

Comments

QUEENSLAND OIL AND GAS LAW

(1) The Nature of Oil and Gas

Before embarking upon a discussion of Queensland oil and gas law, it is interesting to consider what the substances "oil" and "gas" are, and why they should be afforded separate treatment at law. After all, in Queensland there are the *Mining Acts* 1898 to 1967 and the *Mining on Private Lands Acts* 1909 to 1967, which contain the statutory law applicable to a wide range of minerals. So what necessity is there for the *Petroleum Acts* 1923 to 1967 and the *Petroleum (Submerged Lands) Act* of 1967?

Oil and gas consist of several hydrocarbon families, the principal of which is the paraffin family. These substances are now considered by chemists and geologists to have originated from the decomposition and distillation of organic materials deposited in marine muds, which in course of geologic time have become shales and limestones. After conversion of the organic material into numerous hydrocarbons, some gaseous, some liquid, and some solid, the gaseous and liquid hydrocarbons are expressed from the fine pored rocks in which the organic material was deposited, into porous, permeable rocks through which the mixtures of fluid hydrocarbons can migrate. As the hydrocarbon fluid mixtures are lighter than the water originally contained in the porous rocks, the hydrocarbons migrate upwards and finally accumulate in commercial deposits when further migration is stopped by some geological barrier, commonly called a trap.¹

These traps can be one or a combination of several kinds. One, called a dome or anticline, consists of porous rock which is arched upwards like an inverted bowl, overlain by an impervious stratum such as shales. The oil and gas migrate through the porous rock into the anticline, and are then prevented from escaping by the impervious stratum. Another kind of trap consists of sandstones, deposited originally as sand bars under water, also overlain by impervious sediments; these are known as lens. A third kind is formed by faults occurring in the earth resulting in the cutting off of a porous stratum by an impervious stratum, which prevents the further upward migration of oil and gas.²

Oil and gas are produced by drilling a well through the impervious stratum into the porous stratum. The hydrocarbons are forced to the surface of the well by several types of reservoir energies. Natural reservoir energies include the expansion of gas dissolved in oil or the expansion of free gas lying above the oil in the trap, and the displacement of oil from the porous rock by the upward rising of water lying beneath the hydrocarbons in the trap. Non-natural reservoir energies are also used where natural energies are insufficient; these include the repressurizing of a reservoir by the introduction of gas through a well, a reversal of the natural process, and the introduction of water into the margins of the oil accumulation to provide water drive (called "water flooding"). These latter methods of exploitation of a reservoir are known as "secondary recovery methods."³

1. D.E. Lewis, and A.R. Thompson, *Canadian Oil and Gas* (Toronto) Vol. I., Div. A., §15.

2. *Ibid.*, Vol. I., Div. A., §18.

3. *Ibid.*, Vol. I., Div. A., §20.

The principal characteristic of the substances oil and gas which makes them different to the "hard" minerals is their migratory nature. As fluids they may move through porous rock until prevented from doing so by an impervious stratum; when this impervious stratum is pierced, upward movement may continue. No accurate analogy can therefore be drawn between oil and gas and a "hard" mineral which retains a fixed position in the ground until physically removed.

However, the drawing of analogies has frequently been the method by which the common law has sought to deal with new problems, and in this regard the common law of oil and gas has been no exception. In the U.S.A. and Canada, three such analogies have been drawn: with "hard" minerals, with underground percolating waters, and with animals *ferae naturae*. Each is based upon a misconception of the characteristics of oil and gas. The "hard" minerals analogy ignores the migratory character of oil and gas; the percolating waters analogy is a legacy from the now discredited theory that a petroleum pool was a subterranean lake fed by rivers of oil; and the animals *ferae naturae* analogy was based on the also discredited belief that oil and gas wandered below the surface of the earth in undefined channels. Such analogies should therefore be resisted in the future development of Queensland oil and gas law. They remain important, though, when any examination is made of the oil and gas law of the U.S.A. and Canada, because of their unquestioned influence upon the development of these systems of law.

