

# Mount Isa Project

## Queensland, Australia



PALADIN ENERGY LTD

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Paladin's Mount Isa Project include 10 deposits containing 148.3Mlb of uranium. The bulk of the uranium (115.7Mlb) is concentrated in the Valhalla, Skal and Odin deposits.

In June 2007, Paladin acquired an 82% stake in Summit Resources Ltd (Summit) and between 2007 and 2012 achieved annual mineral resource growth of close to 20%, an increase from a total of 65Mlb  $U_3O_8$  to 148Mlb  $U_3O_8$ . 116,490m of diamond core and 148,740m of RC was drilled to search for and define the estimated resources. Paladin acquired the minority shareholdings in Summit to take its ownership to 100% as part of an off-market takeover offer that was completed in late 2018.

The landholding consists of three Exploration Permits for Minerals (EPM's) and six Mineral Development Licences (MDLs). Aeon Metals (ASX:AQR) earned the right to explore for base metals on some of the landholding by satisfying the terms of a Mineral Rights Agreement executed by the parties in 2009. Paladin holds 100% of all uranium rights across the landholding.

The land is subject to the Kalkadoon People No.4 QCD2011/007 native title determination. Paladin has always maintained a good working relationship with the Kalkadoon People with exploration programs routinely culturally cleared with Kalkadoon representatives.



*Diamond Core Drilling*

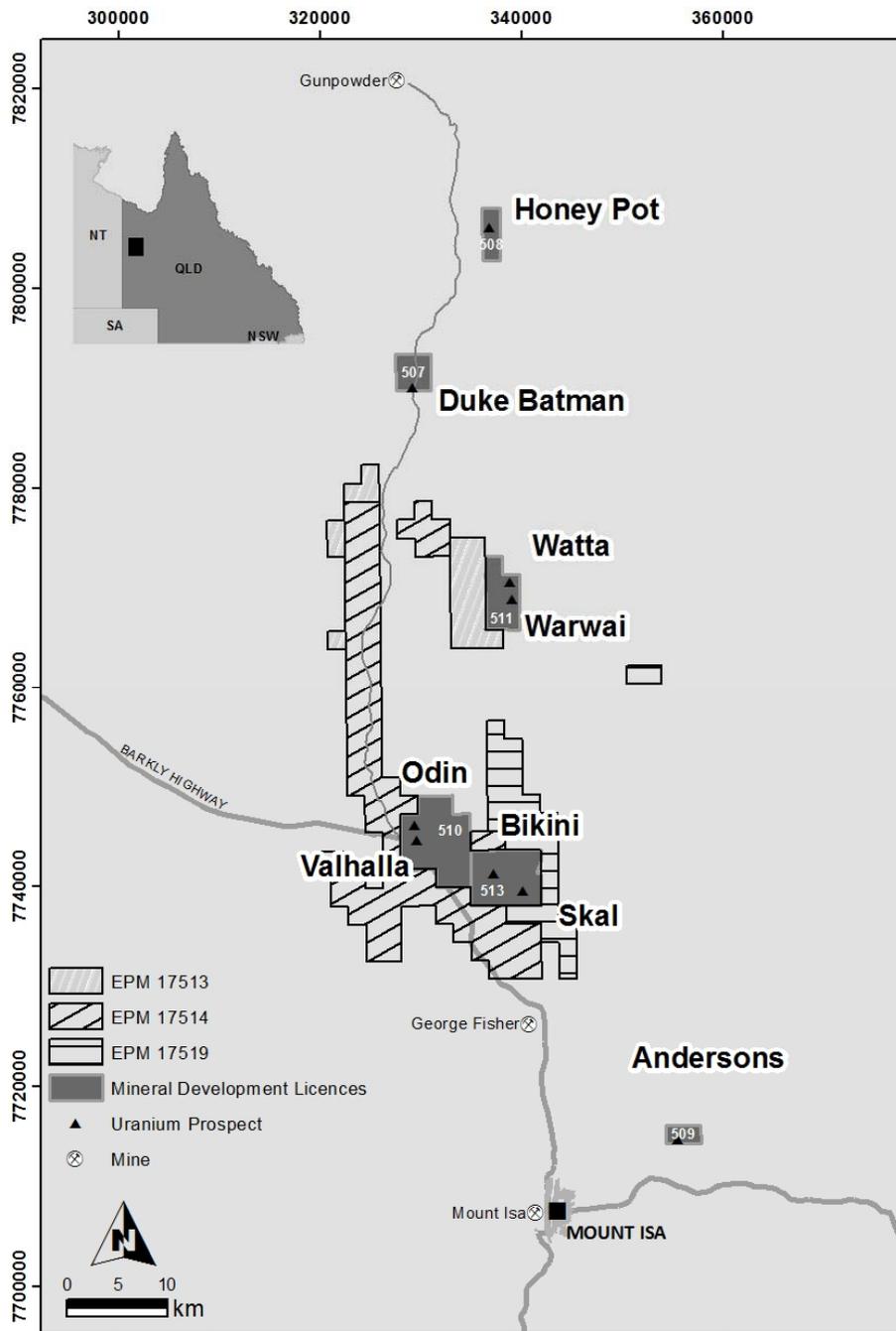
### Location and Access

The Mount Isa Project tenements are located 15 to 80km north and east of Mount Isa. Access to the landholding is excellent via the sealed Barkly Highway, the partially sealed Gunpowder Road, and various station tracks on Calton Hills and Haslingden cattle stations.

