5.0 THE DECLINE OF THE SPA IDEAL

5.1 The apogee of the Government's hopes to create a European-style spa based on the health-giving properties of geothermal waters came in 1908. On 13 August of that year Sir Joseph Ward and Admiral Sperry of the American Pacific fleet opened the new bath-house at Rotorua (the building in the Government gardens now usually known as "Tudor Towers"). The driving force behind the building's construction was Dr Arthur Stanley Wohlmann, Government balneologist at Rotorua since 1902, and the building had cost something like £40,000.00 to build. The surrounding area was developed in order to assist in the creation of an ambience resembling one of the great European spas. Rockel writes:-

> "The Tourist department also attempted to make Rotorua and the gardens attractive. The tea house opened in the grounds, now known as the Government Gardens, became the social centre of Rotorua. A band rotunda was built and bowling and croquet greens and tennis courts were added. In the town metal was spread on the pumice roads.....Dr Wolhmann regretted that a casino could not be installed in the bathhouse; many wealthy visitors to the spas of Europe were partly attracted by the opportunity to gamble. Wohlmann emphasised the importance of social life in the bathhouse, as the centre of the Rotorua spa. The entrance hall became the equivalent of the English spa's pump room or the German kursaal, a place to shelter in bad weather, to listen to light music and to rendezvous in the evening .....An aviary and monkey house were installed in the gardens and a camera obscura was built on the games-ticket office in the grounds, its kaleidoscopic effects no doubt emphasising the cultured retreat atmosphere of the Edwardian spa[68].

The bath-house offered a number of allegedly curative treatments, some of which sound very strange today. These include radium water treatments (supposed to reduce blood pressure and blood

sugar levels and to tighten loose teeth) the "Greville hot air bath" and the "Electric Light Bath". Most of the treatments involved the less controversial methods of soaking in hot thermal waters.

5.2 At Te Aroha, also (like Rotorua) linked by rail with Auckland a rather smaller but in some ways more attractive spa was also laid out by the Tourist Department, featuring drinking fountains, bath-houses and a tea shop. The rather charming buildings are now all preserved in the Te Aroha domain[69].

5.3 The hot springs at Whakarewarewa, Waimangu, Waiotapu and other places were seen as supplementary attractions for visitors to the central North Island spa resorts. As has been seen at Waiotapu, the Tourist department tended to favour government ownership of the hot springs where possible. Waiotapu was, however, rather difficult to get to, and the main tourist attraction at Rotorua after the destruction of the Pink and White Terraces was undoubtedly Whakarewarewa. By the turn of the century most of the land in and around Whakarewarewa was owned by the Crown, but the central part of the thermal area remained Maori-owned, sandwiched between Crown land on either side of it. Here the Tuhourangi community remained, carrying on their traditional lifestyle - often much to the irritation of local inspectors of works and officials of the tourist department. In 1906 the inspector of works at Rotorua complained to the superintendent of the department that local Maori persisted in cleaning potatoes and fish in some of the hot springs "and in fact I have had to draw the attention of the Sanitary Inspector to the matter, but it made little difference with the Natives"[70]. The inhabitants of Whakarewarewa seem to have entered into one of the first commercial uses of geothermal water when they arranged a lease of hot water with Messrs Nathan & Co. who used it for the so-called "Oil Baths" a short distance away[71]. The proximity of Maori and Crown land at Whakarewarewa seems to have given rise to endless petty disputes, concerning such matters as tolls and cooking and washing clothes in the hot pools. The inhabitants of the village were particularly concerned to maintain some control

over the benefits to be derived from tourism, and resented any attempt to use guides who were not from the village. These myriad disputes reflected the quite natural tensions between those who wanted to turn Rotorua into a showcase for "respectable" tourists and those who wanted nothing less than to carry on with their traditional lifestyle.

5.4 The apogee of the spa era was short-lived. Rotorua was too isolated and backward to compete as a serious rival to the great spas of Europe. Modern medicine gradually came to discount the therapeutic benefits of soaking in mineral waters and mud baths. The bath-house at Rotorua was furthermore plagued with horrendous maintenance problems. The concrete arches in the building began to crack and the plaster began to fall away from the ceilings. The building's design was defective in that it failed to ventilate properly. According to Rockel[72]:-

> "For some unknown reason the ventilating shafts and open rear basement were blocked in so that steam built up when the building was closed overnight. On some frosty mornings the doors had to be left open for several minutes before anyone could venture in."

By the 1940s "things at the Bathhouse were in a desperate state". There were a number of meetings to discuss the fate of the building. At one of these[73]:-

> "...Mr Dan Kingi, representing the Ngati Whakaue people of Ohinemutu, urged the Government to retain the bathhouse for its original function. He believed this would keep faith with the elders who had made a gift of the area, now occupied by the Government Gardens, for health and recreation purposes."

The building was last used as a bathhouse in 1966.

