



# Australian Uranium Conference

## 16-17 July 2014

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All amounts in A\$ unless stated otherwise.



# Australia's Uranium

**Bigirlyi & Ngalia**

Macallan

Mopoke Well

Lake Mason

Anketell

Manyingee

Lakeside



# Energy Metals Limited



## Capital Structure

Shares on Issue	209.7m
Shareholders	748
Cash & Bank (31 March 2014)	\$24.7m

## Major Shareholders

CGN	139.3m	66.45%
KangDe	26.5m	12.66%
Jindalee	14.0m	6.69%

**Premier Li Keqiang has declared a  
“war on pollution”.**







# Parent Company

**CGN** (China General Nuclear Power Group)

- **Clean Energy Group** (established 1994)
- Gross assets RMB303.7B (US\$49B)
- Net assets RMB84.5B (US\$13.5B)
- 11 operating nuclear generating units(11.62GWe)
- 13 other nuclear generating units under construction (15.52GWe)
- 5,000 MWe installed capacity for wind power generators in operation
- 517 MWe capacity for solar photovoltaic power generators
- 1,470 MWe controlling equity capacity for hydro power

# Nuclear Power in China

- Mainland China has 18 nuclear power reactors in operation (15.86 GWe), 30 under construction (32.87 GWe).





# Uranium Trading



- Extension of Permit to Possess Nuclear Material to 31 March 2018.
- A waiver from ASX Listing Rule 10.1, subject to certain conditions, to the extent necessary to permit wholly owned subsidiary, NT Energy Pty Ltd, to enter into agreements with CGN-Uranium Resources Company Ltd, to sell up to 2.5M lbs of uranium concentrates per year.

