



# ONSHORE and STATE WATERS PETROLEUM SUCCESSES

**DISCOVERY/  
ACCUMULATION/  
PLAY**      **OPERATOR/  
ORGANIZATION**

**COMMENT**

## PERTH BASIN

West Erregulla 2	Strike Energy	In August and September 2019, Strike Energy announced conventional gas discovery in three different Permian sandstone formations of the West Erregulla 2 well. Log interpretation indicated that the Wagina sandstone may have a net reservoir of 10 m and a total gas column of 79 m. The Kingia Sandstone had elevated mud gas readings while drilling. Logging While Drilling tools indicated excellent quality reservoir sandstones and a possible net pay of 41 m with a gross gas column of at least 97 m. The High Cliff Sandstone was encountered at 4918 m with excellent quality reservoir and interpreted net pay of 10 m and a gross gas column of at least 22 m. At 5100 m depth, this is the deepest well drilled, and it has the deepest hydrocarbons discovered, in onshore Australia to date. (Source: Strike Energy)
Waitsia Gas Field	Mitsui took control of AWE in April 2018	After some 50 years of exploration, the Perth Basin's largest commercial gas discovery (Waitsia) was made in 2014 while appraising the Senecio Gas Field. In 2017 an independent review increased the Waitsia Gas Field's 2P reserves by 78% to 811 petajoules, making it Western Australia's biggest known onshore commercial gas field. This discovery opened up a new Permian sandstone play. A record flow (90 MMSFD) was obtained from Kingia Sandstone. (Source: AWE)
Xanadu 1 (State Waters)	Norwest Energy	In September 2017, the Xanadu 1 oil discovery was made in State Waters of the northern Perth Basin. It was a deviated well drilled from a near coastal drill pad. 34.7 degrees API oil was recovered on a wireline tool and analysis confirmed similarity with oil produced commercially at the Cliff Head oil field which is located approximately 14 km to the northwest. Pre-drill estimates for the Permian Irwin River Coal Measures reservoir in Xanadu 1 were for between 13 to 159 million barrels with a best estimate of 88 million barrels. (Source: Norwest Energy)
Production Licences L18 and L19	Empire Oil and Gas	Licences granted in October 2014. The Red Gully 1 and Gingin West 1 wells have been producing gas and condensate on an Extended Production Test through the Red Gully Processing Facility since first gas was produced in June 2013 and commissioning of the facility occurred in September 2013. (Source: Empire Oil and Gas)

## CANNING BASIN

Adoxa 1	Buru Energy	In early August 2019 Buru Energy announced excellent oil shows were encountered in cuttings samples and live oil was observed over the shakers at the surface. A potential 11 m oil pay zone in the Lower Carboniferous Anderson Formation was subsequently identified by Buru Energy after completing wireline operations. At a later date a cased hole production test is planned to determine reservoir flow characteristics and composition of reservoir fluids. (Source: Buru Energy)
Ungani Oil Field	Buru Energy	Pre-drill, Ungani 1 was a gas in sandstone prospect. However, in 2011, 37 degrees API oil flowed on DST at rates of up to 1647 bpd on a 32/64" choke from Devonian–Carboniferous dolomite. This was another new play discovery. Oil has been delivered by road tanker to the northern Australian port of Wyndham for export to Southeast Asian refineries. In late 2017, Ungani 5 flowed over 1200 bopd. In May 2018 Buru Energy sold 50% of Ungani Oil Field to Roc Oil. The 2019 development drilling program aims to at least double production from the field. (Source: Buru Energy)
Theia 1	Finder Exploration	Theia 1 drilled July–August 2015. Early assessment appears to validate the geological model and de-risk the Ordovician Goldwyer Formation liquids rich resource play. Gas and oil shows, indications of overpressure and interpreted within oil window. (Source: Finder Exploration)
Yulleroo	Buru Energy	Carboniferous Laurel Formation. Gas-wetness ratios and inferred pressure data from Yulleroo 3, which spudded in May 2012, indicate that the Yulleroo accumulation is possibly part of a broader basin centred gas accumulation in the area. In March 2013 it was reported that Yulleroo 4 appraisal well encountered gas shows over a total interval of 1684 m. (Source: Buru Energy)
Valhalla	Buru Energy	July 2011 Valhalla 2 a successful appraisal of a significant gas accumulation. Gas charged Laurel Formation section in excess of 1300 m. Accumulation can be interpreted to be either a basin centred accumulation or a combination structural/stratigraphic trap against the flank of the basin. Potential for recoverable hydrocarbons of several TCF gas and in excess of 50 mmbbls liquids. Valhalla North 1, drilled in the first quarter of 2012, indicates that Valhalla is a geographically widespread resource accumulation. (Source: Buru Energy)
Ungani Far West 1	Buru Energy	Spudded 28 November 2015. Anderson Formation sandstone oil discovery — a new play for the area. Also an interpreted 15 m oil column in Ungani Dolomite (Source: Buru Energy).
Ungani North 1	Buru Energy	Drilled in 2012. The primary target was the Ungani Dolomite, which is the producing interval at the Ungani oilfield. An oil column of approximately 40 m was interpreted at the top of the dolomite reservoir section and there were excellent gas shows in the Nullara Limestone deeper down. (Source: Buru Energy)

