Destination New Zealand

Author D. Salisbury

CEO and Managing Director, New Zealand Oil & Gas Limited, Level 20, 125 The Terrace, Wellington.

The oil and gas industry is a global business. Oil is a global commodity, sourced from around the world for supply where needed. Gas is increasingly a global commodity, although largely still subject to local vagaries (and very much still insular within New Zealand). The workforce is a global workforce. Exotic geographic locations will host adventurous oilers from around the world. The industry is capital intensive, with investment dollars sourced through finance centres channeled into investment destinations near and far.

Worldwide there is more money available for oil and gas opportunities than there are sensible opportunities available.

Reserves replenishment and growth is an ongoing activity, increasingly challenging as the easy to find and extract oil and gas is depleted, and demand continues to rise. To source oil and gas the industry is pushing boundaries of unconventional resources, harsh and remote environments, technological challenge, higher cost, and risk.

Oil and gas companies are global explorers - like the global traveler with a world of possibilities, seeking rewarding locations to visit and, possibly, stay.

New Zealand's tourism industry understands New Zealand's role in the global tourism business and promotes "Destination New Zealand" to global travelers.

I thought that it may be of interest to consider how Destination New Zealand looks to the global petroleum explorers.

Inherent in this review is that the New Zealand industry must be considered in the global context. The New Zealand oil and gas sector is not isolated from global trends. From the perspective of the industry participants, thinking is not confined to only New Zealand and the supply of oil and gas to the domestic New Zealand economy.

It is very pleasing that the current Government's Strategic Objective recognizes the need to "ensure that New Zealand is a highly attractive global destination for petroleum exploration and production investment, such that we are able to develop the full potential of our petroleum resources". This is a break from the past which emphasized more insular thinking premised around energy for New Zealand.

Just as New Zealand wants to encourage tourists to visit our shores, we need to think about the oil and gas explorers in a global context, and position New Zealand as a highly attractive destination for the petroleum explorer.

So what does the petroleum explorer look for? As with the traveler, the explorer is looking at the package. The potential for oil and gas is a must, but it is the whole business that needs to be considered, and compared with what is on offer worldwide.

The global petroleum explorer will typically evaluate the business opportunity by considering parameters that include:

- Hydrocarbon potential
- Petroleum asset market depth and liquidity
- Infrastructure access
- Product market scale, access, liquidity
- Fiscal regime
- Product prices
- E&P costs
- Political risk
- Regulatory and legal risk
- Business contacts, networks

These are broadly the criteria NZOG applies when looking for opportunities overseas.

Of course, we also need to continually assess New Zealand opportunities against overseas opportunities. It is than an interesting exercise to be a "tourist in our own country" and to try to objectively evaluate the New Zealand opportunities.

Given the time available, I will address some of the primary factors, rather than canvassing all of the factors that go into making a decision to invest in New Zealand.

Hydrocarbon Potential

First is hydrocarbon potential.

Just as there are few tourists traveling the barren wastelands, there are few explorers who will go to areas without, at least, evidence of hydrocarbon potential. Most of the explorers will go to the "must see" destinations. These will tend to be the proven areas with good remaining potential.

The New Zealand experience appeals to a select group. It involves experiencing the attractive but relatively sparse pleasures of Taranaki, or traveling to remote destinations and a largely unspoilt landscape that offers a lot of adventure. To quote the Government's draft July 2010 New Zealand Energy Strategy "Most of New Zealand's territory is yet to be explored and the potential for further development of petroleum resources is significant". While this is promising, it is also daunting, and not without a great deal of risk.

The main province for oil and gas exploration and production in New Zealand is onshore and offshore Taranaki. I think that we tend to address this location as a single basin and play for simplicity. The standard statistical analysis is to show the remaining potential using a simplified uniform prospect approach, for example by referencing a creaming curve.

However, it is important that we recognize that the Taranaki basin is geologically complex, offering the explorer an array of exploration experiences.

