

ENVIRONMENTAL REGULATION AND PETROLEUM EXPLORATION PERCEPTIONS AND REALITY

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Governments are paying increasing attention to environmental issues. But in a world in which the threat posed to various animal species and to the world itself, is high in public consciousness, there is a danger that perception of environmental problems can outstrip reality.

Currently, administrative responsibility for environmental matters is divided either side of the boundary of New Zealand's territorial sea. For the offshore oil exploration industry, this division has resulted in different environmental requirements being set. These differences are explained by reference to the statutory consents required of an operator prior to spud date.

Changes in the requirements for consents are discussed, along with an assessment of where emphasis in environmental matters may be headed in the future. Finally, the implications of proposed changes to resource management laws as they may affect the environmental requirements of offshore oil exploration, are briefly outlined.

THE POLITICAL CLIMATE

Nothing concentrates the popular mind better than an image of development damaging some feature of the landscape. However, there is often a huge gulf between popular perception and reality.

Whether or not damage does occur, ceases to be the issue. Instead it becomes a question of coming to terms with a climate of perception and opinion. The grounding of the Exxon Valdez and subsequent widespread pollution of Prince William Sound has cast a shadow over the oil industry. This is not in any way diminished by the fact that oil exploration has been conducted in recent times without any kind of significant mishap. There is an irony in the fact that petroleum exploration, because it is perceived to be potentially hazardous or damaging, is conducted within a regulatory framework that is far more demanding than that applying to the passage of ships such as the Exxon Valdez. Petroleum exploration and development has occurred in a world of divergent values.

Responsibility for reconciling these values, lies in the hands of the politicians. Their very survival depends on their capacity to adapt quickly to changing times and changing circumstances. The public perception of a world environment at serious risk, creates political problems, but also political opportunities. The extent to which environmental issues are now influencing political direction can be seen internationally, as well as within New Zealand. Political commentators in Australia are predicting that environmental issues will determine the outcome of next year's federal election in that country. The Tasmanian State Government has already felt the influence of the rising tide of environmental concern.

The rise of the Green Party in Western Europe is well known. In Britain, the Greens earlier this year celebrated triumph in the European Election. The response by the ruling Conservative Party has been swift, with the demise of one Cabinet Minister and the elevation of another.

New Zealand may not have its own Green Party, but there is growing evidence that both major political parties have seen the warning signs and are reacting. The creation of two Government departments (the Ministry for the Environment and Department of Conservation) as well as the appointment of a Parliamentary Commissioner, all reflect the growing political sensitivity towards environmental issues.

The environment has been a popular cause for a number of years in what might be described as an anti-establishment sense. Today, demonstrations like the *Save the Ozone Layer* rally at Parliament and the launching by the Minister for the Environment of a Green Ribbon Award for environmental consciousness, have Government sanction. It is not inconceivable that within the near future, New Zealand will have its own Environment Protection Agency.

The Prime Minister's decision to retain the Environment portfolio is the strongest indication that Labour appreciates the political sensitivity of environmental issues. While much of the change in attitude to the environment has become obvious during the term of the Fourth Labour Government, it would be wrong to conclude that only Labour has a finely tuned appreciation of environmental issues as the country approaches the 1990 General Election.

Opposition National Party Environment spokesperson, Rob Storey (1989), speaking in June to a farming group sought to raise awareness of the issue. He said: "The so called 'Green

Revolution' converted Mrs Thatcher, changed the Government of Tasmania, has become powerful in European politics and will have an impact on New Zealand politics."

Opposition Leader Jim Bolger underlined the importance National will be attaching to the environment in a speech early last month (1989). He gave an undertaking that both the Minister for the Environment and the Minister of Conservation, would hold Cabinet rank in a National Government. He also floated the proposition of an Environmental Protection Agency. "This would not be a huge bureaucracy with an all powerful role in resource management; rather it would act as a regulatory body with a number of important functions," he said.

RESOURCE MANAGEMENT LAW REFORM

According to Prime Minister, Geoffrey Palmer (1988), the biggest step in what he describes as a domestic clean up, is the Resource Management Law Reform, a major review of all the laws which govern the use of the country's resources. The review, co-ordinated by the Ministry for the Environment, takes in some 15 Acts, including the Town and Country Planning Act, the Water and Soil Conservation Act, the Mining Act, the Harbours Act, the Marine Pollution Act and, of course, the Petroleum Act.

