance to the Minister of Energy or the arbitrator on how price should be determined. Identifying the costs of transporting gas and allocating them between NGC and other users of the system is a complex matter and the lack of guidance in the Petroleum Act would greatly add to an applicant's uncertainty as to whether entry would be profitable.

103. Thirdly, the fact that the approval system requires a case by case analysis both in terms of gaining access and setting prices means that NGC is in a position to injure applicants by using administrative or judicial processes to delay or prevent entry into the market or to impose conditions which make entry by the applicant uneconomic.

104. In conclusion, it is evident that the present common carrier provision is heavily weighted in favour of NGC and any *friendly competitor* it allows to use the pipeline under section 62. Entry to the wholesale market by a would-be section 63 applicant is hindered or deterred by the onus of proof upon it to show to the Minister's satisfaction that NGC has sufficient pipeline capacity to transport all gas over the relevant section of pipeline. Secondly, there are no guarantees that the transportation charges imposed by the Minister or an adjudicator will be non-discriminatory nor that the cost information provided by NGC would not include cross-subsidisations from other parts of its business. Thirdly, the case by case system could be used to significant anti-competitive effect by NGC and fourthly the maximum fine of \$1000 under section 64(4) is inadequate as a deterrent. Section 63 could not be used to provide NGC with a true competitive discipline at wholesale level."

### Regimes in other jurisdictions

A review of overseas regulatory regimes was made by the Commerce Commission in its Brierley/Petrocorp Draft Determination on the Petrocorp sale. An extract of the Draft Determination is attached as Appendix 1. In short, however, the United States approach of the *essential facilities* doctrine may be the most useful in the New Zealand situation. This is briefly discussed later in this paper.

### Proposals for reform

As stated earlier, Government had decided it was more appropriate, due to a deregulated industry and to the purpose of common carrier provisions, that reform of these provisions be dealt with in terms of the Commerce Act 1986. The review considered a number of alternatives to improve the ability of competitors to participate in the industry by making available access to essential facilities. Essential facilities are defined by the Review Report as those that *cannot be viably duplicated and cannot be by-passed*. Some of the solutions considered were:

(a) Structural: where control of an essential facility is isolated from ownership or control of up or down stream business. The owner consequently has no incentive to deny access. This may involve divestiture by some of the participants in the industry. However, the Review con-

sidered this was not possible in the gas industry.

- (b) Industry specific common-carriage rules.
- (c) Reliance upon Section 36 of the Commerce Act 1936.
- (d) Introduction of additional provisions into the Commerce Act to compel provision of access to essential facilities and to set terms for such access (Ministry of Commerce, 1989).

The Report to Government recommended that the common carrier provisions in the Petroleum Act be repealed and that Section 36 should be relied upon as a basis for guaranteeing access to essential facilities in appropriate circumstances. It also recommended, among other things, that the Commerce Act be amended to provide the designation of particular essential facilities by Order in Council upon the recommendation of the Commerce Commission (Ministry of Commerce, 1989).

The Cabinet Policy Committee, however, has decided:

- "1. Section 36 should be relied upon as the basis for guaranteeing access to essential facilities in appropriate circumstances.
- 2. The Minister of Commerce intends to issue a Discussion Paper regarding whether the Act should be amended to provide the designation of essential facilities by Order-in-Council on the recommendation of the Commerce Commission, in conjunction with the introduction of the Commerce Amendment Bill into the House.
- 3. Additional public disclosure of information may be needed to enhance the effectiveness of Section 36. This would enable the Commission to require the publication of information or establish an ongoing monitoring regime."

Section 36 of the Commerce Act 1986 prohibits the use of market power (*the dominant position in a market*) for the purpose of:

- (a) Restricting entry by others.
- (b) Preventing or deterring others from competitive conduct.
- (c) Eliminating any person from the market.

A dominant position in the market is one in which a person as a supplier of services is in a position to exercise a dominant influence over the supply of services in that market (Section 3 (7)).

