

# Annual General Meeting 2020

**Shuqing Xiao**  
**Managing Director**

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Information in this presentation relating to exploration results, data and cut off grades is based on information compiled by Dr Wayne Taylor. Dr Taylor is a member of the AIG. Dr Taylor is a full time employee of Energy Metals. He has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the “Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves – The JORC Code (2012)”. Dr Taylor consents to the inclusion of the information in the report in the form and context in which it appears.

All amounts in A\$ unless stated otherwise.



# Australia's Uranium

## Bigrlyi & Ngalia

Macallan

Mopoke Well

Lake Mason

Anketell

Manyingee

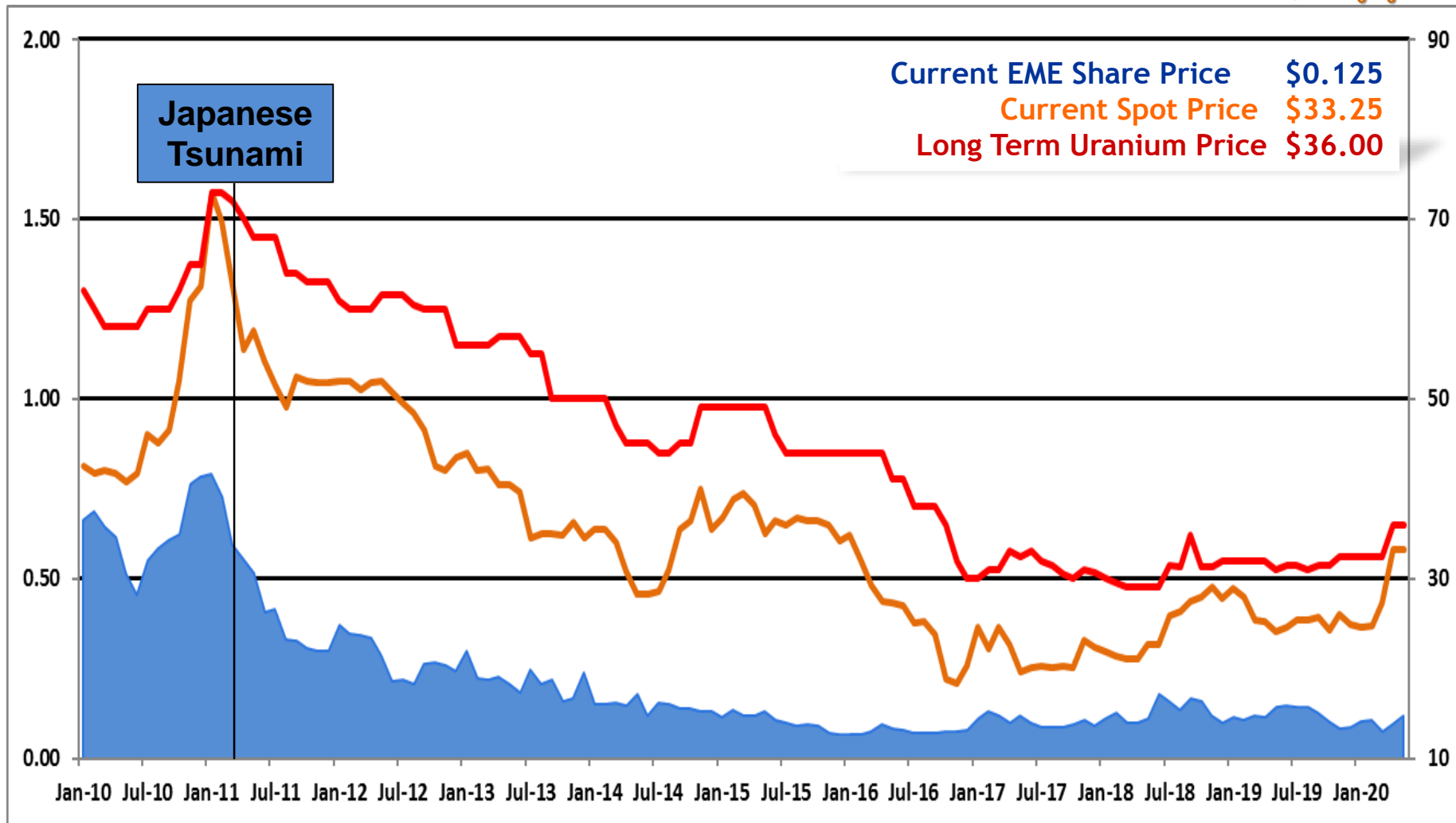
Lakeside



# Energy Metals Share Price vs U<sub>3</sub>O<sub>8</sub> Spot Price from 2010

EME Share  
Price Au\$

Uranium Price  
US\$/lb U<sub>3</sub>O<sub>8</sub>





# Energy Metals Limited

## Capital Structure



Shares on Issue	209.7M
Shareholders	619
Cash & Bank (31 Dec 2019)	\$17.21M

## Major Shareholders

China Uranium Development Company Ltd	139.3m	66.45%
KangDe Investment Group	26.5m	12.66%
Jindalee Resources Limited	14.0m	6.69%



