

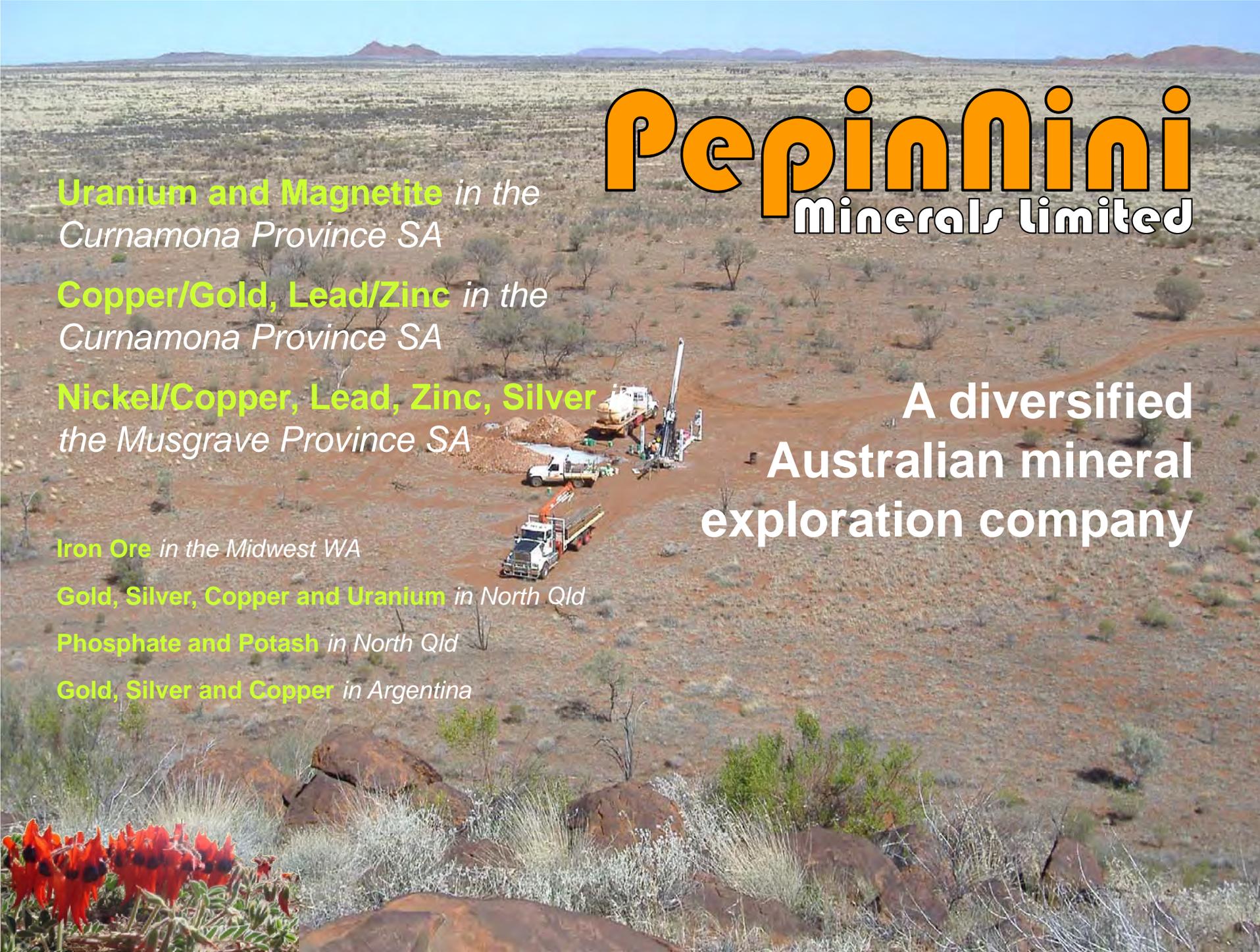
# Pepinnini

Minerals limited

Australia's  
**Paydirt**

**SOUTH  
AUSTRALIAN**  
RESOURCES & ENERGY INVESTMENT  
CONFERENCE

**May 2011**



# Pepinnini

Minerals limited

**Uranium and Magnetite** in the  
*Curnamona Province SA*

**Copper/Gold, Lead/Zinc** in the  
*Curnamona Province SA*

**Nickel/Copper, Lead, Zinc, Silver**  
*the Musgrave Province SA*

**Iron Ore** in the *Midwest WA*

**Gold, Silver, Copper and Uranium** in *North Qld*

**Phosphate and Potash** in *North Qld*

**Gold, Silver and Copper** in *Argentina*

A diversified  
Australian mineral  
exploration company

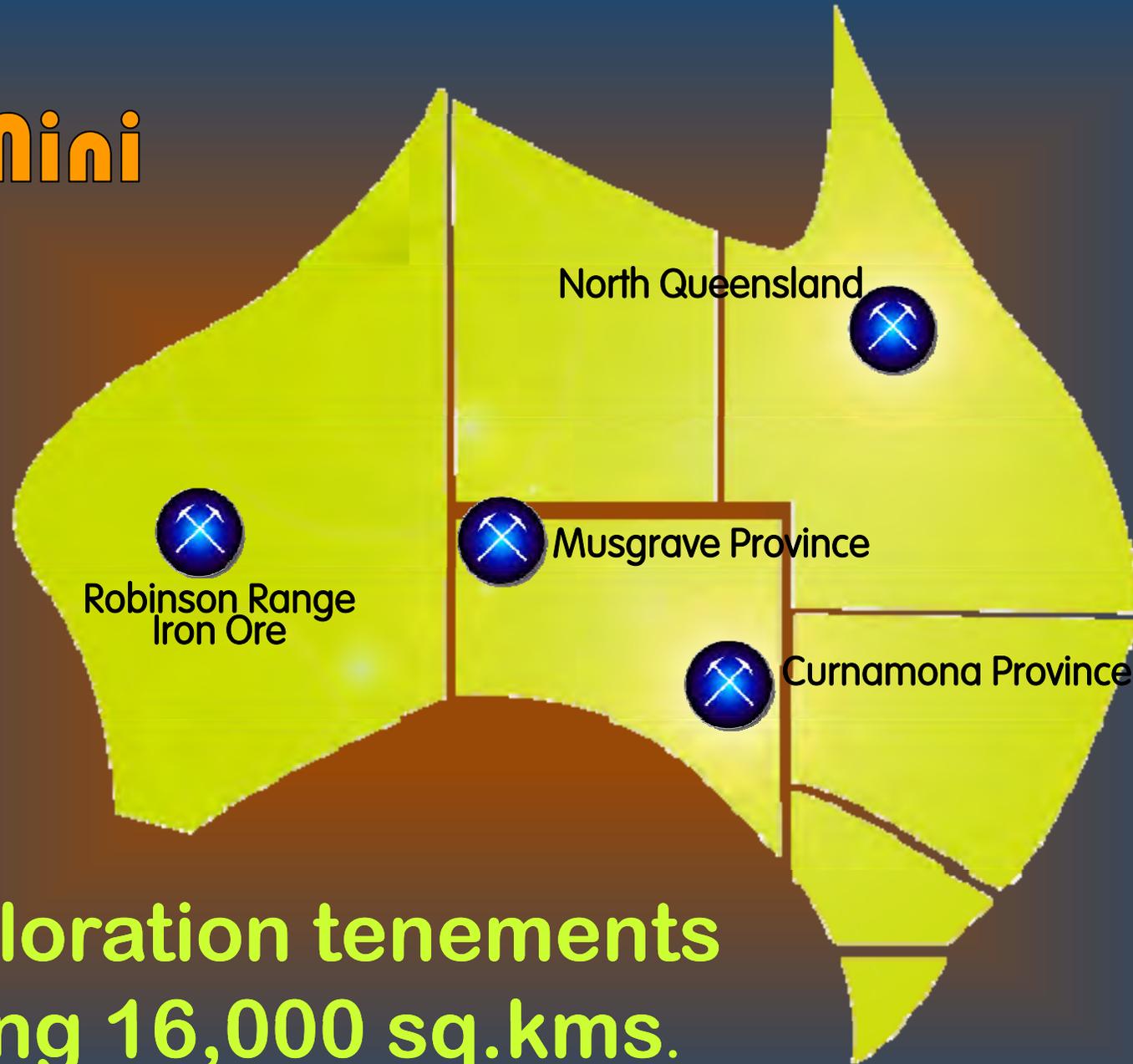
# Capital Structure

(27<sup>th</sup> April, 2011)

- 89,702,499 shares on issue
- Currently 1,920 shareholders
- 48% of issued capital held by top 20 shareholders
- Currently capitalised at AUD\$15 million
- Current cash AUD\$5.4million  
(+ AUD\$4.6million expenditure from Sinosteel JV)