(2) Interests in Oil and Gas under Queensland Law

The first discovery of commercial deposits of oil and gas in Queensland was made less than a decade ago;⁴ and so there has not been time for the development of a common law relating to oil and gas. However, Queensland has had statutes dealing specifically with oil and gas since 1915.⁵ Today, there are two statutory systems. The *Petroleum Acts* 1923 to 1967 deal with the exploration for and exploitation of onshore deposits of oil and gas. These Acts will be referred to hereafter as the "Petroleum Acts". A second and different system of legislation deals with the exploration for and exploitation of offshore deposits of oil and gas; that is, deposits of oil and gas occurring both in the territorial seabed and the outer continental shelf, as defined by the Geneva Convention on the Continental Shelf signed 29 April, 1958. So far as these deposits are concerned, as in the U.S.A. and in Canada, disputes arose between the Commonwealth and the States over legal entitlement. In Australia, these disputes have been resolved, for the time being at least, by the parties entering into a unique agreement, entitled "Agreement relating to the Exploration for, and the Exploitation of, the Petroleum Resources, and certain other Resources, of the Continental Shelf of Australia and of certain Territories of the Commonwealth and of certain other Submerged Land".⁶ Under this agreement the territorial seabed and outer continental shelf of Australia is divided into "adjacent areas", one referable to each State and Territory. The Commonwealth has passed the *Petroleum (Submerged Lands) Act* of 1967 (Commonwealth) which applies to all adjacent areas, and each State and Territory has passed an Act or Ordinance in identical terms applicable to its own adjacent area. In Queensland, therefore, exploration for and exploitation of deposits of oil and gas in the adjacent area are governed by the *Petroleum (Submerged Lands) Act* of 1967

4. Moonie field, near Roma, in 1962.

5. The *Petroleum Act* of 1915 (6 Geo. 5 No. 23).

6. Executed 16 October, 1967.

(Commonwealth) and the *Petroleum (Submerged Lands) Act* of 1967 (Queensland), both of which will be referred to hereafter as the "Submerged Lands Acts".

The definition of "petroleum" in both the Petroleum Acts and the Submerged Lands Acts is the same, and reads as follows:

Any—

- (a) naturally occurring hydrocarbon, whether in a gaseous, liquid or solid state;
- (b) naturally occurring mixture of hydrocarbons, whether in a gaseous, liquid or solid state; or
- (c) naturally occurring mixture of one or more hydrocarbons, whether in a gaseous, liquid, or solid state, and one or more of the following:-

(i) hydrogen sulphide; (ii) nitrogen; (iii) helium; (iv) carbon dioxide:

The term includes any petroleum defined by paragraph (a), (b) or (c) of this definition that has been returned to a natural reservoir.⁷ This definition is wide enough to encompass the multitude of hydrocarbons referred to as oil and gas.

An important feature of Queensland oil and gas law, which distinguishes it from the law of the U.S.A. and of Canada, is the reservation to the Crown of all oil and gas from grants of freehold and leasehold land. Section 5 of the Petroleum Acts states this clearly:

Notwithstanding anything to the contrary contained in any Act or in any grant, instrument of title, or other document, it is hereby declared that petroleum on or below the surface of all land in Queensland, whether alienated in fee simple or not so alienated from the Crown, and if so alienated whensoever alienated, are and always have been the property of the Crown.

The root of title to all interests in oil and gas in Queensland therefore lies in a grant from the Crown. This grant is not a general grant of title to a parcel of land, which is the method by which many interests in oil and gas in the U.S.A. and Canada have been acquired, but is a specific grant of an interest in oil and gas made pursuant to either the Petroleum Acts or the Submerged Lands Acts. No other legislation in Queensland provides for the acquisition of any interest in oil and gas.

In the U.S.A., the degree of State ownership of oil and gas resources is very small. The first attempt to reserve oil and gas from grants of freehold land was made in 1907, but this legislation was applicable to very limited areas of land, as the majority of land had already been the subject of grants to private individuals.⁸ The largest deposits of oil and gas in the U.S.A., apart from those discovered recently in Alaska, have been found upon land the original grant of which contained no reservation of oil and gas to any government, either Federal or State. An oil explorer or producer in the U.S.A. acquires his rights in the first instance not from a government pursuant to oil and gas legislation, but by private contract directly with the freehold owner of the land in question.