# EME Directors & Management

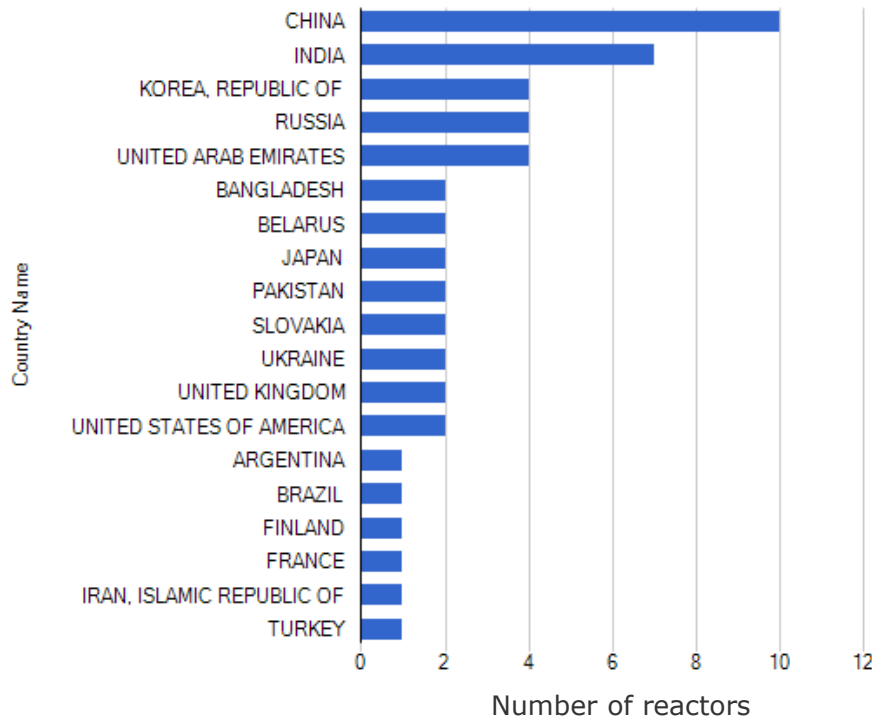
<i>Mr Fei He</i>	<i>Non-Executive Chairman</i>
<i>Mr Shuqing Xiao</i>	<i>Managing Director</i>
<i>Mr Lindsay Dudfield</i>	<i>Non-Executive Director</i>
<i>Ms Jan Macpherson</i>	<i>Non-Executive Director</i>
<i>Mr Zhe Gao</i>	<i>Non-Executive Director</i>
<i>Ms Junmei Xu</i>	<i>Non-Executive Director</i>
<i>Mr Zhe Xu</i>	<i>Non-Executive Director</i>
<i>Ms Xuekun Li</i>	<i>Company Secretary &amp; CFO</i>
<i>Dr Wayne Taylor</i>	<i>Exploration Manager</i>



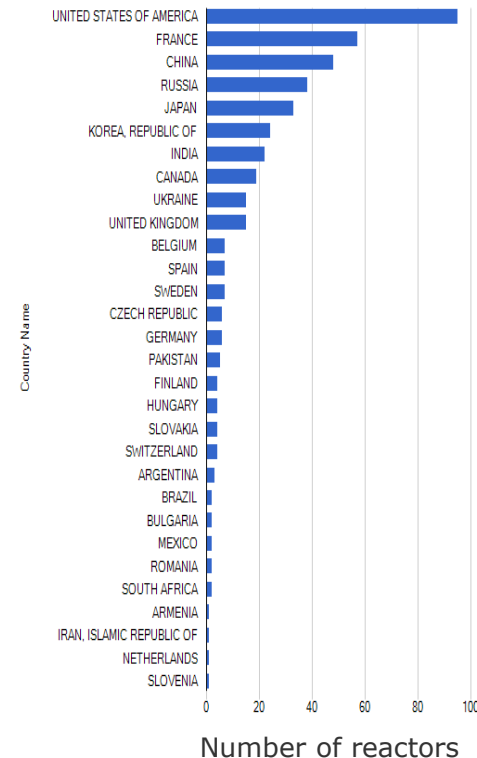
# Strong Demands in the Uranium Market

- Certain and strong demands from nuclear reactors: Uranium consumption has returned to pre-2011 levels.
- More reactors to be built in Asia and the Middle East: 5 new reactors began commercial operation in 2019 and 53 reactors are under construction.
- Financial interest in physical uranium continues from both existing funds and potential new entrants.

**Reactors under construction(53)**

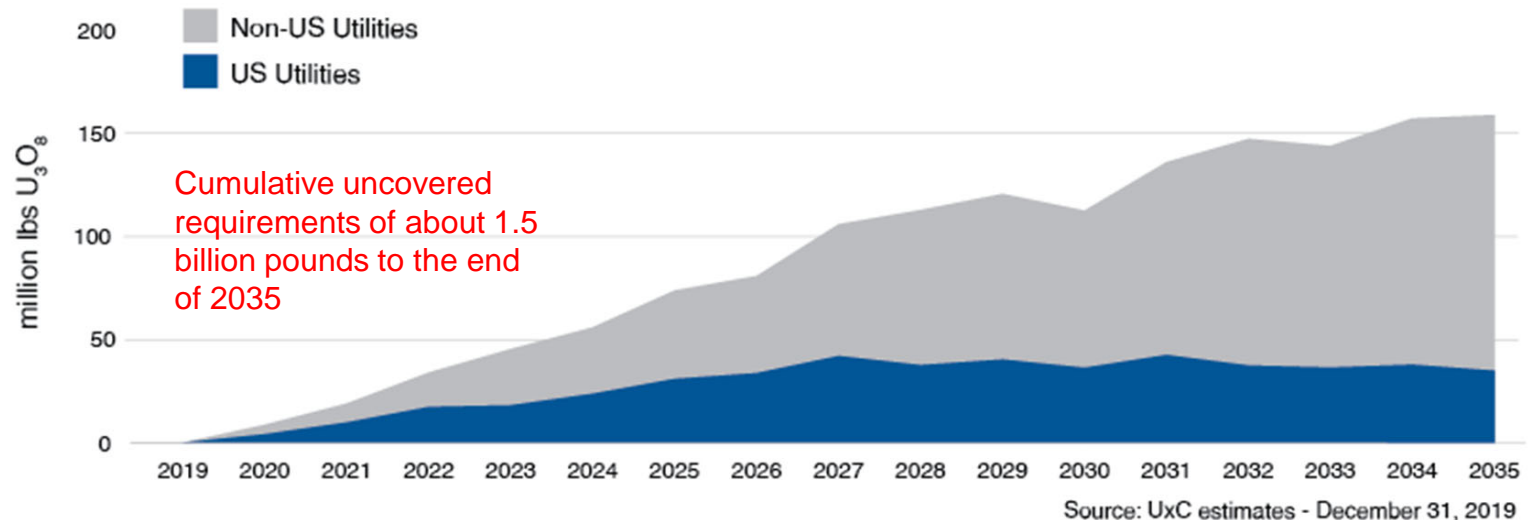


**Reactors in operation (447)**



# Supply Is Not Guaranteed and Will Change the Market

- Significant mine supply cuts in recent years: McArthur River (18Mlbs), Kazatomprom (20% reduction from planned production volumes), Langer Heinrich (5.2Mlbs).
- Ranger mine will shut down in January 2021 and Cominak mine will shut down in March 2021.
- Significant decrease in exploration spending since Fukushima.
- Production from new uranium mines will be many years after incentive prices reached.
- Interest in long-term contracting increased compared to 2018 but there is still a large amount of cumulative uncovered requirements, which estimates 1.5 billion pounds to the end of 2035.
- The low investment in supply since 2011 will increase the supply uncertainty and thus increase concerns about the security of future supply, which will change the market.