# Pepinini

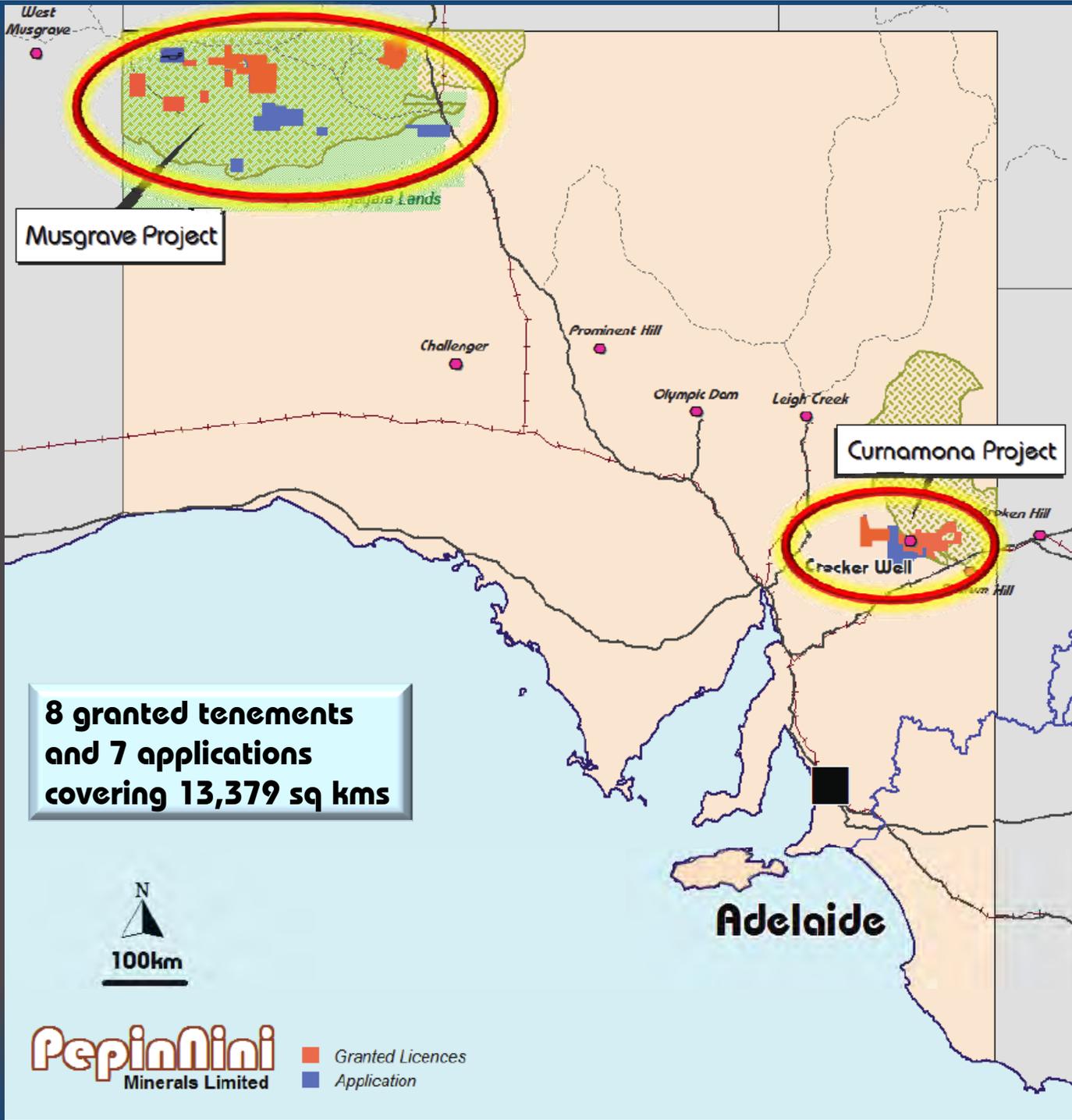


46 exploration tenements  
covering 16,000 sq.kms.

# Pepinini

1 granted tenement  
and 6 applications  
covering 330  
sq.kms.





# Curnamona Province Project

(40% PepinNini 60% Sinosteel Corporation)

## *Advanced Uranium Project – Crocker Well*

- Joint Venture alliance with Sinosteel Corporation to jointly explore and develop the Uranium Project
- JORC compliant  $U_3O_8$  resource at Crocker Well of 11.66Mlbs (Indicated 8.27Mlbs, Inferred 3.39Mlbs) grading 281ppm
- BFS delayed until improvement in uranium price and \$US

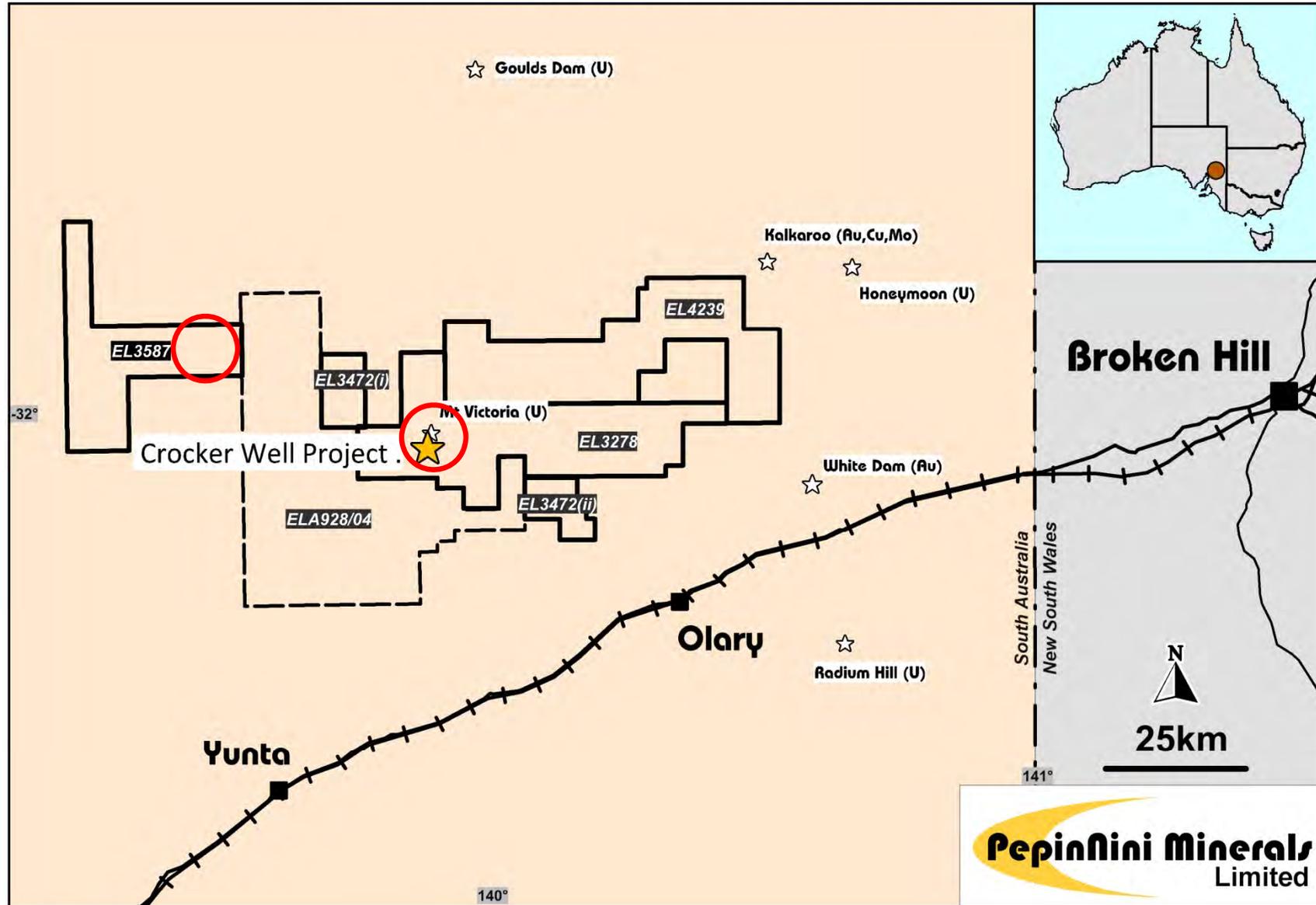
## *Other Projects*

- More than 30 Base Metal (Copper/Lead/Zinc) and Gold targets ready to drill
- Three Braemar Iron Formation Magnetite Prospects identified