The facts to be considered in assessing whether an operator is in a *dominant* position take into account competitive forces (sub-sections (b) and (c)). A company is not to be defined as *dominant* merely by reason of its share of the market, technical knowledge etc. (subsection (a)). Rather, market share and the availability of resources are merely factors to be taken into account in assessing dominance and it would seem that a company which might command a substantial share of a particular product market, but is constantly under threat from potential competitors (subsection (b)), might be able to avoid classification as a *dominant* company. Essentially the test will be whether a company is in a position to have a *commanding influence* on a particular market and to have the power to determine *inter alia* prices or distribution of the products involved: e.g. *TPC v Ansett* (1978) ATPR 17,1705.

The definition of *purpose*, which is central to Section 36, provides that a contract, arrangement or understanding will

only be deemed to have a particular purpose, or a person deemed to have engaged in conduct for a particular purpose or reason, if the purpose or reason was a *substantial* one. Thus, a *dominant* company will not be caught by Section 36 unless it is shown that a substantial reason for a particular course of conduct was to achieve the purposes prescribed by the Section.

### Effectiveness of Section 36

There is, however, some doubt as to whether Section 36 will prove any more effective than the Petroleum Act 1937 provisions in the absence of specific industry related provisions. The Ministry of Energy strongly supported the enactment of common carriage provisions in separate legislation. Such provisions would pro-actively promote competitive behaviour, non-discriminatory access and charges for access. The Ministry considered that the Commerce Act 1986 is at present too general and that by its nature the controls provided by that Act are post-hoc controls. The Report itself comments that action under Section 36 will be relatively expensive and may be time consuming. However, action for breach of Section 36 may be taken by the Commerce Commission as well as private persons.

There is little guidance to be obtained from decisions of the Courts. In the only case to deal with Section 36, Auckland Regional Authority v Mutual Rental Cars [1989] 2 NZLR 647, Barker J. found that the ARA was dominant in its defined market. He considered the difficult question of *purpose* and looked at the cases of essential facilities in the United States. Barker J. adopted the approach of the more robust US doctrine, i.e. the fact that the person controlling the essential facility (hence the person having a *dominant position* in terms of the Commerce Act 1986) excludes access to that person's market, *prime facie* indicates an anti-competitive purpose unless it can be explained by reference to reasonable constraints in the circumstances. If the approach of Barker J. is followed and developed, it may be that Section 36 can be relied upon. See also in this context Queensland Wire Industries Pty Ltd v BHP (1989) ATPR 50,001. The Commerce Commission, however, have commented that *it is unlikely that Section 36 could be relied upon solely to provide workable or effective competition in the wholesale gas market* (Brierley/Petrocorp Draft Determination, para. 105). The Commission in its submissions on the Review repeated its doubts and suggested that it is necessary to clarify the object of the section, and that *purpose*, while being inferred to date from conduct to date by the Courts, would be better replaced by an *effect* test (Ministry of Commerce, 1989, supra).

However, the Report considered the difficulty in proving the purpose behind the actions of the participant concerned may be reduced due to the approach taken by Barker J. in ARA v Mutual Cars where he took the approach of inferring purpose from the surrounding circumstances.

Consequently, the development of the application of Section 36 by the Courts along the lines of the US decisions on essential facilities is where the Government, at the present time at least, is laying its bets. It will be interesting to see whether the Courts will oblige.

### Where now?

As noted the Minister of Commerce intends to issue a Discussion Paper as to whether the Commerce Act 1986

should be amended to provide the designation of essential facilities by Order in Council on the recommendation of the Commerce Commission. This Paper is expected to be released in October 1989.

The intention of such a provision would be that designation by Order in Council would be based upon meeting certain pre-requisite criteria. Once designated the owner of such a facility would be required to provide access to that facility to other persons on terms fixed by the Commerce Commission. The advantage of this procedure is that access to all essential facilities would be controlled by a single agency, the Commerce Commission, who would be able to adopt a consistency of approach.