5.5 In this evidence I have not attempted to deal at length with areas of land gifted by Ngati Whakaue and other tribes at

Rotorua for public purposes. The Fenton agreement specifically sets aside "Te Pukeroa" as a "Reserve for Public Recreation for everybody" - Kuirau Park. As mentioned, other land was made available by the tribes, Ngati Whakaue in particular, to encourage railway development. The setting aside of the area now known as the government gardens must have been by a separate process after the conclusion of the Fenton agreement.

5.6 The collapse of the ambitious dream did not mean the end of Rotorua as a tourist centre, but the objectives shifted from an attempt to recreate Baden-Baden or Cheltenham in the South Seas to the more modest one of a tourist industry based on the hot springs and use of thermal pools for recreational rather than medicinal purposes. Some of the thermal areas were owned by the Crown; others such as Tikitere, the central part of Whakarewarewa, Orakeikorako and Ketetahi on the slopes of Mount Tongariro were Maori-owned. A few were privately-owned, most notably Geyser Valley at Wairakei. It was not until after World War II that interest shifted from the value of the resource as a tourist asset to its value as an energy and industrial resource.

6.0 THE GEOTHERMAL RESOURCE AS AN ENERGY RESOURCE: THE COMMON LAW BACKGROUND

A. Introduction

6.1 Thus far the focus has been on the geothermal resource as a resource valued by the Government as a tourist attraction. Thinking of the resource in this way meant that legal questions concerning ownership of the resource as a whole had no particular relevance. The assumption seems to have been simply that those who owned the land on which were located geothermal springs could use them and develop then as they wished. Private arrangements were made by which owners of hot springs allowed water to be diverted by channels or pipes as, for example, in the water lease arranged between Nathan & Co. and the Maori community at Whakarewarewa, whereby water was diverted by pipe from one of the large hot springs on Maori land to the "Oil Baths" on Nathan's

premises. Bores tapping into underground geothermal systems certainly must have existed prior to the enactment of the Geothermal Energy Act in 1953, but I have not found so far any material on what the legal regime governing underground geothermal waters was supposed to be in these early years. It seems safe to assume that the question was one of marginal importance.

6.2 Until the enactment of the Water and Soil Conservation Act in 1967 water law in New Zealand was essentially governed by the rules of the common law. Statutory inroads such as the Water Power Act 1903 were of minor significance. The Soil Conservation and Rivers Control Act 1941 did not affect common law rights in respect of natural water. The Thermal-Springs Districts Acts, as we have seen, had little to do with thermal springs per se - their principal effect was to give the Crown a monopoly of land purchase in an extensive region. The Acts did not themselves impact on common law rights to surface and underground geothermal water.

6.3 The common law never has developed a body of rules to deal with property interests in geothermal systems. This is hardly surprising. The technology to exploit such systems on the scale seen at Ohaaki or Wairakei has come into existence only recently. In any event geothermal systems do not exist in England to any significant extent, although certainly hot springs are found there at Bath, Cheltenham and other places. Thus the common law "rules" with regard to geothermal water can only be discussed by way of analogy. Geothermal systems can create surface pools and streams and thus one analogy is the law relating to surface water. Another analogy, the one which seems to be most relevant, is the body of rules dealing specifically with percolating or groundwater. However, it has to be recognised that although geothermal systems are water systems, the geothermal resource is an <u>energy</u>, rather than a "water" resource. This perhaps puts geothermal resources more on a footing with energy resources such as petroleum and natural gas. Lastly, geothermal systems contain

minerals in solution, which means that the common law rules regarding mineral ownership are relevant too.

6.4 The following section is intended as a background to the 1953 legislation. It will focus, firstly, on geothermal resources considered as water, before dealing with other aspects of the common law which may be relevant.

B. Surface Water

6.5 It seems unnecessary to develop this at any length. At common law all water, whether surface water or groundwater, belongs to no-one until abstracted. Landowners own the beds of lakes and streams - a lake (or a geothermal pool) is simply land covered by water. The result is that in terms of surface pools the landowner has no property in the water itself until it is abstracted. On the other hand, only the landowner can use the water in the pools on his or her land - crossing the land to take the water would be a trespass if committed by persons other than the landowner. The riparian rights doctrine would apply, although it is hard to see this as having much relevance to geothermal features. These points will be developed in detail in the next section.

C. Groundwater

6.6 The common law rules about groundwater have as their starting point the common law rules about water generally. At common law water was not something capable of ownership until it had been abstracted. Water, as such, belonged to no-one. According to Halsbury's Laws of England[74]:-

> "Although certain rights as regards flowing water are incident to the ownership of riparian property, the water itself, whether flowing in a known and defined channel, or percolating through the soil, is not, at common law, the subject of property or capable of being granted to anybody. Flowing water is only publici juris in the sense

that it is public or common to all who have a right of access to it."

But, once abstracted, the water becomes the personal property of whoever has abstracted it[75]:-

> "Water which has been appropriated or taken into possession from a known and defined channel is the subject of property, the right of property existing only during such possession, as is also percolating water [i.e. groundwater] which has been appropriated, even by the artificial means of pumping."

Thus it is theft at common law to divert water from some other person's pipes: Ferens v O'Brien (1883) 11 QBD 21.