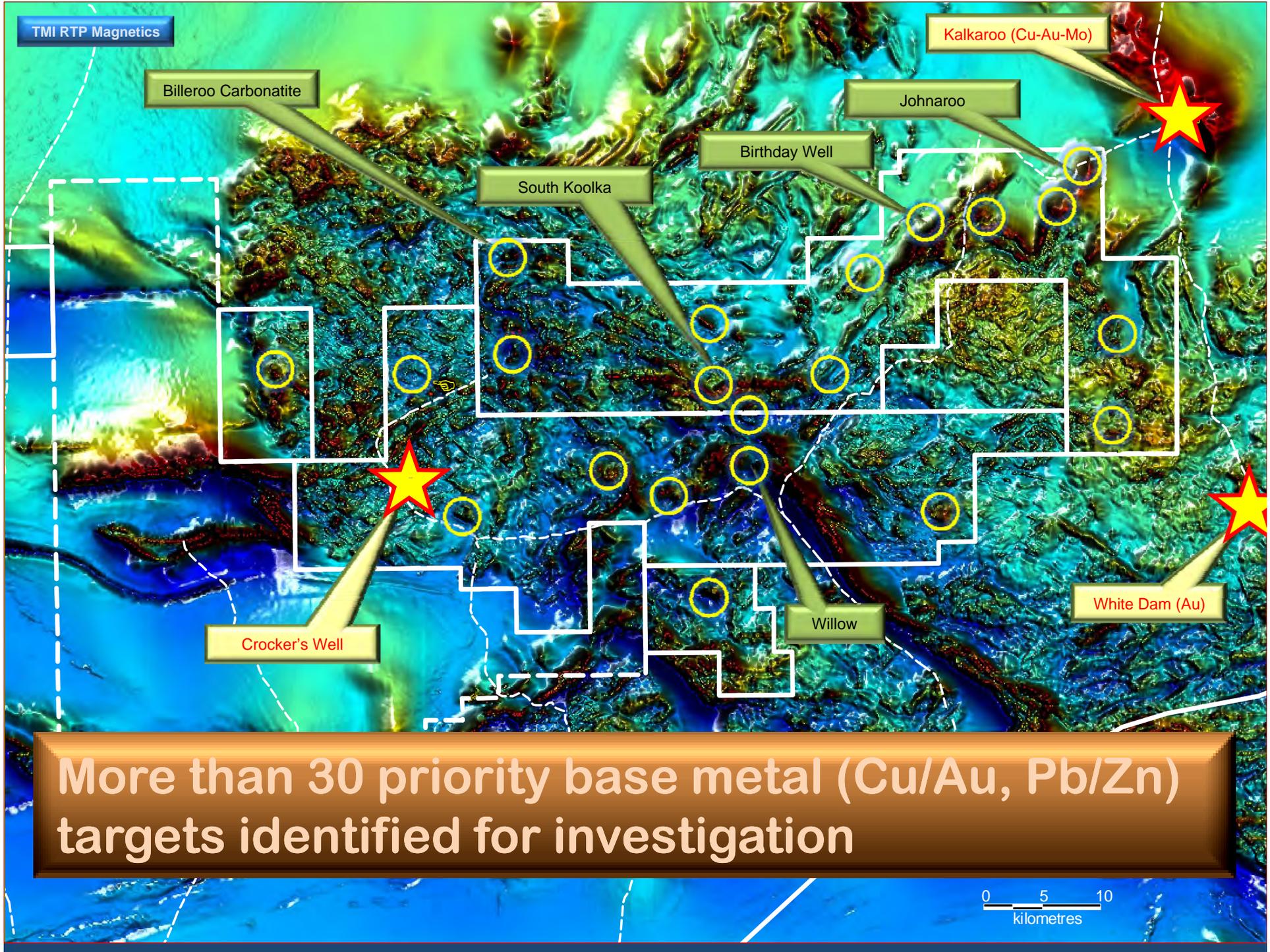


**PepinNini**

## Curnamona Project - Tenement Location Plan



5 Tenements covering 3,778 sq kms

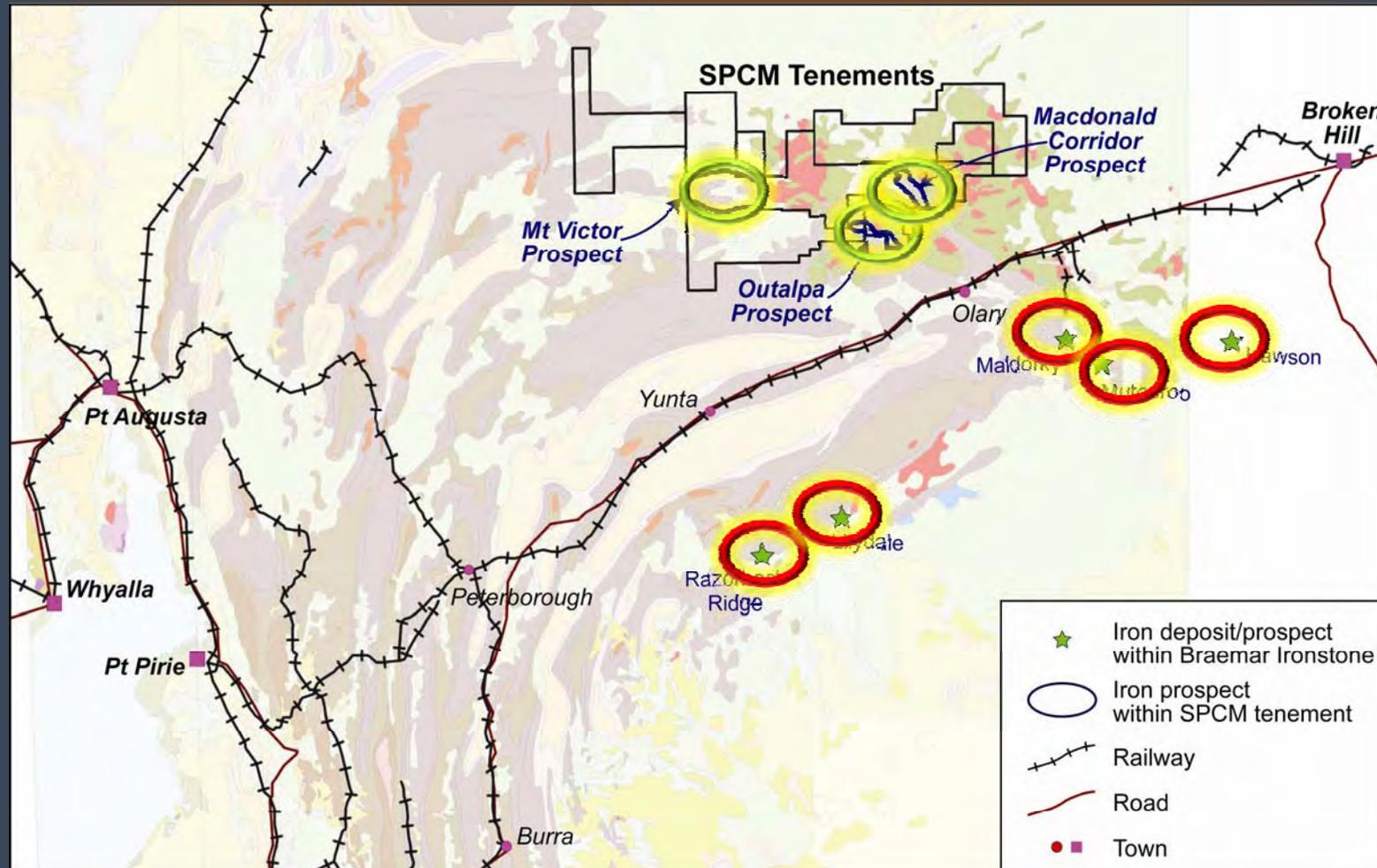


More than 30 priority base metal (Cu/Au, Pb/Zn) targets identified for investigation