## BONAPARTE BASIN

Waggon Creek 1	Advent Energy	During September and October 2012, Advent Energy tested Milligans Formation sandstone reservoirs. Gas flows of up to 0.96 MMCFG/D were recorded from the test. (Source: MEC Resources)
----------------	---------------	--

New players may take up onshore acreage through farm-in opportunities or by applying for acreage released for work program bidding by the Western Australian Department of Mines, Industry Regulation and Safety

[www.dmp.wa.gov.au/acreage\\_release](http://www.dmp.wa.gov.au/acreage_release)

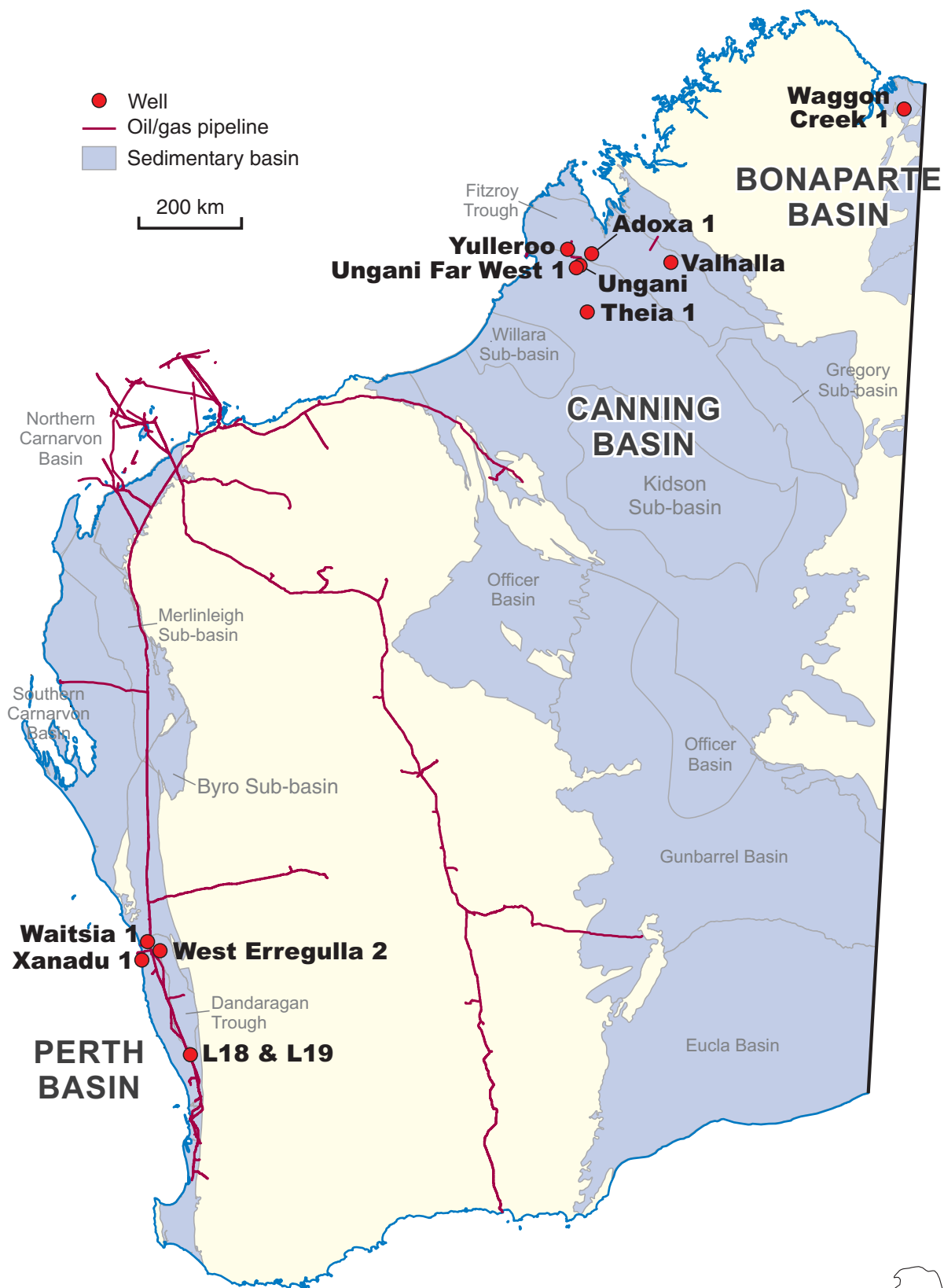


Government of Western Australia  
Department of Mines, Industry Regulation  
and Safety

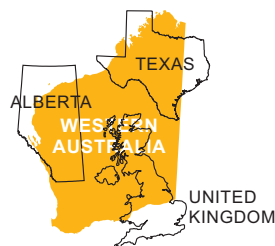
[www.dmirs.wa.gov.au](http://www.dmirs.wa.gov.au)

Geological Survey of  
Western Australia





## Size comparisons



SEPTEMBER 2019

