COMMENT ON THE U.S. RULE OF CAPTURE: ITS PLACE IN AUSTRALIA

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Professor Crommelin has given us an excellent summary of the historical development of the rule of capture in the United States of America and its present status. Both he and S. Gerlach have dealt in detail with both the relevance of the rule to Australia in light of relevant Commonwealth authority and its application in Australia under the existing petroleum legislation.

They have emphasized the confusion that exists in the United States concerning the rule of capture particularly with respect to the concepts of property rights and ownership; and the interrelationship between the rule of capture, the off-set drilling rule and the doctrine of correlative rights.

Gerlach has postulated that the rule of capture (and the off-set rule and the correlative rights doctrine) would be applied in Australia subject to such limitations as may exist under appropriate Commonwealth and State legislation. Crommelin on the other hand argues that the better view is that the application of the rule is necessarily limited both between jurisdictions and within jurisdictions whether offshore or onshore.

To attempt to further canvass these issues in detail except to make specific comments, would be both fruitless and foolhardy. Therefore I would like to restrict my comments to the following issues:

1. some general observations on the application of the rule of capture to Australia particularly with respect to:
   - the difference between the approach to the question of ownership of petroleum *in situ* in the United States on the one hand and the United Kingdom and Australia on the other hand; and
   - criticisms made of the rule of capture;
2. unitization;
3. the 'negative' rule of capture; and
4. gas banking.

RULE OF CAPTURE

Both Crommelin and Gerlach have noted the analogical reasoning from which the rule of capture derives its origins. However, whilst Crommelin was of the view that none of these analogies (*i.e.* to percolating waters, solid minerals and animals *ferae naturae*) was apposite, Gerlach suggested to the contrary. In Crommelin's opinion such analogies distort the physical characteristics of petroleum. Gerlach on the other hand considers that there are strong reasons for drawing an analogy from the percolating waters rule (as postulated in cases such as *Acton v. Blundell*[1],

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1 (1843) 12 M & W 324.

Bradfords Corporation v. Pickles[2] and *Chasemore v. Richards*[3]) to the oil and gas rule to hold that the rule of capture does apply. Gerlach observed that although limited there was English authority to support this view. He then went on to discuss the cases of *Trinidad Asphalt v. Ambard,*[4] *U Po Naing v. Burma Oil Company Limited,*[5] *Micheal Borys v. Canadian Pacific Railway Co.*[6] and *Imperial Oil Limited v. Placid Oil Company*[7] before concluding that those Commonwealth authorities 'point towards the existence of the rule of capture as a general common law doctrine' having application in Australia. Crommelin, on the other hand, was of the view that the first three of those cases 'in no way resolves the status of the rule of capture, for Australia or elsewhere.'

I note it has been observed by other commentators that, with respect to the position in the United Kingdom, there is 'room for doubt as to whether the rule of capture would be applied by British Courts.'[8] I know of no reason why the position in Australia would differ from that applying in the United Kingdom.

On the balance I suggest that on the current state of the authorities there is insufficient support for advocating the existence of the rule of capture as a rule of common law in Australia. I do agree with Gerlach's comments that the rule of capture deals with ownership of oil and gas following extraction and with permitted extraction procedures. As such it is not limited by the nature of the landholder's rights to petroleum in place (whether it be absolute ownership, qualified ownership or non-ownership).

This view seems to be supported by Lang and Crommelin who have suggested, in respect of the Australian position, that because of the relevant State legislation reserving ownership of petroleum to the Crown: 'The common law position regarding ownership of petroleum *in situ* has little direct relevance to Australia.'[9] Thus the fact that the ownership of oil and gas in Australia varies from that existing to differing extents in the various States in the United States of America would not seem to be relevant.

However an observation made by Ely in 1938 when discussing conservation of oil in the United States of America seems to make a critical distinction between the American position with respect to the rule of

2 [1895] AC 587.
3 (1859) 7 HL Cas 349.
4 [1899] AC 594.
5 (1929) 56 LR (Ind. App.) 140.
6 [1953] AC 217.
7 (1963) 43 WWR 437.
8 Daintith T.C. & Willoughby G.D.M. *Manual of United Kingdom Oil and Gas Law* (1984 Oyez Publishing, London) 460, 461 and Daintith T.C. 'The U.K. Petroleum Regime'. (1978) Paper Number 4 *Proceedings of the Petroleum Law Seminar,* International Bar Association — Cambridge 4.3. Their comments are based principally on the decision in *Trinidad Asphalt v. Ambard* [1899] AC 594 after noting the suggestions to the contrary based on cases such as *The Salt Union, Limited v. Brunner & Co.* [1906] 2 KB 822 (dealing with rights of an adjoining landowner to pump brine), which appears to fit into the category of 'the percolating water cases.'
9 Lang A.G. & Crommelin M. *Australian Mining and Petroleum Law,* (1979) 20.