Resource Management Law Reform covers:

- Town and Country Planning Act 1977
- Water and Soil Conservation Act 1967
- Soil Conservation and Rivers Control Act 1941
- Mining Act 1971
- Coal Mines Act 1979
- Geothermal Energy Act 1953
- Petroleum Act 1937
- Quarries and Tunnels Act 1982
- Noise Control Act 1982
- Clean Air Act 1972
- Environmental Protection and Enhancement Procedures and relevant sections in:
 - Continental Shelf Act 1964
 - Iron and Steel Industry Act 1959
 - Atomic Energy Act 1945
 - Local Government Act 1974

With the inclusion of the Coastal Legislation Review formerly under the Department of Conservation, the following Acts are also relevant to RMLR:

- Harbours Act 1950
- Marine Farming Act 1971
- Marine Pollution Act 1974
- Sand Drift Act 1908
- Fisheries Act 1983
- Marine Reserves Act 1971
- Marine Mammals Protection Act 1978
- Territorial Sea and Exclusive Economic Zone Act 1977

To quote the Minister, (Palmer, 1988) "The result will be not just law which is more streamlined and efficient and above all more fair, but law which better equips us to examine an environmental or resource management situation as a whole and come up with a solution which makes every kind of sense - environmental, economic, social and cultural".

Geoffrey Palmer (1989) told his audience that an approach to environmental management that is fragmented, unco-

ordinated, ad hoc and piecemeal, has served us badly. Few would disagree.

The creation of new environmental agencies has been achieved without restructuring the administrative and legal framework they are expected to operate. To date, these administrative agencies have different policy directives. These are often in conflict with the broad principles of legislation they may be required to administer. For example, the Petroleum Act (1937) clearly advocates the exploration and development of New Zealand's petroleum reserves. By a quirk of fate, the Department of Conservation, acting as agent for the Crown, administers the seabed within the 12 mile territorial sea. The Conservation Act (1987) advocates environmental conservation. Conflict with the provisions of the Petroleum Act is obvious. Clearly, all parties affected would welcome Resource Management Law Reform overcoming such glaring conflicts. However, amid the enthusiasm for reform, there is some doubt the conflict of interest between development and conservation will be resolved. In part, this results from a lack of specific details on the exact legislation and administrative changes proposed in part from the way the reform process is being conducted. The ground is shifting all the time, and has been for months. The creation of the Department of Conservation in 1987 has led to reviews involving coastal legislation, the protected natural areas programme and the Marine Reserves Act. When the principles of the Conservation Act are considered, the direction of these reviews could be considered pre-determined.

The political reform initiatives described, have important implications for the petroleum exploration industry. The outcome will determine the manner in which exploration licences are awarded, how any rights and restrictions for access to explore are imposed and the operational conditions under which exploration may proceed. The rules are about to change and all parties need to be sure they understand the implications.

THE CURRENT REGULATORY SYSTEM

Few appreciate the extent to which companies weigh up and evaluate a whole variety of factors before embarking on an exploration programme in this country. These include political stability; the geology of the area; the technical feasibility of exploring and developing a discovery. Environmental and legal constraints which restrict rights of access or impose time consuming delays, become another factor which can influence the decision to invest in New Zealand. Becoming enmeshed in a bureaucratic tangle of red (or green) tape, is as valid a reason for turning away from a country as striking insurmountable technical problems. Although this has yet to happen, the existing system, at least for offshore exploration within the territorial sea, is becoming time consuming and increasingly difficult because of the problems associated with obtaining rights of entry into an area.

Currently, the available land and water area is divided into a numbered grid system. Blocks are allocated on a tender system based on work programmes put forward by companies. Under the Petroleum Act (1937), licences are issued by the Ministry of Energy to explore a particular block.

Under the current allocation system, an exploration licence purely entitles the licensee the right to explore. It does not carry with it the rights of access. The right of access to carry out exploration activities is contingent on the licence holder gaining a number of secondary consents or approvals. In simple terms, it is rather like being granted the lease of a house without being given the authority to enter it, let alone live in it. To those not familiar with the system of gaining approvals, this distinction may not sound significant. In fact, licence blocks are often awarded to companies some distance from New Zealand, where appreciation of the scenic, geographic and environmental values of the country may not be highly developed. Put more bluntly, a company may find itself awarded blocks containing areas perceived to have very considerable environmental sensitivity or value.

