

# Manyingee Project

Western Australia



PALADIN ENERGY LTD

April 2019

Paladin has a 100% interest in the Manyingee Project which is a sandstone hosted uranium project consisting of 41Mlb  $U_3O_8$  across two deposits. A field leach trial (FLT) was conducted at the Manyingee deposit in 1985 and successfully showed the deposit is amenable to extraction by in-situ recovery (ISR) however development didn't proceed at the time due to the depressed uranium market.

Paladin believes Manyingee can be developed into an in-situ recovery (ISR) uranium mining operation over a period of four to five years. An internal scoping study set out steps towards development including further resource drilling, environmental studies, hydrogeological data collection and interpretation and metallurgical testwork culminating in a FLT. The FLT will use modern ISR technology and provide the necessary inputs for a feasibility study that will be used for a final investment decision. Production of between 15-20Mlb  $U_3O_8$  is targeted over a mine life of more than 10 years.

## Location and Access

The Manyingee Project is located in the northwest of Western Australia. The Manyingee resource is located 85km inland from the coastal township of Onslow and is coincident with three Mining Leases. The Carley Bore tenements are located 180km SSE of Exmouth. Access to both areas is along cattle station tracks either from the sealed North West Coastal Highway or Shire maintained gravel roads. Natural gas pipelines are located in close proximity to the eastern side of both the Manyingee and Carley Bore resources. The Project is serviced by Paladin's Perth office.

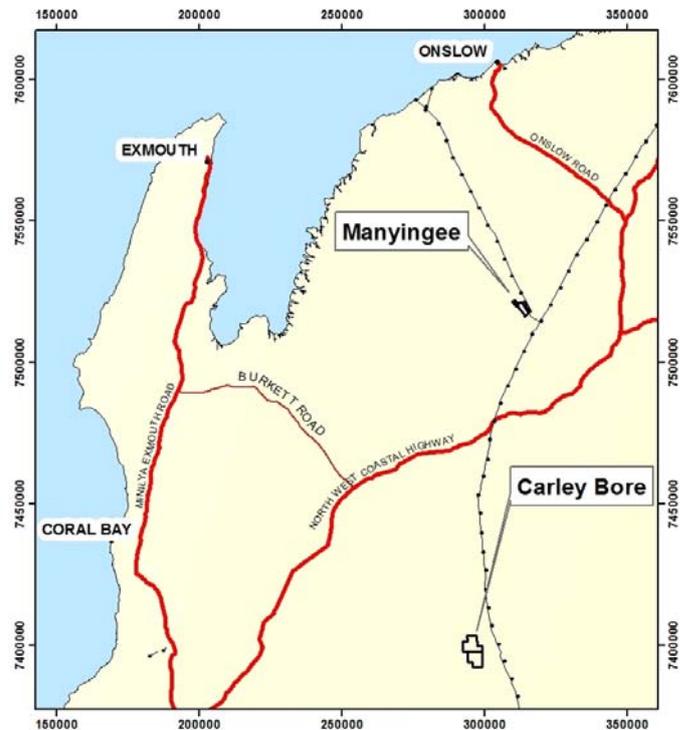
## Geology

The Manyingee and Carley Bore deposits are hosted in Lower Cretaceous sediments of the Northern Carnarvon Basin. These sediments are a sequence of fluvial, deltaic and near-shore facies sediments that were deposited along palaeo drainages which are incised into older stratigraphic units. The sediments are 50-100m thick but thicknesses up to 200m are found in places.

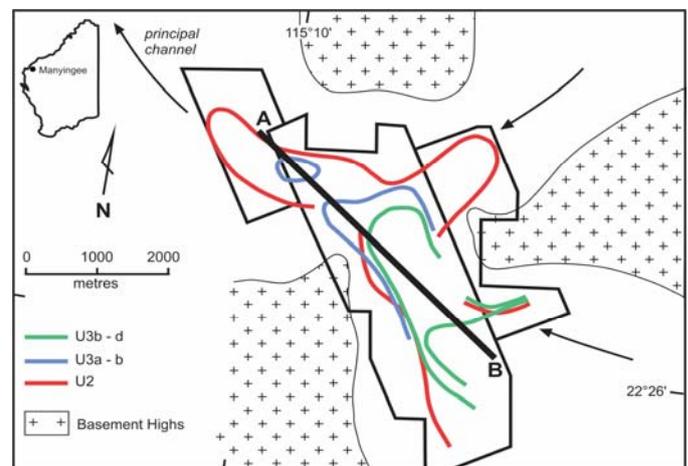
The Birdrong Sandstone hosts the majority of the uranium mineralisation and is capped by the Muderong Shale which effectively hydrogeologically confines the Birdrong Sandstone aquifer. There is no surface expression of the mineralisation and the deposit was discovered by drilling a conceptual exploration target.