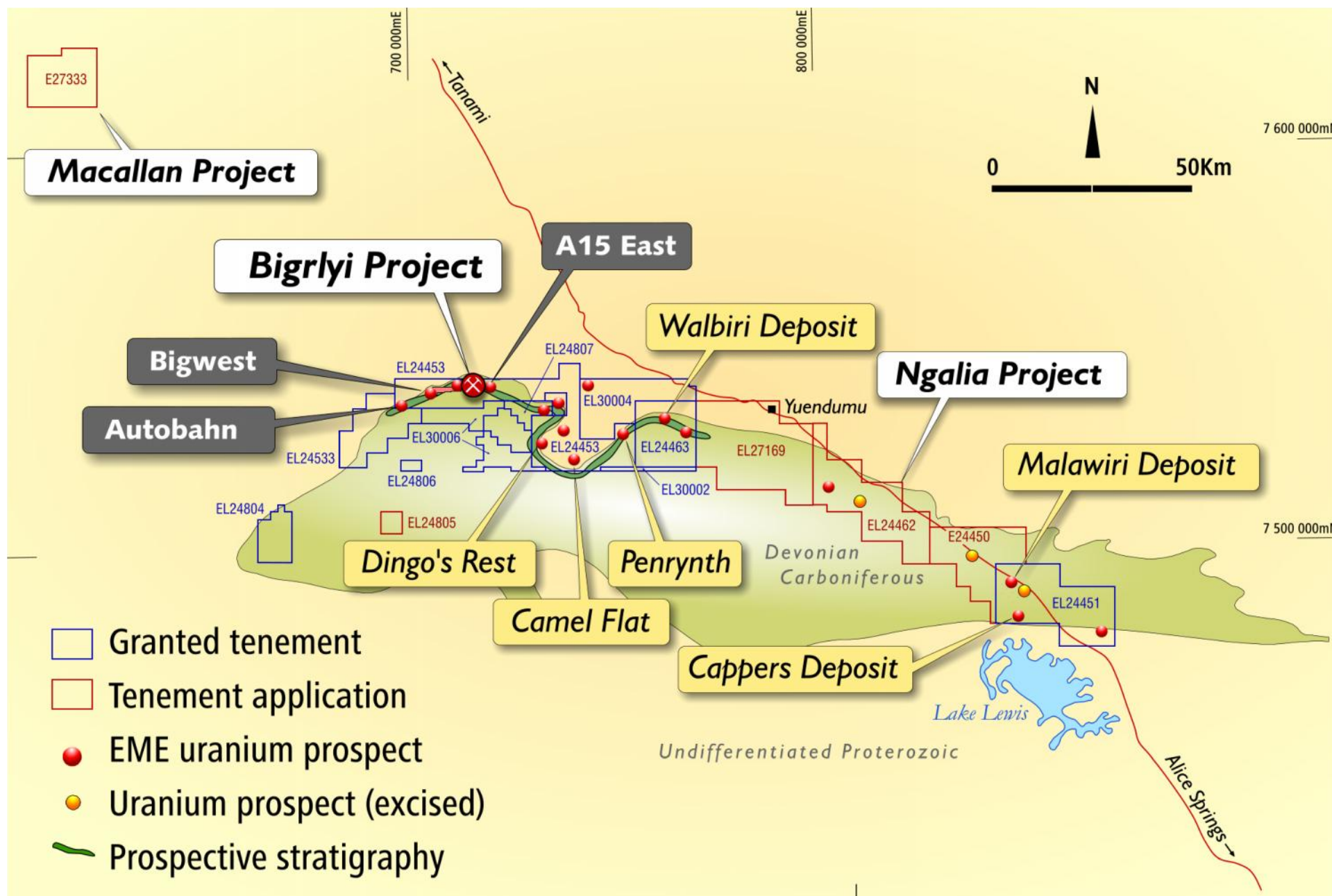


# Northern Territory Projects.

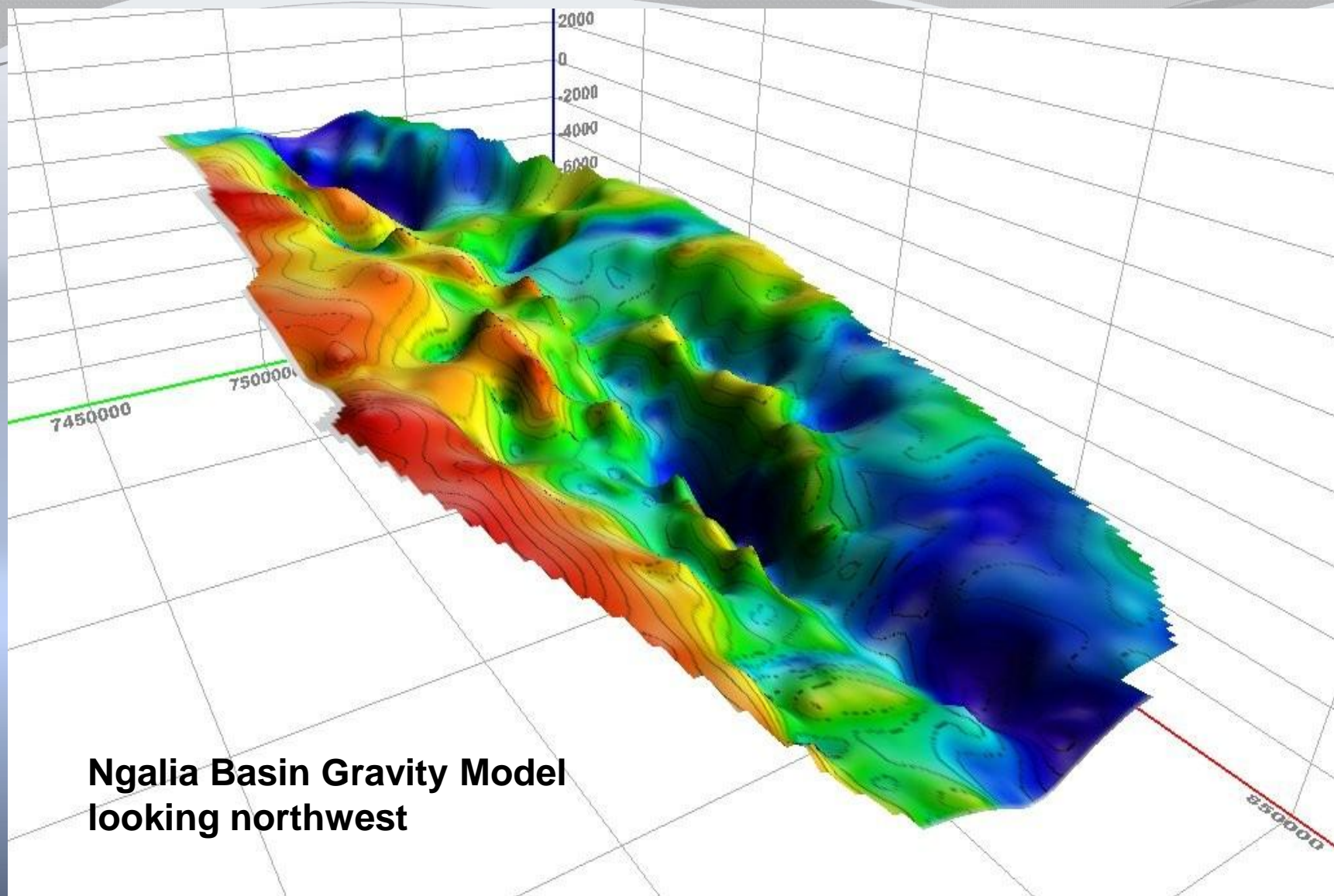


Discovering  
Clean Energy

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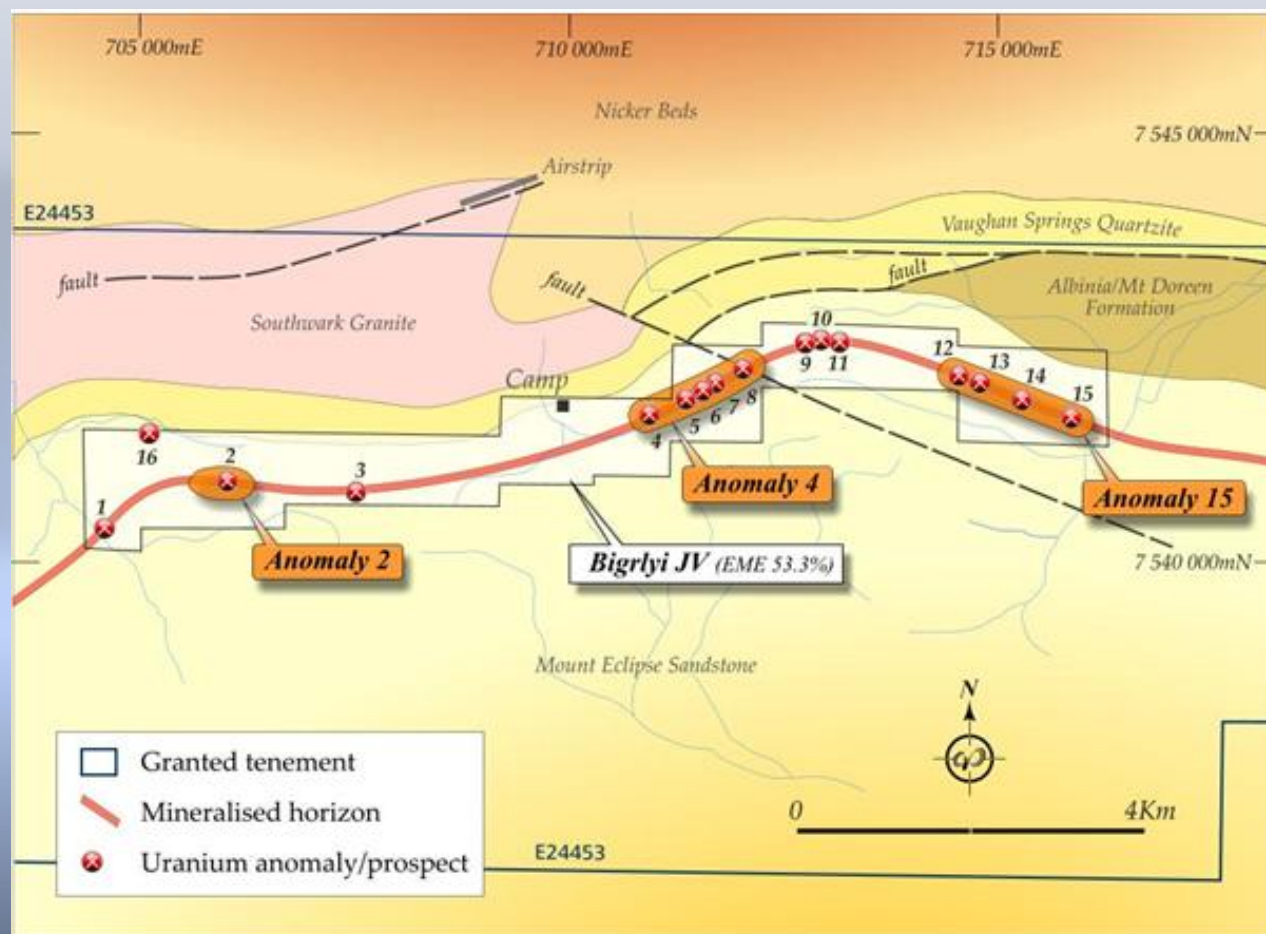






**Ngalia Basin Gravity Model  
looking northwest**

# Bigrlyi Joint Venture Project



Tabular  
Sandstone hosted  
Uranium-  
Vanadium  
Deposit of  
Carboniferous  
Age

Several drilling  
programs,  
concentrating  
mostly on the  
Anomaly 4 and  
Anomaly 15  
deposits, were  
completed at  
Bigrlyi in the  
period from 2006  
to 2011.

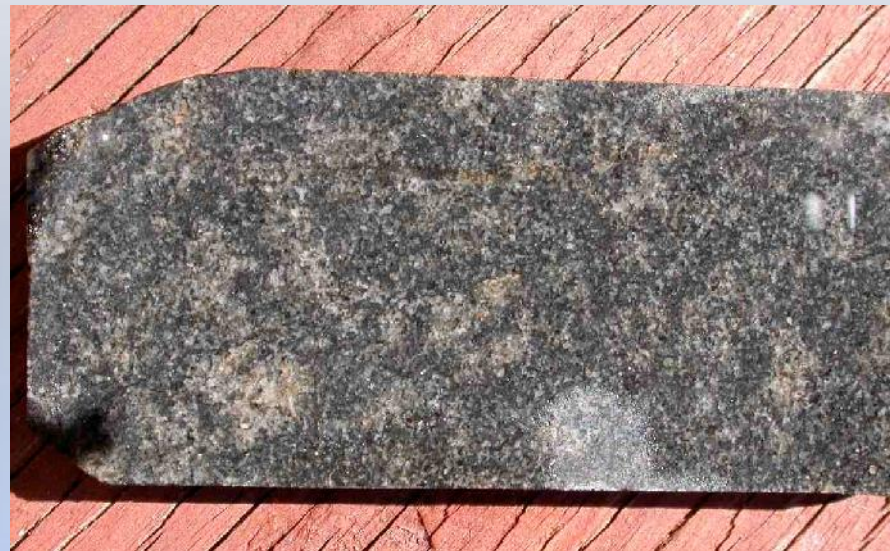


## Bigirlyi Joint Venture Project



A Pre-Feasibility Study completed mid-2011 confirmed that mining the Anomaly 4, Anomaly 15 and Anomaly 2 deposits using a combination of open pit and underground mining and processing ore through a relatively simple acid leach circuit would produce around 10Mlb  $U_3O_8$  over a mine life of approximately 8 years.

