

# ONSHORE PETROLEUM DEVELOPMENT IN TARANAKI OVER THE PAST DECADE — A LOCAL AUTHORITY AND COMMUNITY PERSPECTIVE

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## Abstract

The history of the oil industry in Taranaki goes back over a century. Activity has increased over the past three decades, with a significant increase since 1980 in both exploration and production.

Stratford is surrounded by energy development, which includes parts of what is known as the TAWN concessions — the Tariki, Ahuroa, Waihapa and Ngaere oil fields. Also included are the Waihapa Production Station, in the Stratford district, and the Electricorp Gas Turbine Power Station flanking SH 43. The site chosen for the combined cycle power station is shortly to undergo planning consent.

Since the 1970s, there has been considerable change in aspects of local authority liaison with the petroleum industry. This has resulted in a clearer understanding and cooperation between both parties. During this time the number of local government units in Taranaki has been reduced to three territorial and one regional unit. Planning challenges have also been subject to change, as a result of the industry and law changes.

Small rural communities have generally changed in their attitude towards the prospect of energy development in their district — with some individuals the exception. The impacts were perceived rather than factual, though there are always unforeseen effects. This improvement in attitude is partly due to the energy companies' improved consultation and liaison with the community — the companies have found that freely available information in various forms is beneficial and that Taranaki rural people are not prepared to be trampled over!

Roading is affected by the concentrated use of heavy traffic associated with energy development, and over a period of time the Stratford District Council has developed an agreement with oil companies to reduce the financial effects of road damage.

The socio-economic effects of onshore petroleum development in Taranaki over the past decade have been more positive than negative. This is reflected in the buoyant regional economy. More specifically, the industry has meant more jobs.

Today, the multitude of energy projects and developments in Taranaki are a source of interest for tourists visiting the region. This tourism resource could be developed and marketed even more effectively for the benefit of the region and the energy companies.

## Introduction

The Taranaki region is New Zealand's foremost area for onshore petroleum development. Together with its buoyant dairying industry, large tracts of rain forest encompassing two National Parks and a pristine mountain, the impacts of the energy industry contribute to a unique regional entity. In fact, Taranaki epitomises a successful blend of three key facets of a modern sustainable society — preservation, development and recreation.

The "black gold" of oil is now an integral part of our economy. "White gold" from dairy cows remains the mainstay, while the vital colourless gold of water provides the verdant pastures and forests.

The history of the oil industry in Taranaki goes back well over a century, although systematic prospecting as such began in the mid 1920s. Equipment used and results gained at that time varied. One well bored near Whangamomona,

East Taranaki, in 1928 utilised a tree as a derrick, with drilling machinery improvised from vehicle parts (plate 1). The first well bored was abandoned at 700 feet when a tool fell into the hole, while the second bore reached 1200 feet, discovered only traces of gas — though it is still rumoured that outside interests had bought out those working the rig from continuing.

Major discoveries came in Taranaki after World War II, notably the gas finds of Kapuni in 1959 and Maui offshore in 1969. The onshore oil discoveries in Taranaki of the past two decades are now well documented, as are the think big development projects of the early to mid 1980s.

In 1992 around \$1.5 billion was spent on the oil industry in Taranaki. Ninety per cent of current Westgate (Port Taranaki) total throughput is now based on the oil industry.

Our service town of Stratford (population 5800) in the heart of Taranaki is surrounded by energy development. Some refer to us in fact as "Texas of the South", as an alternative



Plate 1. Drilling for oil at McGregor's, Prospect Rd, Whangamomona 1928.

to "Gateway to the National Parks", or "Shakespeare Centre of the Antipodes" — virtually all of Stratford's streets are named from the works of William Shakespeare.

Today activities such as seismic testing, exploration, production and processing of oil products are regular occurrences in Stratford district (plate 2). The T.A.W.N. concessions — Tariki, Ahuroa, Waihapa and Ngaere — are all close to Stratford. Nearby is the Waihapa Production Station, as is the Electricorp Gas Turbine Power Station. Plans for a \$400 million combined-cycle new power station are currently undergoing resource management consent procedures.

Therefore, you may appreciate that over the past decade our district and its people have inevitably been affected by the impacts of onshore energy development.

It has been an interesting experience as a politician at both local and regional level in Taranaki during this time. Naturally the perspective I present is not that of a planner, scientist, technician or statistician.

I shall discuss in more detail the following aspects:

- Local Authority liaison with the petroleum industry.
- Planning challenges.
- Foreseen and unforeseen impacts on a rural community.
- Community consultation and liaison.
- Roading: implications and impacts.
- Socio-economic impact on the community: positive and negative.
- Petroleum development and production: a tourist drawcard?