## Uranium Mineralisation

Mineralisation is considered to be typical of sandstone-hosted roll-front uranium deposits. The mineralisation occurs between 50 and 150m below the surface pre-



dominantly within the Birdrong Sandstone. Roll front geometry at Manyingee has been modelled in five sedimentary sequences defined by drilling chip logging and geophysical wireline logging. Discrimination between oxidized and reduced facies is clear due to the visible iron hydroxides in oxidized facies and pyrite in reduced facies. Mapping the interface between oxidized and reduced facies is an essential tool for mineralisation targeting and modelling.

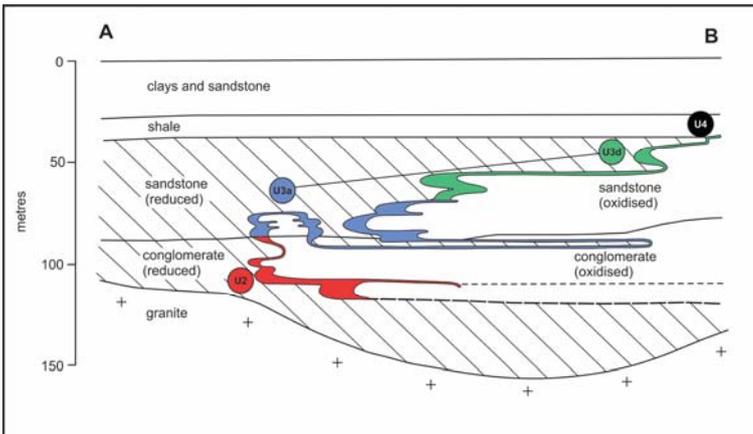


Plan view of uranium mineralisation within each defined sedimentary sequence at Manyingee

## Uranium Resources

Manyingee and Carley Bore have published a JORC Code (2012) compliant resource estimates as tabled to the right.

Deposit	Cut-off ppm U <sub>3</sub> O <sub>8</sub>	Indicated Resources				Inferred Resources				Total			
		Mt	Grade ppm	t U <sub>3</sub> O <sub>8</sub>	Mlb	Mt	Grade ppm	t U <sub>3</sub> O <sub>8</sub>	Mlb	Mt	Grade ppm	t U <sub>3</sub> O <sub>8</sub>	Mlb
<b>Manyingee</b>	250	8.40	850	7,127	15.7	5.41	850	4,613	10.17	13.81	850	11740	25.9
<b>Carley Bore</b>	150	5.4	420	2268	5.0	17.4	280	4825	10.6	22.80	310	7093	15.6
<b>Total</b>		13.8	682	9395	20.7	22.8	413	9438	20.8	36.6	510	18833	41.5



Long section view of uranium mineralisation within each defined sedimentary sequence at Manyingee

## The Way Forward

Paladin currently operates the Manyingee Project on an activity and expenditure level that maintains the tenure in good standing. Throughout this period relationships with key stakeholders are managed and planned work programs are kept current so that they can be implemented when Western Australian State government policy and uranium market conditions are more favourable.

The Project has strong fundamentals given the extent of exploration and engineering studies completed in the past which will provide a strong foundation for further work to proceed when appropriate political and market conditions are realised.



**PALADIN ENERGY LTD**



## Corporate/Contact Details

### Paladin Energy Ltd

Karen Oswald

Investor Relations

Email: karen.oswald@paladinenergy.com.au

Level 4 502 Hay St,

Subiaco, Western Australia 6008

PO Box 201, Subiaco, Western Australia 6904

Tel: +618 9381 4366

Fax: +618 9381 4978

*The mineral resource information in this document is extracted from the report entitled Paladin Energy Ltd 2018 Annual Report created on 28th August 2018 and is available to view on [www.paladinenergy.com.au](http://www.paladinenergy.com.au). The company confirms that it is not aware of any new information or data that materially affect the information included in the original announcement and, in the case of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not materially modified from the original market announcement.*