6.7 A key difference with the rules relating to groundwater is that there is no counterpart to the riparian rights doctrine applicable to surface water. Generally a riparian owner (a landowner through whose land water flows above ground in a defined channel, as in a river or stream) has a right to the maintenance of the flow both as regards water quantity and water quality. It is unlawful for an upstream owner, for example, to take water from a stream, or pollute it to such an extent, that the "natural" quality and quantity of the water (from the view point of the downstream landowner) is impaired. But there is no equivalent rule relating to subsurface water. Any landowner can draw off as much subsurface water as he or she likes - even to the extent of completely depriving neighbouring landowners to any supply whatever. Halsbury again[76]:-

> "The common law confers no rights in respect of subterranean water running in undefined or unknown channels, except that the owner of land may sink wells in his own land and so obtain a supply of water ,although another owner, by doing the same, may draw off the water from his neighbours."

Furthermore[77]:-

> "An owner of land under which there is subterranean water not in a known and defined channel has no right at common law to the support of such water and his neighbour may draw off such water as he pleases. Furthermore, water in an unknown channel or percolating water cannot be the subject of prescription or grant, and its diversion by one landowner may not be challenged by another, whatever the former's motive for doing so may be and however long the latter may have enjoyed the use of the water."

Assuming then that geothermal water is (in the rather archaic language of the common law) "percolating" water there is no right of property in it whatever. It belongs to whoever appropriates it (putting to one side the small problem that when geothermal water is "appropriated" it is at that point often no longer water at all). No landowner can complain if an adjoining landowner manages to abstract all the geothermal fluid in the neighbourhood; nor does the common law offer any protection to those who have put down bores or wells first. Any newcomer can move in next door and appropriate all geothermal water in the system, if he or she is so minded. In short, the common law in its pure form gives no right of priority and no protection to existing users.

6.8 It must be emphasised that the above rules do not mean that anyone at common law can take groundwater. To move onto someone's land and take groundwater would be a trespass. One consequence of the common law rules is that leases, easements and licences aside, no-one can have access to groundwater except landowners. Although there is no property right in groundwater, the common law does not recognise any public right of access to it.

6.9 The different rules relating to surface water and groundwater did not emerge in England until the decision of the Exchequer Chamber in Acton v Blundell (1843) 12 M & W 324, 152 ER

1223. One can only guess as to why the issue had not arisen until then - one possible explanation is that it was not until the nineteenth century and the emergency of steam-driven pumps that the technology became available to seriously deplete an adjoining landowner's supply of groundwater. In this case the plaintiff was a manufacturer, carrying on the business of cotton-spinning. The plaintiff relied on the flow of groundwater from various underground springs to fill wells which in turn supplied the mill. The defendant, an adjoining landowner, had subsequently sunk coal-pits adjacent to the plaintiff's land. This had had the effect of rendering the flow of water insufficient for the purposes of the mill. The legal issue before the Court of Exchequer Chamber was, as Tindall CJ. defined it[78]:-

> "...whether the right to the enjoyment of an underground spring, or of a well supplied by such spring, is governed by the same rule of law as that which applies to, and regulates, a watercourse flowing on the surface."

The Court of Exchequer found that it was not. No equivalent of riparian rights applied and therefore the plaintiff's appeal was dismissed. The Court's reasons for so finding are interesting. Firstly, the flow of underground water, as opposed to surface water, is invisible and unknowable. The doctrine of riparian rights on the surface is based on a theory of mutual consent between landowners based in turn on the fact that the flow of water is <u>known</u> - but this cannot apply (in the Court's view) to groundwater[79]:-

> "...[I]n the case of a well sunk by a proprietor in his own land, the water which feeds it from a neighbouring soil does not flow openly in the sight of the neighbouring proprietor, but through the hidden veins of the earth beneath its surface; no man can tell what changes these underground sources have undergone in the progress of time: it may well be, that it is only yesterday's date, that they first took the course and direction which

enabled them to supply the well: again, no proprietor knows what portion of water is taken from beneath his own soil: how much he gives originally, or how much he transmits only, or how much he receives: on the contrary, until the well is sunk, and the water collected by draining into it, cannot properly be said, with reference to the well, to be any flow of water at all. In the case, therefore, of the well, there can be no ground for implying any mutual consent or agreement, for ages past, between the owners of the several lands beneath which the underground springs may exist, which is one of the foundations on which the law as to running streams is supposed to be built; nor, for the same reason, can any trace of a positive law be inferred from long-continued acquiescence and submission, whilst the very existence of the underground springs or of the well may be unknown to the proprietors of the soil."