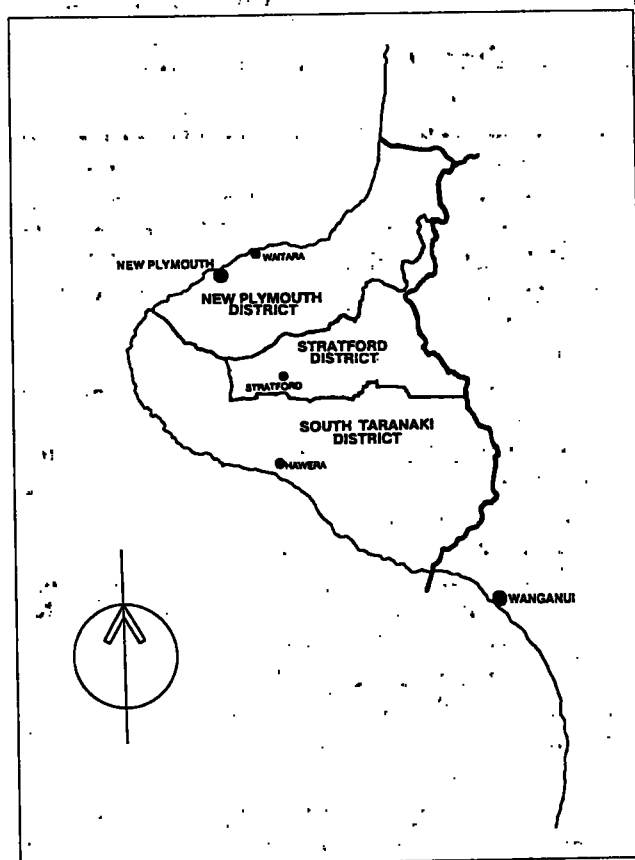
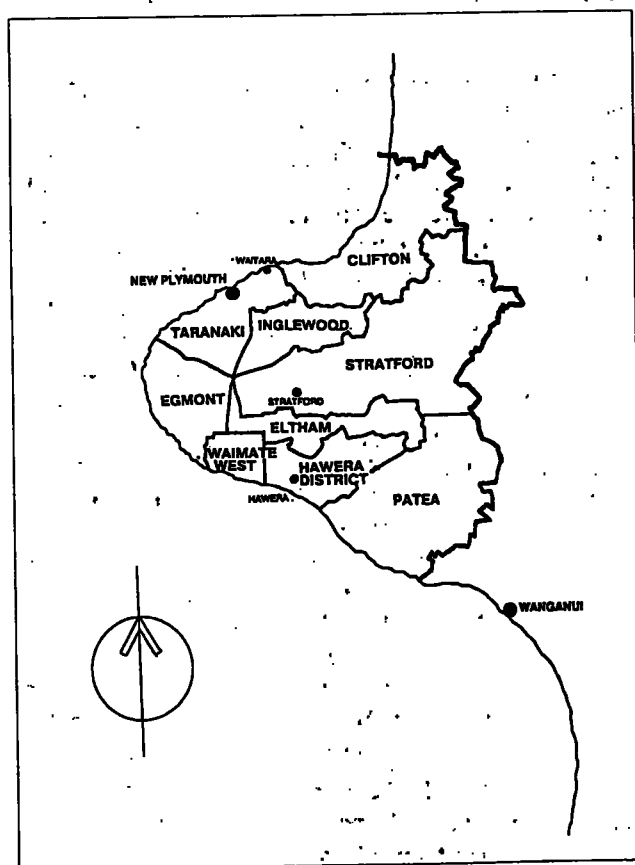


Fig. 1. Local Authorities of the Taranaki Region prior to 1991.

Fig. 2. Local Government districts of the Taranaki Region after 1991.