The evolution of the industry in Taranaki has been a sequence of sporadic expansion punctuated by the successive emergence of distinct plays. We have seen this with the onshore Kapuni and offshore Maui Kapuni sands gas/condensate play, which dwarfed New Zealand's gas demand and led to a hiatus in exploration for Eocene gas/condensate reservoirs until Pohokura in 2000 and the decision to develop the Paleocene Kupe field in 2006. Meanwhile, McKee in 1980 established the presence of oil and complex traps along the eastern margin of the Taranaki basin. Moki in 1983 established Miocene sand plays, the full significance of which is yet to be understood as the play has been expanded through such fields as Kaimiro, Ngatoro and Maari. NZOG's Kaupokonui prospect in offshore southern Taranaki is a further extension of the Miocene play, looking for stratigraphic trapping with reservoir quality sands truncated by fine-grained channel fill. The Maui F sands Paleocene oil discovery in 1993 established a distinct oil play, extended further west by Tui, Amokura and Pateke in 2003-4, the full potential of which has yet to be fully understood. More recently, the industry has begun to consider the potentially very large biogenic gas play in areas such as Karewa and the Bahamas play.

This complexity means that despite decades of exploration activity, in some key respects Taranaki remains poorly understood. NZOG considers that there is good remaining potential, associated with relatively high risk, notwithstanding the activity to date. In the past year, we have as an industry experienced the disappointment of 5 failed wells in offshore Taranaki. There have been 25 exploration wells drilled since 2000, with only 5 commercial successes (Pohokura, Tui, Pateke, Amokura, and Awakino and one "possibly commercial" discovery. However, the aggregate reserves associated with the commercial successes are in excess of 272 mmboe.

Over the same period, onshore Taranaki exploration effort and results have also waxed and waned. Swift's success at Rimu in 1999 stimulated prospect generation and drilling along the eastern margin, and also in the Mount Messenger play where the Goldie pool was discovered in 2001. Results were sporadic and modest compared to expectations. Activity levels peaked at up to about 10 wildcats per year in mid-decade before subsiding. However, as key participants (such as Swift, Tap, and Austral Pacific) withdrew, significant discoveries and additions have been realized in the traditional Kapuni sands play in and around the Mangahewa field. The scale of reserve growth including Mangahewa, Turangi and Kowhai is not entirely clear. The Energy Data File indicates about 300 bcf of gas and over 10 mm bbls of condensate has been added in this area. Informed speculation suggests significantly more is in the process of being booked.

Taranaki is often described as a mature basin, and yet one that has yielded some of the biggest discoveries and additions (Pohokura, the Tui oil fields, Turangi and Mangahewa) in only the past decade of its 50 year history of modern exploration, with a success rate of around 20% for exploration wells, although much less (and more sobering) in recent times.

New thinking and new technologies have considerable potential to unlock further success in Taranaki, which is why NZOG continues to regard it as a core area.

The other New Zealand experience is the largely unspoilt landscape that offers a lot of adventure and potential for the intrepid explorer. The "yet to be explored but with good potential" opportunity will appeal to a relatively small sub-set of global explorers, principally the fittest – financially and technologically. It will generally have a role within a well diversified portfolio comprised of lower expected yield-lower risk opportunities and some more speculative opportunities. In this context, it is easy to understand that more effort is required to attract and retain the explorer to the more speculative opportunity, and that the commitment to that opportunity is likely to be less strong than the commitment to more core opportunities.

Petroleum Asset Market Depth and Liquidity

When we travel, especially if we have gone a long distance, we frequently will want a diversity and depth of experience. It has to be something quite extraordinary to get us to go a long distance for a single activity.

In exploration it is again the same. An explorer may travel to an exotic destination in search of an extraordinary prize, but for the more ordinary we want to know that the destination offers a range of accessible opportunities. Petroleum asset market depth and liquidity are important parameters.

New Zealand has relatively few producing assets, which are tightly held so that there is little liquidity in the market for producing assets. However, the explorer can generally access acreage and exploration opportunities in Taranaki or other basins in New Zealand. There is a relatively transparent and liquid market for new and existing acreage.

Potential access to a greater number of opportunities will assist to bring the explorer to New Zealand. To assist with this, the Government needs to provide the right conditions for investment to develop and sustain momentum. Improvements to the Crown Minerals Act and the Minerals Programme will assist in this regard.