In the western provinces of Canada, where the oil and gas industry is established, Crown ownership of oil and gas resources predominates, but unlike Queensland, there is significant private ownership as well. This is the result of a mineral reservation policy that left mineral rights already vested in private persons unimpaired when the policy of Crown reservation was put into effect. The development of oil and gas law in Canada does not, therefore, provide

7. Petroleum Acts, s. 3; Submerged Lands Acts, s. 4.

8. A.R. Thompson, "Basic Contrasts between Petroleum Land Policies of Canada and the United States" (1964) 36U. of Colo. L. Rev. 187.

a pattern which Queensland can follow, without account being taken of this important fact.

The starting point of a discussion of interests in oil and gas under Queensland law is an investigation of the interests derived from the Crown under the Petroleum Acts and the Submerged Lands Acts. For ease of reference, such interests will be called oil and gas "titles".

There are three oil and gas titles mentioned in the Petroleum Acts: the authority to prospect, the prospecting petroleum permit, and the petroleum lease. However, both the government and the industry have found the prospecting petroleum permit unsatisfactory, the government because the Petroleum Acts do not allow a sufficient measure of administrative control over exploration programmes, especially in relation to expenditure requirements, and the industry because the area of a permit is too small (up to 200 square miles) for a comprehensive exploration programme, bearing in mind the ill-defined geological structures in Queensland. As a result, the last permit issued in Queensland expired in 1963, and present government policy is not to issue further permits. The oil and gas industry onshore is thus regulated in practice according to a two tier system, exploration being carried out under an authority to prospect, and production being carried on under a petroleum lease.

The machinery by which an authority to prospect is granted is as follows: section 9A(1) of the Petroleum Acts provides that any person may apply to the Minister for Mines for an authority to prospect on any land, and the Minister may grant such authority. An authority holder in fact obtains an exclusive right to prospect upon the land covered by the authority, because section 9A(2) gives the Governor in Council the power to declare and define any area or areas within Queensland which shall not be open to permit or lease under the Petroleum Acts, and this power is in fact exercised in respect of each authority issued.

A very important feature of the authority to prospect is the wide discretion given by the Petroleum Acts to the Minister for Mines in granting the authority. The area of land to be held under the authority, the terms, the rent, the conditions, provisions and stipulations as to labour and other matters are left to be fixed by the Minister.⁹ These matters are contained in the authority document itself, and not in the Petroleum Acts or the Regulations thereunder. In this regard an authority to prospect is more like an oil and gas concession of the type granted in the Middle East countries than a Canadian exploration permit.

It is therefore almost impossible to generalize about the terms and conditions of an authority to prospect. In December 1970 there were fifty-three authorities in force. The areas of these authorities varied from 139 square miles to 33,800 square miles. Their terms also varied, generally in the four to six years range. Work and expenditure conditions, and rates of area reduction, also varied considerably. However, in each case the authority document provided for the submission at regular intervals of interim reports on work done, and details of expenditure incurred. At the conclusion of each authority the holder is required to submit a full and detailed report with plans, records, photographs and data, such report to be to the satisfaction of the Minister for Mines.

The main right acquired by the holder of an authority to prospect is set out in section 9A(2) of the Petroleum Acts:

Such authority shall entitle the holder... to undertake exploration and prospecting, or geological or geological and geophysical investigation or

9. Section 9A(1).

testing, of favourable geological structures, or generally to do all things in respect of the search for and discovery of petroleum or for the due development of the industry during the term of such authority.

This section, while giving wide exploratory rights, including the right to drill exploratory wells, does not appear to give an authority holder any right to or interest in oil and gas discovered as a result of such exploration. This view is confirmed by clause 5 of the standard form authority to prospect document currently in use in Queensland:

5. Right to Prospect. The Holder shall during such term have the right to prospect the said lands including topographical, geological and geophysical examinations and aerial surveys and scout and deep test drilling as may from time to time in the opinion of the Holder be appropriate for the purpose of determining the existence or otherwise of petroleum deposits and their extent and nature in the said lands. This Authority to Prospect shall not confer any right of ownership to the said petroleum upon the Holder and all such petroleum shall remain the property of the Crown. The Holder may produce and dispose of petroleum from the said lands only to the extent approved by the Minister in writing.