The other reason for not permitting a taker of groundwater is to have a prior right to it was that doing so would enable landowners to effectively prevent their neighbours from using their land. In the view of Tindal CJ.[80]:-

"...If the man who sinks the well in his own land can acquire by that act an absolute and indefeasible right to the water that collects in it, he has the power of preventing his neighbour from making any use of the spring in his own soil which shall interfere with the enjoyment of the well. He has the power still further of debarring the owner of the land in which the spring is first found, or through which it is transmitted, from draining his land for the purpose cultivation of the soil: and thus, by an act which is voluntary on his part, and which may be entirely unsuspected by his neighbour, he may impose on such neighbour the necessity of bearing a heavy expense, if the latter has erected machinery for the purposes of mining, and discovers, when too late, that the abstraction of the water has already been made. Further, the

> advantage on one side, and the detriment on the other, may bear no proportion. The well may be sunk to supply a cottage, or a drinking-place for cattle; whilst the owner of the adjoining land may be prevented from winning metals and minerals of inestimable value. And, lastly, there is no limit of space within which the claim of right to an underground spring can be confined: in the present case the nearest coal-pit is at the distance of half a mile from the well: it is obvious that the law must equally apply if there is an interval of many miles."

Since this was the first case which had arisen on the point, the Court took the opportunity to fortify its conclusions by referring to the Roman Law rule. In Roman Civil Law a landowner who takes groundwater for his own use is not liable to his neighbour even if the neighbour is deprived of the use of water - provided that the taker of the water intended to use the water for his own purposes (that is, was not motivated by spite): Digest lib. 39, tit. 3, s.12. The common law, however, was to move from the Roman Law in the later decision of Bradford Corporation v Pickles [1895] AC 587 where the action of a landowner in deliberately abstracting water in order to compel the city corporation of Bradford to purchase his land was held not to be actionable.

6.10 One interesting feature of the decision in Acton v Blundell was that the Court of Exchequer Chamber left open the possibility that a different rule might apply if there had been an uninterrupted use of groundwater by one landowner for a reasonably long period:-

> "It is scarcely necessary to say, that we intimate no opinion whatever as to what might be the rule of law, if there had been an uninterrupted user of the right for more than the last twenty years; but, confining ourselves strictly to the facts stated in the bill of exceptions, we think that the present case, for the reasons above given, is not to be governed by the law which applies to rivers

and streams, but that it rather falls within that principle, which gives to the owner of the soil all that lies beneath his surface..."

In Acton v Blundell itself the plaintiff had sunk his wells in 1821 and the defendants constructed their mines in 1837. But the possibility that the situation might have been very different had the plaintiff been using the underground water for a much longer period was something the Court was willing to leave open. It is, in fact, hard to see why this would logically make a difference for most of the reasons put forward by the Court, with the possible exception that a long-term use would presumably become known to the neighbourhood and thus that adjoining landowners might be thought to imply consent to it.

6.11 Another point relating to Acton v Blundell is that one aspect of its reasoning - that groundwater flow is undiscoverable and unknowable - has only limited applicability to geothermal resources. Usually the existence of sub-surface geothermal fluid is revealed by obvious surface geothermal features. Furthermore, since it was those (i.e. surface) features which were actually used by Maori communities - something that anyone observing the community could see - can it not be argued that adjoining landowners plausibly do consent to the continuation of the use?

6.12 To recapitulate:-

(a) The Common law relating to groundwater is reasonably well-settled. The water belongs to nobody until it is abstracted. When it is abstracted it becomes the property of whoever abstracted it.

(b) One effect of the common law rules is that access to groundwater is limited to landowners (or those who obtain the consent of landowners to abstract groundwater).

(c) On the assumption that geothermal fluid is groundwater the "law of capture" applies to it - that is,

that whoever lawfully abstracts the resource, even from underneath neighbouring land, acquires property in the resource thus "captured".

(d) Some aspects of the reasoning in Acton v Blundell do not apply very convincingly to geothermal waters, particularly since geothermal systems have obvious surface manifestations in most, although admittedly not all, situations.

D. The Geothermal Resource and Other Energy Resources

6.13 In terms of physical characteristics and properties, there are obvious distinctions between a geothermal system and a petroleum reservoir. For one thing, sustainable management of a geothermal system is possible, albeit difficult, whereas a petroleum or natural gas reservoir contains a finite quantity of the resource. There is, however, a similarity in that both resources are now, with the onset of modern technology, primarily valuable as energy resources. Both share the attribute that they are contained in pressurised systems, so that the sinking of an oil well or geothermal bore creates a low pressure point facilitating extraction. In both cases loss of pressure will cause the resource to become unobtainable.

6.14 The common law rules regarding ownership of petroleum in situ are themselves a derivation from the common law groundwater rules[81]. In the United States this is reflected in the so-called "law of capture" - i.e. petroleum belongs to no-one until abstracted, and there is nothing to prevent a landowner abstracting as much of the resource as he or she can, even if this means that petroleum is extracted from beyond the boundaries of his or her own property[82]. In New Zealand this rule is of only marginal effect as a consequence of s.43 of the Petroleum Act 1937 (now s.10 of the Crown Minerals Act 1991), which vests ownership of the entire resource in the Crown[83]. The "law of capture" is primarily a rule of property ownership, and it is not easy to see what effect it can now have in a context where the

resource is Crown-owned. Whatever precisely the common law regime in New Zealand was, it has been effectively obliterated and replaced by a system which is essentially wholly statutory. The situation is not unlike that regarding geothermal resources after 1953. The key difference is that whereas in the Petroleum Act 1937 the Crown nationalised ownership of petroleum, in the Geothermal Energy Act it achieved effectively the same result by vesting sole use rights in the Crown. Whatever the explanation for the differing approaches in 1937 and 1953, it cannot be attributed to different common law regimes governing the two resources, for the common law rules appear to have been the same.