The Projects are serviced by Summit Resources' office and yard complex located at 15 Traders Way in Mount Isa .



Mount Isa Yard and Office



Project Location

## Geology

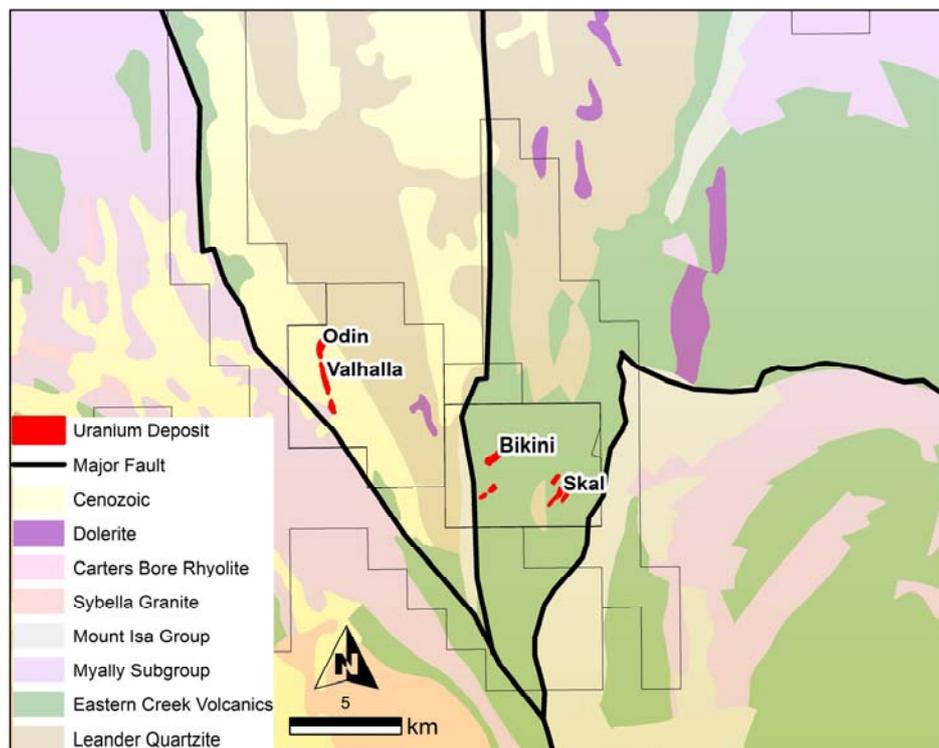
The majority of the uranium mineralisation in the IUJV, MINP and VNP area occurs in the Eastern Creek Volcanics (ECVs) and are spatially associated with second order fault splays off major faults.