Utility uncovered requirements (2019-2035)



# The Covid-19 Pandemic May Accelerate the Transition of Uranium Market

- The COVID-19 has disrupted global uranium production and the duration and extent of these disruptions are still unknown.
  - Cameco suspended the uranium production at the Cigar Lake mine with an annual production of 18Mlbs.
  - Kazatompron is reducing operational activities across all uranium mines in Kazakhstan for an expected period of three months with an estimated reduction of up to 17.5% in total planned uranium production in Kazakhstan for 2020
  - The production of more uranium mines has been suspended or affected significantly.
- The uranium market has started to respond and the uranium spot price has increased by more than 35% since late March 2020, which may accelerate the transition of uranium market.



# Nuclear power business: Largest in China, leading in the world

As of the end of December 2019



x24



27.14GW



56%  
domestically

Units in operation: remains No.1 domestically,  
enters top 3 globally



x5



5.78GW



42%  
domestically

Units under construction: the largest nuclear power builder

Professional nuclear power  
operation services

Overhaul

Spare parts

Operation  
preparation

Training

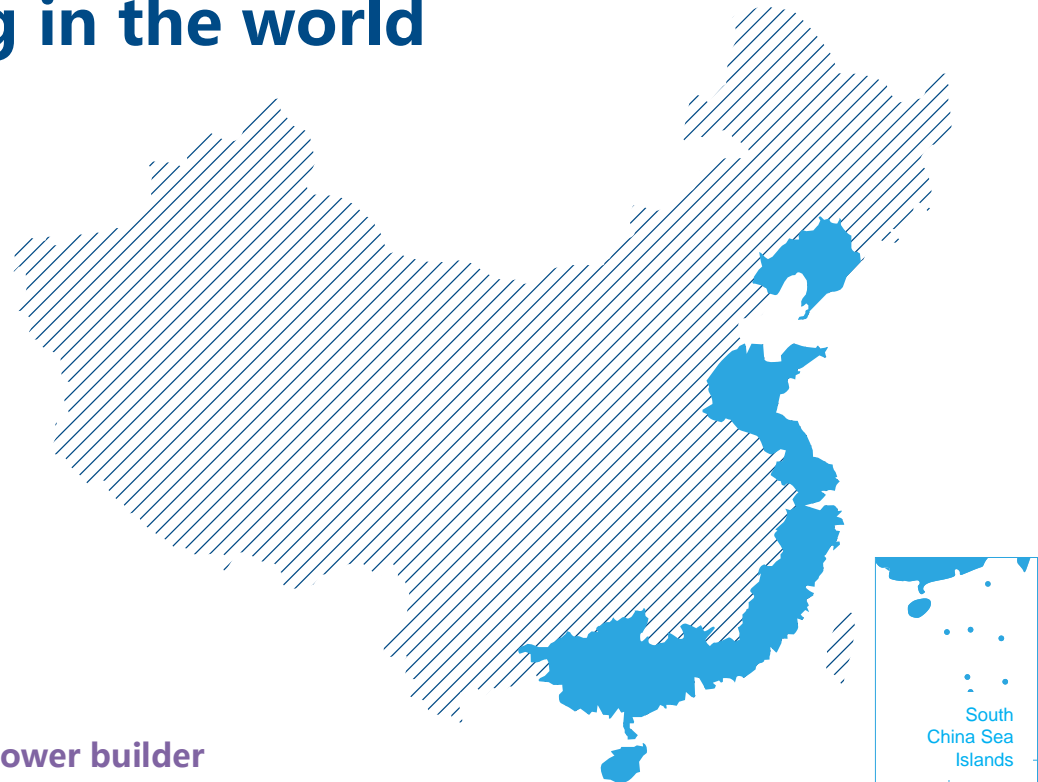
Specialized nuclear power engineering  
construction general contracting services