capture on the one hand and the position in the United Kingdom and Australia on the other hand based principally on the ownership issue.[10] He observed that:

> Ironically, Great Britain, which bequeathed us the doctrine of *Acton v. Blundell*, very promptly legislated herself out of subservience to the rule of capture when petroleum development was projected for the British Isles. But we, like the Byzantines of Gibbon's celebrated passage, have preserved the learning of the ancients to the neglect of the potentialities of our own time.[11]

What in fact is the case, is that the United Kingdom and subsequently each of the States of Australia have legislated to provide for Crown ownership of petroleum. Ely implies that this legislation has effectively removed many of the problems arising from the application of the rule of capture in the United States. Yet this suggestion does not seem to fit with the previous remarks as to the independence of the issues of the ownership of petroleum *in situ* on the one hand and the application of the rule of capture on the other hand.

Daintith in discussing the United Kingdom petroleum regime in 1978 made certain observations regarding the development of the rule of capture in the United States.[12] In his opinion the rule of capture constitutes a modificaton of the accession system, which is the common law basis for determining property rights to subterranean mineral deposits in the United Kingdom. He shares Crommelin's view that the rule of capture is based on an erroneous assumption that oil and gas might percolate through the subsoil over very great distances. Having made those comments he then went on to suggest that:

> The [United Kingdom's] government's supposition appears, in 1917, to have been that at common law, the law of capture, or something like it, would be applied by U.K. Courts to modify surface owners' rights, with a consequent risk of competitive drilling.[13]

After expressing doubts as to the correctness of this supposition he notes that:

> At all events, the nature and extent of property in a petroleum deposit was unclear (in the United Kingdom) at common law in 1917. No such deposits had in fact been found, but the government, for the reasons mentioned, decided that it should act to forestall the difficulties by legislation. Two possibilities were open; to meet the supposed risk of competitive drilling by a scheme of regulation, along some lines such as these adopted in the U.S., without altering basic property rights; or to cut through the problem by eliminating the multiple ownership of deposits inherent in the accession system.[14]

In its 1918 legislation the United Kingdom government sidestepped the much maligned and continuous question of property rights in petroleum *in situ* and instead directly attacked the competitive drilling problem by forbidding any searching or drilling for oil except with a licence to be issued by the relevant person.

10 Ely N. 'The Conservation of Oil' (1938) Vol. 51 *Harvard Law Review* 1209, 1218, 1219.
11 *Ibid.* 1244.
12 Daintith *op. cit.* n. 8, 4.2–4.4
13 *Ibid.* 4.3.
14 *Ibid.*

It is perhaps not surprising that this legislation was later felt to be insufficient protection against the threat of competitive drilling. This lead to the passage in 1934 of legislation which effected the nationalization of all onshore oil deposits. Under that legislation a licence transforms the property of the Crown in any oil or gas *in situ* into the property of the licensee in oil at the wellhead.[15]

This 'legislative scheme' (which still continues in force today) appears to be based on achieving two overriding objectives:

- *firstly*, to remove obstacles to exploration and exploitation of oil and gas that may arise from uncertainties about property rights in deposits; and
- *secondly*, to organize and control exploration and exploitation through the licensing regime so as to avoid competitive drilling.

Essentially the same system has applied in the Australian States in respect of onshore deposits of petroleum since the introduction of the Queensland Petroleum Act in 1915 although I cannot comment as to whether the relevant State governments had the same objectives as those discussed above.[16]

One can only suggest that such legislation overcomes many of the negative effects of the rule of capture experienced in the United States. Even so it is still not clear as to the extent to which that legislation displaces the rule of capture in Australia if the correct view were to be that the rule does apply in Australia. I generally agree with Gerlach's comments as to the reluctance of Australian courts to reject common law rules on policy grounds. However I suggest, as I think Crommelin does, that the existing petroleum legislation is such as to leave little room for the application of the rule in Australia.

I would like to discuss briefly the criticism of the rule of capture that has been made to date.

It has already been noted by Gerlach that there has been considerable academic criticism of the rule of capture. Ely expressed frustration in 1938 at the failure at both State and Federal level to introduce legislation to overcome the difficulties caused by the rule of capture until it had been universally accepted as the basic property law.[17] In his view the absence of legislative restriction has resulted in the development of oil fields in a manner diametrically opposite to that favoured by the physical conditions underground.