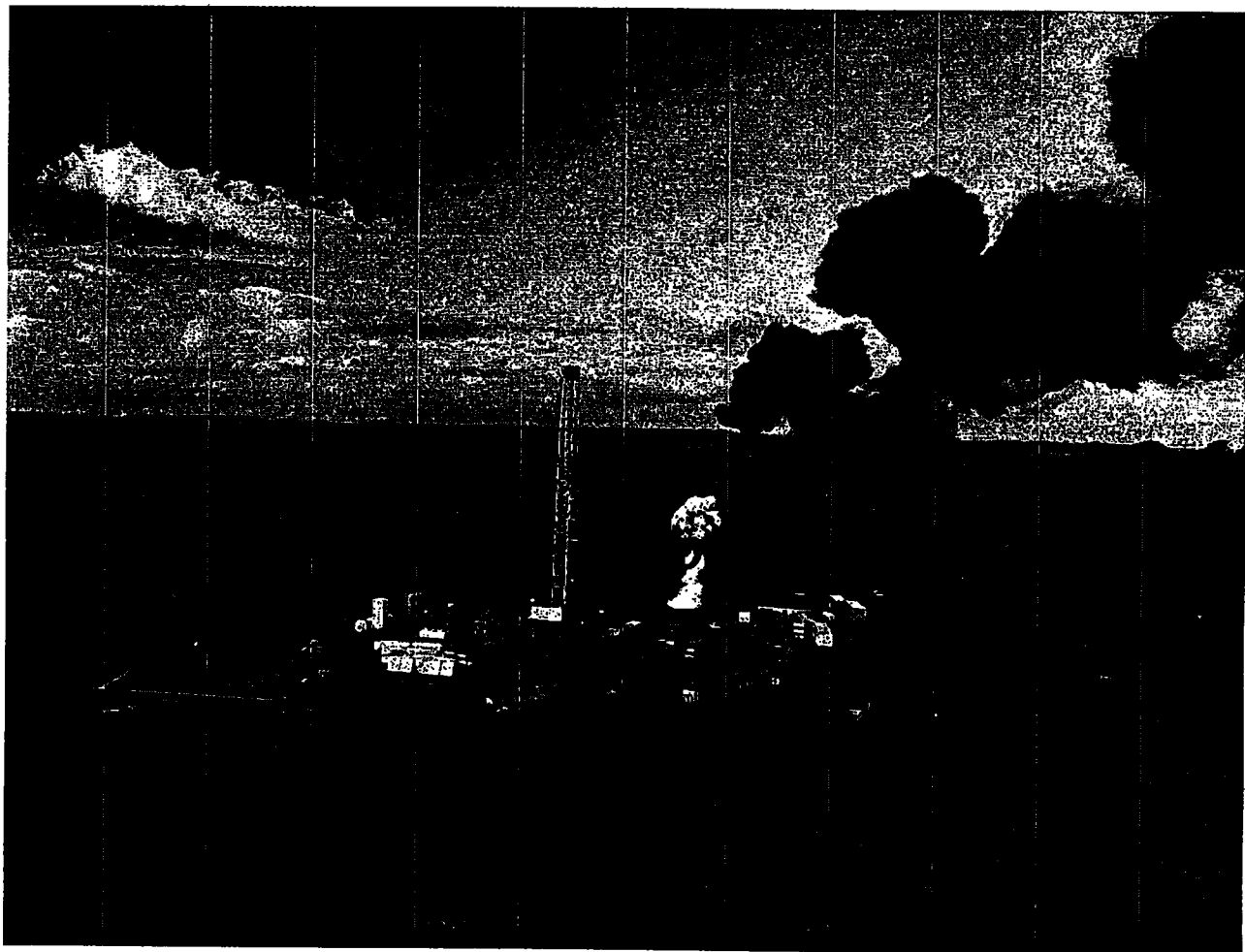


Plate 2. Waihapa No 2 oil well at the corner of Cheal and Wingrove Roads, Pukengahu, Central Taranaki, 1988.

### Local Authority Liaison With The Petroleum Industry

Local Government Reforms enacted in 1989 left Taranaki with three district councils — New Plymouth, Stratford and South Taranaki — and a Taranaki Regional Council with administrative headquarters at Stratford. This compared to a total of eleven territorial authorities and a United Council prior to the reforms, and in fact there were seventeen territorial authorities little more than a decade ago (figures 1 and 2).

Like it or not, local authorities are by manner of their legislative responsibilities involved in onshore petroleum development. They have planning roles, formerly under the Town and Country Planning Act, and now the Resource Management Act. Territorial local authorities have control and jurisdiction over most district roads. They can also undertake a general advocacy role for their community, whether pro-active, encouraging things to happen, or reactive, responding to things that have or are about to happen.

