



(/)

Home (/) Xanadu partners counting down

Xanadu partners counting down

EXPLORATION drilling in the Perth Basin is set to break its multi-year hiatus with the spud of the 160 million barrel-potential Xanadu-1 well in late September.

Haydn Black (/author/profile/888c32d3-3646-4857-be37-825277f70940/haydn-black) 31 July 2017
09:20 News



Success could be the shot- in the arm the region needs.

While Xanadu-1 will be a challenging target to drill, Norwest Energy CEO Shelley Robertson said the partners were convinced in the attractiveness of the target and their ability to bring the well in on time and budget.

Xanadu-1 is the first significant exploration well in the basin for many years, and will follow on from AWE's Waitsia-4 using the Enerdrill Rig-3.

Norwest's 25% operated stake is being carried by three farminees: Triangle Energy and UK-based 3C Group are contributing 80% of the costs to each earn 40%, while junior Whitebark Energy will pay 20% of the costs to earn a 15% interest.

It will be Norwest's first well in the basin since the Arrowsmith-2 unconventional well in 2014, and the first well in the coastal TP/15 permit since 2011's Red Hill South-1 duster.

Red Hill South-1 tested the potential for 9MMbbl in the late Permian Dongara Sandstone reservoir and which are prolific producers at the Hovea and Jingemia oil, but failed to find sufficient hydrocarbons to be commercial.

The company considered it a technical success, and one that upgraded the potential for other prospects such as Xanadu and Capel, but it has taken five years to organise funding of the well.

Robertson said that Xanadu had always been considered the best target in the block, but the decision had been made to drill Red Hill South-1 first as it was a cheaper and easier well from the coastal location into the offshore area of the basin.

"Xanadu is a difficult well to drill in terms of technical challenges, but we have the Aztech Well Construction team who have reviewed and designed the well, and we have the technology to drill this safely," she told Energy News.

"We have had a thorough approach to the well planning, and we have a good team who have a lot of experience in the basin."

Norwest has been involved in TP/15 for more than a decade, but its location on the coast, close to the Cliff Head field, makes it challenging to explore.

Originally the work program required a seismic survey, but Robertson said it had been impossible to attract farm-in interest on the funding of a 3D seismic survey.

"We had about 25 companies come into the data room and a lot were very interested," she explained.

"Most agreed that it was more effective to drill a well, because the costs of a 3D shallow water transitional survey and the drilling were fairly similar."

Drilling of Xanadu-1 is the culmination of around 10 years work on TP/15, and is pinned on a vastly improved dataset.

"Originally, we didn't have the best data so we got a new geologist in, Dean Powell, to go right back to basics without considering the interpretation of what had been done in the past, and because he has been around for a long time he was able to source a lot of 2D seismic lines that we didn't have.

"He got the lines, digitised, and he completed a new structural interpretation.

"We had a great gravity picture of Xanadu, so although we don't have 3D data, we have a lot of solid data, and that supports drilling a well to test the crest of the structure."

The well will be drilled from an onshore location using the Enerdrill Rig-3, close to the limits of extended reach technology, but it makes sense because the costs of mobilising a jack-up would have been far higher, and the rig would still have been located the same distance away from the target because of the depth of the water.

The target has potential across the Permian-age Dongara Sandstone of 12MMbbl barrels at 800m, with secondary targets in the fluvio-deltaic Irwin River Coal Measures (88MMbbl) and the regressive marine sands of the High Cliff Sandstone (60MMbbl).

The main risk of the well is fault seal, and the level of risk increases for the deeper zones.

"We are pretty confident we have seal in the top Dongara reservoir, and the risk increases with the seal as you go through the Irwin River Coal Measures and the High Cliff Sandstone, but with seal in the Dongara even that would be worth developing," Robertson said.

"We are looking at the redevelopment of Jingemia now, and that was originally 12-14MMbbl oil-in-place, so you can see how Xanadu is an exciting opportunity."

Robertson said the work Powell had done had also looked at other dusters, examining source and migration to explain why they had failed, and further supporting the migration of oil from the Cliff Head source into the Xanadu structure.

"We have had a lot of smart geos in the data room, and they've all supported his interpretation, and that process has really helped firm up the prospect, and we have used that data set to farm out what is a fairly cheap well," she said.

"Even if Xanadu-1 doesn't work that isn't the end for Xanadu, because there is more to it because it is a big structure, and we are keen to do some 3D seismic over the other structures in the block."

Xanadu appears to be robust and has both a western and eastern section.

Even if the eastern test with Xanadu-1 is dry, it does not kill the permit or the prospect.

Robertson said the larger western Xanadu could still be a viable target, but it would need to be supported by 3D and most likely would require a jack-up to drill.

While Xandu-1 will be plugged and abandoned regardless of the outcome, success would likely see the production put into Triangle's Arrowsmith plant.

Even if there are just shows, the JV will need to make a tough decision, but that could be enough to support further exploration.

Those decisions - one way or the other - will need to be made ahead of next year's permit renewal, with the expiry set for May 2018.

The work program is likely to return to a seismic focus to support future drilling.

"I know Triangle are very keen to see TP/15 work, because of obviously with declining production from Cliff Head going into the Arrowsmith facility they see this as a way to shortcut the oil through there, and they are keen to explore up and down the coast," Robertson said.

There are other prospects and leads along the length of TP/15, but they are "more sketches" at this stage, with not a lot of data to support what remains preliminary interpretations due to a lack of seismic.

Triangle, 3C and Whitebark's deal with Norwest also raises the option of farming into other drilling opportunities for prospects such as Lockyer Deep, Raven and North Erregulla.

Currently Norwest has 20% in wells, and could find itself carried through the drilling for a commitment well which is due next year.

Norwest is waiting on operator Empire Oil & Gas to finalise its financing,

The shale drilling around Arrowsmith has been set aside, being difficult, but they remain of interest because the shales are thick and extensive, but the work is challenging and expensive, although Roberston said there was still international interest that could see work resume.

The result of Xanadu-1 should be known within 24 days after spud, with the three targets expected to be intersected pretty quickly once the well is near its end.