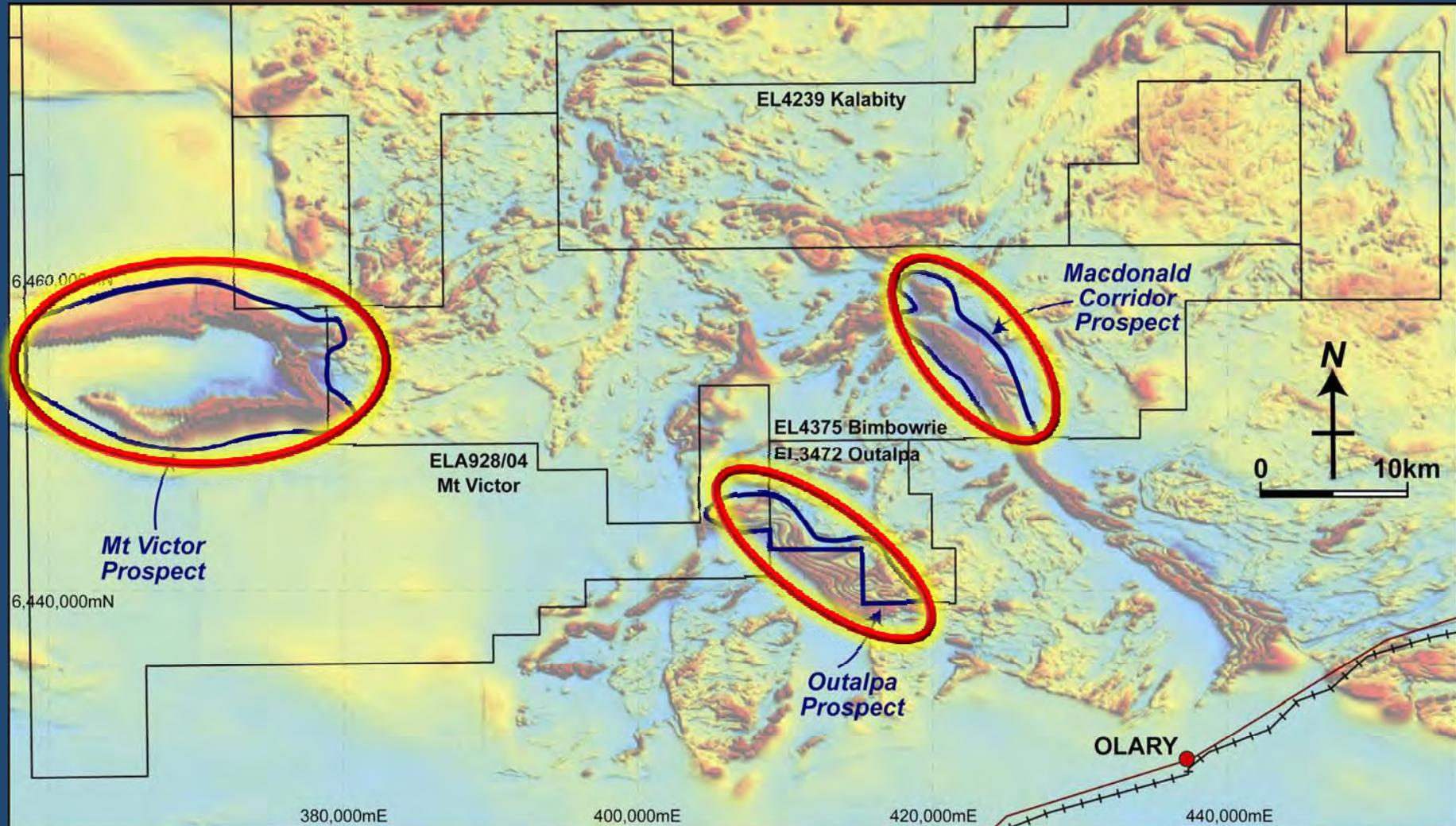


**Encouraging drill intersections by previous explorers include  
10m @ 2.07g/t Au, 0.74% Cu, 5.6m @ 8.5% Cu and 32m @ 0.66% Zn**

# Braemar Ironstone Magnetite



# 3 Initial Targets



# Braemar Ironstone Magnetite

*Encouraging positive exploration drilling and metallurgical results have recently been publicly reported by other explorers in the area*

- Very thick (300 m +) and laterally very extensive sequences of magnetite-bearing strata with average DTR recoveries of 15–20% yielding a premium magnetite concentrate of 67–70% Fe
- Carpentaria Exploration Ltd have announced an Inferred Resource of 1.4 Billion tonnes with an average DTR mass recovery of 15.5%, yielding a magnetite concentrate containing 69.9% Fe for their Hawsons Iron Project

# Braemar Magnetite Project

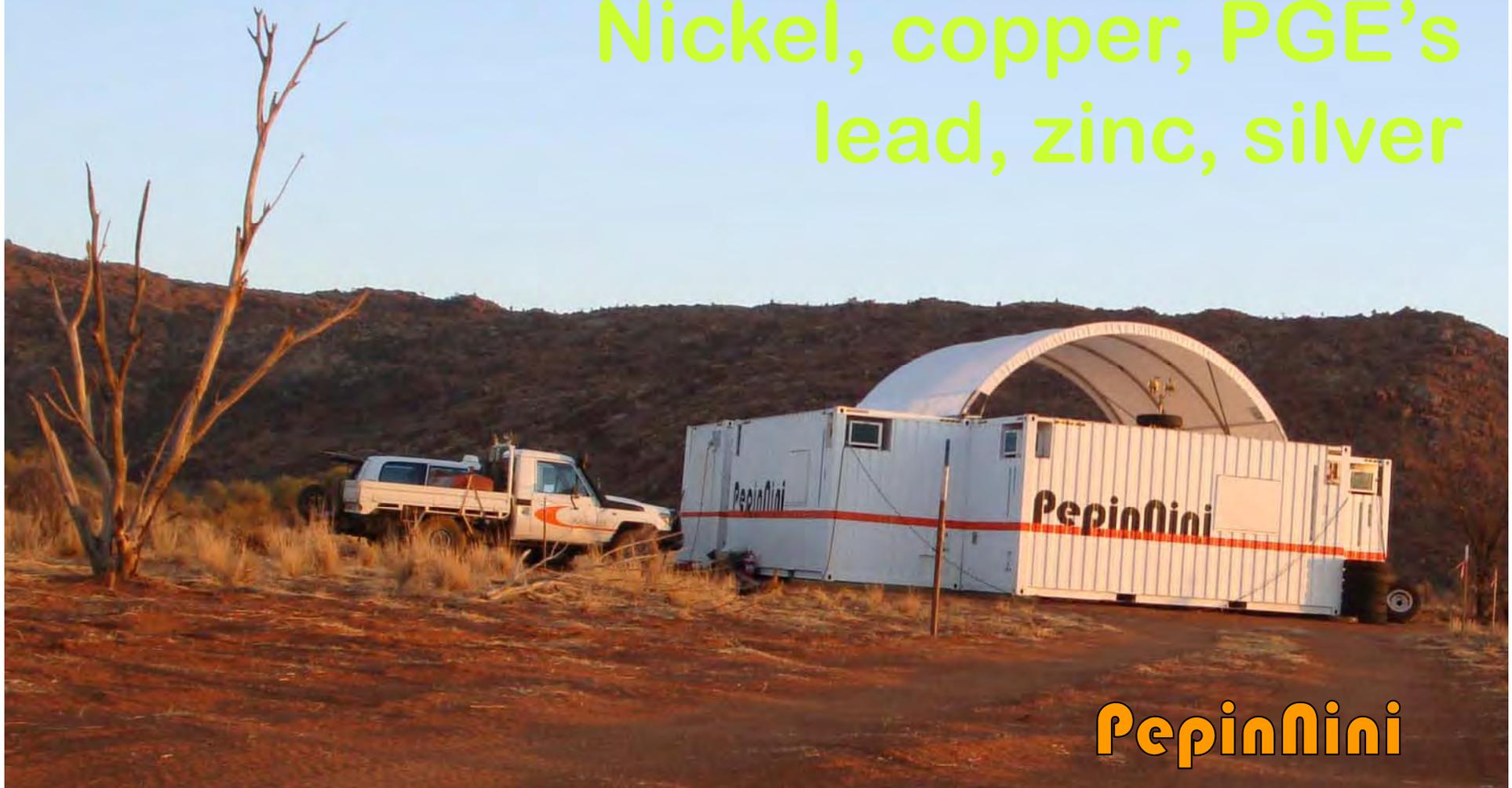
## *Project attractions:*

- Potentially very large deposits (>billion tonnes) easily exploitable from surface and amenable to open cut mining
- Soft siltstone host with the magnetite being easily liberated, resulting in low cost mining and low power requirements for processing (greatly reducing OPEX)
- Ore does not require ultra-fine grinding thus reducing OPEX
- High-grade, premium quality concentrate product with low impurities (~68-70% Fe, ~<3% SiO<sub>2</sub>, <0.01% S)
- Access to open-access rail, road, power and port infrastructure with excess capacity (reducing CAPEX)