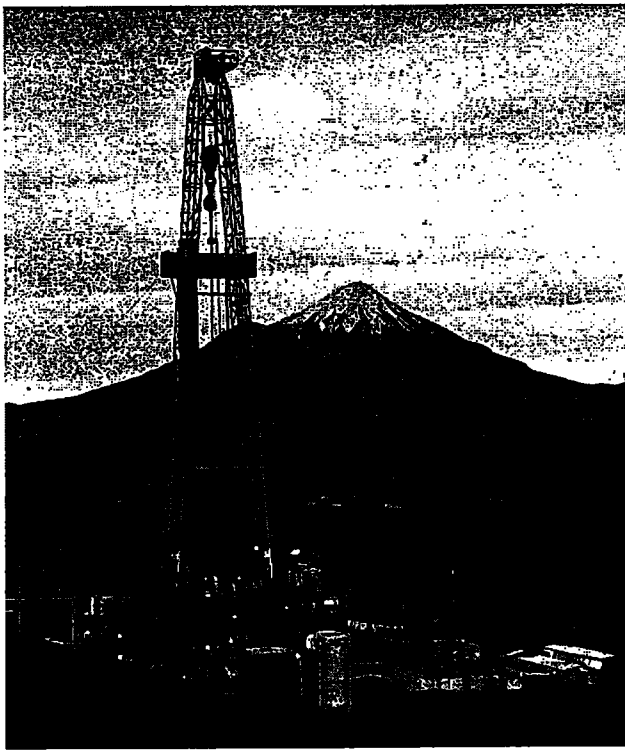
To some extent both the oil exploration companies and local authorities in the 1970s grappled somewhat in deciding their respective stances towards each other as onshore development began to mushroom. It is no secret that there were some problems, divergent views and results that probably pleased the media more than any other party. It was the effects upon roads possibly that resulted in the most acrimony — ratepayers and road users were affected, and were quick to voice their views on the matter. But these were early days,

and both parties realised that such exploration was here to stay, and that they would have to learn to live with each other. And they did.

A degree of conformity grew in approach between companies and local authorities. Model agreements were developed. Consultation and negotiation largely supplanted confrontation or resolution, in the law-courts or by the planning tribunal. The advent of a Regional Council rather than an under-resourced United Council was a positive step forward. The Taranaki Regional Council also retained a number of experienced staff from the former Catchment Board with expertise in key areas.

This graphic reduction of Taranaki's territorial local bodies from eleven to three in 1989 further helped towards co-ordinating approaches. It led to a meeting in July 1991 amongst Regional and District Councils of the province, representatives of the petroleum exploration and production companies based in Taranaki and the Petroleum Exploration Association of New Zealand (PEANZ). From this meeting emerged a discussion paper on model rules to incorporate appropriate consent procedures under the impending Resource Management Act/Crown Minerals Act in the required new Regional and District Plans.

There are sure to be further discussions between the parties before the final new schemes are operative; whether total conformity amongst councils will transpire is as yet uncertain. However, liaison between the industry and local authorities is vital for both sectors. There is a general determination for



**Plate 3.** Waihapa No 1 oil well, Wingrove Road, Pukengahu, Central Taranaki, 1988.

firm and fair understanding, although naturally there is at times still variance in approach between individual companies and individual councils. What is important is communication, and regular meetings are held to engender this.

### **Planning Challenges**

This issue could easily constitute a separate presentation. However, I do not intend to launch into esoteric detail of planning law and case studies as related to the petroleum industry, having neither the inclination nor knowledge to do so. What may be of interest are the key aspects or issues that surface when development is planned, in the eyes of the community.

From our experience, the main concerns are noise, road damage and road safety, visual impact and more noise. Company officers will attest that people are most grumpy when they are kept awake by extraneous noise at night. One of my more vivid recollections of chairing a planning hearing was listening to and evaluating the conflicting arguments put forward by two "noise control scientists" appearing for opposing factions.

I believe there is a growing desire from the general community to have adverse environmental effects from development either eliminated or at least minimised. For instance, concern at air emissions means that black burn-offs are far less acceptable than may once have been the case (plate 3). The Taranaki Regional Council has listed fifteen specific conditions to a consent for air emissions from a well-head.

With the advent of the Resource Management Act and the emergence of some experience in effects from onshore development, I believe there is now a mutual aim for simplification and certainty in planning.

This should mean less cost, less time, the use of pre-hearing meetings when appropriate, and reliance on full initial evaluation and ongoing objective monitoring.

Stratford District Council has already gone a long way through its District Scheme Changes in 1991 allowing petroleum exploration survey, well drilling and initial testing as permitted activities, subject to a number of development standards. Even a decade ago, it would have been a bold person to predict that in 1991 oil exploration activities would have the same rights to the land as dairy farming, as a permitted activity. This status has been operating successfully, with some modifications possibly required.

As a further measure to ensure an accurate quantification of effects, a case study of the Toko B well near Stratford has been set up with the agreement of Taranaki Federated Farmers, Taranaki Regional Council, Petrocorp and PEANZ. This study involves investigation of noise, vibration, water and air emissions and impact on farm production, with assistance from a farm consultant.

The emergence of a less involved planning process for these petroleum activities is absolutely dependent on a willingness, openness and fairness between all parties. This is imperative.

### **Foreseen and Unforeseen Impacts On A Rural Community**

Taranaki rural communities have, for over a century, predominantly comprised dairy farming families, together with the mix of those occupying some houses left empty through farm mergers and other workforce rationalisations. Very few of the scores of small community settlements in the region have experienced the advent of a new large industrial or commercial resident until the relatively recent expansion of petroleum development.

