Signals point to solid ground prosperity

INPEX's Pacific Breeze at the port at Ichthys' LNG project on the North West Shelf area of WA. Picture courtesy: INPEX

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Australia's gas future might lie on land, not offshore, with Western Australia's Perth Basin and the Northern Territory's Beetaloo grabbing plenty of interest from the nation's explorers.

Frontier basins in the Northern Territory and Queensland were prioritised by the Morrison government during last year's gas-fired recovery plans as it seeks to find new sources of production to ease forecast shortages and reboot the manufacturing sector.

The federal government is determined to speed up exploration, and prior to the budget announced $50m to encourage development.

Exploration spend has somewhat recovered after a tough climate during the Covid-19 oil crash, with investment rising incrementally in the first quarter of 2021, after a tough 2020 when onshore exploration spend topped offshore.

Spending rose just over 7 per cent to $283m in the March quarter, although in a historical sense it remains well off boom-time levels. Exploration spend hasn't topped $400m since March 2016 and is nothing like the record $1.5bn spent in the June 2014 quarter when oil was trading above $US100 a barrel.

Citi analyst Dan Levy highlights the Perth and Beetaloo Basins as his favourite exploration plays.

Santos, with junior partner Tamboran Resources, is drilling Tanumbirini 2H in the Beetaloo, while Empire Energy began fracking its Carpentaria-1 well at the beginning of June after first drilling in September and later recording even higher than expected condensate rates.

“If their (Santos) first vertical well results are anything to go by, this horizontal could be a milestone well for the basin, achieving ‘commercial’ flow rates for the first time,” Levy said.

He also noted “smaller players” chasing the same shale – the Velkerri – at shallower depths. Although it can be high-risk from a technical perspective, if successful Empire’s stimulation program “would open up a big section of the Beetaloo many had written off as uncommercial”.

Levy has form in the region, given early in his career he worked as a geologist for Beetaloo player Pangaea Resources, which recently merged with Empire. The market, meanwhile, has some belief as Tamboran’s IPO to the ASX hit the $60m mark.

The Perth Basin has a “near perfect exploration success rate”, according to Levy, but remains under-explored.

Both Beach Energy and Strike Energy are looking to new depths in the area in the so-called Kingia-High Cliff sandstones, which can run up to 5km deep. Previous exploration in the basin focused on the shallower Dongara sandstones, which have had a long and relatively productive history.

All this underlines an interesting detail from the Australian Bureau of Statistics last year: for the first time ever, onshore spend beat offshore. Offshore wells are generally far more costly and difficult, but can offer higher flow rates, especially compared to Queensland’s underwhelming coal seam gas returns.

The biggest offshore well of 2020 was Ironbark-1, by BP and with participation of Beach Energy, Cue Energy and New Zealand Oil and Gas.

The 5000m-deep well was targeting the Mungaroo formation and seen as a longer term candidate to keep the ageing North West Shelf LNG facility full, should Woodside’s plans to develop its Browse gas fields not succeed. The well was a duster, an industry term for empty.

Beach Energy had success earlier this year at its Artisan-1 well in Victoria’s offshore Otway Basin, paving the way for a wider drilling campaign, but the project will not be LNG-scale.

The Beetaloo is a particular federal favourite, with Energy Minister Angus Taylor visiting Empire’s permit last year while the company was drilling.

Gas from the area could head to east-coast markets, though likely not in time to stem a middecade supply crunch; or go north to Darwin, where it could be liquefied if Santos expands its onetrain Darwin LNG facility, which it already has approval for, or to a new petrochemical plant.

Elsewhere Senex Energy, whose sole focus is Queensland coal seam gas, plans to increase production by a factor of five by 2025 which will require both infill drilling and exploration. Consultant Simon Molyneux says spending won’t fall further, but he does not see a resurgence, especially offshore.

“Across offshore Western Australia and the Northern Territory a lack of acreage turnover, limited access to infrastructure, high entry costs, small remaining potential – all feed into low activity levels without the negative impact of global factors,” he said.

For an uptick in offshore exploration spend, industry would need access to prospective acreage, which could mean forced relinquishment of long-term retention licenses, certainty of third-party infrastructure access and confidence that proposed work will be approved.

However, Molyneux sees this as a global problem and with an ongoing lack of funds oil prices could inch back to double digits by as soon as 2024. This may fund a rush back to exploration, with speculative money coming from firms in the Middle East, China and Russia and other nations “that aren’t fussy about the climate”.

There are several offshore exploration wells due in Australia. Advent Energy has plans for a wildcat in the Sydney Basin, provided it can secure an extension to its work program, and EOG Resources is also awaiting an extension for its offshore Western Australia permit, after buying it from Melbana Energy in May. If successful, it will drill a carbonate structure known as Beehive, a tricky prospect that will pay off handsomely if successful.

“Prospects that could be developed quickly as low-cost tiebacks offer the most compelling exploration opportunities. Beach’s Artisan find in the Otway basin earlier this year is a good example of such a discovery,” says Wood Mackenzie analyst Shaun Brady.