## Uranium Mineralisation and Alteration

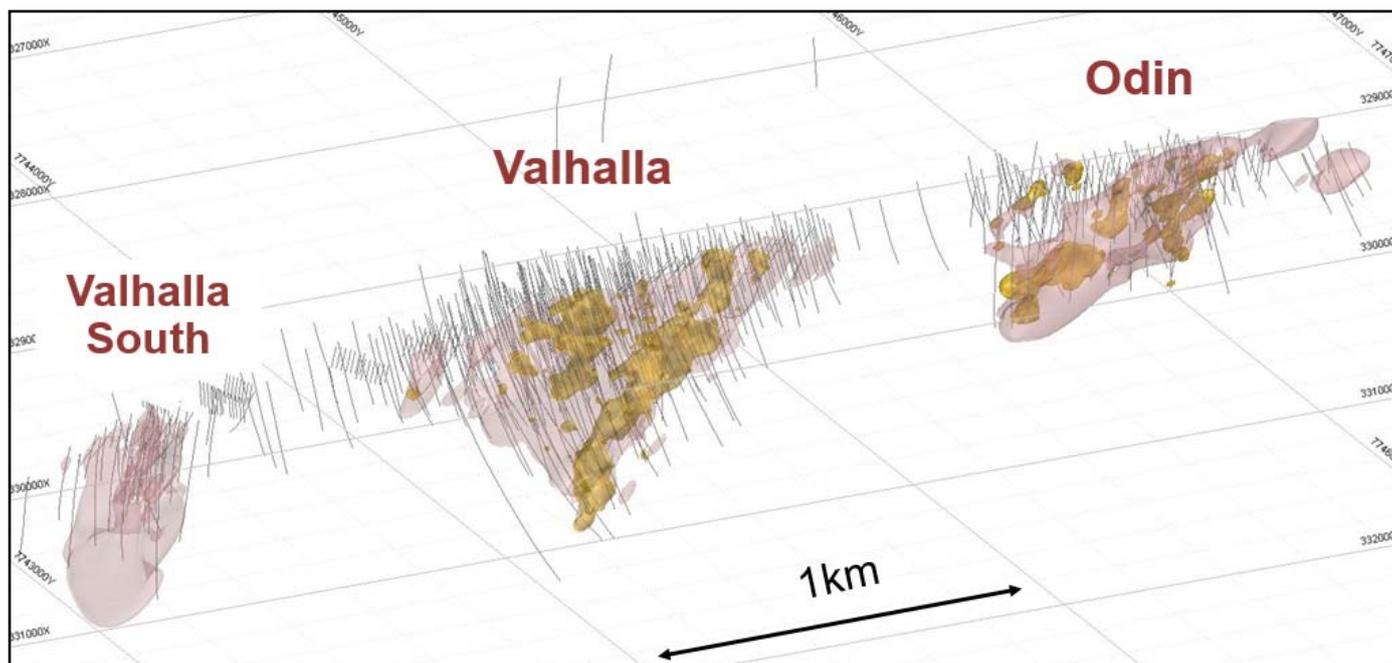
Petrographic studies and mapping have demonstrated that much of the 'red rock' alteration in the deposits is due to finely disseminated hematite in albite and calcite caused by Na and Ca metasomatism. Mineralisation is typically dominated by either mylonite or breccia textures. Deposits with geology and mineralisation similar to that of the IUJV, MINP and VNP uranium deposits have been, and continue to be, mined in Russia, Ukraine, Brazil and Canada.

Valhalla is spatially coincident with part of a 3km-long shear zone. Valhalla can be interpreted as a series of en - echelon lenses of uranium mineralization that is better developed at the intersection of the shear zone and areas of repetition of narrow thicknesses basalts and sediments, the repetition is termed interbeddedness. Interbeddedness creates rheological contrasts

which causing multiple surfaces that can fail when subjected to deformation and therefore can facilitate transport and reaction with uraniumiferous mineralising fluids.



*U Deposits in relation to major structures and stratigraphy*



*Long section of the Valhalla—Odin trend showing Leapfrog generated grade shells and drill hole traces. 114,703m of RC and diamond drilling has been completed along the trend. Approximately AUD9M has been invested in drilling since July 2007.*

## Uranium Resources

The Project resource inventory totals 148Mlb, the details of which are tabled below.

Deposit	Cut-off ppm U <sub>3</sub> O <sub>8</sub>	Measured Resources			Indicated Resources			Inferred Resources			Total		
		Mt	Grade ppm	Mlb	Mt	Grade ppm	Mlb	Mt	Grade ppm	Mlb	Mt	Grade ppm	Mlb
Valhalla*	230	16	820	28.9	18.6	840	34.5	9.1	640	12.8	43.7	792	76.2
Skal*	250				14.3	640	20.2	1.4	520	1.6	15.7	630	21.8
Odin*	250				8.2	555	10	5.8	590	7.6	14	569	17.6
Bikini*	250				5.8	495	6.3	6.7	490	7.3	12.5	495	13.6
Andersons*	250				1.4	1,450	4.6	0.1	1,640	0.4	1.5	1522	5
Watta	250							5.6	400	5	5.6	404	5
Warwai	250							0.4	360	0.3	0.4	335	0.3
Mirrioola	250							2	560	2.5	2	566	2.5
Duke Batman*	250				0.5	1,370	1.6	0.3	1,100	0.7	0.8	1316	2.3
Honey Pot	250							2.6	700	4	2.6	692	4
<b>Total Resources</b>		16	820	28.9	48.8	720	77.3	33.9	565	42.2	98.8	680	148.3

Figures may not add due to rounding. \* Deposits estimated using Multiple Indicator Kriging within a wireframe envelope. All other Mineral Resources are estimated using Ordinary Kriging with an appropriate top cut. Data for all deposits is a combination of geochemical assay and downhole radiometric logging. All Mineral Resources are JORC (2004) compliant.

## The Way Forward

Away from the estimated resources there are potentially many targets obscured by alluvium that remain untested. The execution of creative exploration to discover further resources represents a significant opportunity for the Mount Isa Project.

The expectation in Queensland is that a conservative government will strongly support uranium mining while a Labor (incumbent) government will not permit it.

Internal engineering studies show that there is potential for an operation to be developed. The operation may have throughput rates of 4-5Mt/a to produce 5-7Mlb U<sub>3</sub>O<sub>8</sub>/a. It is expected that three to four years of exploration and metallurgical work will be required to provide sufficient information to implement a BFS.



**PALADIN ENERGY LTD**



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*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.*