However, upon application being made by the holder of an authority to prospect who has discovered "payable deposits of petroleum" within the area of his authority, for petroleum leases covering the deposits, the authority holder is entitled to have such leases granted as of right.¹⁰ This, of course, is a most important right. No further discretion is given to the Governor in Council (who is the lease granting authority) in the the matter. Questions of general public interest can not be raised at this stage. Further, the authority holder is not required to select part only of the area covering the deposits.

This right of an authority holder should be clearly borne in mind at the stage when authorities to prospect are granted. The difficult social issue of exploitation of natural resources versus conservation of natural beauty falls to be resolved at the time the authority to prospect is granted, not when an application is made for a petroleum lease. Furthermore, under the present legislation, this issue is resolved once and for all by the decision of the Minister for Mines, who exercises an unfettered discretion, and there is no provision for any public hearing or inquiry.

Section 12 of the Petroleum Acts restricts the number of petroleum leases which may be held at any time by the one person. For the purposes of the Acts, the State of Queensland is divided into three divisions, and it is then provided that a person shall not be entitled to apply for, acquire, or hold in any one division, a number of leases in excess of five, at any time when the number of leases held by him in any other division exceeds five. Otherwise, the number of leases which a person may hold is not limited.

The rights conferred on the holder of a petroleum lease are set out in section 31 of the Petroleum Acts:

Every lease shall—

- (b) Confer upon the lessee the exclusive right to prospect for, mine, extract, recover, remove, and dispose of all petroleum in or under the land demised. . .

10. Petroleum Acts, s. 28; confirmed by clause 18 of standard form authority to prospect document.

It is an open question whether the words of this section should be interpreted as meaning that the lessee may recover only that oil and gas lying within the land covered by the lease at the date the lease was granted, or whether they should be given the meaning that the lessee may recover all oil and gas which subsequently migrates into that land. The question is important, because of the fugacious nature of oil and gas. It is clear that if a petroleum lease is granted covering part only of a deposit of oil and gas, once oil and gas are produced from that lease, oil and gas which were originally contained within adjoining lands will migrate into the lands covered by the lease, and will also be available for production from the lease. In the U.S.A. the courts, when faced with this problem, developed the "rule of capture": a lessee was entitled to all oil and gas produced from his lease, irrespective of the original source. This rule has since been recognized in Canada and in Britain, and it therefore appears likely that Queensland courts will interpret section 31 so as to give effect to it.

The operation of the rule of capture in Queensland will, however, be restricted by sections of the Petroleum Acts which regulate production from a common oil and gas pool. Sections 61A and 61B allow the union of leases, with the approval of the Minister for Mines, whether or not the areas embraced in such leases are contiguous. Section 61C provides for the unit development of petroleum deposits, either by agreement between respective lessees, with the Minister's approval, or by direction of the Minister. Unit development is the overall development of oil and gas deposits as a unit, by co-operation between all lessees having an interest in the deposits, rather than the separate development of individual leases by lessees in competition with each other. Finally, section 48 forbids the drilling of a well, by an authority holder or lessee, within 200 feet of the outer boundary of the authority or lease, unless the adjoining land is not subject to an authority or lease. This section endeavours to avoid conflict between adjoining title holders, upon the assumption that 200 feet is a likely maximum drainage factor for the types of oil producing structures in Queensland.

A strong contrast exists between a petroleum lease and an authority to prospect, in that while the Minister for Mines is given important discretionary powers in relation to oil and gas production from leases, the main obligations of the petroleum lessee are set out in the Petroleum Acts, and are not left to the Minister's discretion. The rental, \$20 per square mile per year, is provided for by section 32. Section 40A requires payment of a royalty of ten percent of the value at the wellhead of all petroleum produced, although the Governor in Council may reduce the royalty rate if satisfied that the rate of production from a well has, from natural causes, become so reduced production would be uneconomic if the full royalty rate applied. Before production commences, a lessee is required to spend, on drilling and approved operations, at least \$4000 per square mile per year; after production commences, this required minimum expenditure is reduced by the value of petroleum production for royalty purposes: section 34(1)(b). When production from a lease declines the lessee must resume drilling or commence an approved programme of stimulating production or obtain exemption from the Minister; otherwise, he must surrender some or all of the lease: section 34(1)(c). A lessee is also obliged to drill all necessary wells to offset the wells of others on adjoining lands: section 34(2). Before the grant of a lease, the applicant must deposit with the Minister such security, being to an amount of not less than \$10,000, as the Minister shall fix, for the compliance by the lessee with the provisions of the Petroleum Acts, and the conditions of the

lease: section 30. The lessee is required to furnish annually a plan of development work, a statement as to production of petroleum, and full information as to work done and expenditure incurred in relation to the lease: section 35. Finally, the lessee must also punctually comply with the Petroleum Acts, and with all requirements, directions and orders of the Minister, issued under the terms of the lease: section 53.