Pierce has suggested the rule of capture, although having some benefits, no longer serves the best interests of society.[18] As such it has to be re-examined and other alternatives considered. His thesis is that current

15 Cameron P.D. *Property Rights and Sovereign Rights: The Case of North Sea Oil* (1983) 53.

16 S. 9 Petroleum Act 1967 (W.A.) & s. 5(1) Petroleum Act 1958 (Vic.); s. 6(1) Petroleum Act 1955 (N.S.W.); s. 5 Petroleum Act 1923 (Qld); s. 4(1) Petroleum Act 1940 (S.A.); s. 2B Mining Act 1929 (Tas.); s. 6(1) Petroleum Act 1984 (N.T.).

17 Ely *op. cit.* n. 10 1218, 1219.

18 Pierce D.E. 'Co-ordinated Reservoir Development — An Alternative to the Rule of Capture for the Ownership and Development of Oil and Gas' (1983) 4 *Journal of Energy Law and Policy* 1, 6, 169.

energy imperatives demand that the rule of capture be abolished and replaced with a system which promotes maximum possible recovery of oil and gas.

The preferable approach, in Pierce's view, would be to declare basic ownership and development rules to govern the resource. He has suggested this could be achieved in the United States through legislative action. In his opinion an appropriate statute would nullify the rule of capture (and therefore remove the negative effects of that rule). At the same time such action would encourage development of petroleum resources by the removal of the 'speculative bounds' of a lease which would otherwise have been subject to the rule of capture. He suggests a statute in the following terms would achieve those objectives:

> (1) The owner of land shall have a protected property right to the equivalent of all oil, gas, or other hydrocarbons beneath his land and within the owner's legal surface boundaries.
> (2) The landowner's property right in oil, gas, and other hydrocarbons shall not be subject to appropriation by others through the 'rule of capture' as the rule has been judicially developed by the courts of this state.
> (3) The development and production of all oil, gas, or other fugacious hydrocarbons in this state shall be on a reservoir basis. Development shall be coordinated to achieve the maximum ultimate recovery technically and economically feasible through operations conducted on a reservoir basis.
> (4) It is the public policy of this state to protect the correlative rights of all landowners to an equivalent share of all oil, gas, or other hydrocarbons beneath their land. It is the public policy of this state to promote the development of oil, gas, and other fugacious hydrocarbons in such a manner as to obtain the maximum recovery possible with minimum waste of the natural resource and economic resources. All lease covenants, express or implied, shall be interpreted in accordance with the public policy of this state.[19]

I assume Crommelin would be satisfied with the distinction made by Pierce between property rights and ownership.

I suggest that with a little imagination and some licence the rights of the landowner under Pierce's suggested legislative framework can arguably be construed as equating to the rights of a holder of a production licence under the existing Commonwealth and State petroleum legislation applicable to any specific jurisdiction in Australia.[20] As Crommelin has suggested the convenience offered by the rule of capture for determining the mutual rights of a 'competing' licence holder would be offset by considerations of reservoir management and equity.

This is perhaps the critical difference between the position in the United States and that in the United Kingdom and Australia. Under the rule of capture it is the ownership rights of the individual which are emphasized whereas under the Australian legislation the sanctity of proper reservoir and resource management would appear to be paramount even to the extent of some loss of equity.

19 *Ibid.* 154, 155.

20 Consider s. 52 of the Petroleum (Submerged Lands) Act 1967 (Commonwealth); s. 62 Petroleum Act 1967 (W.A.); s. 30(1) Petroleum Act 1958 (Vic.); s. 13 Petroleum Act 1955 (N.S.W.); s. 31 Petroleum Act 1923 (Qld); s. 33 Petroleum Act 1940 (S.A.); s. 31(4) Mining Act 1929 (Tas.); s. 56 Petroleum Act 1984 (N.T.).

However it should be recognized that the rule of capture still has its proponents. They, as does Gerlach, suggest that some of the alternatives to the rule of capture such as the apportionment of resources or co-ordinated reservoir development are not practical.[21] In any event it seems that as pressure mounts on a worldwide basis to increase the protection and conservation of its energy resources further pressure will be brought to bear on the rule of capture favouring as it does private rights over public rights.