6.15 It is important to emphasise that the issue of Maori property rights in petroleum was extensively discussed as the Petroleum Bill made its way through Parliament through 1936 and 1937. In the debate Sir Apirana Ngata said[84]:-

> "Did the Maoris know that there was oil under their lands when they signed the Treaty of Waitangi in 1840? No. Nor did they know there was gold or coal under their land, or that the timber which grew on their lands had a greater value than for making canoes and carvings for their houses and so on. Is the argument now that, because the poor savage was ignorant of the things that have been made possible by the pakeha, he is to have no benefit or advantage from them today? If so, it will not hold water."

Concern about the Treaty of Waitangi implications of the Petroleum Act[85] was such that the matter was referred to the Solicitor-General for an opinion on the point. He concluded that the legislation did not violate the Treaty for the reason that the Act, although certainly expropriatory, affected everybody regardless of race:-

> "The legislation is comprehensive, and treats equally all subjects of His Majesty."[86]

No doubt these issues will be traversed again at some stage of the Taranaki raupatu hearings[87]. The debate on the Treaty implications of the petroleum legislation represents a marked contrast with the debates on the geothermal legislation in 1952 and 1953, where Maori issues went virtually unmentioned and the Treaty of Waitangi was mentioned not at all.

E. Minerals

6.16 At common law minerals belong to the landowner. Minerals are part of a landowner's estate in land, which theoretically extends from the heavens to the centre of the earth. Mineral ownership can, however, form a separate estate in fee simple which can be severed from the surface title. Once this has been done the surface title does not, and never can, include the mineral title until this has been re-purchased. An added complexity in New Zealand has been the Crown's practice of reserving to itself ownership of minerals, or rights of access, or both at the time of the initial Crown Grant.

6.17 Geothermal fluids usually contain minerals in solution, sometimes of commercial valuable quantities. At common law ownership of groundwater and ownership of minerals are based on quite different assumptions - groundwater belongs to no-one, but minerals belong to the landowner. What is the position when geothermal minerals in solution are abstracted from my land by my neighbour? There are two cases which have some bearing on this, although none were actually concerned with geothermal water. In Trinidad Asphalt Co. v Ambard [1899] AC 594, a decision of the Privy Council, the defendants extracted pitch from the land of a neighbouring landowner. This extraction had fairly dramatic effects, as Lord Macnaughten makes clear:-

> "...The section of the stratum of pitch thus exposed to the atmosphere began to melt. The pitch oozed out and the excavation yielded abundantly. Between 200 and 300 tons of pitch were 'won', as the phrase goes. The surface of the plaintiff's land began to sink and crack. A

> depression was formed in shape like half a saucer about five feet deep in the centre at the boundary line, and going back in a semicircle with a radius of about sixty feet. A series of cracks appeared on the surface from eight to ten feet long by six to eighteen inches wide, and some buildings or sheds of no great value were more or less wrecked." ([1899] AC 599).

In the Privy Council, much of the argument centred on whether pitch was analogous to groundwater. The Privy Council concluded that pitch, despite its fluid nature, was a mineral and belonged to the landowner: it was not in any way analogous to groundwater. Said Lord Macnaughten[88]:-

> "The judgment of the learned Chief Justice is short and to the point.....'Asphaltum', observes the Chief Justice, 'is a mineral - not water'. He found that the defendants had interfered with the plaintiffs' right of support, and that they had let down the surface of the plaintiffs' land, and consequently done injury to the plaintiffs' house; and also that the plaintiffs had suffered injury by the loss of the asphaltum which, on the removal by the defendants of the lateral support of their land, passed into the defendants' land, and was appropriated by them to their own use. Their Lordships agree with the learned Chief Justice. It is not necessary to discuss the question on which Lewis J. differed from Nathan J. as to the right to support from subterranean water, because, as the Chief Justice observes, the substance which afforded support in this case was not water."

The landowner here therefore had a right to support - the extraction of the pitch had caused his land to subside. Michael Crommelin, Professor of Law at the University of Melbourne, states that the Privy Council's conclusions "are entirely at odds with the law of capture"[89].

6.18 The decision in Trinidad Asphalt Co. v Ambard can be contrasted with The Salt Union Ltd v Brunner, Mond & Co. [1906] 2 KB 822, a decision of the Court of King's Bench in the United Kingdom. In this case the defendants sought an injunction to restrain the plaintiffs from pumping salt brine from a mine in Cheshire. The defendants had pumped from this mine an enormous quantity of brine, something like 2093 million gallons representing 2,791,000 tons of commercially very valuable rock salt. The Court accepted the contention of the plaintiffs that the operation of the mine had led to rock salt on the plaintiffs' property being dissolved and abstracted by the defendants: the defendants had been taking the plaintiffs' salt. Counsel for the plaintiffs argued that[90]:-

> "The brine which the defendants pumped was, to the extent to which it was formed by the dissolution of the plaintiffs' salt rock, the plaintiffs' property, and the defendants were guilty of a trespass in taking it. Any contrivance by which one person takes away the rock-salt of another, whether it be by means of a pickaxe or a pump, is equally wrongful. The rule that there is no property in percolating underground water has no application except to water, and brine is a distinct thing from water."