Engineering  
design

Engineering  
procurement

Construction  
management

Commissioning



South  
China Sea  
Islands



## Nuclear Power business



**Daya Bay**



**Fang Cheng Gang**



**Yang Jiang**



**Ning De**



**Ling Ao**

# Northern Territory Projects.





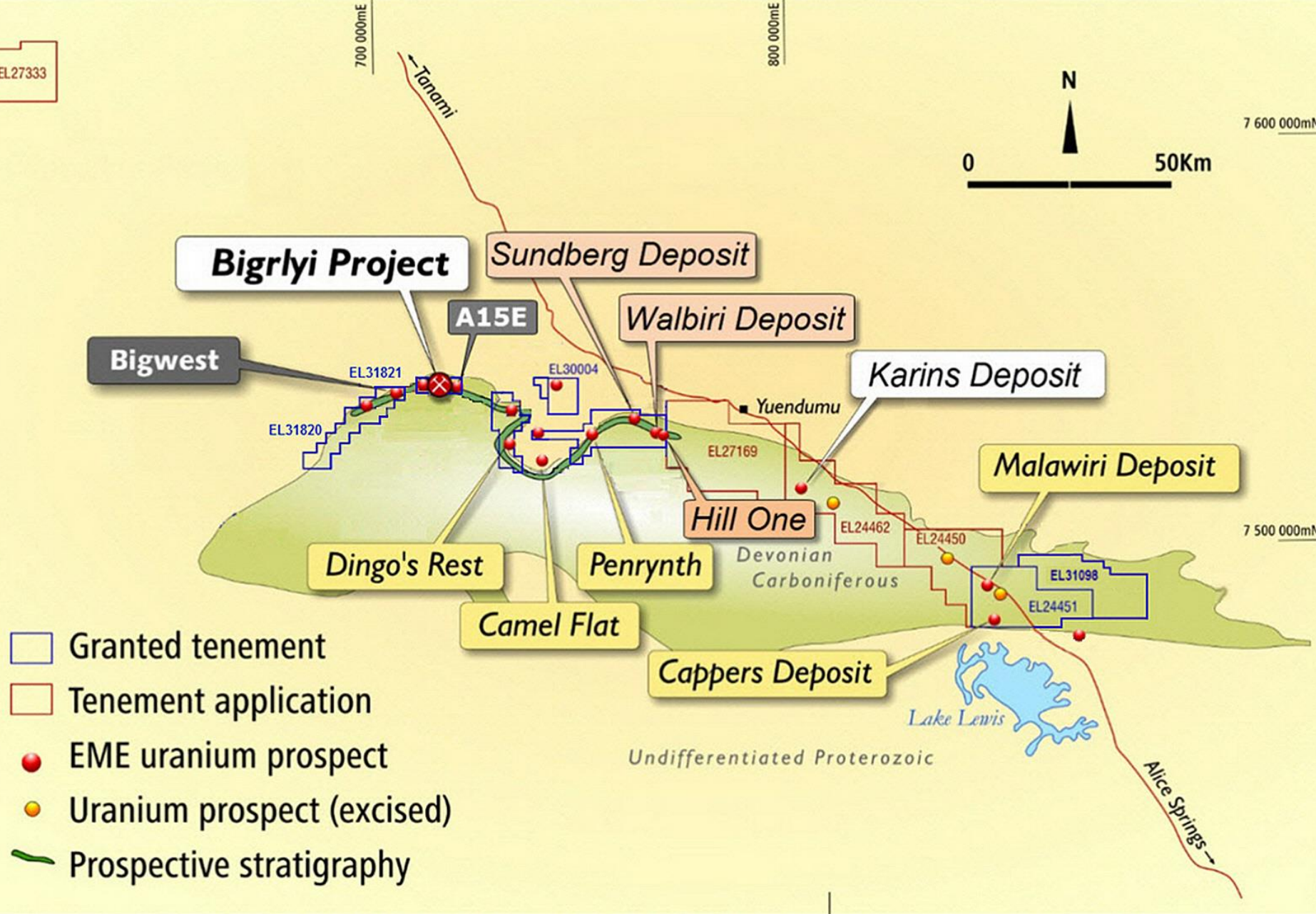
EL27333

700 000mE

800 000mE

7 600 000mN

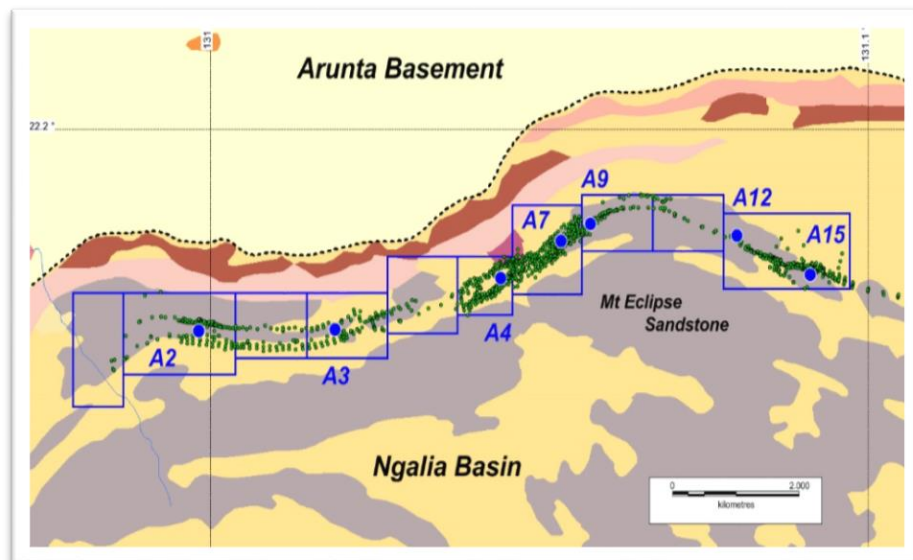
7 500 000mN



# NORTHERN TERRITORY PROJECTS

# Bigrlyi Joint Venture Project

- EME's flagship project is the sandstone-hosted Bigrlyi Uranium-Vanadium Deposit.
- The Anomaly-4 and Anomaly-15 deposits were the focus of past resource drilling.
- A prefeasibility study was completed in March 2011.
- Development work was suspended post-2012 with minimum exploration works due to the depressed uranium market.
- New interest in vanadium as a co-product.



## Bigrlyi 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
<b>Total</b>	<b>7.5</b>	<b>1,283</b>	<b>1,197</b>	<b>9,600</b>	<b>8,900</b>	<b>21.1</b>	<b>19.7</b>