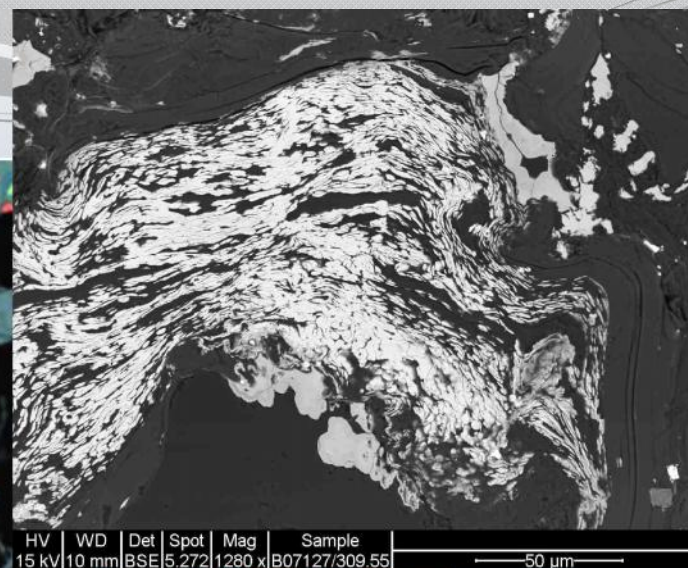
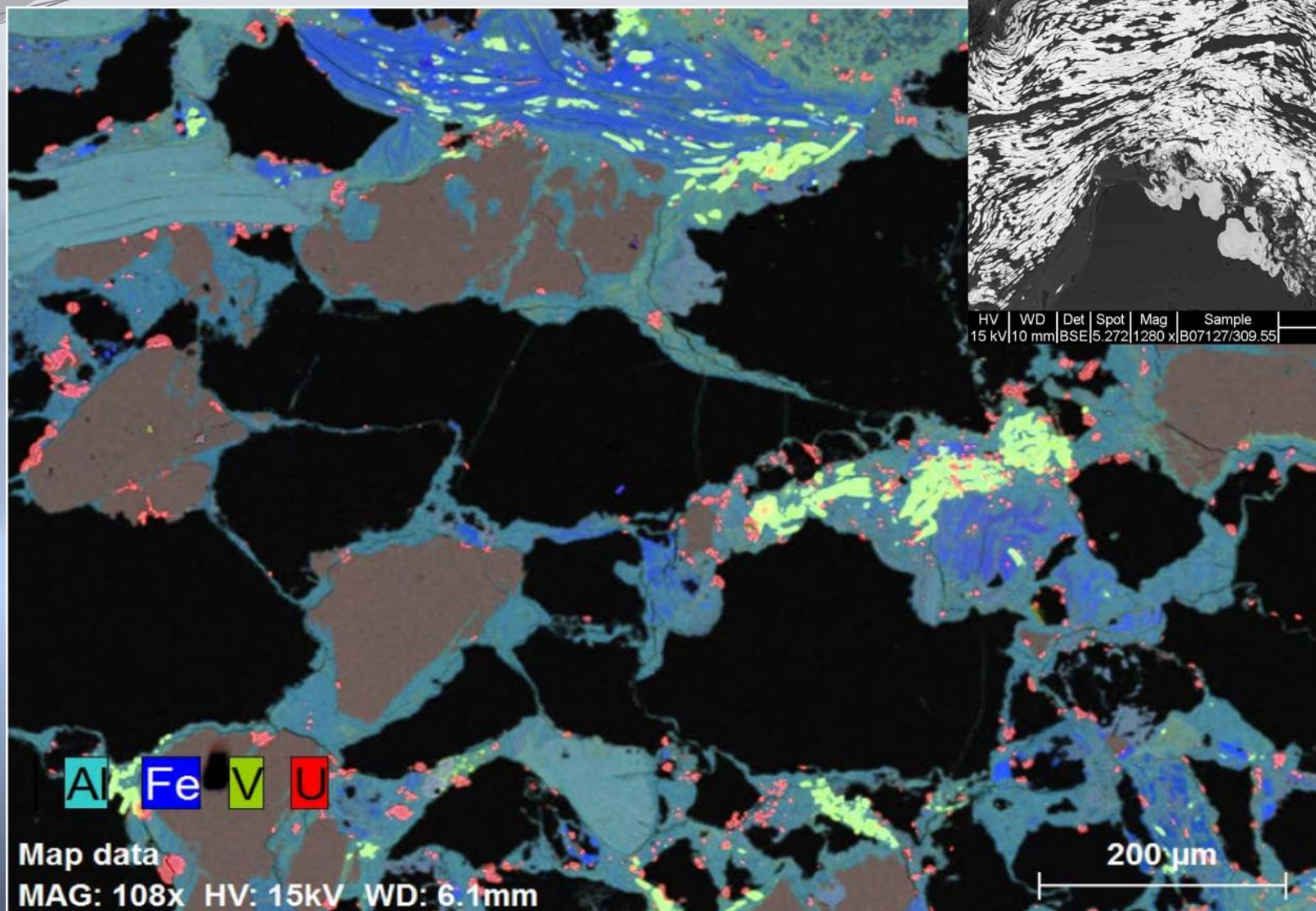




**Mineralised Reduced Arkosic Sandstone – black mottling is caused by vanadium and uranium minerals (uraninite, coffinite) with minor pyrite - not carbonaceous matter as previously assumed.**

**Mineralisation occurs near the interface between reduced (pyrite-bearing) and oxidised (hematitic) sandstone units.**





# Bigirlyi Joint Venture Project

## Bigirlyi Mineral Resource Estimate at a 500ppm $U_3O_8$ cut-off (2011)

Resource Category	Tonnes (millions)	$U_3O_8$ (ppm)	$V_2O_5$ (ppm)	$U_3O_8$ (t)	$V_2O_5$ (t)	$U_3O_8$ (Mlb)	$V_2O_5$ (Mlb)
Indicated	4.7	1,366	1,303	6,400	6,100	14.0	13.4
Inferred	2.8	1,144	1,022	3,200	2,900	7.1	6.3
Total	7.5	1,283	1,197	9,600	8,900	21.1	19.7

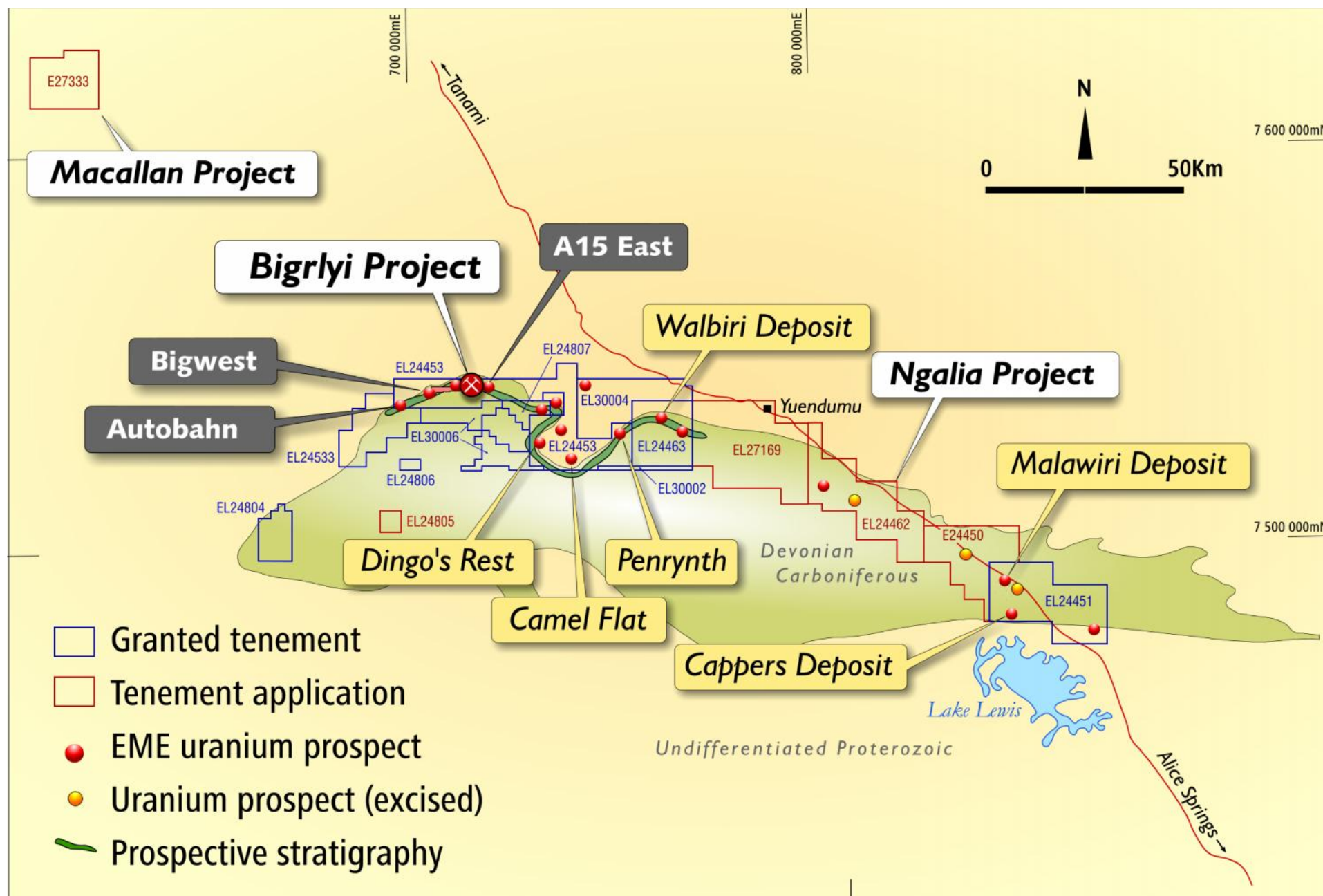
- PFS: a substantial increase in the resource base would positively impact on the economics of the Bigirlyi project. To this end, the exploration activities have focussed on the discovery of additional resources in satellite and regional deposits located on 100% Energy Metals ground in proximity of the main Bigirlyi resource.
- Due to the depressed uranium market, the Joint Venture development plan is currently suspended but will re-commence as the uranium market improves.