The Cabinet decisions also contemplate the necessity for additional public disclosure of information to enhance the effectiveness of the section. The purpose of such a requirement would enable the Commission to establish an ongoing monitoring regime. What is contemplated is that the Commission will have the power to put such a regime in place only where it believes it is necessary rather than have a general disclosure requirement.

## APPENDIX 1 OVERSEAS REGULATORY REGIMES

The purpose of this section is to observe regulation in gas industries in other countries to determine whether they have any relevance to New Zealand. The review focuses on price control and common carrier provisions.

### The United States of America

**Price Control** Under the doctrine of Munn v Illinois the interstate distribution of natural gas was acknowledged as a business *affecting the public interest* and was, therefore, regulated by state authorities. But the interstate pipelines, as they expanded in the 1930s, exceeded local regulatory jurisdiction and in 1938 the Natural Gas Act was passed granting regulatory powers to the Federal Power Commission (FPC) to set prices and rates of return. However the FPC's jurisdiction was vague and this created major problems particularly in respect of whether wellhead prices were subject to the FPC's control.

In two cases, decided by the Courts in 1946 and 1954, it was determined that wellhead prices were subject to the FPC's jurisdiction and by the latter decision (the Phillips Petroleum case) the Supreme Court established federal price controls over the entire natural gas industry and the several thousand companies that produced natural gas for sale to interstate pipelines. This result seemed illogical because Phillips Petroleum and other mining companies were not public utilities and yet their earnings on natural gas had to be regulated. The FPC set prices for producers employing the same methods used for the pipeline companies without acknowledging the investment risks to exploration or a causal link between price and discovery. Several changes occurred by way of administrative and legal decisions and statutory amendments over the next few years, but without the central issue being addressed. The regulatory policy that emerged was a hybrid of field market prices, cost-based utility rate regulation and federal price control. The result was that natural gas was usually underpriced, exploration was below optimal levels and, consequently, shortages occurred beginning in 1970. By 1974, service to industrial

customers in interstate gas markets had been widely curtailed reaching 16 % nationally (1.2 trillion cubic feet) and 3.8 trillion cubic feet by 1977. Curtailments meant higher fuel costs, plant closings and layoffs of workers, and eventual disruption of public services in the areas most affected.

In order to overcome these problems, the Natural Gas Policy Act (the NGPA) was passed in 1978. The NGPA provided, *inter alia*, for well head prices of various categories of *new* gas (i.e. gas found after 1977) to be allowed to increase somewhat faster than the rate of inflation and to be deregulated in 1985. Wellhead prices of *old* gas (i.e. gas discovered before 1977) on the other hand would be allowed to increase only with the rate of inflation and would remain regulated. The NGPA sought to both encourage production of natural gas and, at the same time, to hold down prices to consumers. To this end, it created 28 different pricing categories and provided large incentives for increasing new high-cost supplies (such as deep gas) while maintaining stringent controls on lower-cost supplies. The NGPA has not produced the results which its advocates would have anticipated. Instead, its effects overall have been perverse, with the previous situation of shortages and rising prices giving way to a situation of surpluses and rising prices. Consumption of natural gas has declined while average prices increased strongly through to 1982. Surplus gas available for distribution was in the order of 5 trillion cubic feet in 1983.

The major reason for the failure to achieve the desired result was inflexible regulations and price escalation clauses. The problems of case precedent and established procedure were enough to stifle innovation. Reliance on historic costs and treatment of gas production as a utility function was deeply rooted, not only in precedent, but in the minds and careers of the Commission's professional staff. Victor sums up the history of price control in the U.S. gas industry as follows:

"What stands out is the inefficiency of the policy process; it could not have been more inept. The adjustment to high-cost energy, and the issues of equity that entailed, was certainly a difficult challenge. But the legislative and administrative problems can only be attributed to institutional failure: the exclusive reliance on the adversary process to make micro-economic policy."