# Musgrave Province Project

Nickel, copper, PGE's  
lead, zinc, silver



**Pepinini**



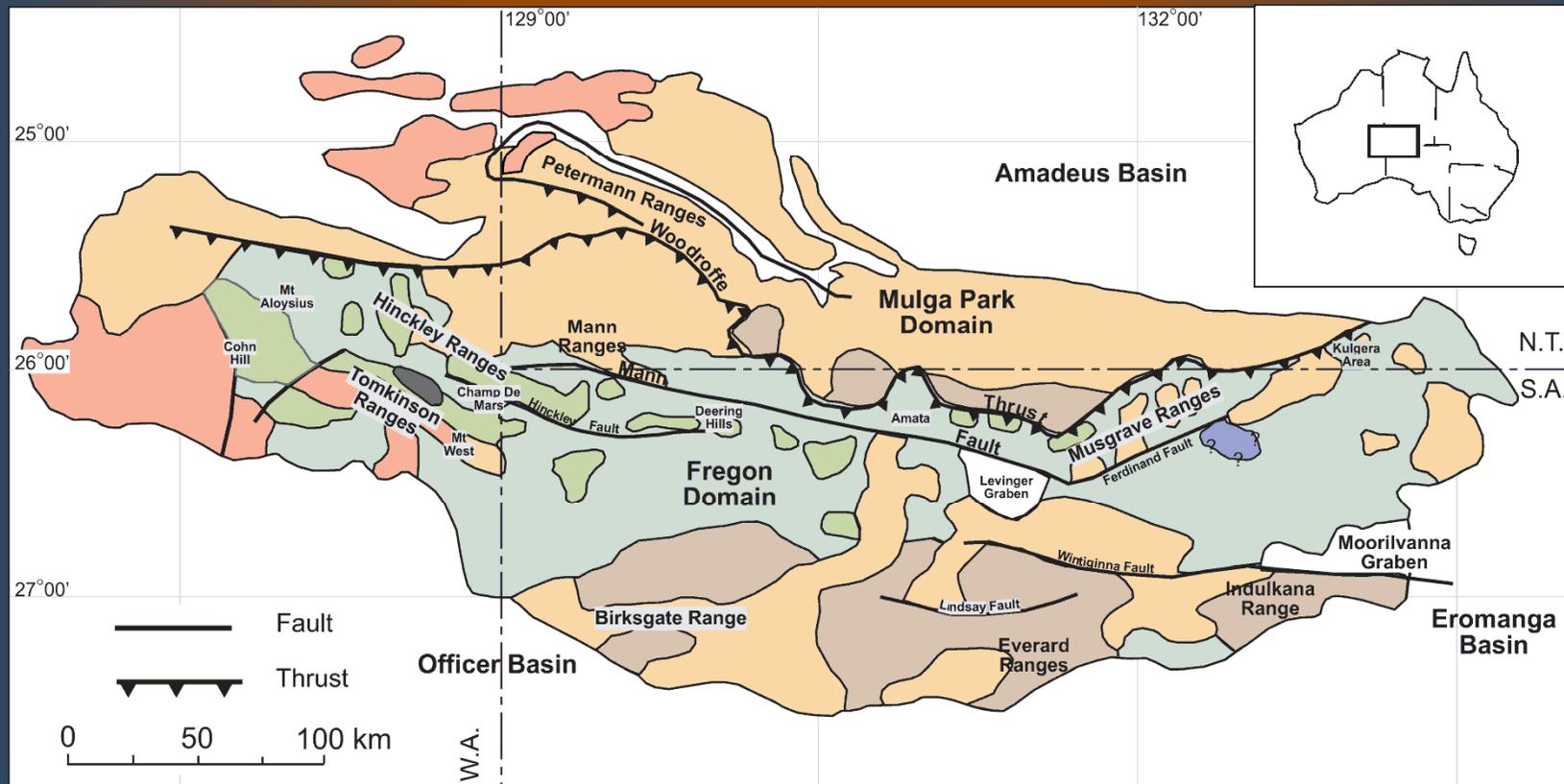
- Long term commitment to explore potential for world class size mineral deposits
- Company owned drilling rigs and support equipment
- Company owned field camp
- Cost effective exploration

**Pepinini**

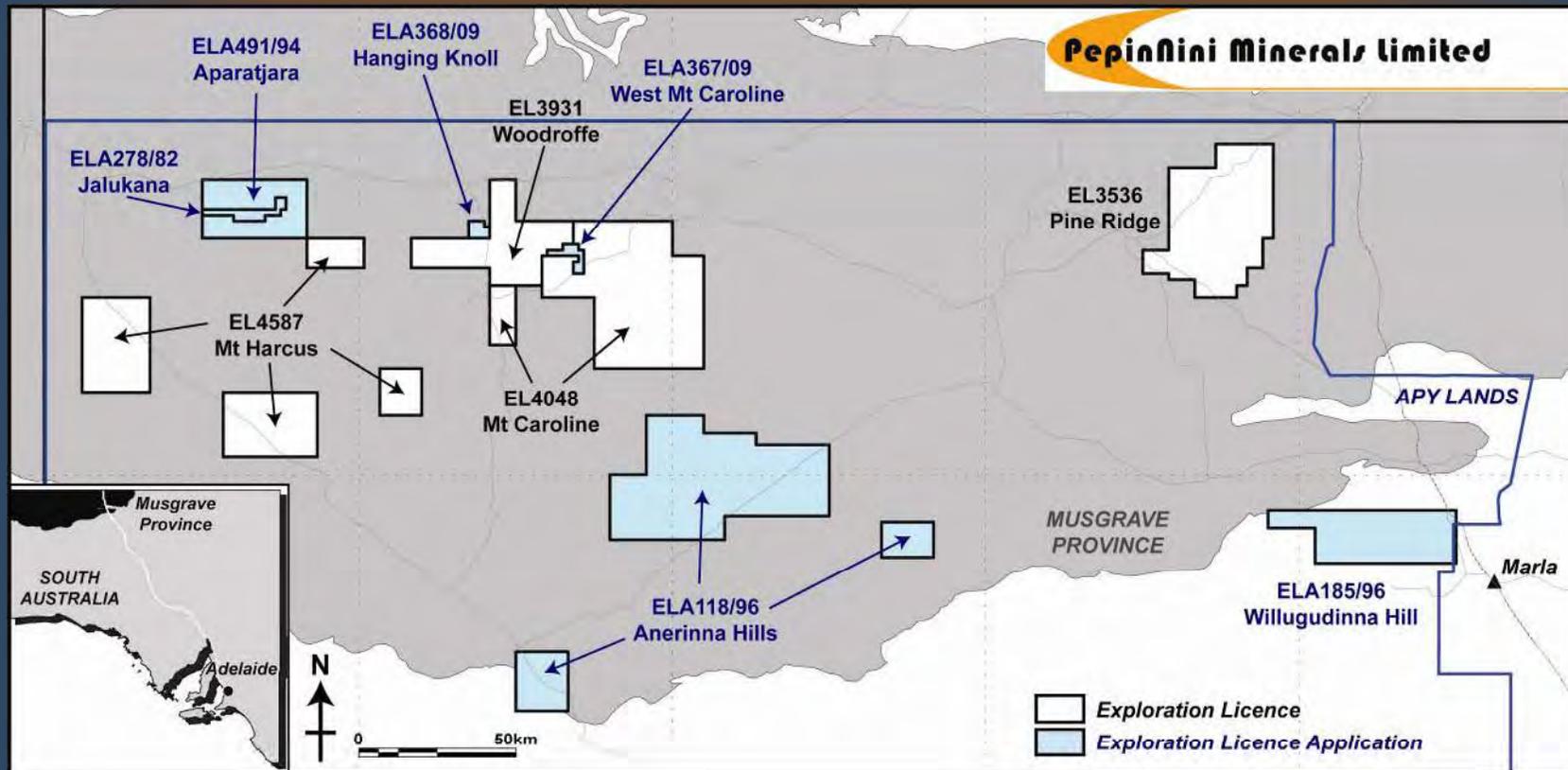
# Musgrave Province Project

## TARGETING

Nickel, copper, PGE's (Giles Complex)  
Copper, lead, zinc, silver (Birksgate Complex)