It was only natural that these "intruders" were viewed with some trepidation, and occasional hostility. There were common perceptions about their impacts, sometimes exaggerated from past experiences.

There have been bad experiences for individual farmers in past years from pipeline development: generally the result of the weather, lack of planning, lack of consultation, lack of consideration, and lack of compensation. Also there have been graphic photos and stories from overseas of massive destruction and incineration from gas lines or tankers blowing up.

Maybe some of the initial perceptions of the 1960s and 1970s were based on these factors. However, our experience now is that generally speaking (this does not mean every single person, without exception) the foreseen impacts of development upon communities can be identified and attended to.

As previously indicated, noise, visual impacts and roading are key issues of importance. Add to those, excessive light at night, vibrations, dust nuisance, the safety of school children on roads, and stock disruption e.g. from helicopters or seismic shots. Unforeseen impacts are relatively few; they may include some cultural values that had not been predicted. It is vital to consult local iwi or tangata whenua.

Notwithstanding that most impacts on communities can be foreseen, oil development still brings quite a change to a rural landscape and settlement that has been relatively uninterrupted for decades. It would be naive to think otherwise. Companies have come to realise this in their attitudes and their provision of compensation and development levies. Without a fair measure of complicity

and goodwill from local residents and landowners, their task is much more difficult, and possibly more costly.

## Community Consultation and Liaison

Any petroleum exploration or drilling company that came to Taranaki some years back with the attitude that dealing with these local people would be little different to those in other countries overseas very quickly revised their views. Taranaki farmers and rural people are not prepared to be trampled over. They do not have a third world country attitude moulded by repression. They do not buckle easily to bluster or pressure, and resent condescension or arrogance. They are well supported by their farmer's organisation or union (Federated Farmers).

For the developers, lessons of experience brought about vast improvements in consultation and liaison with individual landowners, local neighbouring families and communities as a whole. These advances included the use of liaison officers, or field officers, more uniform criteria for negotiations and compensation, public meetings for affected individuals and communities, and extensive use of newsletters and pamphlets.

When the Waihapa Production Station was being planned around three years back, Petrocorp put on buses to take people from the affected Pukengahu community to see first-hand the McKee Production Station in North Taranaki.

Another gesture appreciated by parents in more than one community of the Stratford district was the supply of a bus by the company to convey children to the local primary school — much safer than biking or walking along country roads congested by heavy traffic servicing energy development. There has also been some liaison between Ministry of Transport officers and companies to improve road safety.

Don't for a moment think all consultation is easy or harmonious. There have been difficult meetings, difficult landowners and difficult company representatives. Situations vary, farmers do not all think alike, and companies and their employees have differing approaches. It is probably close to the mark to suggest that 90% of complaints or concerns come from 10% of people affected. It is not appropriate to say whether all complaints are justified. However, there is the capacity for councils to load costs for investigating them onto the complainants where they are deemed frivolous or vexatious; in other words, if the process is being abused.

Another significant advance was the signing of a voluntary Land Access Code by Federated Farmers and PEANZ in December 1993 (figure 3). As well as giving clear guidelines for agreement with individual landowners, there is acknowledgement that exploration companies have broader obligations to the community at large, of which they also are members.

The contributions from companies in the form of sponsorships, donations, scholarships, grants and development levies have done much to cement relationships with communities, and indicate that they pay more than lip service to these stated obligations.

## Roading: Implications and Impacts

There is generally no argument that concentrated heavy traffic for onshore petroleum development incurs extraordinary damage to rural roads in particular. During