I understand that there is ongoing consideration of a National Oil Company, which it is postulated will benefit New Zealand through "Substantial lift in participation levels, sector liquidity and competition".[1] These assumed benefits need to be very critically examined.

A National Oil Company may lift overall sector activity, but runs the risk of crowding out private investors, compounding the critical issues of sector liquidity, private sector participation and competition.

I further understand that the focus for a National Oil Company would be to stimulate exploration activity, in particular outside Taranaki. It must be questioned whether direct Government involvement in the higher risk spectrum of a high risk, knowledge based, capital intensive industry is an appropriate and optimal use of Government funding. If the Government is investing in activities that the private sector will not fund, then the investment decision must be open to serious question. If the view is that the private sector is not investing through lack of knowledge of the opportunity, then the solution should be to focus on generating and disseminating the knowledge. In the context of a worldwide industry that is opportunity constrained with a large investment base seeking attractive opportunities, it seems illogical to assume that the lack of private investment requires that the Government undertakes all or a substantial proportion of the investment if the opportunities are properly understood and attractive.

The proposition is to base a National Oil Company on existing state-owned upstream assets, which is principally Genesis' 31% interest in the producing Kupe gas-condensate field. While this interest should

[1] Source: Stepping Up, Options for Developing the Potential of New Zealand's Oil, Gas and Minerals Sector. McDouall Stuart June 2009.

generate annual cashflows in excess of NZD100 million for the medium term, this sum of money is an insignificant investment base from which to stimulate investment in exploration, in particular frontier exploration (bearing in mind that exposure to that class of opportunity should ideally be tempered with lower risk activities).

An option for the Government to stimulate upstream activity would be to sell the Government-owned upstream assets. This could generate a higher level of private investment in New Zealand as a core business area, stimulating further focus and investment. If sold to a New Zealand listed exploration and production company, such as NZOG, this would add depth to the capital markets and a larger scale local champion of the sector.

Product Market Scale, Access and Liquidity

Before acquiring or developing our oil and/or gas, we need to know that there is a sufficient market for the products. This is easy in respect of oil and condensate with the unfettered international demand and export capability. It is much more difficult in respect of gas and LPG.

As is well understood, the relative levels of gas supply and demand in New Zealand have meant that the market has swung from oversupply to periods of supply concern. Methanex operates as a pressure relief valve during periods of oversupply. Maintaining Methanex's presence when there are supply concerns will be an ongoing issue. However, the major issue is the overall level of demand and, in particular, the maintenance or increase of demand for gas for thermal generation.

The prior Government's ban on new thermal generation no doubt hurt the industry. A good stimulus for the industry would be clear and unambiguous ongoing commitment to and prioritization of new thermal generation. Recent industry success has demonstrated that the gas supply can be made available if the demand is there at the right price. This has required a significant adjustment from the unsustainable position of gas over-supply and very low pricing associated with the early success from the Maui and Kapuni fields. Gas purchasers may have decried the loss of access to artificially cheap gas supplies, but the result is a much more sustainable gas industry.

We should not rely on the vision of sufficient over-supply of gas for the domestic market large enough to support new export facilities (principally LNG) as the panacea to address the issues of a small, geographically isolated gas market.

LPG faces similar issues, which make the marketing of LPG challenging, and risky.

As an overlay on the underlying issues of small, geographically isolated markets remain the issues of markets dominated by a few participants, with predominantly long-term bilateral supply arrangements, a lack of transparency and a tendency to litigation to address issues.

Infrastructure Access

The traveler wants to know that they can get around within New Zealand, with transportation readily available at acceptable prices by friendly locals.

The explorer is the same. If gas or LPG is discovered, there needs to be confidence that it can be transported on an open access non-discriminatory system that gives the infrastructure owner no more than an appropriate return. In the absence of such a framework and, in particular, where there are infrastructure constraints, the simple rule is that the infrastructure owner will (at least attempt) to make super-profit at the expense of the explorer. Issues of infrastructure access exist in New Zealand in respect of the gas system, LPG infrastructure and liquids storage near port Taranaki. While in some instances significant progress has been made towards improved access, issues nevertheless persist, and are problematic for the explorer.