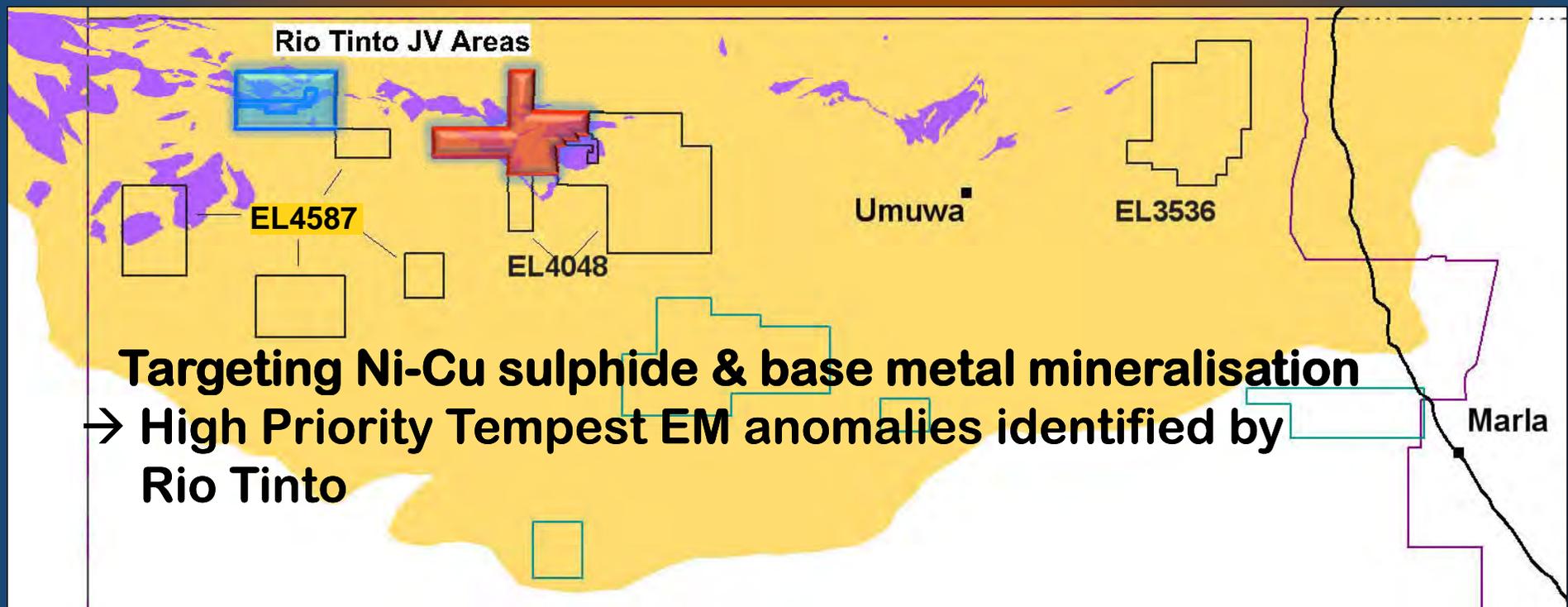
# Musgrave Province Project



**4 Granted Exploration Licences  
6 Exploration Licence Applications  
covering 9,600km<sup>2</sup>**

# Rio Tinto Joint Venture

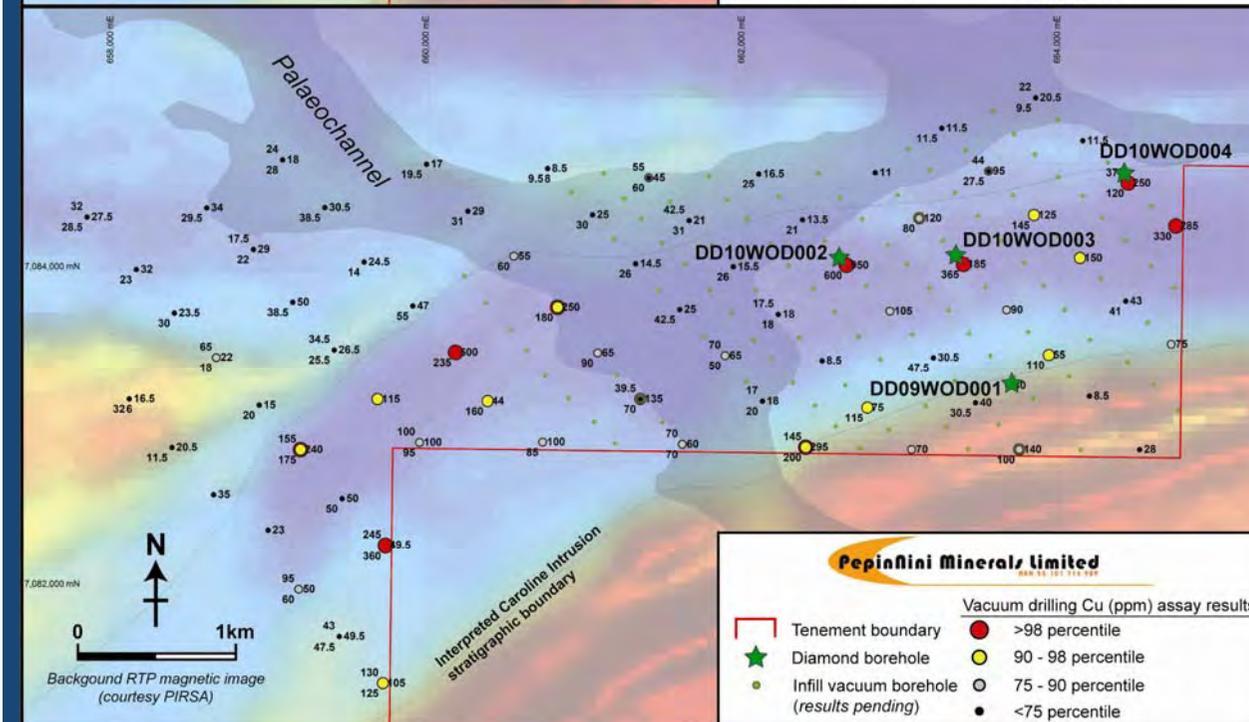
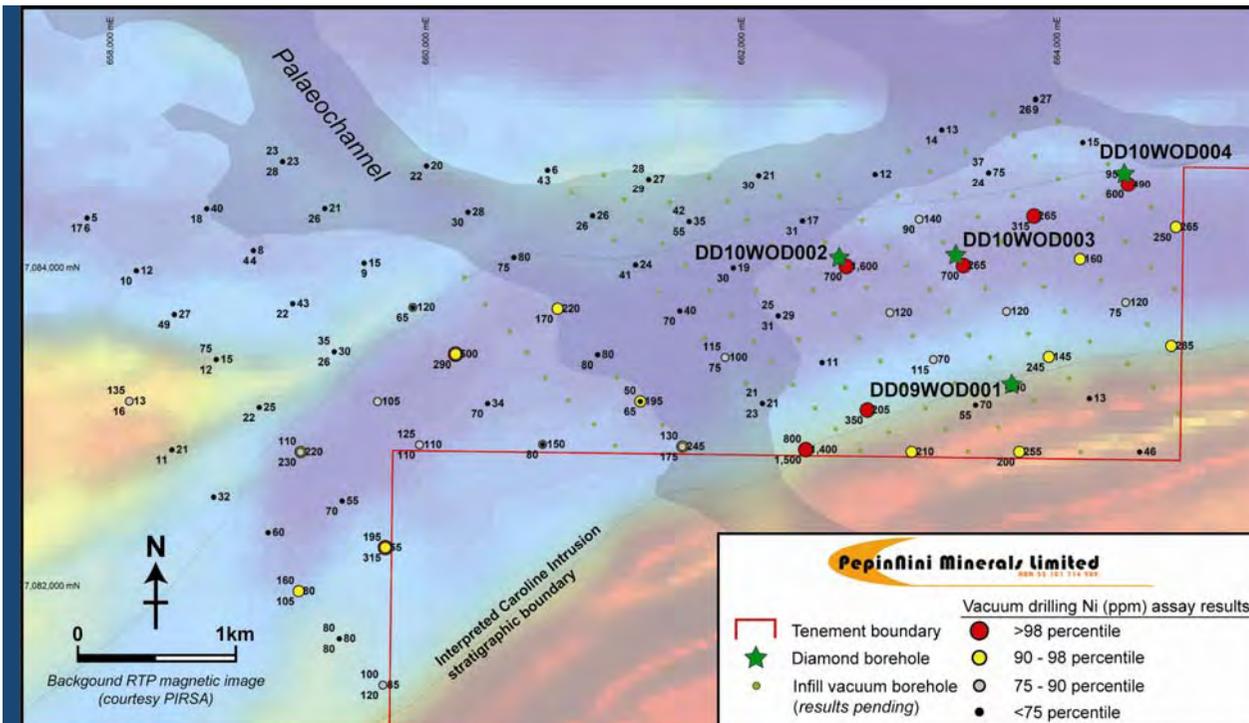
- Three tenements covering 1,382km<sup>2</sup>
- Expenditure of \$4m over 4 years to earn 51%
- One tenement granted – EL3931 Woodroffe
- Two tenement applications – Jalakana & Aparatjara