The basic term of a petroleum lease is also provided for in the Petroleum Acts, and is twenty-one years: section 31(c). A lessee is given as well a preferent right to renew the lease for further periods of twenty-one years, and in the case of each renewal, the laws in force at the date of the renewal with respect to royalties and rentals apply to the new term. The result of this is that in fact the term of a lease is for the duration of economic production of oil and gas from the lease, subject to variation of royalties and rentals every twenty-one years.

The form of the petroleum lease, and the language used, have been borrowed from the real property lease: "We . . . do hereby . . . demise and lease unto . . . all that parcel of land." Apart from form and language, however, the petroleum lease has little in common with the real property lease. The principal rights of a petroleum lessee are to enter upon land occupied by another, and to drill for, recover, and take away oil and gas. With this in mind the Canadian Supreme Court has decided that a common form of oil and gas lease in Saskatchewan conferred upon the lessee a *profit à prendre* for an uncertain term.¹¹ There is no doubt that this affords a closer analogy than the real property lease. However, so far as Queensland is concerned, there appears little to be gained by endeavouring to classify the petroleum lease in terms of established real property concepts. When the inevitable problems present themselves for solution, a more positive approach to adopt would be to interpret the words of the Petroleum Acts in the light of the actual characteristics of the modern oil and gas industry. Professor Howard R. Williams, an eminent American oil and gas lawyer, has had this to say on the question of classification of interests in oil and gas law:

. . . excessive conceptualism can have unfortunate consequences. In the States, the courts have generally passed through the conceptual period, and now the classification of the interest of the lessee as corporeal or incorporeal in character has little if any practical significance. The Canadian Courts, as viewed by this observer, continue to be unduly conceptual. The ancient seaweed cases, the basis of much of the lore concerning the *profit à prendre*, have little if any relevance to the interests created by instruments dealing with the exploration, development and production of immensely important natural resources today. If any of this ancient lore is to be applied to the oil and gas lease, it should be applied selectively rather than blindly. What is really involved is the construction of a commercial instrument more closely related to one dealing with the erection and operation of a great manufacturing plant than an agreement permitting a person to go upon the land of another and sever and remove seaweed to be utilized as fertilizer. The *profit à prendre* lore dealing with such matters as divisibility of the profit, surcharges of the profit, and abandonment of the profit are totally irrelevant to the oil and gas lease.¹²

These words have more relevance to Queensland, where interests in oil and

11. *Berkheiser v. Berkheiser* (1957) S.C.R. 387.

12. Howard R. Williams, "Comments on Oil and Gas Jurisprudence in Canada and the United States" 4 *Alberta Law Review* 189.

gas are obtained initially from the Crown, and disputes will therefore largely be within the field of public law, than to Canada, where most disputes which have been decided by the courts have been in the field of private law, involving purely private land rights.

The Submerged Lands Acts provide for five different types of oil and gas titles: the exploration permit for petroleum (the "permit"), the production licence for petroleum (the "licence"), the pipeline licence, the special prospecting authority, and the access authority. However, the principal titles used in the exploration for and production of oil and gas are the permit (exploration stage) and the licence (production stage). In effect, then, the Submerged Lands Acts also set up a two-tier system of titles.

For the convenience of administration in the regulation of petroleum titles, the Submerged Lands Acts establish over offshore areas a graticular system of blocks. The size of each graticular block is five minutes of arc of latitude by five minutes of arc of longitude. In the northern areas of Australia this results in graticular blocks of about thirty square miles, reducing as one moves south until south of Tasmania the blocks are approximately twenty-three square miles in area.