UNITIZATION

Daintith and Willoughby have commented that:

> Unit development of fields in separate ownership, or 'unitisation' as it is called in the industry, was designed to counter the wasteful effects of the law of capture in the United States . . . .[22]

Unitization has the benefit of *inter alia*:

- conserving existing resources and increasing ultimate recovery;
- facilitating the orderly development of a reservoir;
- spreading costs and the attendant risks amongst all parties having an interest in the reservoir;
- maximizing efficiency of production; and
- facilitating secondary recovery.[23]

Gerlach has observed that unitization or pooling agreements have become popular in the United States. However it should be noted that at this stage, notwithstanding its recognized virtues, some States have yet to introduce compulsory pooling. Pierce has suggested that in the absence of such compulsion few reservoirs are being operated as units.[24]

On the other hand the current position with respect to unitization both in the United Kingdom and internationally (especially in the North Sea) is reflected in the apparent willingness and desire of the parties interested in a common pool to enter into voluntary unitization agreements. It has been suggested that, as a result of the rapid advancement in reservoir engineering techniques, unitization, because it best serves optimum development and conservation objectives whilst at the same time preserving the equity ('correlative rights') of all interested parties to a 'fair share of production', is now internationally accepted as the framework for developing reservoirs.[25] If you like, a commonly accepted code which overrides any underlying common law rule applying as a matter of international law.

21 Kuntz E. 'The Law of Capture' (1957) 10 *Oklahoma Law Review* 406, 406–408.
22 Daintith and Willoughby *op. cit.* n. 8, 460.
23 Williams N.D. 'To Unitize or Not' Paper 1 in *Institute on Pooling and Unitization of Oil and Gas Interests* (1980) The Rocky Mountain Mineral Foundation 2.1, 2.3–2.10.
24 Pierce *op. cit.* n. 18, 76, 77.
25 Outhit P.A. 'Unitization: As between Companies — Of Fields between States (International)', Paper 26 *Proceedings of the Petroleum Law Seminar op. cit.* n. 8, 26.2 & Hill A. 'Operating Agreements; Current Developments in the North Sea' Paper 1 *Energy Law* 1981 Volume 2, International Bar Association, Banff 5.

NEGATIVE RULE OF CAPTURE

Crommelin in his paper briefly referred to the fact that the rule of capture has both a negative and positive aspect. He suggested the negative aspect of the rule denied the right of a landowner (which presumably includes the Crown) to prevent migration of petroleum attributable to lawful production operations.

However this is not the concept I wish to discuss here. The particular concept I wish to consider has been described as the rights of a landholder to:

> inject into a formation substances which may migrate through the structure to the land of others, even if this results in the displacement under such land of more valuable with less valuable substances (*e.g.* the displacement of wet gas by dry gas).[26]

This suggestion obviously has significant ramifications in the context of secondary recovery of oil and gas.

It is arguable that as all licence holders derive their property rights through the Crown they can gain no greater right than the Crown itself to that oil and gas. If, therefore, the Crown authorizes the use of secondary recovery processes by a particular licence holder it is submitted that the Crown consents to the potential displacement of more valuable property with less valuable substances. An adjoining licence holder will in that event only obtain property to the less valuable substance.

Even if the rule of capture did apply in Australia as a rule of common law it is doubtful, in my opinion, that the 'negative rule of capture' would apply. There are two bases for this conclusion both of which are subject to flaws of differing importance. Firstly, Williams and Meyers, the original proponents of the concept now suggest that subsequent developments have indicated that the courts in the United States are reluctant to insulate from liability an operator who by secondary recovery methods displaces more valuable property of another with less valuable substances.[27] In their view it is hazardous to countenance a secondary recovery programme in the absence of a unitization agreement between all interested parties who may be adversely affected by the injection of fluids.

The rationale for the reluctance of the courts referred to above is the recognition of a public policy requiring the avoidance of waste and maximization of recovery of resources which is pertinent to the rule of law to be applied *i.e.*, the 'negative rule of capture'.[28] As a result the Courts have been unwilling to extend the rule of capture further. To an outsider this is a rather surprising development initiated by the same courts that in the past have been prepared to enforce the rule of capture, albeit subject to the off-set rule and the correlative rights doctrine, thereby permitting waste and inefficient recovery of energy resources.

Secondly, it could be proposed that there is sufficient authority at common law to suggest that no person can use his land as to be a nuisance

26 Williams H.R. and Meyers C.J. *Oil and Gas Law* Mathew Bender (Looseleaf service) para. 204.5 (60.1).

27 *Ibid.*

28 *E.g. Jameson v. Ethyl Corp.* 271 Ark. 621.

to another for example, by polluting a percolating water supply.[29] Those authorities suggest that such actions will be a trespass or nuisance or, in certain circumstances, will result in the application of the rule in *Rylands v. Fletcher*. However the majority of the cases deal with percolating water and it has already been observed that the drawing of analogies to 'water cases' is inappropriate insofar as it fails to take into account the particular physical characteristics of petroleum.