# Exploration Strategy

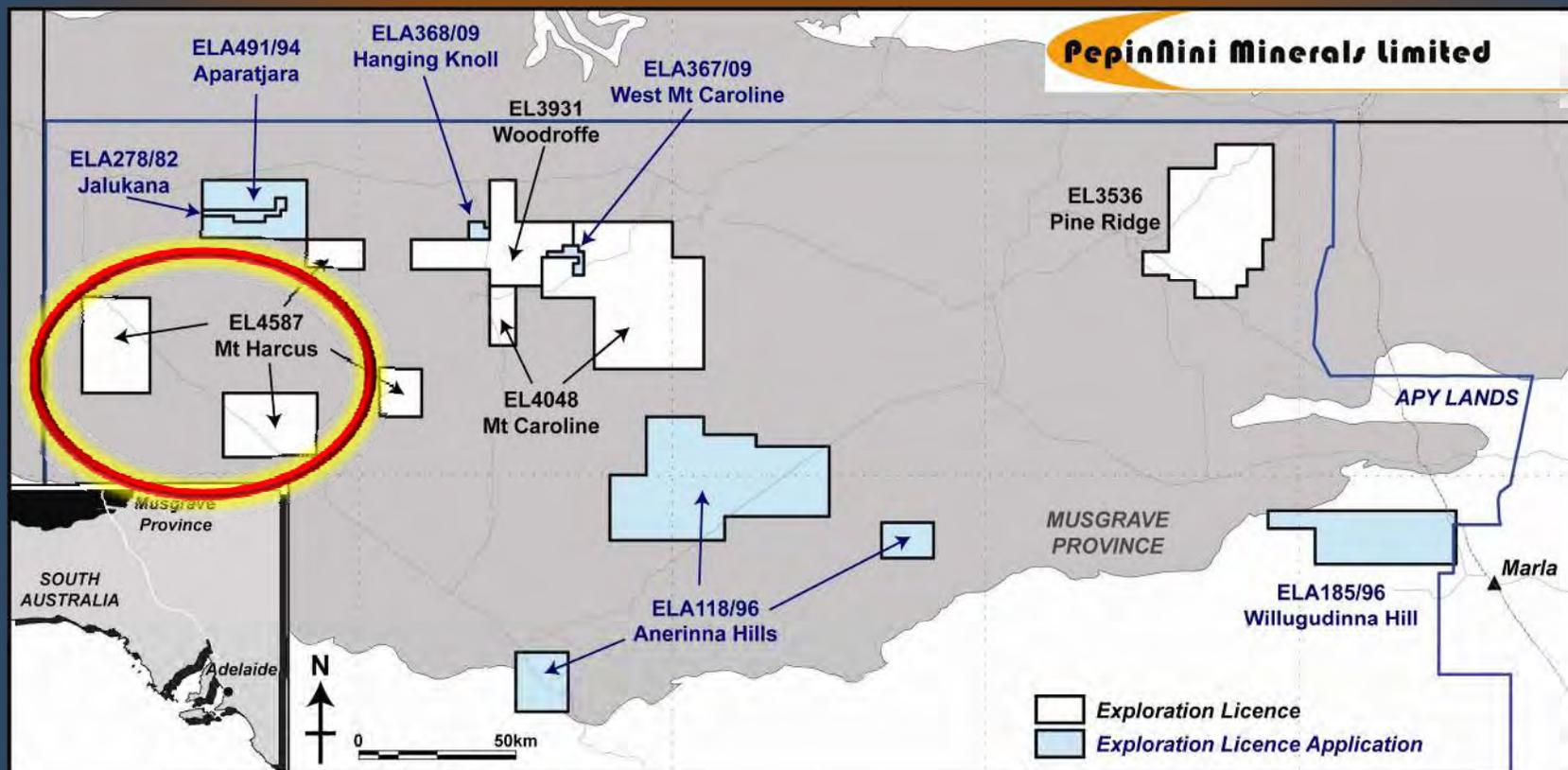
- Geology
- Geophysics
- Vacuum Drilling
- Diamond Drilling