## 2013 Exploration Activities in the Ngalia Project Area

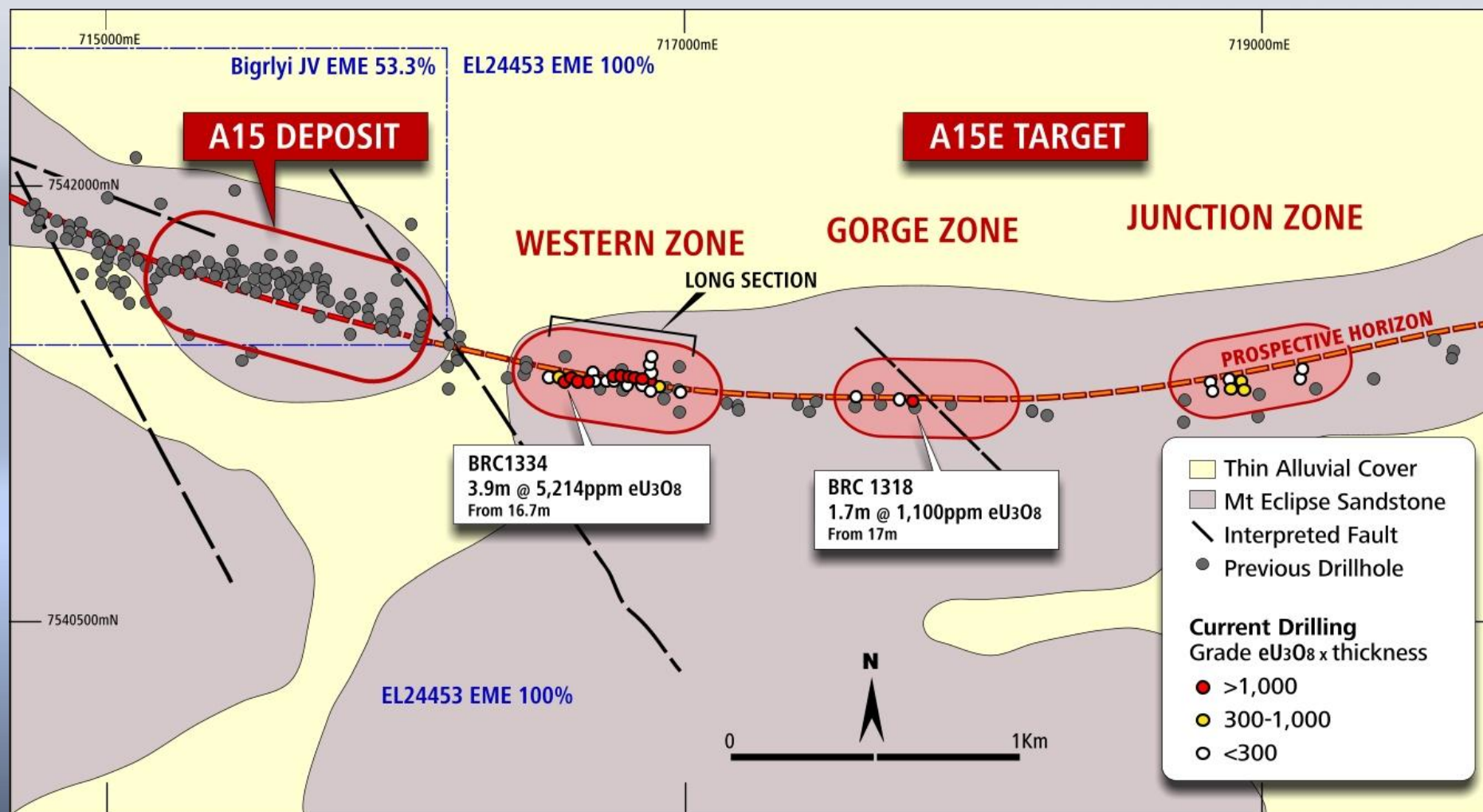


- During 2013 both geophysical targeting and drilling programs were completed at a number of regional prospects including Anomaly 15 East, Bigwest, Autobahn, Camel Flat, and Dingo's Rest (North).
- Over 18 km<sup>2</sup> of gradient-array induced polarisation (IP) surveying was undertaken and over 25,000m of exploration and resource definition RC drilling was completed.
- Initial resource estimates were undertaken for three satellite deposits: Anomaly 15 East, Bigwest and Camel Flat.