Given the existing legislative scheme in Australia for petroleum recovery I doubt that such a rule, if it did exist as a matter of common law, would be applied by an Australian court.

GAS BANKING

The last area on which I wish to comment is the possible application of the rule of capture to gas storage or 'gas banking' as it is often described. I will not attempt to discuss in this paper the general issues relating to gas banking and I merely refer you to other more specific works in that context.[30]

The underground storage of gas is a technique that has been in use for some time in Canada, the United States, Europe and the United Kingdom. It is suggested that given this country's vast reservoirs of natural gas the concept of gas banking will become 'an area of immense economic opportunity and social importance'.[31]

Apart from the Victorian Petroleum Act which has detailed provisions dealing with gas storage all other petroleum legislation either State or Commonwealth (and pertaining either to offshore or onshore areas) contains little of significance with respect to gas storage. In a recent symposium on gas storage Willcocks suggested there were three significant legal areas involved in assessing the impact of current petroleum legislation on gas storage.[32] They were:

- the extent to which such legislation modifies private rights;
- the disposition of interest in Crown lands; and
- container space law.

He went on to suggest that in the context of those areas three questions need to be analysed. Firstly, who owns the gas so stored, secondly, does the relevant petroleum legislation authorize gas injection into the storage area and secondary recovery of the gas so stored, and thirdly, does there currently exist a general regime for gas storage.

I will not discuss these issues, interesting though they may be, but would like to make the following assumptions;

- that gas having been recovered from a natural reservoir becomes the property of the licence holder at the wellhead and the mere fact of its

29 *E.g. Ballard v. Tomlison* (1885) 29 Ch.D. 115.

30 Willcocks R.M. 'Gas Storage Laws and Regulations' paper *First Australian Symposium on Gas Storage* 1985; Hogg, G., 'Gas Banking' Paper 1 Topic 8 *Energy Law 1981 Volume 2* 115 and Ozimic S. & Pain L. 'Gas Storage in Australia' *The Australian Gas Journal* 22.

31 Willcocks *op. cit.* n. 30.

32 *Ibid.*

subsequent injection into an underground storage area does not reconvey it to the Crown;
— that injection into the storage area is authorized; and
— that there is no general regime for gas storage.

In that case what is the position if the gas so stored migrated to another 'area'. That area could be, for example, another gas storage area (such as an abandoned coal mine) which could either be owned by the Crown or privately held and which either contained no other gas or itself was being used as a gas storage area; or a naturally occurring pool. In the last two cases it would become commingled with the gas stored or yet to be extracted as the case may be.

In that situation it is arguable that the law of capture may be applicable notwithstanding my earlier comment to the contrary with respect to the application of the rule of capture in Australia generally. The rule of capture may apply in these circumstances for two reasons. Firstly because the existing base of petroleum legislation which seems to allow little room for the inference of the rule of capture will not be applicable to gas not the property of the Crown and the recovery of which is presumably not the subject of that legislation. Secondly, due to the difficulties of differentiating the migrating gas from either stored gas belonging to another party or naturally occurring hydrocarbons, as perhaps the only realistic method of resolving what otherwise appears to be an insoluble problem.

However, although this scenario suggests a 'glimmer of hope' for the application of the rule of capture in Australia I doubt very much whether problems such as those briefly described above would be left by either the Commonwealth or State Governments to be determined by the application of the rule of capture.

CONCLUSION

The rule of capture would appear to be in many respects an historical anachronism. It was developed in the absence of knowledge and on the basis of erroneous assumptions and reasoning. As such it must be considered in that context.

To some degree the development of the off-set rule and the doctrine of correlative rights have reduced its impact on the private interests of individual parties otherwise thereby affected. Similarly the development in the United States of various anti-waste and conservation measures by many of the States and to a limited degree at Federal level, have reduced the 'social' effect of the rule of capture on the public interested in the conservation of energy resources.

As we have seen from this afternoon's discussion whether or not the rule of capture applies in Australia as a matter of common law is a moot point. But it should be, I think, a point of little consequence, except to a very limited degree with respect to gas banking, given the existing petroleum legislation at State and Commonwealth level. That legislation leaves little doubt that at all times the emphasis in resource recovery is to be placed on efficiency of recovery, the interests of licence holders being a lesser consideration.