Once awarded, few realise the dilemma the exploration company then faces. The successful tenderer effectively has a contract with the Government to carry out a specified programme of work. It must carry out this programme within a five year time span or relinquish the block. A commitment to a work programme is a commitment to spend considerable sums of money. Should that programme include a commitment to drill exploration wells, the company does not have a great deal of choice about where it drills. That is determined for it by the nature of the geological structures in the licence block.

In areas of high environmental value, a company is less likely to succeed in obtaining the necessary secondary consents. It can find itself with approval to explore for petroleum contradicted by the declining of applications for secondary consents after the expenditure of a significant amount of the exploration budget. Most would accept that petroleum exploration is not cheap. But few would appreciate the scale of spending that can be involved and the returns this investment gives to the country. Energy Minister David Butcher (1988) in noting that at least four offshore wells were to be drilled in the Taranaki Basin made the point that it cost \$20 million to drill an offshore exploration well. The benefits to Taranaki, he said, were obvious.

At the same time New Zealand gains detailed information about a critical strategic resource. Probably, better understood is the way the results of exploration have the potential to generate much needed jobs in areas desperate for regional development opportunities. Possibly too few people in this country realise or appreciate these aspects of petroleum exploration.

WHERE THE CURRENT PROBLEMS LIE

It is the problem of gaining secondary consents to carry out a drilling programme that is becoming a source of major frustration for petroleum explorers. For example, offshore exploration drilling in the 12 mile territorial sea requires multiple secondary consents to be obtained. These include: consent from the Minister of Conservation to enter the seabed; consent to discharge waste to natural water from the local catchment authority; consent from the Minister of Transport for navigational matters and to an oil spill contingency plan; and approval from the Chief Petroleum Inspector of the Ministry of Energy for a well plan.

Of these agencies, those charged with considering the potential environmental impacts from exploration drilling

take the longest time. These include the local catchment board and the Department of Conservation. Typically, a catchment board can take between two and six months depending on whether objections to an application are received. The Department of Conservation can take even longer.

It is reasonable to ask why it should take so long. Typically, an offshore well takes 50 to 70 days to complete. It may involve a drilling platform that either floats or jacks down on to a small area of the seabed. The waste produced by the rig comprises treated sewage, drilling cuttings, and some drilling fluids. In most other respects, drilling does not interface directly with the environment. The perception is that drilling an offshore exploration well poses a risk to the marine environment, either from the disposal of waste during the drilling operation or a loss of well control (a blowout) resulting in an oil spill. The reality is that international research has repeatedly shown that in most cases there are no significant impacts (Neff, 1987).

Similarly, the potential for an oil spill from a loss of well control during exploration drilling is very remote. An examination of the Worldwide Offshore Accident Data Bank (WOAD) for offshore exploration using mobile drilling platforms reveals that for the period 1970 to 1988 there were 5952 exploration wells drilled in US waters and 2971 exploration wells drilled in the North Sea. WOAD does not record any oil spills from these wells.

Even so, these aspects of an offshore drilling programme are evaluated in considerable detail for each well. It is important to recognise that for offshore exploration drilling, secondary consents must generally be obtained on a well by well basis. If a company wants to drill back-to-back wells, it must go back and gain individual consents for each well. Alternatively, a multi-well programme has to be devised and permitted in advance of the results of the first exploration well. As operators will recognise, predicting in advance the location, well plan and timetable for subsequent wells in the absence of previous drilling results is often unrealistic.

To keep an exploration rig lying idle while a company seeks consent to drill another well would be extremely costly. But to send it away only to bring it back an indeterminate number of months later, is equally unpalatable.

ISSUES TO BE FACED

Petroleum is the lifeblood of a modern, industrialised society. Its importance is amply demonstrated by the value of petroleum, oils and crude oils imported to New Zealand. In 1986 their total value amounted to around \$338 500 000. When all refined products were included, the value rose to around \$1.2 billion. The value of a petroleum industry to the country is obvious. Firstly it reduces dependence on other supplying nations. Secondly, it reduces the need to spend hard earned export receipts on imported fuels.

Last year, New Zealand was something like 33% self sufficient in petroleum products. However, production for the moment has peaked. The gap between demand and supply is already beginning to widen. By the year 2000, New Zealand will once again be heavily dependent on imported petroleum, unless significant new fields can be discovered and developed.

There has been a tendency for the public to discount the possibility of a major oil strike in or around the country. But by world standards, New Zealand is relatively unexplored. Before 1960, only 159 wells had been drilled, all of them onshore. Between 1960 and 1987, a further 223 onshore and 60 offshore wells were drilled. Almost all of the offshore drilling has focused on the Taranaki Basin. But, by international standards, even this area has been poorly explored. Take into account the total land mass and seabed around the country and the potential for exploration is enormous.