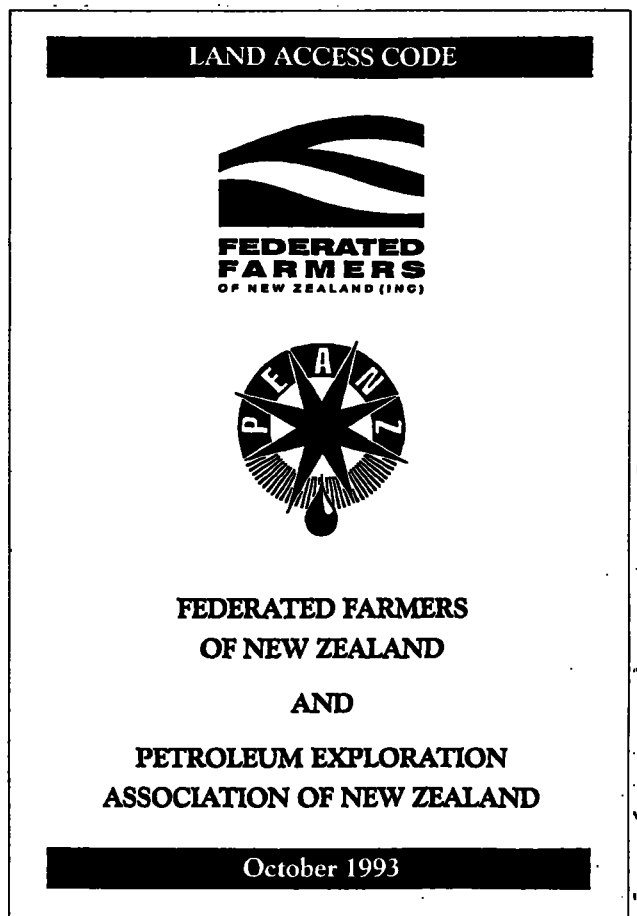


Fig. 3. Frontispiece of Federated Farmers and PEANZ Land Access Code.

peak periods such trucking may include metal cartage for internal roading and well-site foundations, transport in and out of rig and equipment, and as can occur, tankerisation of petroleum products during initial testing or interim production.

Some of the impacts can be addressed through development standards or conditions of planning consent, e.g. standards for entrances, proposed routes for trucking, and provision for safety signs. Stratford District Council's development standards for permitted use include a clause that reads: "No petroleum exploration survey or well drilling which will affect the otherwise normal and continuous use of any public roads may be commenced until the notification of the use of any public road has been made to the Council and any reasonable requirement of the Council with regard to the use of public roads has been agreed or met. Provided that Council may require a financial contribution for the ongoing maintenance and pavement rehabilitation of any public road which will be required to carry a significantly increased volume of traffic because of drilling activity. Such contribution will be based on and limited to a reasonable assessment of the effects of that traffic caused directly by and during the duration of the drilling on the road, and shall be agreed between the party carrying out the drilling and the Council."

As an example of the extent of oil cartage within the Stratford district, during the period from September 1988 to January 1993 almost 12 million barrels of oil were transported by tanker from the Waihapa well-sites along a total of 9.8 km of local roads en route to Omata near New Plymouth. This