**Federal common carrier provisions** In the U.S., more than 100 companies transmit natural gas interstate. The country is criss-crossed by networks of privately owned pipelines. There is a common carrier provision, whereby the Federal Energy Regulatory Commission (the successor of the FPC) is empowered, by rule or order, to authorise any interstate pipeline to transport natural gas on behalf of or to sell natural gas to any intrastate pipeline or any local distribution company. The rates and charges for providing these services are determined in accordance with the NGPA and the main features are that the prices shall be *fair and equitable* and non-discriminatory as between inter and intrastate companies.

**State common carrier provisions** The gas industry is highly regulated at both federal and state levels. State level controls focus on rate proceedings by public utilities commissions. In addition, some states require intrastate pipelines to operate as common carriers.

Outlined below, is Gunderson's description of some of the State common carrier systems:

"The current New York statute provides that: All persons desiring to transport products shall have the right on equal terms to transportation in the order of application, on complying with the reasonable regulations and charges of such corporation. (New York Transportation Corporation Law Section 90).

West Virginia and New Mexico have enacted legislation (in 1983 and 1984 respectively) in effect declaring pipeline owners to be common carriers.

The most innovative statute is the Wyoming Natural Gas Consumers Act 1985. Wyoming, although a major gas producer, suffered from unusually high domestic prices for natural gas. In an attempt to remedy this the 1985 Act permits any city or town to buy gas directly from suppliers, and can compel the local gas utility to distribute the gas to consumers. In a New Zealand context, this would allow Wellington City Corporation to purchase gas from [NGC] and oblige the local utility to distribute the gas; in effect in competition with itself. Whether the legislation will achieve its desired effect in bringing down prices remains uncertain.

The usual effect of making a pipeline a common carrier is to enhance the ability of consumers to buy direct from producers. There is, as a consequence, an increase in what is usually termed *end-user owned* gas in the system. Utilities increasingly have two types of customers: sales customers, and transportation customers who in effect rent the pipes to transport their own gas bought elsewhere. Those who wish to *rent* the system take a risk. In some states transportation customers immediately lose their normal right to a guaranteed supply (as in New Mexico). In New York transportation customers retain their rights to a guaranteed supply, but only for a fixed period (two years) after which it is lost.

Most US pipelines operate under a hierarchy of customer entitlements. Demand for gas is variable and sometimes the gas company has to interrupt supply to some of its customers. Usually sales customers have a higher priority than transportation customers. Customers who use the system to transport their own gas thus have a higher risk of loss of supply. A distinction is also drawn between *firm* gas transportation contracts and *interruptible* transportation contracts. In New York the hierarchy is as follows:

- 1st Priority: High priority sales customers.
- 2nd Priority: Firm transportation service customers.
- 3rd Priority: Interruptible sales customers.
- 4th Priority: Interruptible transportation customers."

**The Essential Facilities doctrine** In the development of monopolisation law under section 2 of the Sherman Act 1890, the American courts have established that monopolists' refusals to deal have been found not to violate section 2 in a variety of circumstances where the refusal was for legitimate business purposes, even though customer non-competitors may have been harmed. Section 2 violations have been found, however, when a firm with monopoly power at one level of a chain of distribution refuses to deal with firms at another level of the distribution chain in order to drive those firms from business so that the monopolist can integrate vertically and achieve monopoly at both levels. In

**MCI Communications Corp v American Telephone & Telegraph Co** the Court held that MCI had produced sufficient evidence at trial for the jury to conclude that it was technically and economically feasible for AT&T to have provided requested interconnexions, and that AT&T's refusal to do so constituted an act of monopolisation because AT&T controlled an *essential facility*. The court stated:

"A monopolist's refusal to deal under these circumstances is governed by the so-called essential facilities doctrine. Such a refusal may be unlawful because a monopolist's control of an essential facility (sometimes called a *bottleneck*) can extend monopoly power from one stage of production to another, and from one market into another. Thus, the antitrust laws have imposed on firms controlling an essential facility the obligation to make the facility available on non-discriminatory terms. United States v. Terminal Railroad Association, 224 U.S. 383, 410-11 (1912); Byars v. Bluff City News Co., 609 F.2d 843, 856 (6th Cir. 1979).