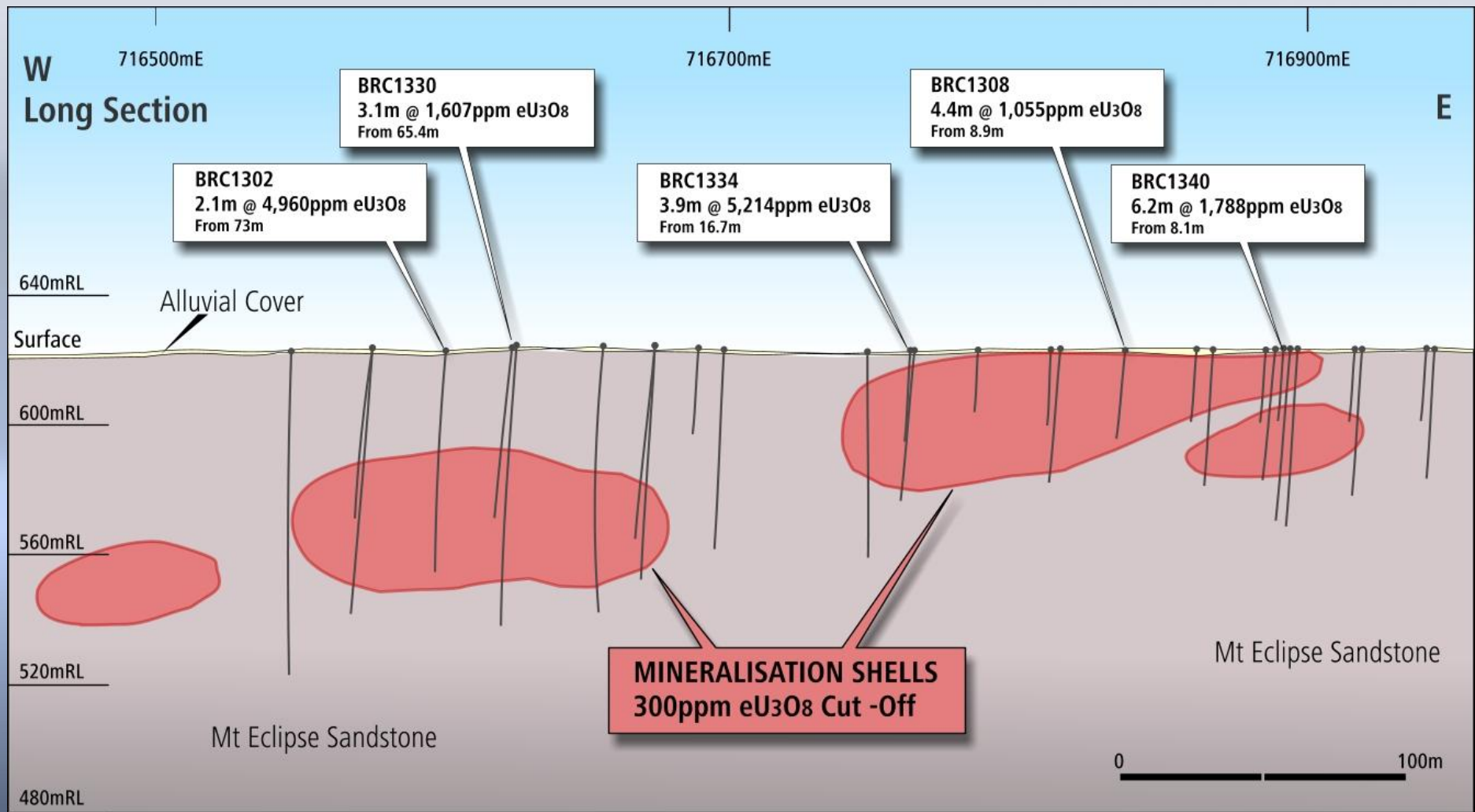




# Anomaly 15 East

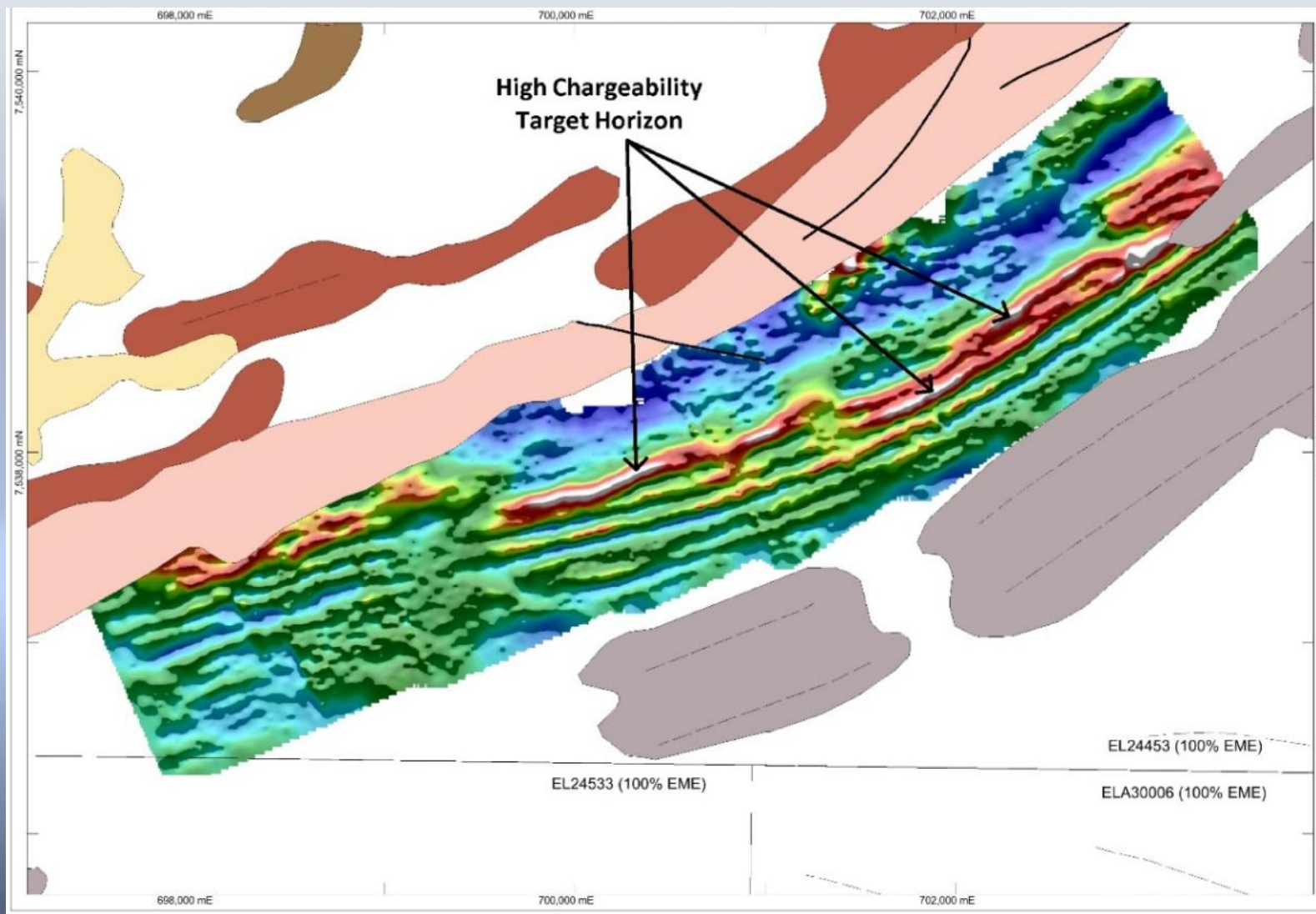


# Drill Intercept Highlights at Anomaly 15 East

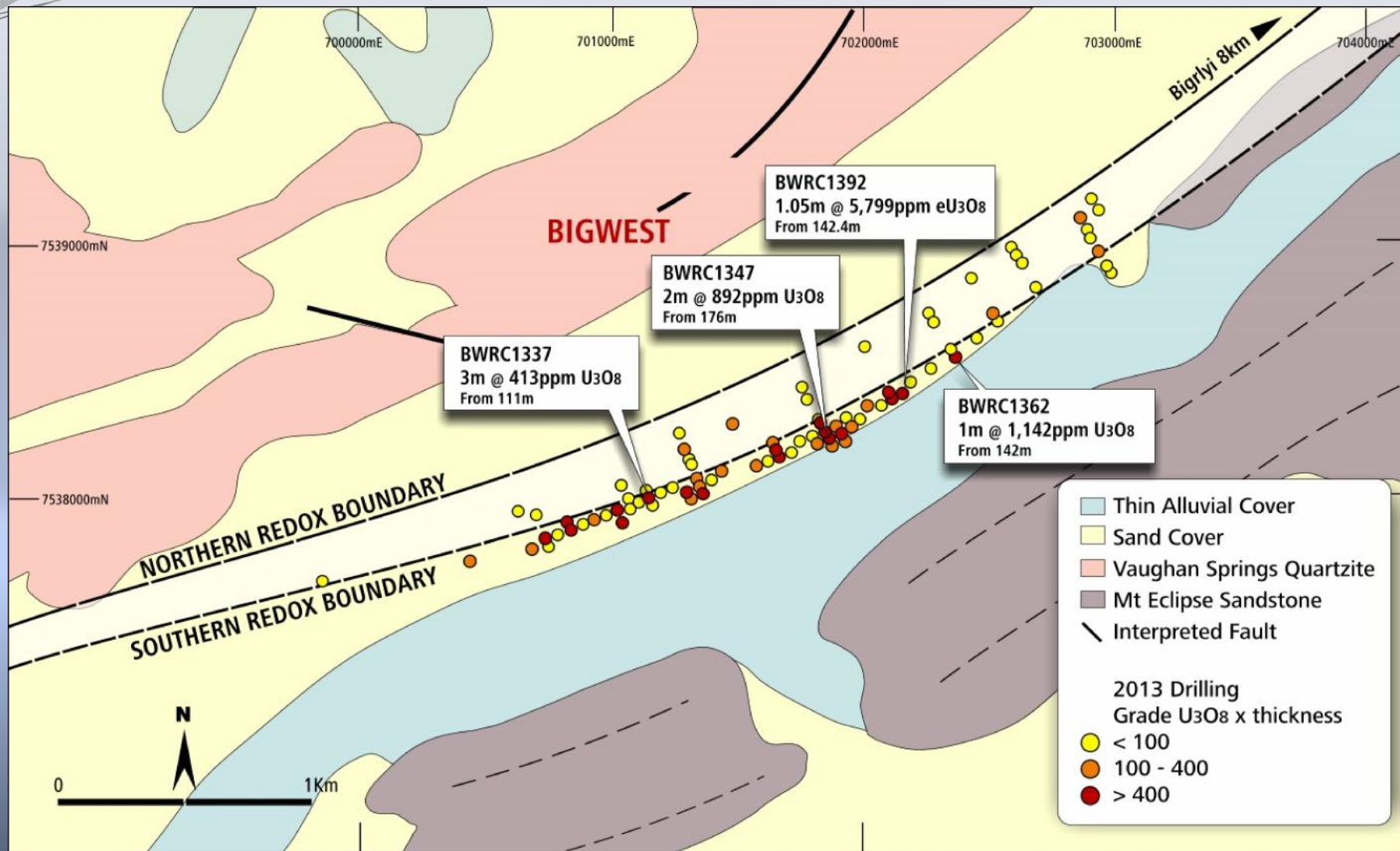




# Bigwest – IP Survey targeting under sand cover

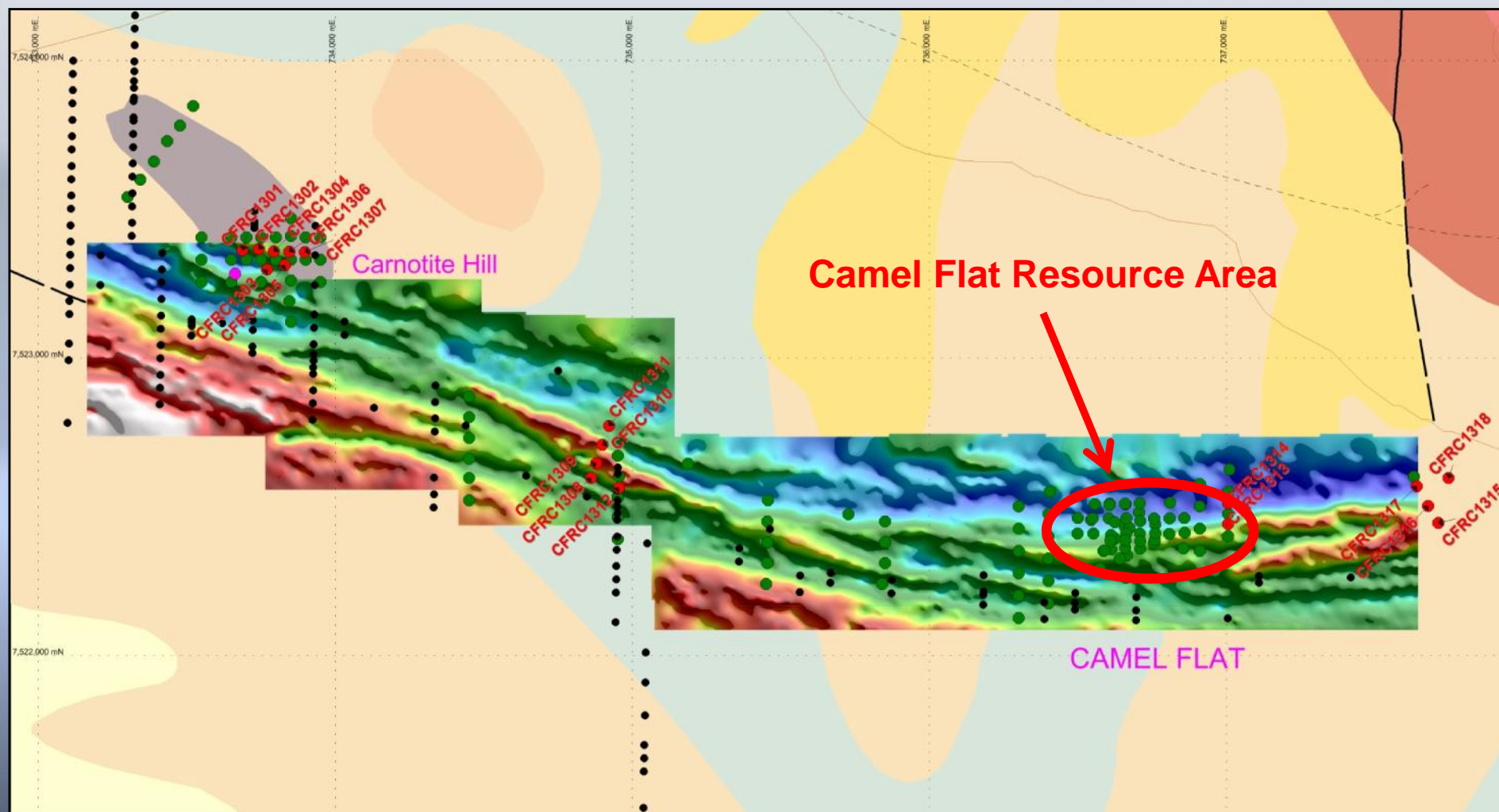


