



# PETROLEUM

## ONSHORE SUCCESSES

WORLD-CLASS RESOURCE PROVINCE | SECURE INVESTMENT LOCATION  
WORLD-LEADING GEOSCIENTIFIC DATA | LOCAL PETROLEUM SERVICES INDUSTRY



## PERTH BASIN

WELL OR FIELD	OPERATOR	COMMENT
Lockyer Deep 1	Norwest Energy, Energy Resources	In September 2021, a gas discovery was reported in the Kingia Sandstone which was intersected at 4041 m. In March 2022, a well test gave an instantaneous maximum gas flow rate of 117 MMSCFD from excellent conventional reservoir quality Kingia Sandstone. Condensate recovered to surface with a preliminary condensate gas ratio (CGR) of 5–6 bbl/MMSCF. (Source: Mineral Resources)
South Erregulla 1	Strike Energy	Gas was discovered at two levels: Upper Permian Wagina Sandstone and Lower Permian Kingia Sandstone. The Wagina gas discovery, announced in February 2022, was an added outcome to the primary objective Kingia Sandstone. In June 2022, it was announced that good-quality gas flowed from the Kingia Sandstone at a rate of 78 MMSCFD. In October 2022, it was announced that the Wagina Formation flowed gas at a rate of 10 MMSCFD. (Source: Strike Energy)
Walyering 6	Strike Energy	In July 2022, it was announced that the Jurassic Cadda Formation commingled with the Cattamarra Coal Measures flowed gas at a rate of 35 MMSCFD. (Source: Strike Energy). The Walyering gas field has been sanctioned for development in only 9 months from its announced discovery.
Beharra Springs Deep 1	Beach Energy	In October 2019, Beach Energy declared a new conventional gas discovery in the Beharra Springs Deep 1 exploration well. Preliminary estimate of net gas pay is 36 m, and reservoir porosity is calculated to be up to 21% in the Kingia Sandstone at a depth between 3935 and 4000 m. In December 2019, the high quality of the Kingia Sandstone reservoir was confirmed by a test giving flow rates of up to 46 MMSCFD constrained by tubing size. (Source: Beach Energy)
West Erregulla 2	Strike Energy	In August 2019, Strike made a major gas discovery with its West Erregulla 2 well. Several Permian sandstone reservoirs were intersected, including the Kingia Sandstone, with a gross gas column of at least 97 m. Subsequent testing of the Kingia reservoir gave a gas flow rate of approximately 69 MMSCFD, through a two-inch choke and 700 PSIG wellhead pressure over a one-hour period, confirming the high-quality reservoir with excellent productivity. At 5100 m depth, this was the deepest well drilled and the deepest hydrocarbons discovered in onshore Australia up until that time. (Source: Strike Energy)
Waitsia gas field	Mitsui	In 2014, the biggest discovery of conventional gas in onshore Australia for more than 40 years was made while deepening the Senecio 3 appraisal well beyond the target younger Permian reservoirs. The discovery became known as the Waitsia Gas Field and opened up a new deeper Permian sandstone play. (Source: Mitsui)

## CANNING BASIN

WELL OR FIELD	OPERATOR	COMMENT
Rafael 1	Buru Energy	In March 2022, Buru Energy announced that gas flowed at a rate estimated to be between 4 and 5 million cubic feet per day on a 32/64 inch fixed choke with a wellhead flowing pressure of 970 psi. The indicative condensate gas ratio (CGR) was estimated to be between 20 and 30 barrels of condensate per million cubic feet of gas. Executive Chairman Eric Streitberg said 'This is the first sustained gas flow from conventional reservoirs in the Canning Basin... We also need to plan for testing of the other zones in the well including the upper part of the Ungani Dolomite zone where the gas influx occurred during the drilling of the well, and the Upper Laurel Carbonate section, both of which are behind casing'. (Source: Buru Energy)
Adoxa 1	Buru Energy	In August 2019, excellent oil shows were encountered in cuttings samples and live oil was observed over the shakers at the surface while drilling Adoxa 1. A potential 11 m oil pay zone in the Lower Carboniferous Anderson Formation was subsequently identified by Buru Energy after completing wireline operations. (Source: Buru Energy)
Theia 1	Theia Energy (formerly FINDER Exploration)	Theia 1 was drilled in July–August 2015. Post-well assessment appears to validate the geological model and de-risk the Ordovician Goldwyer Formation liquids rich resource play. Both gas and oil shows, as well as indications of overpressure, were encountered in the well. (Source: Theia Energy)
Ungani oil field	Buru Energy	Pre-drill, Ungani 1 was targeting gas in a sandstone reservoir. However, when it was drilled in 2011, a new play was discovered with 37° API oil flowing on DST at rates of up to 1647 bpd on a 32/64 inch choke from Devonian–Carboniferous dolomite. (Source: Buru Energy) This discovery has sparked new exploration interest in the Canning Basin.
Valhalla	Bennett Resources	In 2011, Valhalla 2 was a successful appraisal of a significant gas accumulation. The thickness of the gas charged Laurel Formation is in excess of 1300 m. The accumulation can be interpreted to be either a basin-centred accumulation or a combination structural/stratigraphic trap against the flank of the basin. It is assessed to have a potential volume of recoverable hydrocarbons of several TCF gas and in excess of 50 mmbbls liquids. Valhalla North 1, drilled in the first quarter of 2012, indicated that Valhalla is a geographically widespread resource accumulation. (Source: Buru Energy)

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

### For more information



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Department of Mines, Industry Regulation and Safety

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