The case law sets forth four elements necessary to establish liability under the essential facilities doctrine: (1) control of the essential facility by a monopolist; (2) a competitor's inability practically or reasonably to duplicate the essential facility; (3) the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility."

**Summary: USA** The United States has an adversarial price control system. The U.S. also has several common carrier provisions which appear to be successful. At the wholesale level, there are common carrier provisions for interstate and intrastate gas transportation and antitrust case law provides a backup. For gas reticulation, Wyoming has introduced common carrier legislation and insufficient time has passed to determine whether or not it will be successful.

### The United Kingdom

The relevant statute is the Oil and Gas (Enterprise) Act 1981 (the O&G Act) which forms part of the British Government's privatisation programme. Prior to its introduction, the British Gas Corporation (BGC) had a statutory monopoly over the supply of gas to consumers. The O&G Act has provided for partial deregulation of the industry by:

- (a) Allowing private suppliers to supply gas directly to consumers, but only in the following circumstances:
  - (i) Persons other than BGC may supply premises taking more than two million therms a year subject only to a notification procedure designed to provide a check on the estimated rate of supply. The Act also sets up a procedure regulating the situation should the rate of supply fall below the required rate of two million therms [i.e. 2000 gigajoules] per annum.
  - (ii) Persons other than BGC may also supply premises taking less than two million therms a year with the Secretary of State's consent, but if the premises are within 25 years of one of BGC's distribution mains the demand must exceed 25 000 therms a year, or BGC must not object.
  - (iii) Persons other than BGC may not supply premises within 25 years of one of BGC's distribution mains taking less than 25 000 therms a year, unless the BGC does not object to a proposal for their private supply and the Secretary of State consents.

B.N. Gunderson, in his unpublished research paper for the Ministry of Energy, describes the British common carrier provisions as follows:

"Section 27 of the Oil and Gas (Enterprises) Act 1982 permits other persons to apply to the Secretary of State for permission to transmit gas through pipeline networks owned by the British Gas Corporation. The applicant is to specify the quantities of gas sought to be conveyed and the duration of the period of transmission, and the gas must be of, or of a kind similar to, the kind of gas which the pipeline was designed to convey. (Section 17(1)). If the Secretary [of State] decides to consider the application, the Corporation is given notice that the application is being considered and an opportunity to be heard. The decision-making process is ministerial rather than judicial. There is no right of hearing conferred on public interest groups, local authorities, proposed gas purchasers, existing purchasers from BGC, or even the applicant itself.

The matters the Secretary are to consider are set out in Section 17(2):

"Where, after further considering an application... the Secretary is satisfied that the giving of directions under this Section would not prejudice the conveyance by the pipeline of-

- (a) The quantities of gas which the Gas Corporation requires or may reasonably be expected to require to be conveyed by the pipeline in order to secure the performance by the Corporation of its statutory duties and contractual obligations.
- (b) The quantities of gas which any person who has a right to have gas conveyed by the pipeline is entitled to require to be so conveyed in the exercise of that right.

the Secretary of State may give such directions to the Corporation."

In this way, the legislation attempts to safeguard the position of existing gas users and BGC's contractual and statutory obligations.

The directions the Secretary may give are set out in Section 17(3):

- "Directions under this Section may -
- (a) Specify the terms on which the Secretary of State considers the Gas Corporation should enter into an agreement with the applicant for all or any of the following purposes:
    - (i) for securing to the applicant the right to have conveyed by the pipeline during the period specified in the directions quantities so specified of gas which is of the kind so specified;
    - (ii) for securing that the exercise of that right is not prevented or impeded;
    - (iii) the regulating the charges which may be made for the conveyance of gas by virtue of that right;
    - (iv) for securing to the applicant the right to have a pipeline of his connected to the pipeline by the Corporation.
  - (b) Specify the sums or the method of determining the sums which the Secretary of State considers should be paid by way of compensation for any such right.
  - (c) Require the Corporation, if the applicant pays or agrees to pay those sums within a period specified in that behalf in the directions, to enter into an agreement with him on the terms so specified.