# Bigwest Area Drilling – Significant Intercepts





# Camel Flat Area – Drilling Programs & IP Survey



# 2013 Exploration Program Results

## Satellite Deposit Mineral Resource Estimates

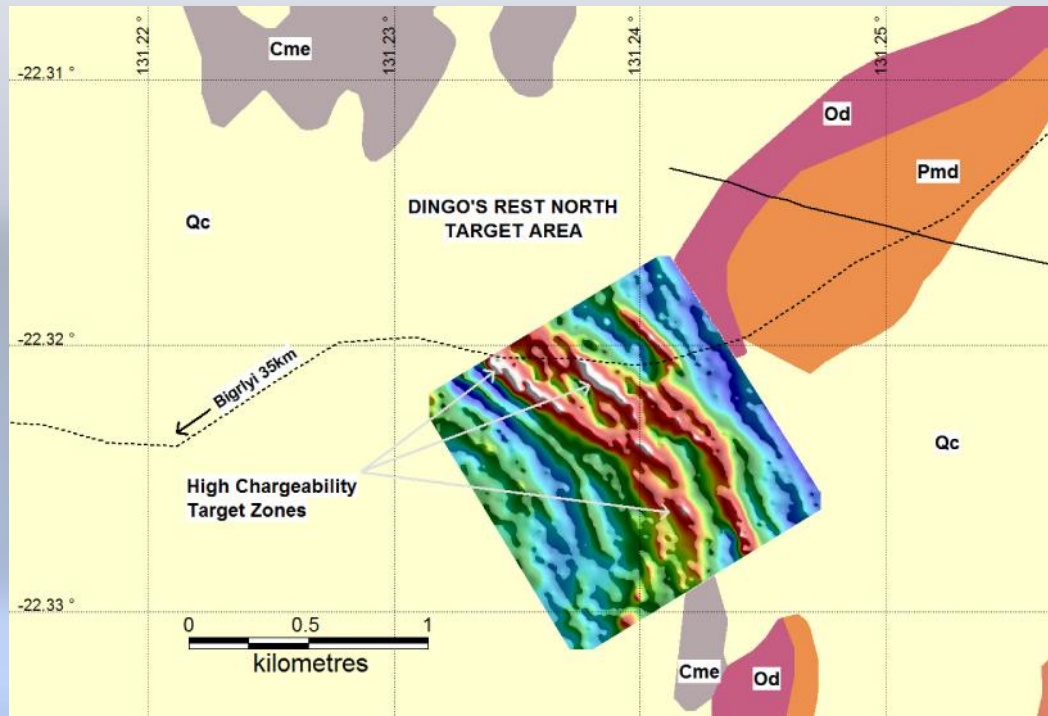
Deposit	Cut-off $U_3O_8$ (ppm)	Resource Category	Tonnes ('000t)	$U_3O_8$ (ppm)	$U_3O_8$ (tonnes)
Camel Flat	100	Inferred	211.3	1,384	292