Counsel for the defendants argued in response[91]:-

> "The rule laid down in Acton v Blundell and Chasemore v Richards [(1859) 7 HLC 349] as to the right of a landowner to appropriate percolating underground water applies equally to brine. The distinction between water and brine is one of degree only, not of kind; for all water contains a certain proportion of salt."

The Court of King's Bench found for the defendants. The judgment of Lord Alverstone CJ. is, however, not exactly helpful. Although he found for the defendants, he also stated that the cases as to underground water were not conclusive. He fails,

however, to explain what the "special circumstances" of this case were[92]:-

> "...I think that when a man puts down a shaft and pumps in his own land (both of which acts are prima facie lawful) the act does not of necessity become unlawful simply because it turns out that the brine thereby obtained may be the result of dissolution of rock in another man's property. It must depend upon the particular circumstances of the case. I state this view with very great diffidence, but it is the best that I am able to form after very careful and anxious consideration. So far as one may argue from analogy, pumping of brine under such circumstances appears to me to have more in common with the cases of underground water than with the cases of support upon which the plaintiffs rely, but I have already indicated that, in my opinion, the cases as to underground water are not conclusive, assuming matters to remain in their natural condition."

In both Trinidad Asphalt and in Salt Union the abstraction had caused subsidence on the land of the plaintiffs, so the cases cannot be reconciled on that basis. Since the Court declines to find the groundwater analogy to be "conclusive" it would be interesting to know what the other factors (in the view of the Court) might be. The real distinction appears to be that the Courts see a difference between a substance such as pitch, manifestly not water, and minerals dissolved in solution in water. Surely, however, there must be some limitations on the principle suggested in the decision in Salt Union. Can a landowner abstract any valuable mineral from adjoining land as long as it is in solution form contained in groundwater? The decision in Salt Union is potentially a very serious inroad on the originally quite strict rule that at common law minerals (with certain special exceptions, such as gold and silver) belong absolutely to the landowner. It is, however ,entirely in accord with the "law of capture" which is applied to petroleum in the United States, which, as Crommelin points out, can in no way be

reconciled with the Trinidad Asphalt case. Pitch is, after all, a kind of petroleum.

F. The Aboriginal Title Rule and Geothermal Energy

6.19 The final aspect of the common law background which needs to be considered is the aboriginal title rule and its implications for the law relating to geothermal resources. This doctrine has been brought to the fore in recent years as a consequence of the many publications on the subject by Dr Paul McHugh of Sidney Sussex College Cambridge[93], and by important decisions of the Courts in Canada, the United States and New Zealand[94]. The aboriginal title rule is a rule of common law that the property interests of "aboriginal" populations survive and remain enforceable after a transfer of sovereignty, until, that is, such time as the new sovereign power has extinguished the property right. The aboriginal title rule involves a number of uncertainties, however, which have been usefully identified by David Elliott, a Canadian scholar, as follows[95]:-

> (i) A question of legal status: To what extent is aboriginal title recognised in law? To what extent has aboriginal title received recognition in the various sources (prerogative, judicial, legislative or other) of law?
>
> (ii) A question of scope and content: What is the actual scope and content of the rights derived from aboriginal title?
>
> (iii) A question of termination or restriction: What, if anything, can put an end to aboriginal title or restrict the rights derived from it? and
>
> (iv) A question of compensation: To what extent, if any, is there a legal obligation on government to pay compensation for termination or restriction of aboriginal title?

These issues will form the basis of the following discussion.

6.20 It is no longer open to doubt that the aboriginal title rule is a recognised part of New Zealand law. Although Blackburn J. in the Milirrpum case expressed the view ((1971) FLR 141, 242) that the aboriginal title rule was not part of the law of New Zealand, just as it was not part of the law of Australia, this is certainly wrong. The leading recent case is the decision of Williamson J. in Te Weehi v Regional Fisheries Officer [1986] 1 NZLR 680. The case (like all of the relevant New Zealand cases) was concerned with fishing rights, and in particular with s.88(2) of the Fisheries Act 1983, which provides that "[n]othing in this Act shall affect any Maori fishing right". Williamson J. rejected the argument advanced by the Crown that "any Maori fishing right" meant only a right created by statute. He instead characterised the rights protected by s.88(2) as "customary" rights, rights which must still subsist unless they have been extinguished. Of course, far from being extinguished, such customary rights were in fact preserved by s.88(2) as counsel for Mr Tom Te Weehi (who had been charged under the fisheries regulations with taking undersized paua) specifically contended. Williamson J. also held that such customary rights were not extinguished at the point of substitution of the native customary title with a title order pursuant to the Native Affairs Acts - as was stated in the earlier cases of Inspector of Fisheries v Weepu [1956] NZLR 920 and Keepa v Inspector of Fisheries [1965] NZLR 322. These points will be developed a little further below. Suffice to say that the case is an unequivocal recognition of the aboriginal title rule for the purposes of the law of this country.

