

Smaller Energy Companies Eye Opportunities In New Zealand

November 1, 2005

Drew Cadenhead is the CEO of TAG Oil & Gas Co. of Calgary, Alberta, Canada. The company has substantial holdings in an area that has been little discussed about – New Zealand. In this interview, Cadenhead explains the challenges that await oil and gas companies in that island nation.

What is the current energy supply situation in New Zealand? How does the depletion of the large Maui reservoir impact the country?

Cadenhead: Since the early 1980s, New Zealand's world-class Maui reservoir has met 85% of the country's total natural gas demands. In early 2003, an independent expert reassessed the recoverable amounts of oil and gas from the Maui reservoir. The results of this "redetermination" clearly confirmed the fast approaching end to the cheap Maui gas era and created much anxiety on the part of the New Zealand power producers, as well as large natural gas customers.

After considering the impact of some of New Zealand's new sources of natural gas due to come onstream over the next 18 months (Pohokura and Kupe developments), there is still a considerable gap between the amount of natural gas that can be supplied and the expected consumption once the Maui supply is no longer available.

The New Zealand government has stated a strong preference for solving the looming energy supply problem through domestic natural gas supplies

as opposed to other alternatives such as imported LNG. It realizes that the country's consumption of energy is relatively small, giving it little leverage in the global LNG market.

New Zealand is under-explored compared to most other notable oil & gas producing regions. The few wells drilled and the resultant large discoveries confirm there is still plenty of potential for the development of domestic natural gas supplies that can reliably meet its needs well into the future.

What is being done to resolve the potential for future supply problems?

Cadenhead: The New Zealand Ministry of Economic Development's Crown Minerals group is responsible for the effective management of petroleum reserves. In January 2005, Crown Minerals published a program for petroleum minerals, which outlined a sensible framework for promoting oil & gas exploration and development.

The government recognized that "indigenous" petroleum reserves are unsubsidized, competitively priced and utilization of these reserves

contributes to New Zealand's economy in a substantial way. Promoting these resources is strategically important.

The government realized incentives were needed to increase the rate at which exploration was taking place. Notwithstanding that it, like most nations, wants a fair return on its assets; the new program substantially reduces royalties. Through Dec. 31, 2009, wellhead royalties have been reduced to 1% for natural gas and 5% for oil. Accounting profits royalties have been reduced to 15% on the first \$750 million of gross profits for offshore discoveries and 15% on the first \$250 million of gross profits for onshore discoveries. Above these thresholds, accounting profit royalties are fixed at 20%.

Furthermore, the new program allows companies to deduct all exploration and developments costs for the purposes of calculating gross profits (not just the costs associated with a specific discovery).

Crown Minerals has increased its attention to petroleum exploration permit ("PEP") conditions. Historically, Crown Minerals has not tightly enforced full compliance with

the work programs outlined in various PEP conditions. Now, Crown Minerals expects that companies fulfill their obligations and failure to do so may result in forfeiture of permit rights where there are no valid reasons for work program delays. Progressive, well-financed and effectively managed companies see enforcement of permit compliance as a positive step, which quickly eliminates exploration companies that are not serious about the opportunities that exist in New Zealand.

Crown Minerals has recently taken the proactive steps of acquiring large amounts of high quality 2-D seismic over under-explored areas of New Zealand at its own cost and providing this data (at no cost) to potential explorers. The Ministry is hoping this free data will encourage exploration interest from both active explorers and potential new entrants in the country's exploration scene.

Recently, several large natural gas customers have entered into agreements with exploration companies for the funding of drilling programs. Under the terms of these agreements, these downstream companies have been willing to cover a substantial portion of the drilling costs and in return receive the right to enter into a gas supply agreement based on prevailing market conditions (no farm-in rights). These types of agreements are excellent ways to reduce the cost of drilling high-risk/high-reward prospects and mitigating shareholder risk.

What is the gas transportation infrastructure?

Cadenhead: There are approximately 3,400 kilometers of high-pressure gas pipelines covering the North Island of New Zealand. Many of the pipelines transporting natural gas from the production sights to the downstream

usage points are now underutilized as existing reserves dwindle.

The existing pipeline infrastructure is managed on a "non-discriminatory open access basis" allowing flexible arrangements between producers and customers. This open infrastructure system ensures TAG can transport any new gas discoveries made on the North Island to market in a timely and economical fashion.

There is also a 300-km "Maui Pipeline" which carries gas from South Taranaki to the Huntley thermal power station, just south of Auckland, the largest power usage area in New Zealand. As a result of the decreasing Maui reserves, there is also an open access regime for use of the Maui pipeline.

The South Island is not reticulated for natural gas transmission and is currently serviced by bulk LPG transportation. When a significant South Island natural gas reserve is identified, the current pricing structure will certainly support the cost of building gas transmission infrastructure to carry natural gas to the logical markets. The city of Christchurch is the largest city on the South Island of New Zealand and is situated adjacent to a deepwater port at Lyttleton. Any oil discoveries made in Canterbury can be easily transported to Lyttleton for shipping to international markets. The Natural Gas Corporation of New Zealand operates a substantial portion of the existing gas pipeline network. A full map of the North Island pipeline infrastructure can be found at <http://download.ngc.co.nz/general/pipelinemap.pdf>

What makes New Zealand an attractive place to make investments?