It is to be noted that there is a clear entitlement to *compensation* (it is more a payment for *renting* the pipeline) payable by the applicant to the BGC.”

**Other regulations in the United Kingdom** The gas industry was privatised by the Gas Act 1986. Commensurate with that decision, the Office of the Director-General for Gas Supply (OFGAS) was established with the aim of ensuring fair competition. The regime includes a system of price control. BGC is required to fix a tariff for all customers taking not more than 25 000 therms a year (i.e. mainly domestic customers) and in relation to other customers, may not show undue preference for or discrimination against any person or class of persons. Tariffs must fully reflect any fall in the cost of supplies from the North Sea and the growth in its unit charge to customers in respect of non-gas cost items may not exceed the percentage change in the Resale Price Index minus two percent. Supply to larger customers is not subject to the same degree of regulation because it is supposed that contract customers can more easily obtain alternative fuels. BGC is required to publish maximum prices for both firm and interruptible supplies and a statement of pricing policy.

**Summary: United Kingdom** It is clear from the above, that the British have not attempted to remove all barriers to entry. With few exceptions, BGC retains monopoly power in relation to transmission and distribution of gas from existing fields and continues to have a monopoly position in supplying municipal customers. Further, the provisions relating to discrimination in respect of the common carrier provision are vague and the Secretary of State has discretion as to when it will be applied. The sole intention appears to be to encourage private suppliers to develop new gas fields and to conclude high volumes contracts with large industrial enterprises. Selective price control measures have been introduced. Nevertheless, there is much controversy in the U.K. over the results of privatisation because BGC was sold en bloc as a monopoly, with only minor provision made for competition in the immediate future, and there is much complaint now from both business and private customers about the service provided and the adequacy or otherwise of the regulatory controls. OFGAS has been established to administer most of the new regulatory measures introduced to coincide with privatisation. The same has been done in respect of British Telecoms where OFTEL has been created. A risk of this approach is that each of the regulatory bodies will take an increasingly divergent approach to regulating its industry.

## Canada

Gunderson summarises the Canadian regulatory regime as follows:

“Canada has a very large natural gas industry, a great deal of which is exported by pipeline to the United States. The United States pattern of relatively strict regulation of utilities which sell power, gas, telecommunications, services, water supply etc. is also typical of Canada. Public utility commissions are found in all provinces which regulate such matters as prices, mergers and takeovers, granting of securities and borrowing by utilities. As well as the public utility commissions functioning at the provincial level there are federal controls on the natural gas industry. As a consequence in Canada as in the United States the operations of the utilities are far more open to public scrutiny than is the case in New

Zealand where public involvement in matters such as pricing arrangements for natural gas is non-existent. Despite current interest in deregulation in the United States and Canada, there is little pressure to relax this system of public scrutiny of utility corporations, which is regarded as being part of the price to pay for holding the position of monopoly supplier.

The National Energy Board regulates the construction and operation of international and interprovincial oil and gas pipelines. It controls the export and import of gas, reviews the prices paid for exported Canadian and regulates rates and tolls charged for the transportation of gas. It also has certain advisory functions on aspects of energy policy under the jurisdiction of the national government.

Gas utilities are also controlled by provincial public utilities boards whose powers include control over pricing, the issuing of shares or stock or bonds or other forms of indebtedness and the sale, lease, mortgage or other encumbrances relating to property, franchises, privileges or rights.”

**Summary: Canada** Canada has a highly regulated natural gas industry which appears unrelated to the trends in New Zealand. In 1983 the OECD recommended that the Government of Canada:

- (a) Give particular consideration to the strategy of reducing regulation and administration of the oil and gas industry, particularly with regard to future pricing arrangements, taxation systems and imports and exports.
- (b) Ensure the gas exports regulatory process governing prices and quantities does not discourage exploration for and development of gas for both the domestic and export markets.