6.21 A slightly more guarded view is that of the Law Commission as expressed in its report The Treaty of Waitangi and Maori Fisheries: Mataitai: Nga Tikanga Maori me te Tiriti o Waitangi (March 1989). The Commission places primary weight on the divergence between the decision in Te Weehi and Stout CJ.'s decision in Waipapakura v Hempton (1914) 33 NZLR 1065[96]:-

> "Te Weehi is authority for the view that traditional Maori fishing rights exist and are not subject to the regulatory regime of the Fisheries Act. Waipapakura had held that customary rights could not receive legal recognition without legislative sanction. In Te Weehi Williamson J. preferred the view that such rights continued unless extinguished in one way or another.....[T]here is at least an implicit recognition [in Te Weehi] of a common law aboriginal title, and the approach and tone are quite different from most of the New Zealand cases since Wi Parata."

6.22 Much more difficult than the issue of whether the rule is part of New Zealand law (it is safe to state that it is), is the question of the scope of rights protected by the aboriginal title rule. In Te Weehi Williamson J. is clearly under the impression that the "customary rights" protected by s.88(2) are limited to non-exclusive subsistence and (possibly) other clearly "traditional" uses. The right at issue, he says, is only a "right limited to the Ngai Tahu tribe and its authorised relatives for personal food supply". District Court decisions after Te Weehi reveal marked confusion about the scope of rights protected by the section[97]. There is little indication of any sort of consensus. It is possible that the Courts would probably balk at holding that s.88(2) protects Treaty fishing rights as these have been exhaustively (and expansively) explained by the Waitangi Tribunal in its Muriwhenua Fishing Report (1988). The narrower problem about the meaning of s.88(2) is bound up with the wider question of the scope of the rights protected by the aboriginal title rule, a problem which is in essence the same problem as posed by the confusion over the meaning of the section. Quite what does the aboriginal title rule protect? The answer seems to be: it protects rights of use and occupancy in land, the rights being those which were "aboriginally" exercised as at the point of acquisition of sovereignty and which (probably) have been in continuous use.

6.23 There has never been an aboriginal title claim made to geothermal resources in this country (or anywhere else for that matter). None of the voluminous literature on aboriginal title even touches on geothermal resources. It is, however, hardly possible to over-emphasise the point that the critical difficulty with aboriginal title is not the existence of the rule but its scope. What is the aboriginal title in respect of geothermal resources? It is limited to the right to boil kumara in hot springs or gather kokowai to make traditional dyes and paints?

6.24 The closest parallel to geothermal aboriginal title claims that the present author has managed to find are Indian claims to water in North America. In the western United States and Canada water is a resource of critical importance and the source of endless litigation. This has included claims by tribal groups to water based both upon treaties (which are enforceable in the ordinary courts and the United States and also in Canada) and on the aboriginal title rule. The Canadian case law is studied in detail in a valuable text by Richard H. Bartlett, Aboriginal Water Rights in Canada: A Study of Aboriginal Title to Water and Indian Water Rights (Calgary, 1988). In this book Bartlett draws a distinction between general aboriginal title rights to water and reservation-based claims. General aboriginal title rights in water are probably limited to the former "aboriginal" uses. This follows from his examination of the leading United States and Canadian decisions, these being Attorney-General for Ontario v Bear Island Foundation, [1985] 1 CNLR 1 (Ont SC), Guerin v The Queen 13 DLR (4th) 321, Winters v United States, 207 US 564 (1908) 52 L Ed 340, and Arizona v California 373 US 546 (1963) 10 L.Ed 2d 542. Bartlett concludes[98]:-

> " The analysis suggests that aboriginal title to water is confined to traditional uses, and that more extensive rights only arise upon the establishment of a reservation, whether by treaty or otherwise. This is consistent with the facts of the cases which have allowed non-traditional Indian rights to water. All have involved reserve lands and waters.

An analysis of the United States jurisprudence which favoured the actual decisions rather than the inconsistency of the language of the judgments suggest a conclusion, unsurprisingly, similar to that tentatively arrived at upon examination of the Canadian decisions. It suggests that common conclusion that aboriginal title includes water rights, but rights which are limited by traditional and historic uses. It suggests that the aboriginal peoples could not reserve rights to contemporary uses because aboriginal title does not include those rights. The tentative nature of this conclusion should not be under-emphasized. It bears repeating that Chief Justice Dickson of the Supreme Court of Canada [in Guerin, above, DLR at 339] considered that the very exercise of attempting to describe aboriginal title was 'potentially misleading' and left open the possibility of a radically different analysis of aboriginal title."