Fiscal Regime

The tourist does not enjoy feeling exploited and getting a bad deal. The explorer is the same. The explorer needs to expect to get, as well as to in fact get, an appropriate return on their investment.

In New Zealand, the Government directly receives approximately 44% of the revenue generated by an oil or gas field development in royalties and taxes. In addition, the country benefits generally from direct and indirect economic impacts such as increased economic activity and employment. Obviously, the more oil and gas fields are developed and produced, the greater is the reward for the oil and gas companies, and for the Government.

As an overall fiscal regime, this split between Government and the investors is about right. However, there are circumstances in which the Government take can make a project sub-commercial, in which case it will not proceed or continue. Such circumstances can arise with smaller fields, some larger gas fields, or fields as they approach the end of life.

The rational tourist operator will reduce their fare to maintain turnover and sustain a higher level of profit where necessary, recognizing that a smaller than targeted return is better than no return, or indeed a loss. Hotels and airlines do this as standard practice.

It is always a bit surprising from the corporate perspective that a Government will not take a similar approach, effectively preferring to have nothing rather than a less-than-targeted share of something. The existing royalty regime incorporates an element of this with the Ad Valorem Royalty component which as a regressive tax penalizes marginal developments and encourages early abandonment of fields. A change to only the Accounting Profits Royalty rather than the higher of Accounting Profits and Ad Valorem Royalty would appear to be a sensible adjustment.

Political Risk

The traveler will avoid destinations where there is political risk, something that can rapidly turn a pleasant holiday into an unpleasant situation.

The explorer is the same. The explorer wants to be able to make an informed decision to come to New Zealand with a robust understanding of the investment framework, and confidence that it will not be detrimentally changed.

We look with concern when key parameters for a high risk long-term capital intensive business are detrimentally adjusted. For instance, as already noted, the previous Government introduced a ban on new thermal generation. In a country with relatively little gas demand, that is gas prone, and in which export of gas is not currently feasible (at least not without converting it into another form, such as methanol) this was a detriment to the assessment of New Zealand as an investment destination. The current Government is to be applauded for overturning this ban.

Disappointingly, however, the current Government has introduced regulations that are viewed by the industry with concern, and which undermine the objective to ensure that New Zealand is a highly attractive global destination for petroleum exploration and production investment. The carbon charges under the Emissions Trading Scheme are levied at the point of production, on producers. Notwithstanding that the purpose of the legislation is intended to be the modification of consumer behavior and that the Government is aware that there are in place long-term gas contracts under which carbon charges cannot, or cannot with certainty, be passed on from producers to gas purchasers, the Government has not provided in the new regulation for the pass-through of these new, and substantial, costs. At worst this introduces a substantial new tax on producers. At best it probably results in difficult commercial negotiation if not litigation to resolve liability. From an industry perspective, it is hard to understand why the regulation was not put in place to provide for pass-through as was requested by industry.

The Government is to be congratulated for undertaking a wide-ranging review of the rules applying to the exploration and production sector. As a participant, we have experienced a proliferation of new rules and proposals from various regulatory bodies over the past decade or so. A focus on the fitness-for-purpose of the rules, and adequate resourcing and co-ordination of activities amongst the Government entities with responsibilities for administering the petroleum estate, is a very welcome initiative.

The Experience Overall

In conclusion, New Zealand offers the attractive but relatively sparse pleasures of Taranaki, and the high risk excitement of frontier exploration. For the explorer, there is a relative ease of access to new acreage, but a lack of opportunities across the spectrum of producing, development and relatively highly prospective acreage. There are good initiatives underway by the Government to encourage more exploration. The Government's prioritization of the sector and the Action Plan are very welcome initiatives. The product market structure and infrastructure regime could be further improved, but are not insurmountable barriers to the industry. The fiscal regime is suitability attractive.

As a closing comment, it is right to be enthusiastic about the appeal and potential of Taranaki and the frontier exploration opportunities, but this should be tempered with the knowledge that this experience is not unique. The opportunities compete with similar opportunities worldwide. To ensure that New Zealand is a highly attractive global destination the international context of the industry needs to be always borne in mind, something that I know the Government is very aware of.