The permit covers all stages of exploration for oil and gas in the adjacent area, including drilling operations. Section 19 of the Submerged Lands Acts prohibits the exploration for petroleum in the adjacent area except under and in pursuance of a permit, or except as otherwise provided by the Acts. Here is a contrast with the Petroleum Acts, which provide that a petroleum lease may be granted to a person who is not the holder of an authority to prospect, but who nevertheless has discovered payable deposits of petroleum.¹³

The rights conferred by a permit are set out in section 28 of the Submerged Lands Acts:

A permit, while it remains in force, authorizes the permittee, subject to this Act and the regulations and in accordance with the conditions to which the permit is subject, to explore for petroleum, and to carry on such operations and to execute such works as are necessary for that purpose, in the permit area.

As with the authority to prospect under the Petroleum Acts, these rights are exploratory rights only, and do not include any interest in oil and gas that may be discovered within the permit area. However, as with the authority to prospect, the permit carries with it the very important right, upon discovery of petroleum within the permit area, to apply for and be granted a licence in respect of the area in which the discovery is made. The procedure to be followed in applying for and obtaining a licence is rather complicated, but the right of the permittee, subject to compliance with the Submerged Lands Acts, is absolute.

The Minister of the Crown charged with the administration of the Submerged Lands Acts, in the case of the area adjacent to Queensland the Minister for Mines, is referred to in the Acts as the Designated Authority. It is clear that the Designated Authority has been given wide discretionary powers in relation to permits. Section 33 of the Acts is as follows:

- (1) A permit may be granted subject to such conditions as the Designated Authority thinks fit and specifies in the permit.
- (2) The conditions referred to in the last preceding subsection may include a condition that, in relation to the permit area, the permittee will, during

the term of the permit, carry out the work, and expend the amount or amounts, specified in the permit.

However, the discretion of the Designated Authority in relation to permits is not as wide as the discretion of the Minister in relation to authorities to prospect. The Submerged Lands Acts deal specifically with the term of permits, which is six years primary term, with renewal periods of five years: section 29; with the progressive reduction in area of permits: section 30; and with maximum and minimum permit areas: section 21 (four hundred blocks, or approximately 10,000 square miles, and sixteen blocks, or approximately 400 square miles, respectively). The main condition left to the discretion of the Designated Authority is the work and expenditure condition, in which the advantage of flexibility is obvious.

A discovery of petroleum in a permit area is to be notified immediately to the Designated Authority,¹⁴ and the permit holder may be required by the Designated Authority to take steps to evaluate the discovery.¹⁵ Following such a discovery, the permit holder may nominate one graticular block, which becomes the centre of a group of nine graticular blocks, called a "location". Each side of a location is three blocks in length. If the permit holder fails to nominate a block upon which to base a location, the Designated Authority may direct him to do so, and upon non-compliance with such a direction, the Designated Authority may nominate a block as the centre of a location with respect to the discovery. In this way it is ensured that the machinery in the Submerged Lands Acts by which a licence is granted is put in motion after discovery of oil and gas.

Once a location has been declared, the permit holder, if he wishes to take out production licences, may take one of two courses open to him. The first is to take out as a licence any five blocks out of the location of nine blocks, and if this is done, the standard royalty rate of ten percent applies to all production from that licence. The four remaining blocks in the location then revert to the Crown. The second course is to take not only five blocks from within the location but one or more of the remaining four blocks as well, so that the initial five blocks and the additional blocks form two separate production licences. In this event, the permit holder must pay an additional overriding royalty on production from both licence areas.¹⁶ This additional overriding royalty is negotiated between the Designated Authority and the permit holder between a minimum of one per cent and a maximum of two and a half percent. In effect, then, if a permit holder avails himself of the opportunity to take blocks from within his location in excess of his primary entitlement of five blocks, he pays a royalty on all production of between eleven and twelve and a half percent.

There is no limitation in the Petroleum Acts upon the number of licences which may be granted to a person or company. However, when a well results in the discovery of petroleum and is used as the basis for declaring a location, then no other well in that location will qualify as the basis for declaring another location, unless the Designated Authority so approves in special circumstances. This restriction is to prevent assessment or step out wells being used for the establishment of additional locations, leading to the granting of further licences.