6.25 It appears that in North America a quite different approach applies to on-reservation water rights. This is due to the fact that on-reservation rights are normally Treaty-based. The leading cases is the decision in Winters v United States 207 US 564 (1908), a decision of the Supreme Court of the United States. This case was concerned with the water rights of the Gros Ventre and other Indians living on the Fort Belknap reservation. The reservation was established after a Treaty had been concluded between the tribes and the Federal government, an event which occurred before the state of Montana came into existence in 1889. The Indians and the United States Federal Government diverted from the Milk River, which formed a boundary of the reservation, a significant quantity of water. The defendants were irrigation companies and ranchers who, acting legally under Montana law, appropriated water thus depriving the Indians and the Federal Government of water necessary for irrigation purposes on the reservation. The United States

under no obligation to do so and the United States had benefited greatly from the transaction. Part of the arrangement was that the Indians would adopt a new kind of life on the lands reserved to them - something that could not possibly be done without access to water in volumes sufficient to irrigate the land for farming. The Indian legal entitlement in respect of water is therefore quite different from the rest of the population. Moreover this "Treaty" based right is rather more extensive than the interests protected by the aboriginal title rule.

6.26 Applying this distinction to the situation in New Zealand is quite difficult. Clearly the American and Canadian law has evolved in a constitutional and jurisdictional framework which is quite different from ours. Perhaps a similar argument might, however, be made that is analogous to the Winters approach. It could be argued that Maori freehold land is not altogether dissimilar from reservation land in the United States at least in the sense that it was implicit in the arrangements between the Crown and the Tribes that Maori would be able to sustain themselves in a modern economy on their remaining blocks of land. To effectuate this, it might be argued at common law that Maori have certain priorities in terms of access to resources, including (where relevant) geothermal resources. Such an argument might succeed, but it would need considerable research and care in presentation. It should need no emphasis that these possibilities are of no particular relevance to the Waitangi Tribunal except insofar as it is necessary to understand the adequacy of the common law rules.

6.27 Questions of termination and compensation can be discussed together and relatively briefly. The aboriginal title is no more and no less than that the aboriginal title subsists until extinguished. There is little authority in New Zealand on the question of what constitutes lawful extinguishment. The probable answer is that the only lawful mode of extinguishment is by statute where the statute exhibits a "clear and plain intention" to extinguish the right. In Te Weehi (above) Williamson J. cited the important Canadian case of Hamlet of Baker Lake v Minister of

Indian Affairs and Northern Development (1979) 107 DLR (3d), which establishes the "clear and plain intention" test for statutory extinguishment of aboriginal title. Williamson J. does not actually say in so many words that statutory extinguishment is the only permissible mode, but this seems to be implicit in his adoption of the reasonably strict Baker Lake test. Applying this to geothermal energy, it seems beyond argument that s.3 of the Geothermal Energy Act 1953 fails absolutely to extinguish Maori aboriginal title in geothermal resources. The provision does not manifest any "clear and plain intention" to extinguish such title. That being so it is unnecessary to discuss questions of compensation. In Canada the question as to whether there is a right of compensation for extinguishment of aboriginal title has been left open by the Supreme Court of Canada - reference is here made to Hall J.'s judgment in Calder v Attorney-General of British Columbia [1973] SCR 313. For the period 1953-1991 claims to compensation, if any, were in any event excluded by s.14 of the Geothermal Energy Act 1953.

6.28 Finally, though this is moving into counsel's domain, it needs to be emphasised too that s.3 of the Geothermal Energy Act has now been repealed as a consequence of the enactment of the Resource Management Act 1991. Management has been wholly vested in the regional councils.

6.29 Common Law Claims : Summary

(a) There never has been a common law claim made in respect of geothermal resources in New Zealand;

(b) The common law rule of aboriginal title has only been dealt with in New Zealand in respect of fisheries claims;

(c) As a result of (a) and (b) the outcome of a common law aboriginal title claim to geothermal resources is unpredictable;

(d) It is reasonably clear that the common law of aboriginal title is part of New Zealand law - which makes New Zealand legally closer to Canada and the United States than it is to Australia;

(e) The scope of the aboriginal title rule is quite uncertain. In particular it is difficult to be confident about whether the Courts would restrict such a claim to "pre-European" use of the resource. Even if they did so restrict it, it is difficult to be sure about what is meant by pre-European use and whether this could extend to the development of such uses by advanced technologies;

(f) The language used in s.3 of the Geothermal Energy Act 1953 was insufficient to extinguish Maori interests in geothermal resources. In any event s.3 is not repeated in the Resource Management Act 1991.

7.0 THE BACKGROUND TO THE 1952 AND 1953 ACTS

A. Geothermal Energy for Electric Power Generation

7.1 In 1947 the Hon. R. Semple, Minister of Works and Minister in Charge of what was then called the State Hydro-Electric Department presented the department's annual report to parliament[100]. Semple began by explaining the severe difficulties the country faced in terms of adequate supplies of electricity:-

> "The past year has been one of great difficulty in the field of electricity supply. With increasing difficulty in obtaining any alternative means of supplying light, heat, and power, and in accord with the Government's general policy of encouraging local manufacture wherever possible, the demand for electricity supply has continued to grow. Unfortunately, however, consequent on the war and the subsequent disorganisation throughout the world, there are serious delays in obtaining the necessary plant