Cadenhead: New Zealand has a stable democratic government, which has demonstrated a willingness to promote oil & gas exploration. Both

predominant political parties (National and Labour) have publicly stated strong ongoing support for domestic oil & gas exploration.

* New Zealand has a superior fiscal regime with royalties substantially below other possible investment locations with similar (very low) political risk profiles.

* There is the potential for large-scale discoveries as the region has not been explored to the extent that other regions have. For example, the drilling density in the Taranaki region is approximately one well for every 120,000 acres (compared with one well for every 1,500 acres across western Canada). In the Canterbury Basin (South Island), the drilling density drops to one well every 600,000 acres in an area that has world-class prospects.

* There has been a five-fold increase in domestic natural gas prices over the past 18 months as a result of the dwindling Maui reserves.

* Low operational costs and existing infrastructure access result in high profit potential, at least twice what would be normally expected in North America.

What are TAG'S objectives in New Zealand? Cadenhead: TAG has developed a risk-managed business plan that combines shallow (2,500m) low risk oil opportunities with deeper (4,000m), high-reward gas opportunities.

TAG will initially build its reserve and cash flow base on several shallow oil targets that are drill-ready now and awaiting rig availability. It is expected that six to eight of these shallow wells will be drilled over the next 12-18 months. These prospects are expected to deliver good results and provide strong cash flow to support further work. Given the type

of crude that is generally found (sweet 42 API), development costs are low.

Complementing TAG'S shallow low risk oil program are several deeper, primarily gas-prone, prospects that offer the potential of significant reward but carry higher drilling costs and hence higher risk. TAG also looks to acquire 100% ownership/operatorship in each of the permits that we consider key to our ongoing success.

Where in New Zealand are you exploring?

Cadenhead: Our primary exploration area is within the onshore Taranaki Basin of the west central North Island. This is the only existing oil and gas production area of New Zealand and has the associated infrastructure necessary to bring new discoveries to early commercialization.

Within the eastern part of the Taranaki Basin is a proven discovery "fairway" that extends in a north-south direction to the east of Mount Taranaki. This onshore region has been producing from a dozen different pools for over 40 years and is well-serviced by all-weather roads as well as, gas and oil pipeline infrastructure. All seven of TAG'S Taranaki Permits are situated within this fairway, in many cases surrounded by existing pools. TAG is also active in the Canterbury Basin, located on the east coast of the South Island. The Canterbury Basin has a similar basin style to prolific oil and gas areas of southern Australia, California, and the Gulf of Mexico. This is a largely unexplored region of New Zealand but two of four offshore wells drilled to date have discovered hydrocarbons. We have three permits in the Canterbury Basin totaling 4 million acres (1.4 million acres net), which is larger than the entire Taranaki Basin.

Perhaps our most exciting prospect is located in the onshore portion of one of our Canterbury permits. A number of high-grade oil seeps are visible at the surface along the perimeter of this anticline. Initial 2-D seismic confirms that the anticline formation continues at depth. A potential reservoir is located at an approximately 1,200-meter depth and if this reservoir structure is full, volumetric calculations indicate as much as 200 million barrels of oil may be associated with this structure. Further seismic is planned in the next six months to locate an optimal drilling location.

How do you view the future of New Zealand energy supply?

Cadenhead: We support the current government initiative to promote exploration and development. We believe there is very real potential in New Zealand, but the country faces the dilemma of being a small fish in a big ocean. Although we believe the potential for discovery in New Zealand is enormous, we believe this potential will continue to slide under the radar screen of most of the world's larger explorers. This leaves an opportunity for smaller companies to have a realistic opportunity at international size discoveries without the pressure of competing against multinationals.

What challenges are there in dealing with the federal and local governments in New Zealand?

Cadenhead: We see New Zealand as a very stable location to operate and government policy is consistent. New Zealand has put in place legislation and regulations to protect the environment. The regulations are well understood and have little impact on exploration and development by those who act responsibly.

Rules and regulations governing exploration and the subsequent granting of mining licenses are also well developed and well understood. As a result of the urgent need for an increase in natural gas supply, Crown Minerals has been more closely enforcing permit conditions to ensure that exploration commitments are met. We don't see any "challenges" in dealing with any level of New Zealand government.

What risks do you face when working in such an isolated part of the world?

Cadenhead: Although New Zealand is remote, it is not as isolated as some might think. There is certainly not the oil and gas exploration and production support that is available in North America, however, there is adequate support for the present levels of activity.

You have to be well-organized and disciplined with respect to completion of our exploration activities. With careful planning and management of those providing services to us, we are highly confident that we can accomplish what we want without undue delays caused by lack of support services.

We are also confident that the significant increase in drilling activities will bring with it an increase in locally available services, including equipment.

If we see bottlenecks ahead of us, we can and will take steps to minimize or eliminate any delays that could occur. These steps might involve bringing in additional support services from North America and/or reorganizing schedules to make maximum use of equipment and services that are locally available.