On the face of it, New Zealand should be looking forward to a programme of oil exploration that could lead to significant discoveries in the years ahead. Success rates compared with wells drilled have so far been comparatively good by international standards; technical considerations are favourable; the Government is stable, at least in comparison with some and even claims to support exploration.

New Zealand would not be the most difficult country in which to obtain the consents for exploration activities. But it is far from being one of the easiest. The responsibility of governments is to reconcile competing interests. Well meaning statements of Ministerial support lose their value when viewed in the international and national political context already described.

The current petroleum legislation is basically sound both from a resource management and an environmental perspective. Its aim and the Government's stated objective, is to encourage exploration and the development of a petroleum industry.

In a world humbled by sharp reminders about the fragile nature of human existence on earth, one might reflect on J. Paul Getty's often quoted remark; (O'Connor, 1972) "The meek shall inherit the earth, but not the mineral rights". That may have been true in his day when his executives could and did buy Government officials and influential newspaper editors. Today, the cynical might consider the environmentally pure in heart have indeed inherited the earth and are now making a strong run for the mineral rights.

If this is not to be the case, then Government must establish clear policy directives. These need to set out where and what are *no go* areas. In the absence of this policy, how can would-be explorers judge the potential of an area and the level of effort and cost they are prepared to invest when tendering for individual licence blocks?

Many of the comments made in relation to exploration activities, equally apply should a discovery be made. It is important that any explorer be certain that once they have discovered hydrocarbons in commercial quantities, they can take the next step and develop wells. They must be confident that the regulatory regime does not impose conditions or be so time consuming and expensive that they jeopardise the venture.

While the licensing regime appears likely to remain in the hands of central government, it is probable that regional or local government will have control over the manner in which exploration impinges on the local environment. This two tier approach is not too dissimilar from the consent granting approach in place at present. It appears that some streamlining of central Government administration will occur.

However guidance will be sorely needed in how regional Government evaluates individual applications.

Internationally, most petroleum operations are governed by established standards of performance which serve to protect life, property, the environment and the petroleum resource. In many respects, these standards have been applied in New Zealand by way of the Petroleum Regulations (1978). This has proved to be a practical and manageable way in which to ensure good oil field practices are maintained and environmental values are not compromised. However, little recognition is given by environmental regulatory agencies to the stringent controls imposed on operations in New Zealand by these regulations.

In the course of Resource Management Law Reform, it makes abundant sense to review legislation as it applies to the exploration industry, with a view to reducing delays and duplication. For example, to overcome the cost and frustration incurred by companies having to apply separately for licence to drill back to back wells, a number of solutions are possible. These include the granting of environmental consents in concert with the granting of individual licence blocks. Alternatively, separate environmental consents for a licence area could be applied on a prospect by prospect basis within a licence block.

Thirdly, if greater emphasis was placed on performance criteria, and the controls imposed by regulation, the only time when separate environmental consents would be required would be if there was significant variance to such regulations.

CONCLUSION

The need to protect the environment is accepted. Men and women must learn to respect the natural world and work at finding ways to live in harmony with it. They must also use their reason rather than their emotions in deciding what constitutes a threat to the environment and what does not.

Checks and balances are needed and it is desirable that as society places greater value on environmental matters, activities that impinge should be subject to greater scrutiny. What is undesirable is a regulatory system that allows the degree of environmental scrutiny to become out of step or unbalanced with the degree of scrutiny placed on other values or priorities. Those agencies charged with evaluating the environmental component, need to be responsive to the practical measures in which exploration operations are controlled through a variety of industry, regulatory and social constraints.

This paper has attempted to give some political and social perspective to the changes that are occurring in environmental legislation in New Zealand. It has been suggested there are frustrations with the existing system and concerns that need to be heeded as part of the reform process. But there are lessons the industry must learn. It has been guilty in the past of complacency. It has used established, formal mechanisms to communicate its concerns to Central Government. But it has been overtaken by the environmental movement in the lobbying stakes. The industry must now be prepared to take its message to Central Government, to Government officials and just as importantly, to officials at a local government level. Communication is a two-way process.

If the petroleum industry is to successfully argue that it deserves to be regarded as a special case because of the nature of the business and the importance of the resource, it must act now. If it fails to meet the challenge, it can hardly complain if it finds itself shut out of large parts of New Zealand by green tape.

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