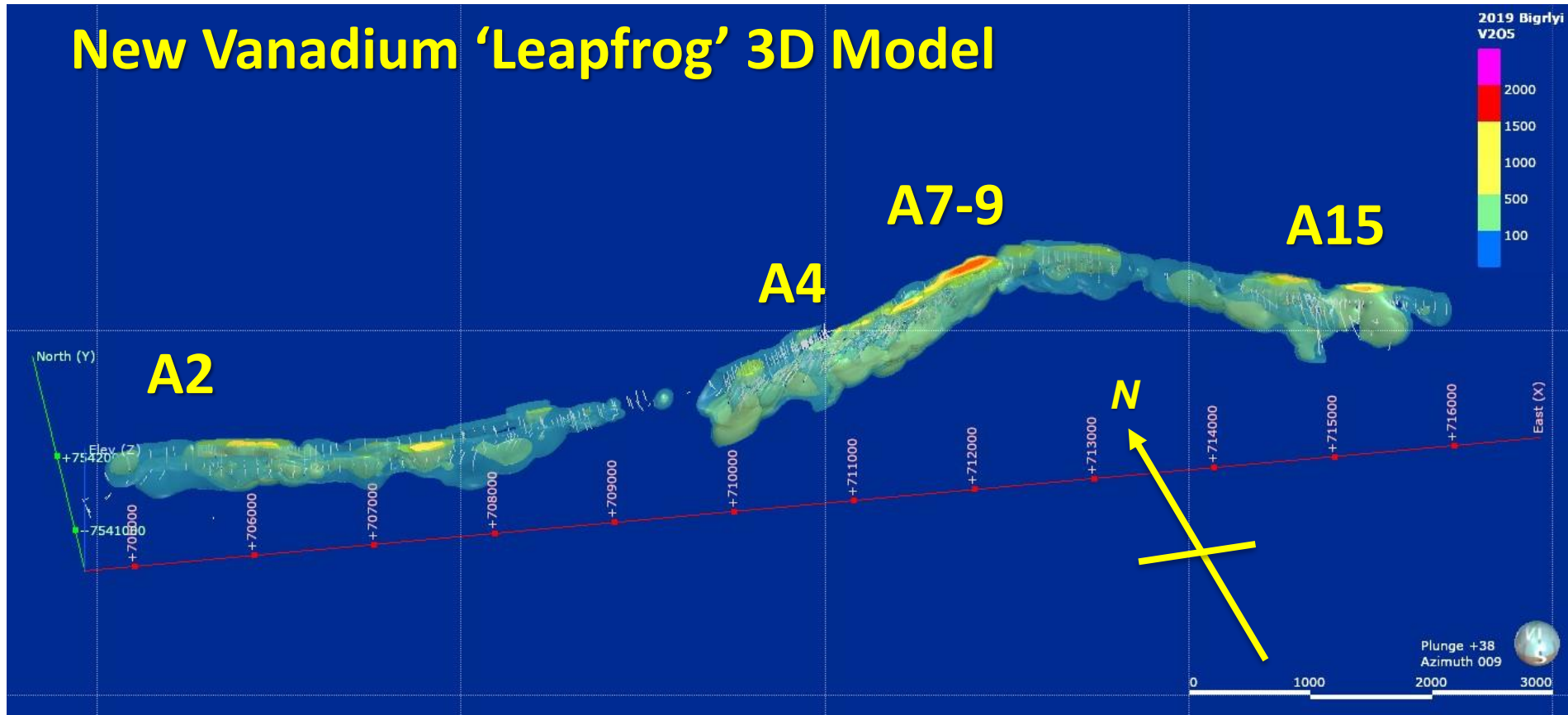
# Bigrlyi Joint Venture Project – 2019 Update

- Marenica Energy Ltd (MEY) becomes new partner with 20.8% stake in the Bigrlyi JV.
- Uranium spot price shows improvement but vanadium price just above historical averages for 2019-2020 period.
- 2019 focus on vanadium resources and metallurgy to develop a pathway for co-recovery of uranium & vanadium and to improve project economics.
- Metallurgical testwork at ANSTO improves vanadium extraction to over 72% for a modest increase in acid consumption.
- Vanadium mineralisation modelling work has led to an expanded vanadium exploration target of approx. 97 million lbs  $V_2O_5$  at the 100ppm cut-off level.
- Bigrlyi camp infrastructure remained on 'care and maintenance' with regular site visits during 2019. Visits on-hold in 2020 due to COVID-19 restrictions on access & travel.



# Reassessment of Bigirlyi Vanadium Deposit Model Completed

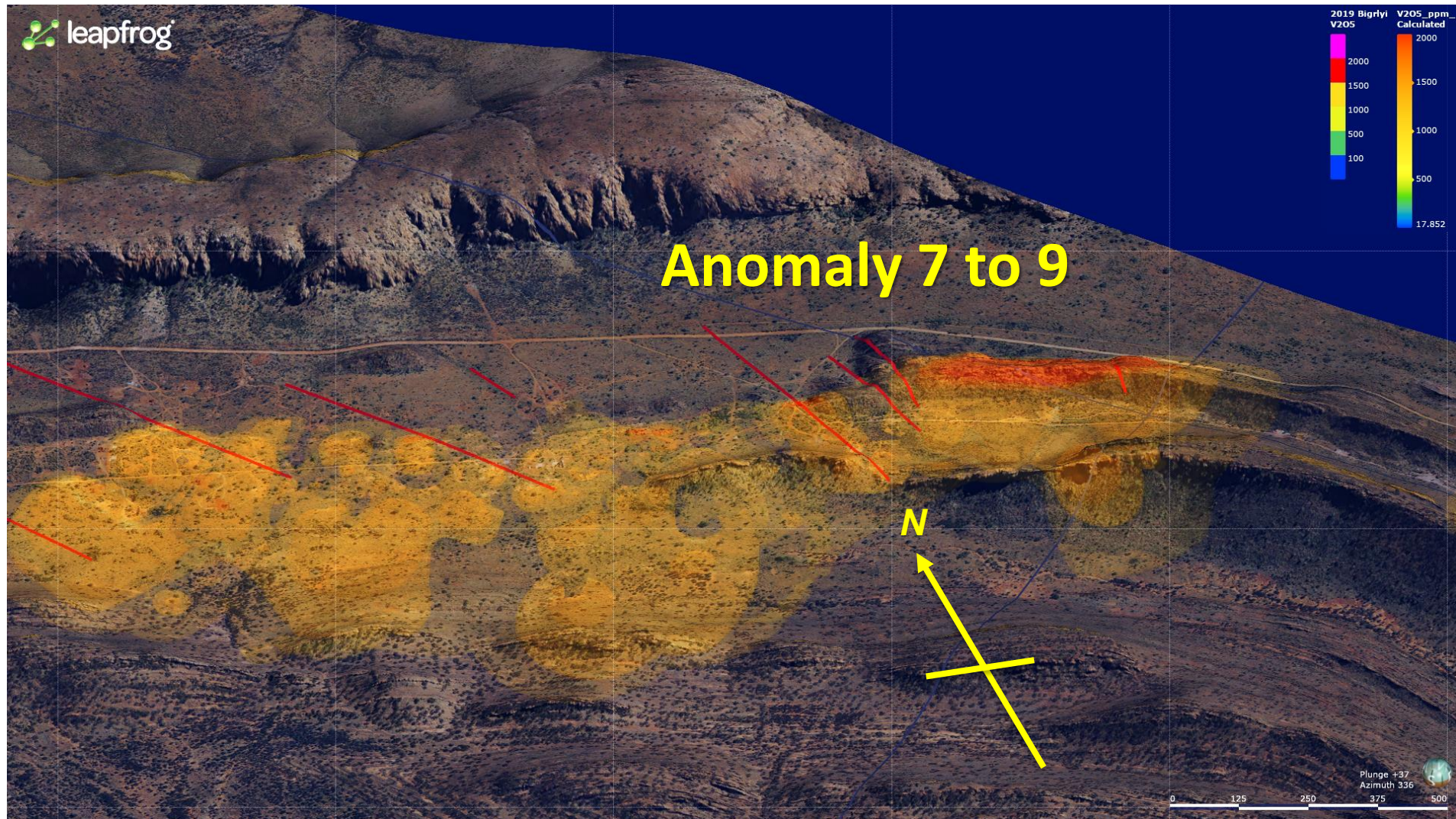
## New Vanadium 'Leapfrog' 3D Model



Previous resource models were constrained by uranium cut-off grades – but significant parts of the deposit are vanadium-rich yet uranium-poor and outside the current model.