In practice, the right of a permit holder to take out production licences covering an entire location, or an area in excess of 225 square miles, should be

14. Section 34.

15. Section 35.

16. Section 42.

sufficient to blanket any oil and gas producing structure. There has been no suggestion that Esso and B.H.P. have been unable to take licences over all the oil producing regions in the Martin, Kingfisher, and Halibut fields offshore from Victoria. The overriding royalty negotiated with the Victorian Designated Authority in relation to these discoveries was the base rate of one percent.

Any graticular blocks forming part of a location but not taken up by a permit holder as either a primary licence or a secondary licence are automatically excised from the permit area, and revert to the Crown. The Designated Authority is empowered to advertise such blocks as being available, and he may call for cash bids, additional royalty bids, or tenders in other forms for these blocks.¹⁷ In order to give potential tenderers an opportunity to evaluate these blocks, the Submerged Lands Acts make provision for the grant of a short, non-exclusive interest called a special prospecting authority, which permits all exploration operations short of drilling.¹⁸

Section 39 of the Submerged Lands Acts provides that a person shall not carry on operations for the recovery of petroleum in the adjacent area except under and in pursuance of a licence, or except as otherwise provided by the Acts.

Production licences are issued for an initial period of twenty-one years, but a licensee is entitled, as of right, to an extension for a second period of twenty-one years, provided he has complied with the conditions of the licence. Furthermore, extensions beyond this second term may be granted at the discretion of the Designated Authority.¹⁹ A licensee may, with the consent of the Designated Authority, surrender a licence or part thereof,²⁰ so in effect a licence remains in force as long as commercial production continues from the area.

A condition of a licence is that the licensee carry out approved work within the licence area at a cost of not less than \$100,000 per block per year. The value of any oil and gas produced in a year may be offset against the work obligation for the following year.²¹

The rights conferred by a production licence are set out in section 52:

A licence, while it remains in force, authorizes the licensee, subject to this Act and the regulations and in accordance with the conditions to which the licence is subject—

- (a) to carry on operations for the recovery of petroleum in the licence area;
- (b) to explore for petroleum in the licence area; and
- (c) to carry on such operations and execute such works in the licence area as are necessary for those purposes.

The effect of section 52 can only be appreciated fully when it is read in conjunction with section 127:

Subject to this Act and to any rights of other persons, upon recovery of any petroleum by any permittee or licensee in the permit area or licence area, the petroleum becomes the property of the permittee or licensee.

The Submerged Lands Acts thus make it clear that until reduced to possession, any oil and gas contained in a licence area are not the property of the licensee, who has merely a right of recovery. Upon exercise of this right of recovery,

17. Section 47.

18. Section 111.

19. Sections 53-55.

20. Section 104.

21. Section 57.

and reduction of any oil and gas to possession, the property in that oil and gas passes to the licensee.

This is consistent with the rule of capture, and so it seems that this rule applies equally to offshore areas as to onshore areas. However, as with onshore areas, there is little scope left by the Submerged Lands Acts for the operation of the rule of capture. Section 59 provides for the unit development of a petroleum pool, either by agreement between respective licensees, or by direction of the Designated Authority. Furthermore, section 100 forbids the drilling of a well by a permittee or licensee within 1000 feet of a boundary of the permit or licence, except with the consent in writing of the Designated Authority.

The nature of a licensee's interest in oil and gas is not made entirely clear by section 52. Despite the difference in nomenclature, this interest appears to be similar to a petroleum lessee's interest under the Petroleum Acts. There appears to be no good reason for classification of the licensee's interest as a "licence" in the way that this term is understood in real property law. A mere "licence" is generally regarded as a personal right, not assignable by the licensee. There is also a higher form of licence, which enables the licensee to do more than merely enter upon land. This right is often called a licence coupled with a grant. However, a petroleum licence under the Submerged Lands Act is not strictly a licence coupled with a grant, as there is no grant of oil and gas to the licensee, but rather a grant of the right to recover oil and gas. As with the petroleum lease, the petroleum licence appears most similar to a *profit à prendre*, but as recognized with the petroleum lease, there appears to be no real benefit to be gained by classifying the petroleum licence in this or in any other way. The needs of the oil and gas industry are such that problems can best be solved by a fresh approach.

