

Trans-Orient takes on high-risk/reward targets

IN ITS WILDEST dreams, Trans-Orient Petroleum could be sitting on undiscovered conventional resource potential of 1.7 billion barrels of oil equivalent in-place (OIP) within its 8,100 square kilometers of East Coast Basin permits.

A report by Calgary-based consultants Sproule International suggests that's the mid-case potential of the 100%-owned PEPs 38348 and 38349, although it added the basin is so immature for oil and gas exploration that estimating any recoverable reserves was impossible.

According to Sproule, PEP 38348 could contain between 615 million barrels of oil equivalent and 1.7 Bboe OIP, while PEP 38349 could contain between 601 mboe and 866 mboe OIP.

Frontier territory

In New Zealand terms anywhere outside the Taranaki Basin is generally regarded as frontier territory, so it's not surprising that in an era where oil is trading at about US\$100 per barrel that old wildcat prospects are being dusted off.

Although numerous gas and oil seeps have been documented, Sproule described the East Coast Basin as "...one of the least explored areas in NZ".

With a fresh, US\$9 million capital raising and a newly installed executive chairman, Trans-Orient Petroleum is returning to the East Coast Basin to try to make its fortune.

David Bennett, most recently chairman of fellow NZ-focused oiler Austral Pacific Energy, believes his Canadian-based, OTCBB-listed explorer has identified a basin that, with time and effort, could rival the prolific Taranaki Basin.

"The area is a forearc basin, and there are several hundred very spectacular oil and gas seeps, there are a lot of very prominent structures visible at the surface, and in the sub-surface there is a small amount seismic control," Bennett said.

High-grading

While most of the structures are poorly defined, and are considered geologically risky, Bennett felt Trans-Orient was starting from a strong position.

The permits contain almost 60 prospects and leads within the Miocene sandstones and Pliocene limestones.

Trans-Orient has already conducted soil geochemistry across some of its preferred targets in an effort to high-grade prior to the next stage of exploration.

"We're really following the idea that we may see a hydrocarbon halo effect over the top of them, and that worked well, and in some cases we saw prominent hydrocarbon levels over some of the prospects," Bennett said.

Those with the haloes have been ranked, and will be targeted by seismic in January, prior to drilling in 2009.

Trans-Orient has two commitment wells in year three of the permit, although Bennett indicated those wells could be accelerated if early stage results were promising.

The proposed wells will be drilled to 1,000 metres, with most wells to pass into prospective zones at about 500m.



The East Coast Basin is home to numerous oil and gas seeps. Picture courtesy Trans-Orient Petroleum.

Past exploration

Some 40 wells have been drilled in the East Coast Basin, of which 20 have been drilled within Trans-Orient's blocks.

Most of those were drilled in the early 1900s, and are not considered valid tests.

Modern wells account for less than a dozen across a huge area.

Westech Energy has the only true discovery in the basin, the undeveloped and challenging Kauhauroa-1 gas discovery, made in 1998.

The same year Bennett, with Indo-Pacific (now Austral Pacific) drilled the Speedy-1/1A wells which returned oil and gas shows, however drilling problems forced the well to be terminated at 876m and it was not properly logged.



Dave Bennett. Picture courtesy Trans-Orient Petroleum.

"Speedy-1's on our list as a prospect, because as we drilled down to the Miocene sand target it got stuck, but as we deepened the level of gases and other higher-order hydrocarbons were appearing," Bennett explained.

"It remains an untested prospect that we could re-drill."

Shale search

Separately, the Sproule report also recognises the potential for unconventional fractured shale projects from the Waipawa-Whangai fractured shale formations, which share similarities to the Bakken play in Montana and Barnett shales in East Texas that are being developed in the US.

Technological advances such as horizontal drilling and modern fracking techniques have allowed the play type to become a prolific producer in the US, and Bennett hopes that by getting in early Trans-Orient can work a similar miracle in NZ.

The shale plays are essentially self-sourcing, being source, seal and reservoir, and are thought to be the source of the widespread seeps that are evident across the basin.

They will be tested with shallow boreholes to identify sweet spots, probably in the south east of the permits where the shale section has been uplifted and the Pliocene and Miocene eroded off, which means the shales are closer to the surface, Bennett pointed out.

Outcropping shales are heavily fractured and appear to have high organic carbon content – the basic parameters for a fractured shale play, he added.

The potential for a Waipawa-Whangai formation gas shale play has been supported by GNS Science of New Zealand, which surmised that the Whangai can be quite thick, with low to moderate richness and maturity, and the Waipawa possibly richer but of more modest thickness.