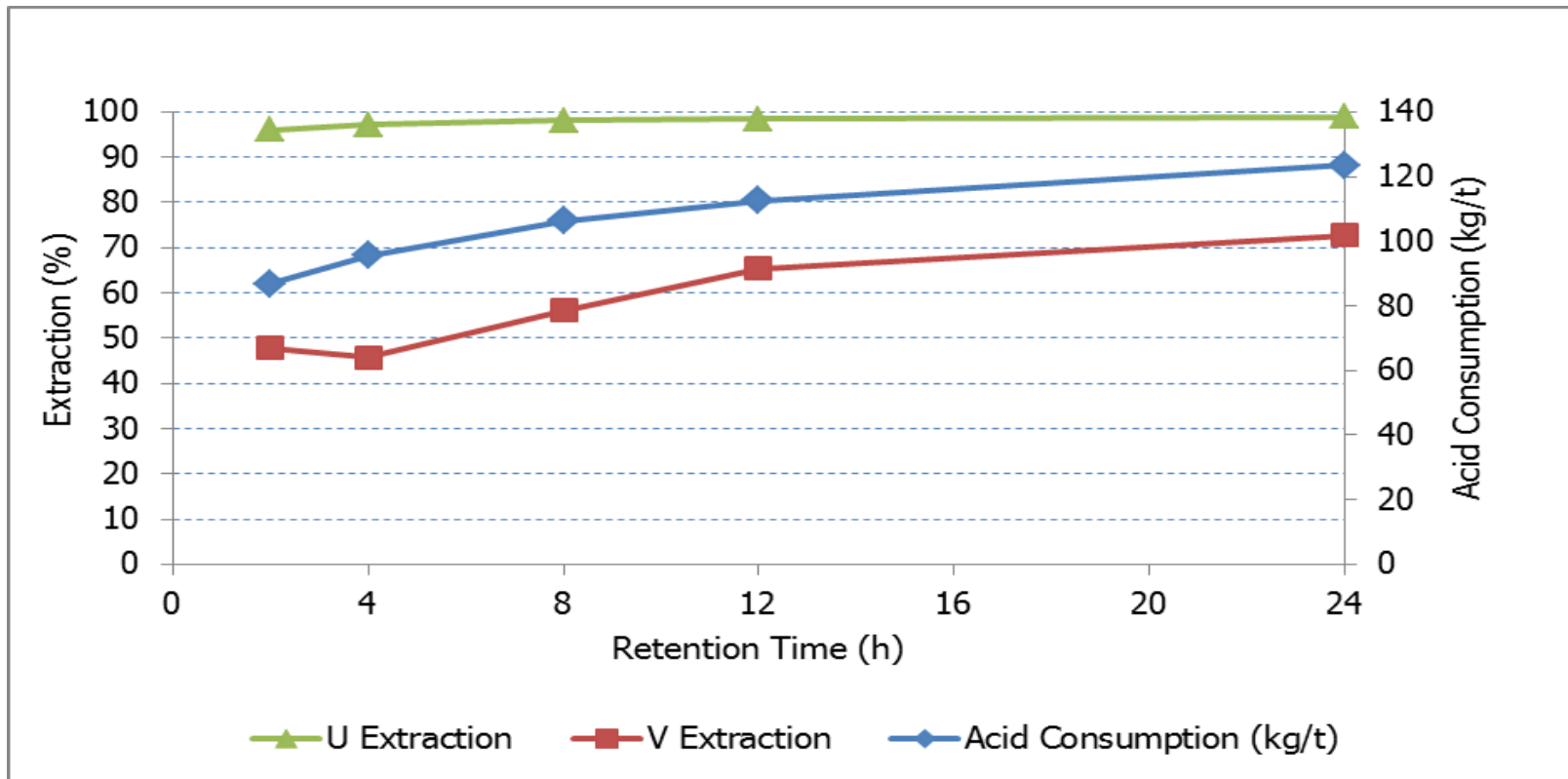
# Anomaly 7-to-9 corridor found to host over 30% of Bigrlyi Vanadium



# Metallurgical Test-work Results

Conventional acid leach tests at 50% slurry density were conducted under varying conditions at ANSTO Laboratories, Sydney.

- The extraction of vanadium varied as a function of pH and temperature with particular sensitivity to pH
- Conditions of pH 1.2, temperature 60°C, and 24 hours leach time provided optimal vanadium extraction of over 72%



