

Norwest poised to make waves in Perth Basin



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Western Australia's Perth Basin is a proven hydrocarbon province that has been continuously overshadowed by the giant offshore oil and gas discoveries in the State's northwest, despite the discovery of impressive commercial oil and gas fields in the basin over the past few decades.

However, recent discoveries in the Perth Basin that are centred around the highly prospective "Kingia-High Cliff" sandstones structure have once again stoked the flames of intrigue in the underexplored basin and Norwest Energy – a long-time operator in the region – is keen to be the next to have a crack at its potential.

The renewed interest in the Perth Basin stems initially from AWE's 2014 discovery of the Waitsia gas field, which, with estimated proved and probable reserves of about 844 billion cubic feet of gas, is now described as Australia's largest onshore conventional gas field.

Current Waitsia owners Mitsui E&P Australia and Beach Energy have approved the expansion of the Xyris gas processing facility at the field to handle 20 terajoules of gas per day, more than enough gas to meet their ongoing sales agreement with Alinta Energy.

While the discovery of Waitsia opened up the Permian gas play in the basin, it is only in recent weeks that interest in the Perth Basin has truly taken off after Strike Energy and Warrego Energy drilled the West Erregulla-2 gas well about 16km east of Waitsia that Strike themselves have described as staggering.

West Erregulla-2, which Strike and Warrego claim is the deepest onshore well in Australia, intersected 58m of net gas pay with porosities of about 14.3% in the Kingia sandstone and 10m of net gas pay with an average porosity of 10.3% in the High Cliff sandstone.

Down-hole tools also returned what Strike described as exceptional permeability along with reservoir pressures of up to 6,828 pounds per square inch absolute for the Kingia sandstone.

This success, which dispelled most doubts about the prospectivity of the Kingia-High Cliff sandstones despite their depth at West Erregulla-2, has also somewhat de-risked the play in surrounding regions by proving that the Waitsia discovery was not a fluke.

The news sent Strike's stock rising nearly 90% to 27.5 cents in late August, while shares in Warrego nearly doubled to about 38.5 cents.

Unsurprisingly, Norwest and its partner, Energy Resources, a subsidiary of ASX-listed hard rock miner Mineral Resources, are now running the ruler over their Lockyer Deep and North Erregulla gas prospects too. These prospects are situated to the north and on-trend with West Erregulla-2 and represent potential targets for their commitment well in the EP 368 exploration permit in the first half of 2020.

Both areas are prospective for gas in the same Kingia and High Cliff sandstones as West Erregulla-2 and could benefit from the two formations being considerably shallower at the Lockyer Deep and North Erregulla locations.

Whilst Norwest had previously estimated that Lockyer Deep could host prospective resources of up to 662 billion cubic feet of gas, the impact of the West Erregulla-2 porosity and column thickness data could potentially increase this resource estimate.

The company has also flagged the possibility that Lockyer Deep and North Erregulla might be a single, large structure, which could add just a touch of excitement to this rapidly developing story.

Further exploration of the Kingia/High Cliff gas play is expected soon with Mitsui and Beach set to drill the Beharra Springs Deep prospect after Easternwell's Rig 106 completes its operations at West Erregulla-2.

Another potential candidate for the commitment well is the Springy Creek oil prospect, located north of the gas prospects, that has estimated prospective recoverable resources of up to 61 million barrels of oil in the Kingia and High Cliff sandstone formations.

Springy Creek was recently upgraded to a drillable prospect following the reprocessing of 2D seismic by Norwest.

Looking to the southwest, Norwest is also awaiting results from a 3D seismic survey completed over the Xanadu oil discovery off the Western Australia coast that was drilled directionally from an onshore location in 2017.

Xanadu, located about 14km southeast of Triangle Energy's producing Cliff Head offshore oil field, was drilled on limited 2D seismic and intersected hydrocarbon-bearing reservoirs.

Wireline logs confirmed reservoir quality sands throughout the Irwin River Coal Measures with porosities between 15-16%, and three sands identified as the A, B and C sands with 4.6m of net pay recording hydrocarbon saturations of between 41-66%.

Analysis of oil samples also indicated that Xanadu is analogous to the Cliff Head field.

Data from the 3D seismic survey will define the up-dip and down-dip potential of the discovery and form the basis for contingent resource estimation.

It will also set the stage for the Xanadu joint venture to consider an appraisal well that will be designed to optimise its chances of making a commercial appraisal.

Norwest has a 25% interest in TP/15, where Xanadu is located, whilst Triangle holds 45% and 3C Group has the remaining 30%.

Rounding out the company's petroleum plays is its Arrowsmith unconventional gas discovery in EP 413, which also hosts the drill pad for the Xanadu-1 well.

While Norwest had delineated an unconventional 2C resource of 316 billion cubic feet of gas following the drilling and fracture stimulation of the Arrowsmith-2 well in 2014, the project has been on the back burner due to the Western Australian Government's moratorium on fracture stimulation.

This moratorium has recently been lifted for existing petroleum titles, which opens up the potential for the company to resume its operations at Arrowsmith.

The revitalisation of the Perth Basin could not have come at a better time for Norwest given the substantial interest that the recent gas discovery at West Erregulla-2 continues to generate.

The company's considerable exposure to the Kingia-High Cliff gas play along with the Xanadu oil discovery and Springy Creek oil play are all potential company-makers in the event of exploration success.

Watch this space.