## Australia

Australia has controls at both the state and federal levels. Natural gas prices are relatively low, not because of federal or state regulation, but in accordance with historic and long term contracts signed by producers, generally with monopoly state purchasers. Low priced gas purchases from producers of existing major fields are expected to continue until approximately 2003. The five relevant states all have legislation to control gas utilities. They are similar, with most having exclusive franchising which grant rights and create obligations to supply.

There are two significant federal statutes. The Petroleum (Submerged Lands) Act 1967 regulates petroleum exploration and mining. The Pipeline Authority Act 1973 established the Pipeline Authority, a statutory corporation which was formed with the express intention of establishing a national integrated pipeline system. The Pipeline Authority maintains and operates the transmission system and is required by its empowering Act to have a uniform city gate price throughout Australia. This does not reflect the cost of supply.

**Summary: Australia** Australia has some price control but for reasons which would be irrelevant in New Zealand. An effective non-discriminatory interstate common carrier-body has been created by setting up an independent statutory corporation whose only activity is wholesale gas transmission. The requirement to have a uniform city gate price appears to be a political intervention which bears no relation to promoting efficiency in the transportation and consumption of natural gas.

**Regulatory framework: conclusion** The two clearest conclusions that can be made in respect of natural gas industries are that:

(a) Markets can be opened up to as much competition as possible by the minimisation of barriers to entry and by other liberalisation measures. In its deregulatory activities over the last three years, the New Zealand Government has almost always aimed for and achieved the minimisation of statutory barriers to entry. (There are exceptions, for example milk production and distribution). In the Commission's opinion, this objective cannot be achieved without dismantling the system of exclusive franchising under the Gas Act 1982. Deregulation will have little merit if exclusive franchising is retained.

(b) It is highly doubtful that removal of barriers to entry alone are sufficient to impose constraint on behaviour to obtain the benefits of productive efficiency of a single company.

The major issues for the Government are whether to continue price control and whether an effective common carrier provision should be introduced. Australia has been able to limit bureaucratic regulation in respect of the latter by way of maximising buyer countervailing power and by establishing an independent transmission company. However these options seem to be foreclosed in New Zealand as the Government has committed itself to selling Petrocorp as a vertically integrated operation. It would appear then, that consideration may need to be given to either price control or a strengthened common carrier regime, but not necessarily both. Consideration may also need to be given to the legality of existing supply contracts in different regulatory environments.

## APPENDIX 2 NEW ZEALAND'S HIGH PRESSURE PETROLEUM PIPELINE NETWORK, AN INTRODUCTION

The installation of major petroleum pipelines is relatively recent in New Zealand. These developments assumed public prominence with the development of the Kapuni and Maui gas fields in the early 1970s.

In New Zealand the main legislation relating to petroleum, mineral and high pressure gas pipelines is contained within the Petroleum Act 1937 which is administered by the Petroleum Unit of the Ministry of Energy\*. This Act and the Petroleum Pipelines Regulations 1984 apply to all pipelines designed to carry oil, natural gas at pressures exceeding 2000 kilopascals, or other dangerous goods. Gas pipelines operating below this pressure are subject to the provisions of other legislation, principally the Gas Act 1982.

Up until 1989 there have been around 100 authorisations issued by the Minister of Energy for the construction of pipelines, predominantly in the North Island, to supply gas to various areas. There are also major LPG pipelines such as the Lyttelton to Woolston pipeline which conveys LPG from the port to Christchurch and there is a major pipeline from the Marsden Point Oil Refinery to South Auckland which conveys various refined oil products including aviation turbine fuel for further distribution by road tanker to Mangere International Airport, petrol, automotive diesel and kerosene.

\*Now Energy and Resources Division, Ministry of Commerce

Natural gas is an integral component of New Zealand's energy industry and makes a significant contribution to the nation's economy. Natural gas is acquired from four sources: the Maui, Kapuni, McKee and Kaimiro fields, all in the Taranaki area. The increase in gas availability at a competitive price since 1979 has seen the pipeline system expand rapidly. The high pressure pipeline network throughout the North Island extends from Taranaki to Kauri (north of Whangarei), to Gisborne and Hastings on the east coast and south to Wellington. Natural gas now reaches almost all major North Island urban areas.