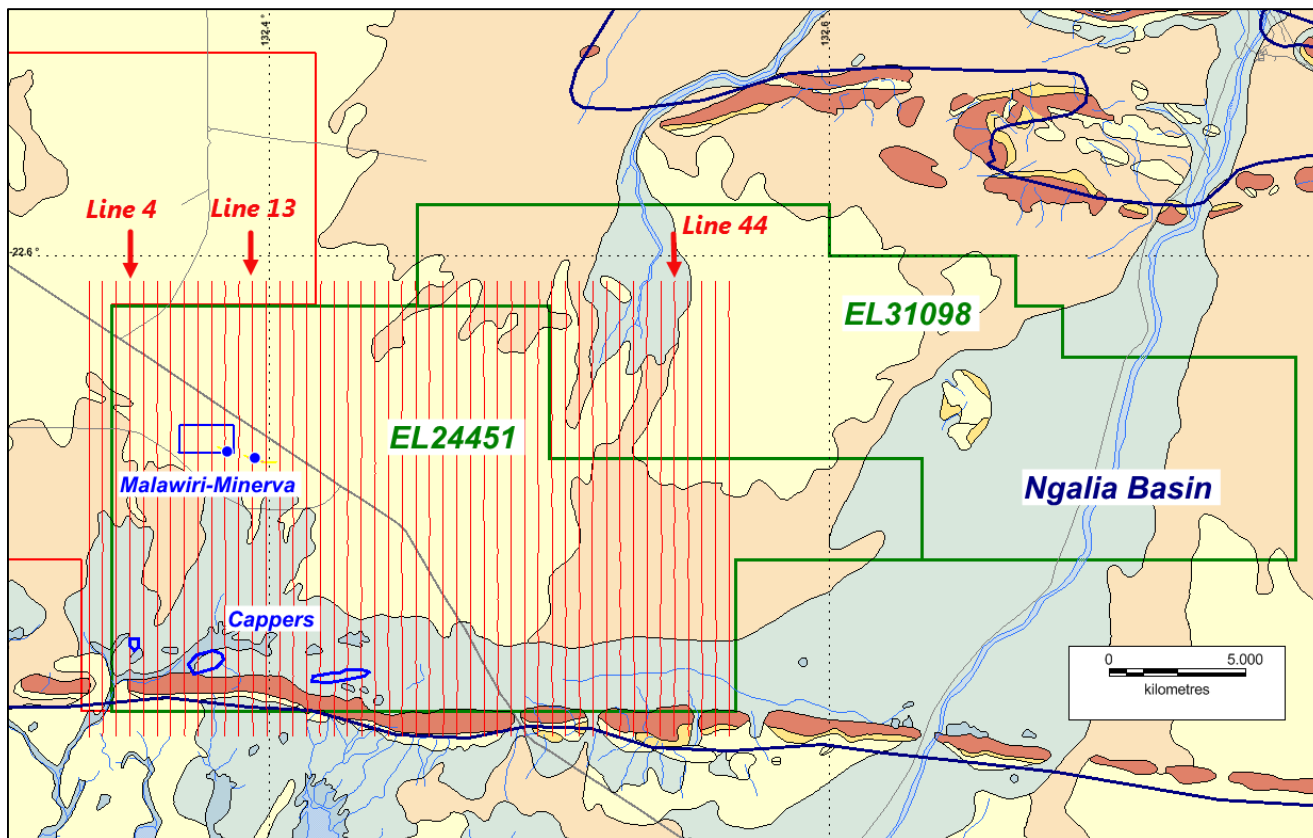
*U and V Extraction and Acid Consumption vs. Leach Time (pH 1.2, 60 °C, 24 h)*



# Ngalia Regional Project

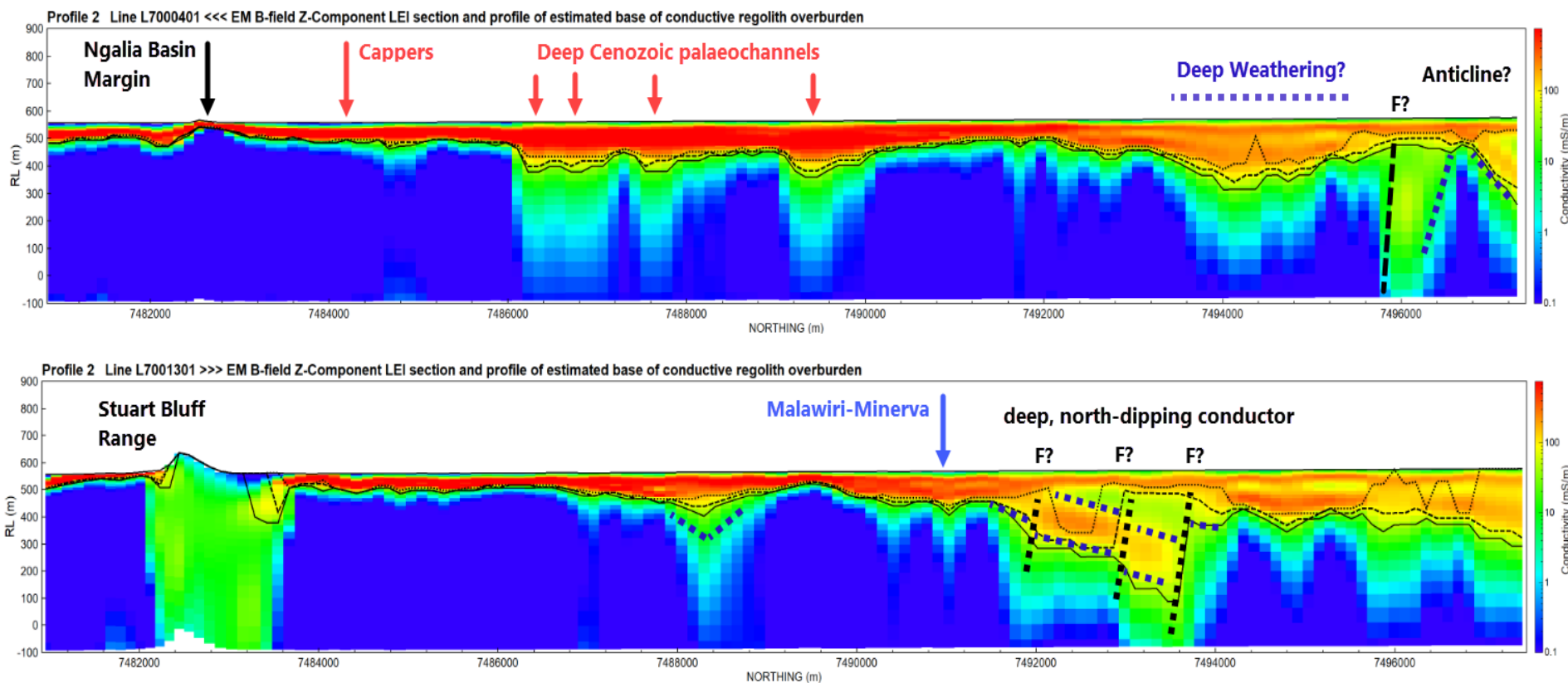
The 2019 exploration program focused on geophysical targeting of undercover uranium mineralisation utilising aerial electromagnetic (AEM) survey data.

Interpretative results of an AEM in-fill survey over the eastern Ngalia Basin, conducted in conjunction with Geoscience Australia's *Exploring for the Future Program*, were finalised during the year.