The importance of discretionary powers given by the Submerged Lands Acts to the Designated Authority has already been noted, though generally the discretion is not as wide as that given to the Minister for Mines under the Petroleum Acts. However, section 56 of the Submerged Lands Acts gives the Designated Authority a very wide discretion in relation to licences: the discretion to include in licences such conditions as he thinks fit. It is hard to see any limit to this discretion.

(3) Conclusion

Oil and gas law in Queensland today is a challenge, to both Parliament and the courts. Parliament is faced with the difficult task of providing a satisfactory system for the exploitation of one of Queensland's valuable natural resources. As oil and gas in Queensland are the subject of exclusive public ownership, Parliament must ensure that exploitation of these resources is ultimately for the public good. However, the system of exploitation adopted in Queensland, both because of the philosophy of the government and because of the demands of oil and gas technology, is one of private enterprise, largely foreign owned. A balance must therefore be struck between the need for stimulation of the industry in Queensland, where the results of exploration in recent years have been disappointing, and the public benefit to be derived from exploitation of these resources.

It is suggested that neither the industry nor the public benefits from a legislative system which gives extremely wide discretionary powers to the Minister for Mines and the Designated Authority. The industry should be able to ascertain its basic rights and obligations from the relevant legislation, not from the actual exploration or production title. The public also should be given the

opportunity of expressing its views when difficult social questions arise, such as whether the search for oil and gas is to be allowed on the Great Barrier Reef.

For the courts, the challenge is one presented by a new field of law. Guidance will undoubtedly be obtained in this field by studying the law in other jurisdictions, such as the U.S.A. and Canada. Nevertheless, what is required for Queensland is a unique body of law developed to meet Queensland's own background and future needs. The challenge will never be met by the simple application of precedent, whatever the source.

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OIL POLLUTION FROM SHIPPING: THE INTERNATIONAL RESPONSE

The Problem

The memory of the *Torrey Canyon* disaster remains vivid for most people. It is probably that incident which, more than any other, directed world public opinion to the environmental hazards of ocean transportation of oil. The *Torrey Canyon* was an American owned Liberian registered tanker which ran aground on the Seven Stones reef in international waters on March 18, 1967. At the time of the accident it was manned by an Italian master and crew. Most of its cargo of 118,000 tons of Kuwait crude oil was released, and large quantities drifted onto the west Cornish coast and the northern coast of France. The vessel and its remaining cargo were eventually destroyed by R.A.F. aircraft¹. This particular accident was only one of a succession in which oil released from tankers has caused alarm to coastal authorities². The Australian public was reminded of the dangers of oil pollution when the tanker *Oceanic Grandeur* was holed in Torres Strait in March 1970³.

The sensational appeal of such incidents ensures them of notoriety; but it is not so well known that each year roughly one million metric tons of oil enters the oceans from oil transportation operations alone⁴, this being 0.1 % of the total oil shipped⁵. Most of this results not from maritime casualties, but from the activities of ship operators who flush empty tanks and dump oily ballast at sea before entering a terminal to take on a new cargo of crude oil⁶. The dangers of pollution following an accident involving an oil tanker will be related to the increasing size of these vessels. In 1930, the maximum tanker size was less than

1. *The Torrey Canyon* (1967; Cmnd. 3246); N.A. Holme, "Effects of 'Torrey Canyon' Pollution on Marine Life", in D.P. Hoult, ed., *Oil on the Sea* (1969), 1; C. Gill, F. Booker, T. Soper, *The Wreck of the Torrey Canyon* (1967).
2. See, for instance, the list in the Comment, "Oil Pollution of the Sea", (1969) 10 *Harvard International L.J.* 316, 318, n. 19.
3. *Sydney Morning Herald*, 4 March 1970. See also the Special Report in the *Newsletter of the Queensland Littoral Society*, No. 37, March-April 1970, p. 17.
4. M. Blumer, "Oil Pollution of the Ocean", (1969) XV *Oceanus* 3.
5. M. Blumer, "Oil Pollution of the Ocean", in Hoult, *op. cit.*, p. 6. The 4000 tankers currently trading make up 40% of the world's ocean traffic: Rienow & Rienow, "The Oil Around Us", *New York Times*, June 4, 1967 (Magazine), p. 24.
6. W.A. Bachman, "Oil Spills", *Oil and Gas Journal*, 1 June 1970, p. 93.