The Natural Gas Corporation (NGC), a wholly-owned Petrocorp subsidiary, is New Zealand's leader in gas pipeline systems. Gas pipelines owned, operated or managed by NGC are approximately 3000 km in length. NGC is the predominant gas wholesaler in New Zealand.

Because of its expertise in pipeline management, NGC operates or manages the easements of most of the gas and liquid petroleum pipelines in the North Island, including the pipeline linking the Marsden Point Oil Refinery with the bulk storage depot in South Auckland. NGC operates gas pipelines for the Maui Joint Venture, and manages those pipelines supplying gas to power stations operated by Electricorp, to the Synthetic Gasoline plant and to the Petralgas Methanol plant. NGC has contracts with NZ Forest Products Limited to supply gas to the Kinleith pulp and paper mill, Tasman Pulp and Paper Company to supply gas to the Kawerau pulp and paper mill, New Zealand Steel Limited to supply gas to the Glenbrook Steel Mill and a number of other large industrial users, hospitals and commercial organisations. NGC is also a major gas franchise holder reticulating gas to consumers in areas of Waikato, Thames Valley, King Country, Taranaki, Horowhenua, Bay of Plenty, Northland and (through its subsidiary Gisborne Gas Limited) Poverty Bay.

The Gas Act 1982 regulates the retail distribution of gas in New Zealand. It provides for specified areas of New Zealand to be supplied with gas under area franchises granted under the Gas Act. There are eleven other franchise holders to NGC, namely Auckland Gas Company, Gisborne Gas Limited, East Coast Gas Supply, Hawera Gas Company, Levin Borough Council, Hutt Valley Energy Board, Wellington Gas Company and the city councils of Hamilton, New Plymouth, Wanganui and Palmerston North.

A sophisticated Gas Control Centre at the Natural Gas Transmission's operation centre in New Plymouth continually monitors and regulates all high pressure transmission pipelines. The control room is staffed 24 hours a day, every day. At the push of a button the control room is able to close down a pipeline when and if an emergency occurs. Transmission offices are located at Hamilton, New Plymouth, Palmerston North and Whakatane to provide services to those regions and to ensure a quick response to problems in the field. In addition, 50 field staff are strategically placed along the pipeline routes, so that they may respond immediately to any emergency.

Transmission staff maintain close community relations with property owners over whose land high pressure pipelines are constructed. Pipelines pass through nearly 4000 properties and are regularly patrolled from the air, by vehicle and on foot, to detect any signs which could indicate a threat to a

buried pipe. Staff are available to visit properties to identify the location of pipelines and to discuss any problems. NGC also uses up-to-date electronic and computer techniques to monitor and meter gas flows and to carry out regular maintenance checks. It is a requirement of New Zealand law that pipeline owners report to the Chief Petroleum Inspector of the Ministry of Energy every six months. Reports cover the condition of the pipeline, any significant land erosion which threatens the pipeline easements and details of any pipeline incidents. In most cases, *incidents* are caused by third parties when digging and operating over pipelines. Very few incidents are due to pipeline failure. For example, natural gas pipelines withstood even the severe earthquakes which occurred in the Bay of Plenty area of the North Island in 1987.

NGC has recently extended its gas transmission network in Northland with the construction of a 20 km high pressure pipeline from Maungatapere to Kauri, near Whangarei. The new pipeline was built primarily to supply gas to the Northland Dairy Company's new factory.

Other pipeline authorisations which have been approved by the Minister of Energy over the past 18 months are all in the Taranaki area. Two of these pipelines are now in use, another is due to be put into operation at the end of May and construction on the fourth pipeline is due to commence in December of 1989.

*Petroleum Exploration in New Zealand News, June 1989*

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