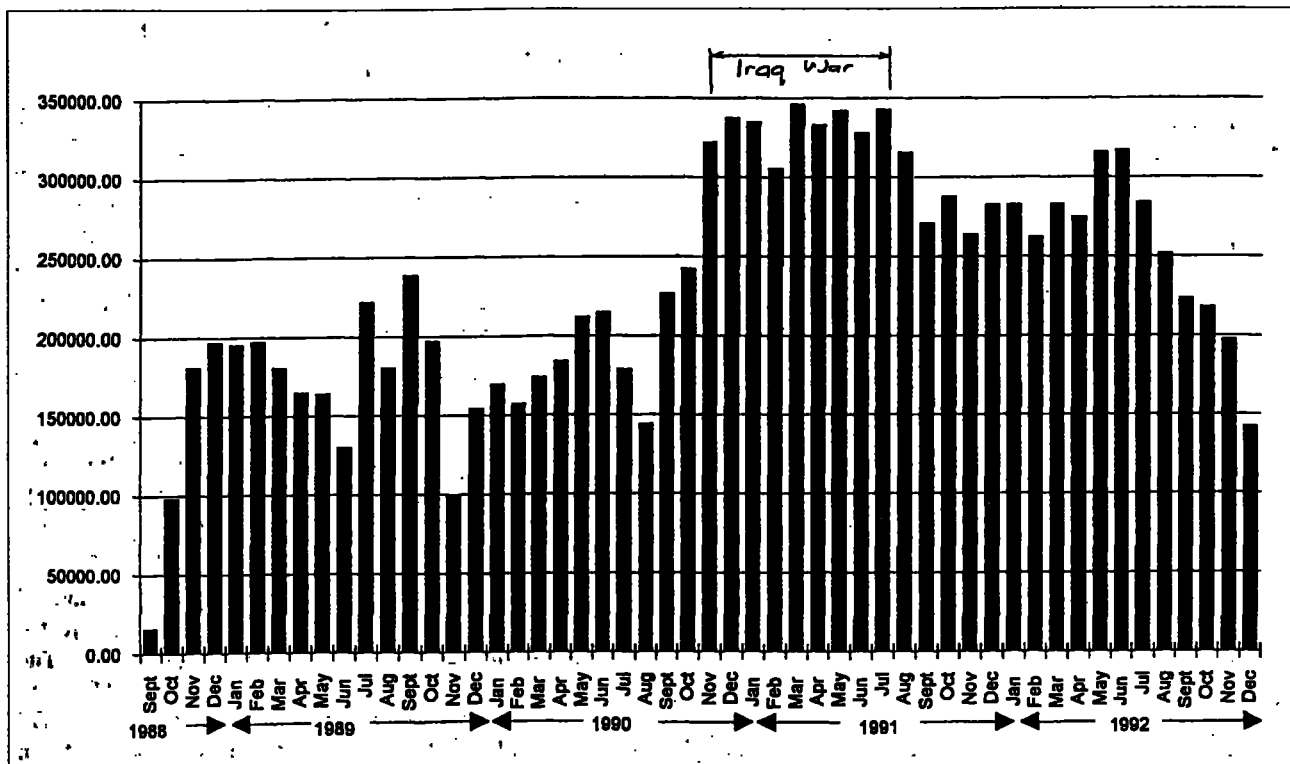


Fig. 4. Number of barrels of oil transported by tanker from Waihapa wells from 1988 to 1992.

was an average of 5100 barrels per day, or approximately 30 truck movements per day (figure 4).

Council reached an agreement with Petrocorp whereby the company would meet the cost of road damage (extraordinary maintenance) and some future restoration of pavement (rehabilitation). The method of payment was based upon a barrel levy, originally set at 3c per barrel; 1c for extraordinary maintenance and 2c for rehabilitation (figure 5).

While there were slight alterations in the assessment and level of payments after the first year, the principle remained. In all, the Stratford District Council collected \$307 839 over almost 4.5 years. This was spent on repairing damage such as edgebreaks, pavement failure, potholing, slabbing and rutting of seal (all extraordinary maintenance) and as well, rehabilitation by shape correction of an eventual total of almost 9 km of road.

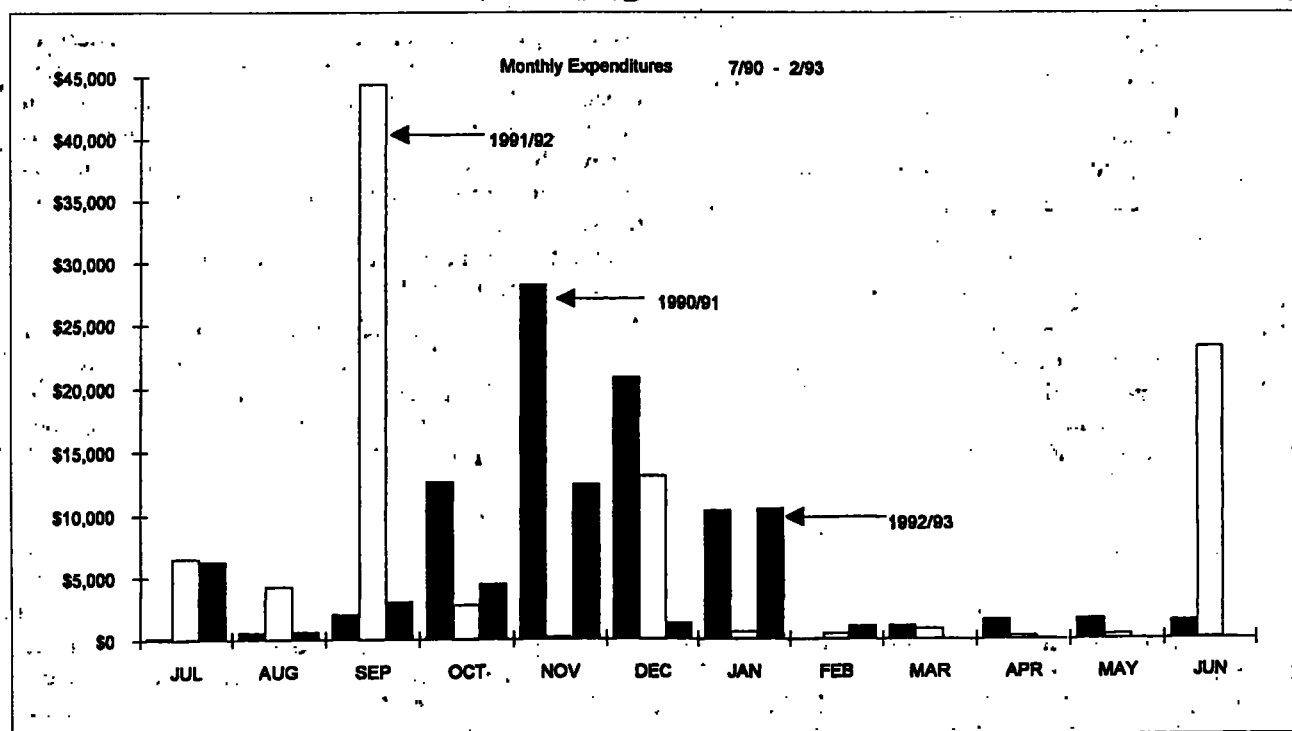


Fig. 5. Monthly expenditure on extraordinary maintenance of roads traversed by oil tankers in the Stratford District, July 1990 to February 1993.