Deposit	Cut-off $eU_3O_8$ (ppm)	Resource Category	Tonnes ('000t)	$eU_3O_8$ (ppm)	$eU_3O_8$ (tonnes)
Anomaly 15 East	100	Inferred	142.0	1,320	187
Bigwest	100	Inferred	407.3	362	147

- The Mineral Resources have been classified and reported in accordance with JORC (2012) requirements. The resource classification is based on the assessed level of confidence in sample methods used, geological interpretation, drill spacing and geostatistical measures.



## Other prospects in the Ngalia Project Area



- Gradient-array IP surveys were conducted at various locations along the northern margin of the Ngalia Basin including Dingo's Rest North. Chargeability anomalies have been identified and selected for drill testing.

- Energy Metals intends to continue exploration within the broader Ngalia Regional project area which has potential for both satellite resources to supplement a mining operation at Bigirlyi and, if of sufficient size, a stand-alone development.

# Meeting with Traditional Owners





# Western Australian Projects.

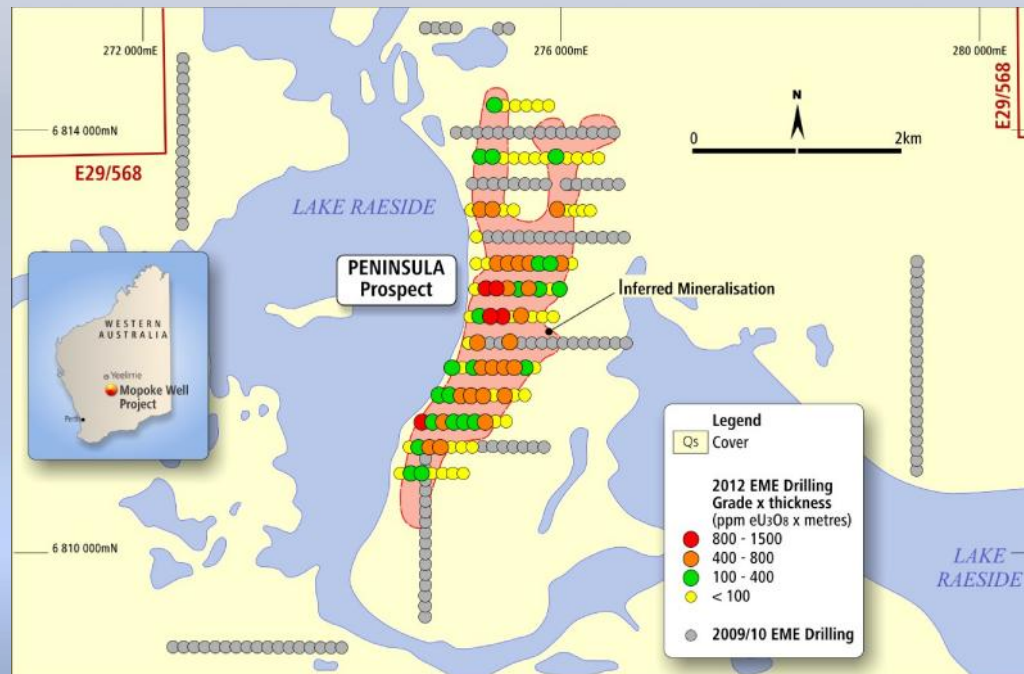


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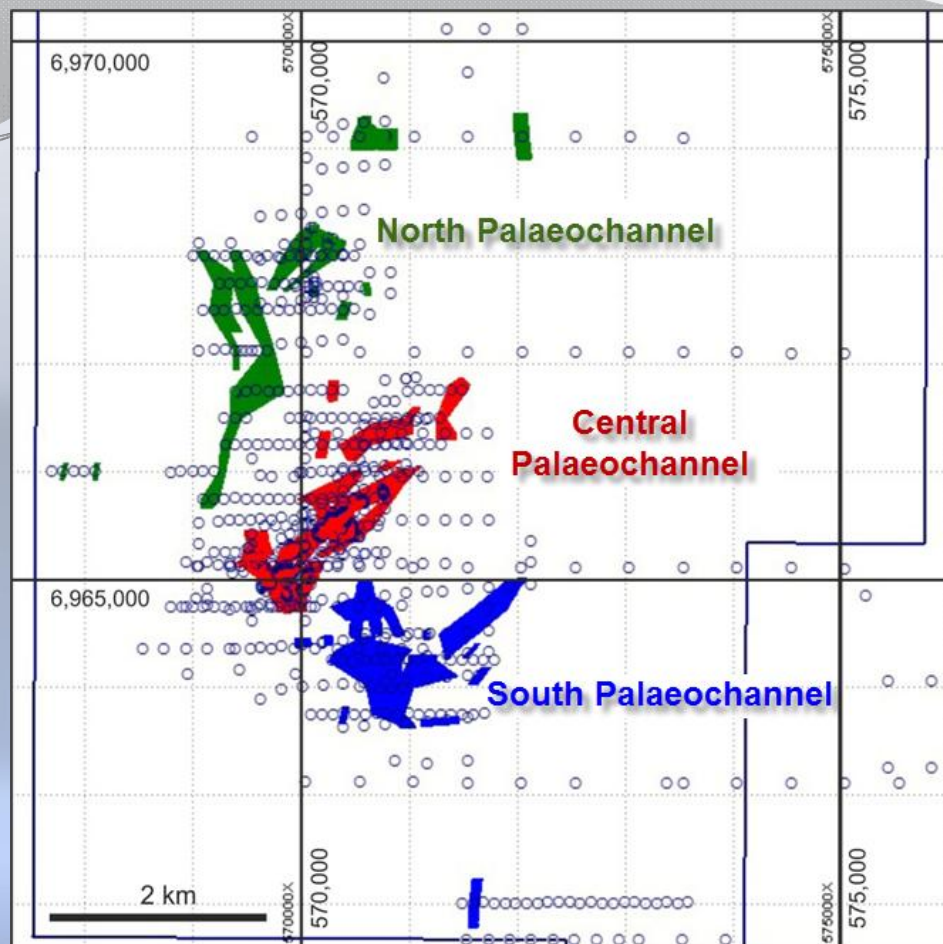
# Mopoke Well Project – Resource Estimate

A maiden JORC (2004) resource estimate was undertaken for the Peninsula Deposit. The inferred JORC resource estimate totalled 1,613 tonnes  $U_3O_8$  at an average grade of 165ppm  $eU_3O_8$  (100ppm cut-off).