# AEM Survey Results

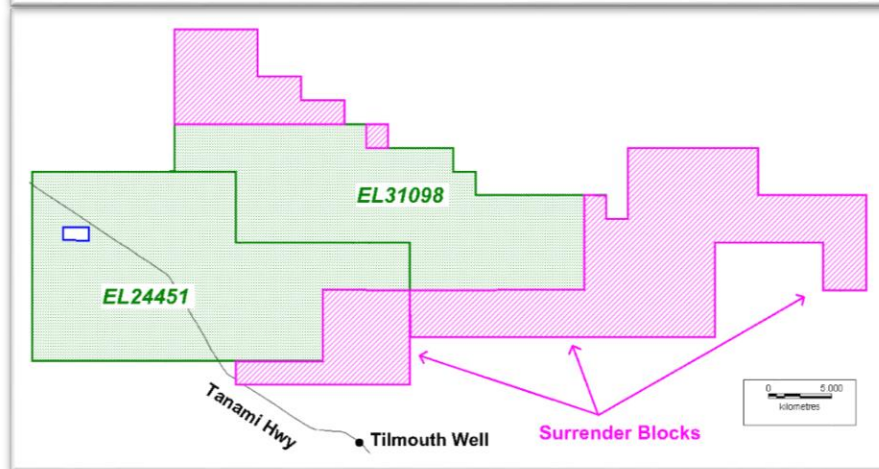
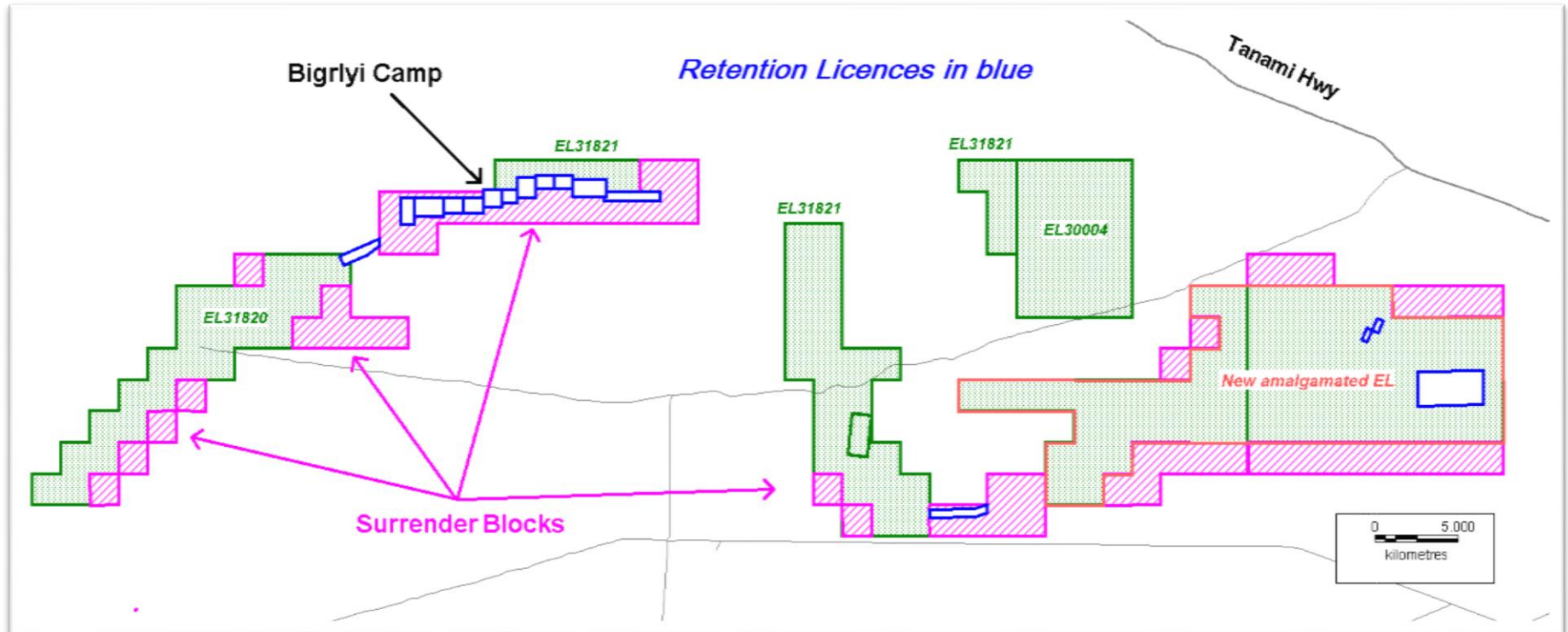
*Conductivity-depth sections known as LEIs or 'layered earth inversions' have revealed useful details of the sub-surface geology allowing mapping of conductive Cenozoic palaeochannels as well as highlighting some deeper conductive units of the underlying the Ngalia Basin - potentially uranium-bearing pyritic shales.*



LEIs for Lines 4 & 13 showing inferred palaeochannel and deep conductor targets



# Tenement Optimisation – Northern Territory



***Following the project review, EME's Ngalia Regional tenements were re-organised with approval from the NT DPIR received during the year.***

***Cost savings in expenditure commitments & rent were achieved.***

# Retention of WA Uranium Projects



- EME has four calcrete-style uranium projects in WA: Lakeside, Lake Mason, Anketell & Mopoke Well and one palaeochannel-hosted roll-front deposit located at Manyingee.
- JORC-reported Mineral Resource Estimates have now been announced for all EME's WA projects.
- Resource areas of WA projects are covered by **Retention Licences**, or in the case of Manyingee by a Retention Licence application.
- A landholder objection to grant of the Manyingee Retention Licence is proceeding through the Warden's Court process.





## Plans for 2020

### Northern Territory Projects:

- Bigrlyi Project focus.
- Field work and field visits currently suspended but desk-top studies to proceed.
- Re-modelling of uranium and vanadium mineralisation at Bigrlyi in preparation for revision of the mineral resource estimate.
- Re-evaluation and Optimisation of Bigrlyi open pit design.
- Update of the Bigrlyi economic model.

### WA Projects:

- Minimum exploration activity.



**ASX:EME**

**Thank you !**

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