A separate report on the Waihapa oil cartage levies is available on request.

What should be said is that the level of competence of the tanker drivers was very high, and refinements were undertaken to the units to obviate noise where possible, as the cartage was a round-the-clock operation passing through the built-up areas of Stratford, Inglewood and New Plymouth.

It is also fair to say that the Waihapa oil cartage operation was more extensive than normal for a well site, given the length of production testing and delays in constructing the Waihapa Production Station.

### **Socio-Economic Impact on the Community: Positive and Negative**

The socio-economic impacts of onshore petroleum development in Taranaki have not been analysed and written about to anything like the same degree as those of the think big projects of the early to mid 1980s. In any case, there would be only partial similarity in effects. However, onshore petroleum development has injected dollars and jobs into Taranaki. Some sectors have benefitted significantly, for example, metal and roading contractors, trucking firms, engineering firms and certain servicing industries. Many small contractors have built up their businesses thanks to the industry. The oil industry spent \$1.5 billion in Taranaki in 1992, a figure of some significance. While not all of this would filter through to local communities, much does.

Many visiting the New Zealand Oil and Gas Expo in New Plymouth last year were surprised to realise how many of the hundred or so trade exhibits confirmed employment and business for our region. Around one thousand people are employed directly in the oil and petro-chemical industry in Taranaki, with at least another thousand employed in downstream service industries.

The education sector has been able to expand courses and facilities with the input of the oil industry. Taranaki Polytechnic in particular has been able to acquire a valuable collection of equipment for use in training courses.

Various emergency services now have extended and specialised responsibilities and equipment because of the industry, in particular fire services and civil defence.

In a less quantifiable manner, the petroleum industry has helped boost investment confidence in Taranaki and underpin its recent rating as one of the highest growth regions in the country.

You may note that I haven't been able to identify any significant negative socio-economic impacts of onshore petroleum development, as distinct from some of the effects of the much bigger and more concentrated projects of a decade ago that brought some instability into the employment market as well as pressure upon the housing and community facilities of North Taranaki.

#### **Author**

DAVID WALTER is current Mayor of the Stratford District Council, a position he was elected to first in 1989 when the District Council was formed from a merger of the Stratford Borough and county councils. Mr Walter has been in local government since 1974, and chaired the Stratford County Council from 1983 to 1989. During those 6 years he was also a member of the Taranaki United Council, which was heavily involved in the various effects of the energy industry. He has been a director of Tourism Taranaki since its formation in 1986, and was Chairman of the Board for 3 years until standing down last year (1993).

### **Petroleum Development and Production: A Tourist Drawcard?**

For the first few years of the 1980s, Taranaki's energy development projects featured almost daily in newspapers or on television. People flocked to see the huge 25-storey building sized modules slowly transported by night through the streets and roads around New Plymouth. Offshore drilling rigs and support vessels dwarfed other boats and ships near our coastline. Visitors came to Taranaki to see the mammoth new complexes take shape.

Then from the mid 1980s the publicity wound down as the projects were completed. Political and economic arguments on their viability poured some odium on their merit. To some, think big were dirty words; and they didn't want to come and see the results of the concept. In fact, some people even advised those on our Tourism Taranaki Board to cease promoting the energy developments as an attraction.

Today, however, the multitude of energy projects and oil developments in the Taranaki region are of unique interest to the burgeoning number of tourists visiting the region. The Stratford Information Centre funded by the District Council actively promotes oil exploration as a visitor attraction. Oil flares are billed as the nightly aurora australis or southern lights, and from the plateau look-out over 1000 m up Mt Egmont, they make an impressive sight. Drilling rigs are also spectacular by day or night; Toko 2, close to State Highway 43 just east of Stratford, proved a literal traffic stopper late last year.

There is much more potential for onshore energy development projects as tourist attractions; we need to package and market them better, publish a specific brochure and tour guide, and establish a good energy information centre at a strategic point. Such initiatives would help not only the regional tourism industry, but the oil industry profile as well.

### **Conclusion**

Over the past decade or more the oil and energy industries have emerged as a major influence upon the Taranaki economy. Billions of dollars have been invested in pursuit of these valuable commodities. This has resulted in hundreds of new jobs, changed the landscape of parts of the region and given a high profile to Taranaki. It has also required a firm resolve for liaison and understanding between those in the oil industry, community representatives and decision-makers, and the people themselves.

As we approach the next century the need for and impact of energy development seems likely to increase, with further challenges, risks and benefits ahead. We should be able to face these with confidence and optimism, based on our experiences in Taranaki.