Category	Volume ('000 m <sup>3</sup> )	Tonnes ('000 t)	$eU_3O_8$ (ppm)	$U_3O_8$ (Tonnes)	$U_3O_8$ (M lb)
Inferred	5,132	9,751	165.4	1,613	3.55





# Lakeside Project – Resource Update

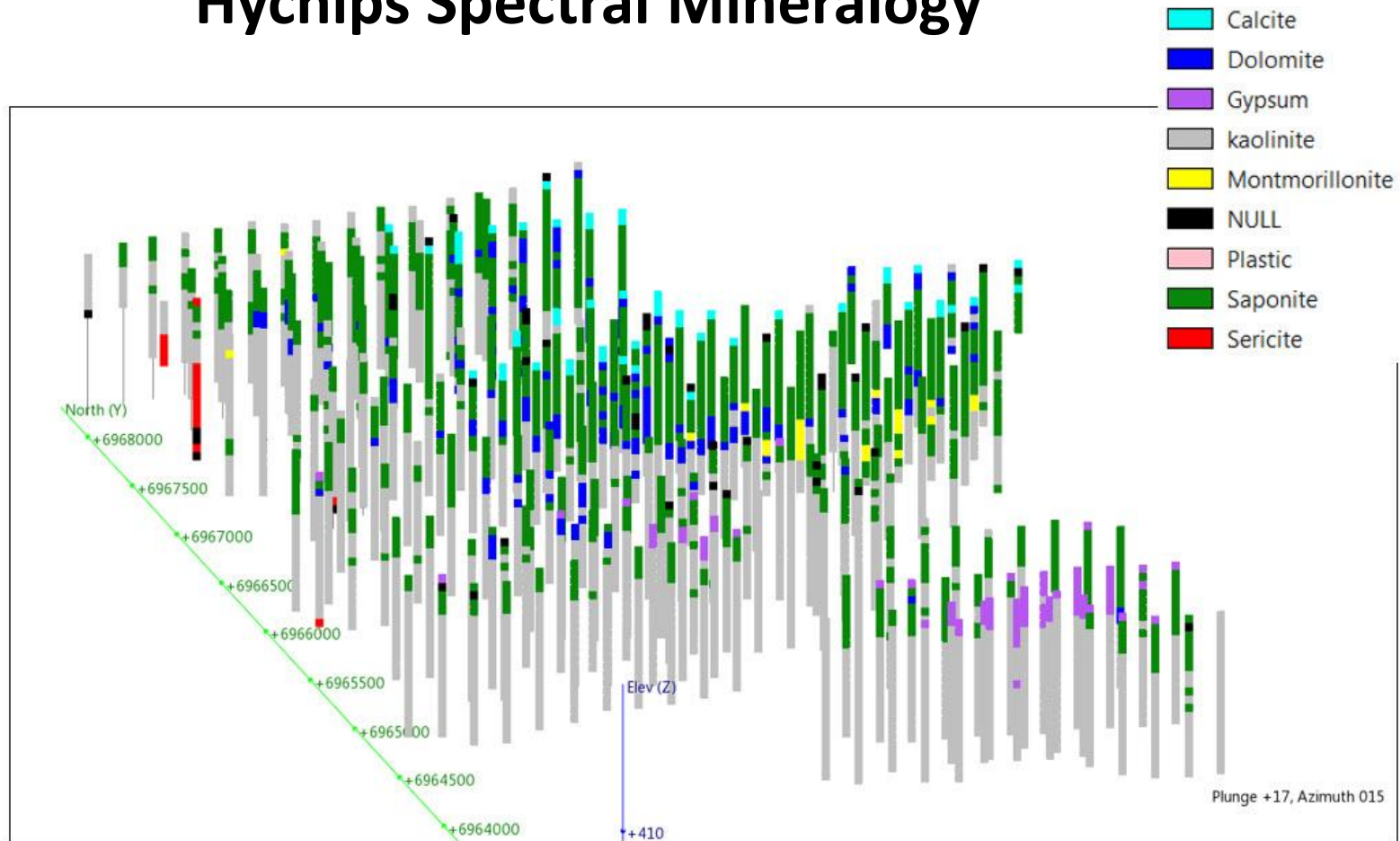
Cue, WA

- Uranium Resource Estimate of 960 tonnes  $U_3O_8$  (at 200ppm cut-off grade) obtained for the Lakeside Deposit.
- Mineral Resource increase of 256% over previous estimation.

Tonnes (Million)	Cut-off Grade $U_3O_8$ (ppm)	Average Grade $U_3O_8$ (ppm)	Contained $U_3O_8$ (tonnes)	Contained $U_3O_8$ (Mlb)
2.74	200	350	960	2.12

**Lakeside HyChips results**  
3D view of the clay mineralogy.

## HyChips Spectral Mineralogy





# Manyingee Project



## Exploration Potential:

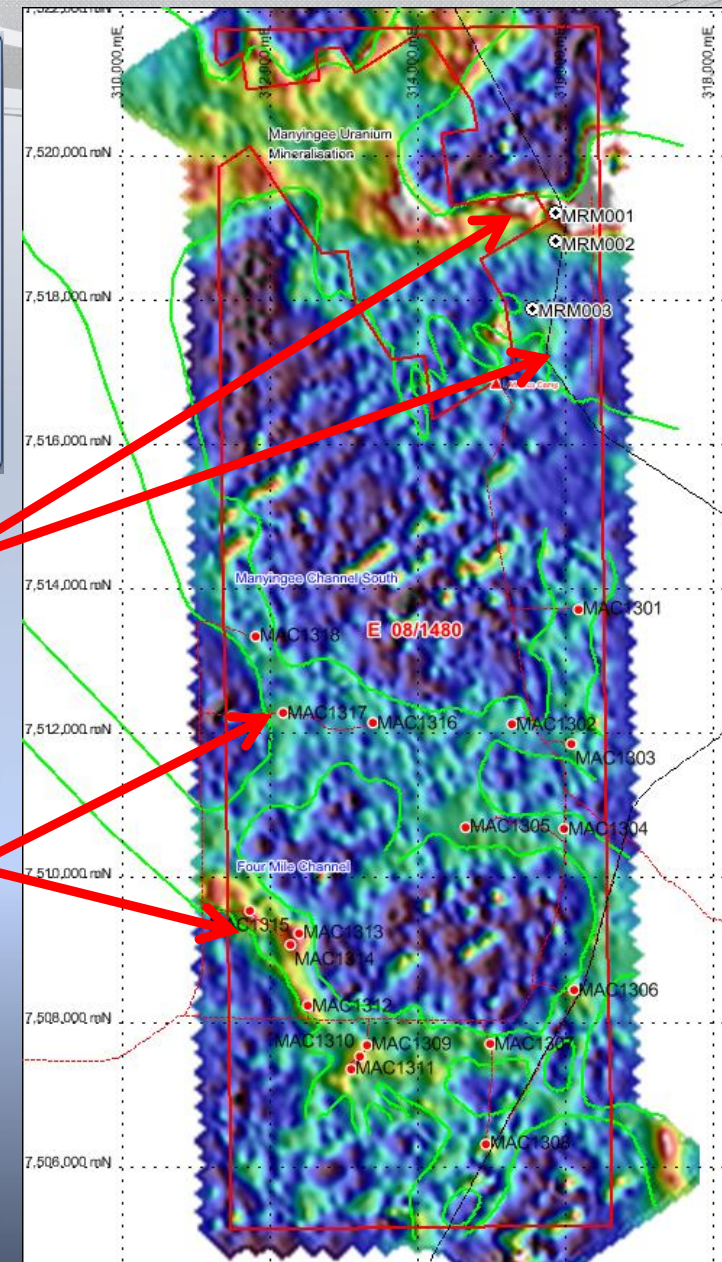
- Significant uranium intercepts were encountered in 2012 drilling of the palaeochannel upstream of Paladin's Manyingee Uranium Deposit
- Further work planned in 2014-15

## 2013 drilling program:

- A small aircore drilling program (6 holes for a total of 179m) was conducted to test possible channels within the southern part of the Manyingee tenement (E08/1480).

## Drilling results:

- No significant uranium mineralisation was encountered due to absence of prospective Cretaceous age palaeochannels.



# 2014-2015



## Uranium Trading Transactions

## Exploration Updates

- Manyingee (WA)
- Walbiri (Ngalia)
- Malawiri (Ngalia)
- Other Regional Exploration





# Thank you



## ASX:EME

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