**Pepinini**



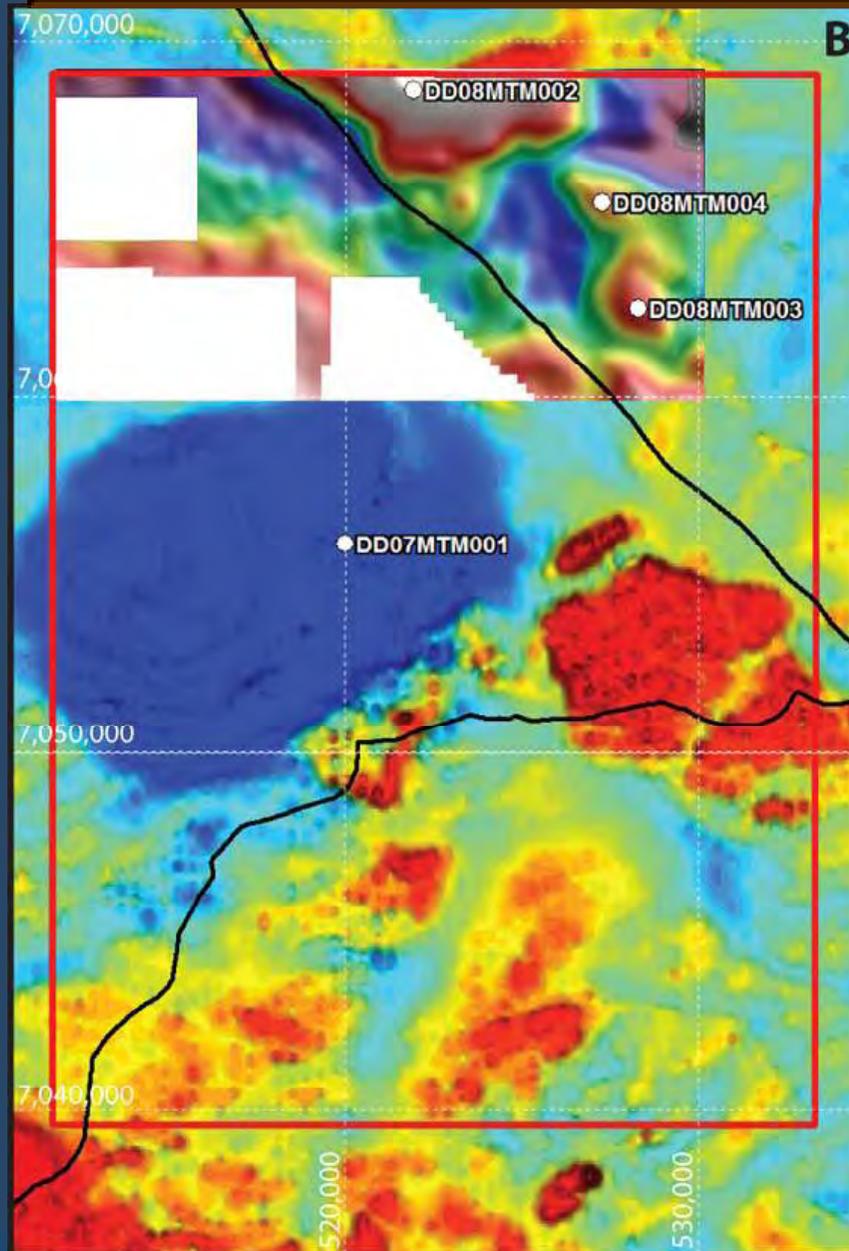
# EL 4587 Mt Harcus

Two Magnetic Features have been investigated



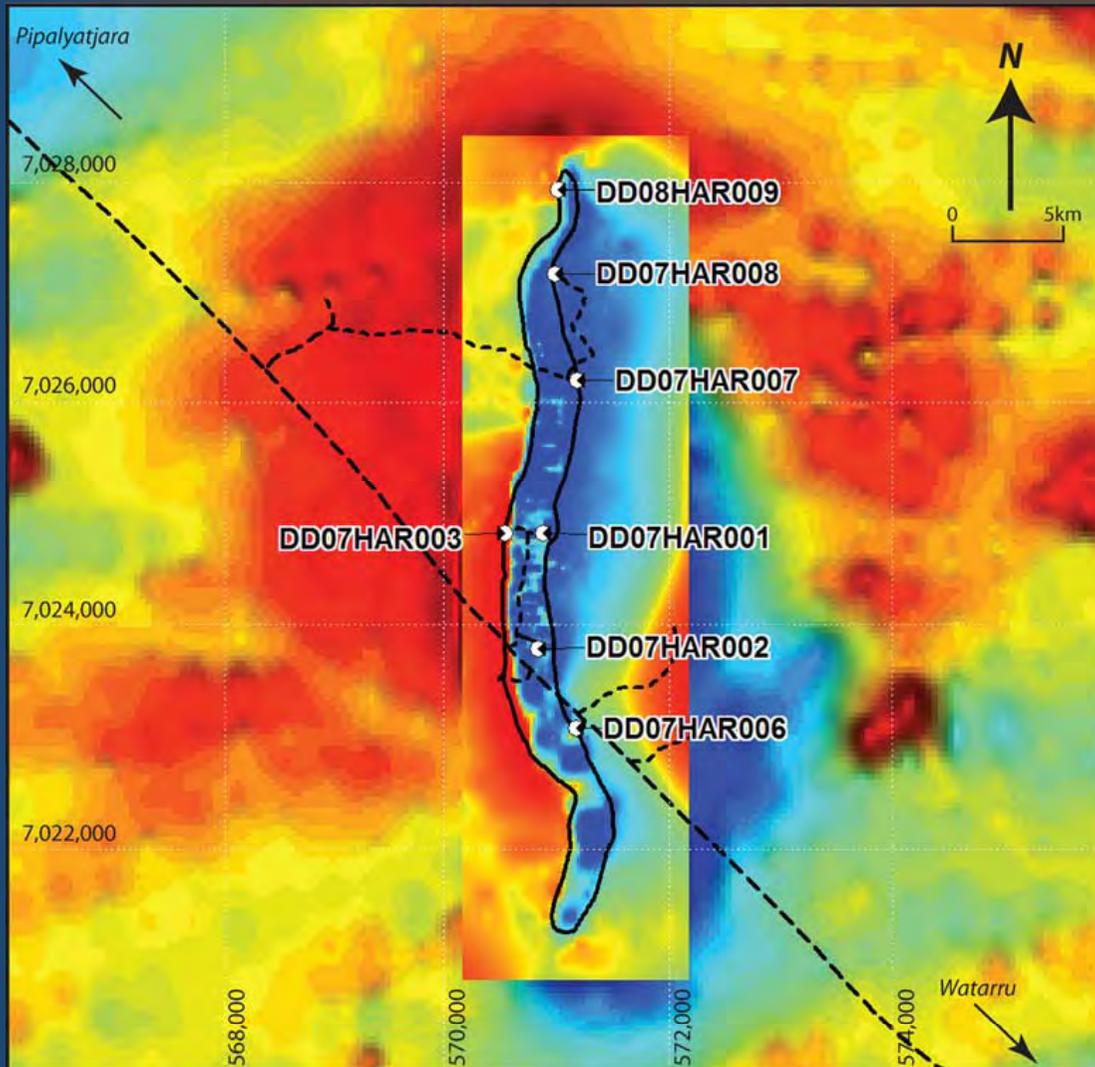
Pepinini

# Mt Moulden Block – Nickel Sulphide Targets



- Nickel copper sulphide & platinum group metal targets
- Prospective Giles Complex rocks in NE of block
- Similar geological setting to Voisey's Bay (Ni-Cu)
- Large 10x15km magnetic anomaly & gravity feature
- Sulphides intersected in PIRSA drilling - elevated Ni, Cu, Au, Pt in chip samples
- Four diamond drill holes – sulphur saturation confirmed

# Mt Marcus Block – Nickel Sulphide Targets



- Nickel copper sulphide & platinum group metal target
- Similar geological setting to Voisey's Bay (Ni-Cu)
- Extreme magnetic anomalies (up to 65,000nT)
- Harcus Intrusion 7km x 350m (mag-gravity) – 7 diamond drill holes
- Disseminated and massive sulphides intersected



**DD07HAR008**

**0.3%Cu, 0.3% Ni**

**Pepinini**



52m of elevated Ni & Cu  
from 41m

Up to 0.2%Cu, 254ppmNi

**Pepinini**

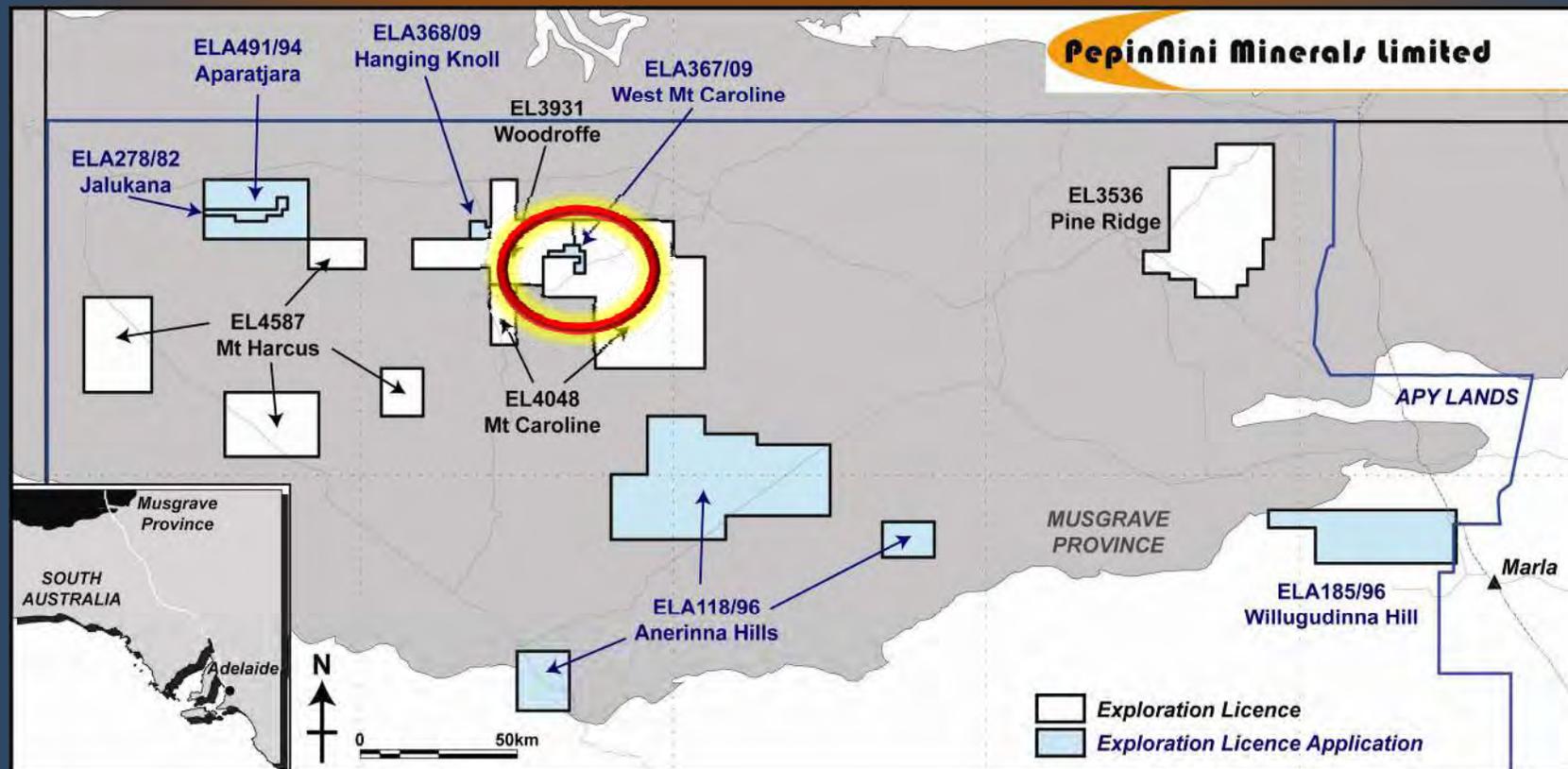
DD07HAR008

0.7%Cu

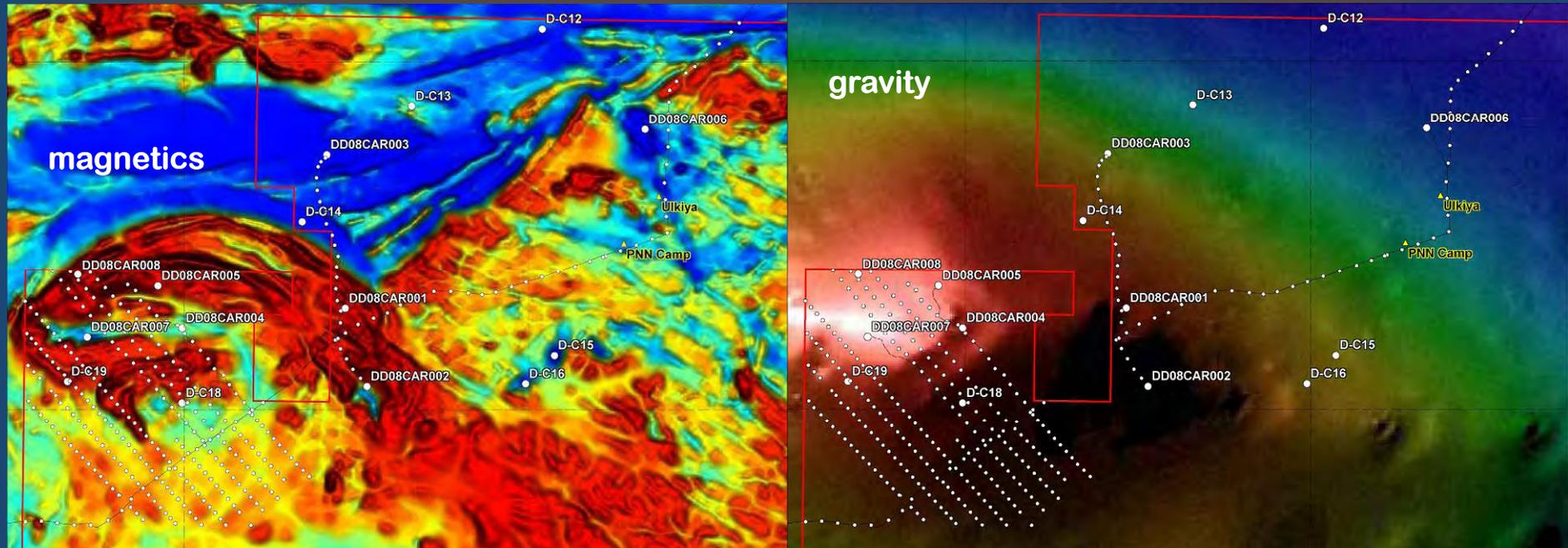
Pepinini

# EL4048 Mt Caroline, EL3931 Woodroffe

Caroline Intrusion has been investigated

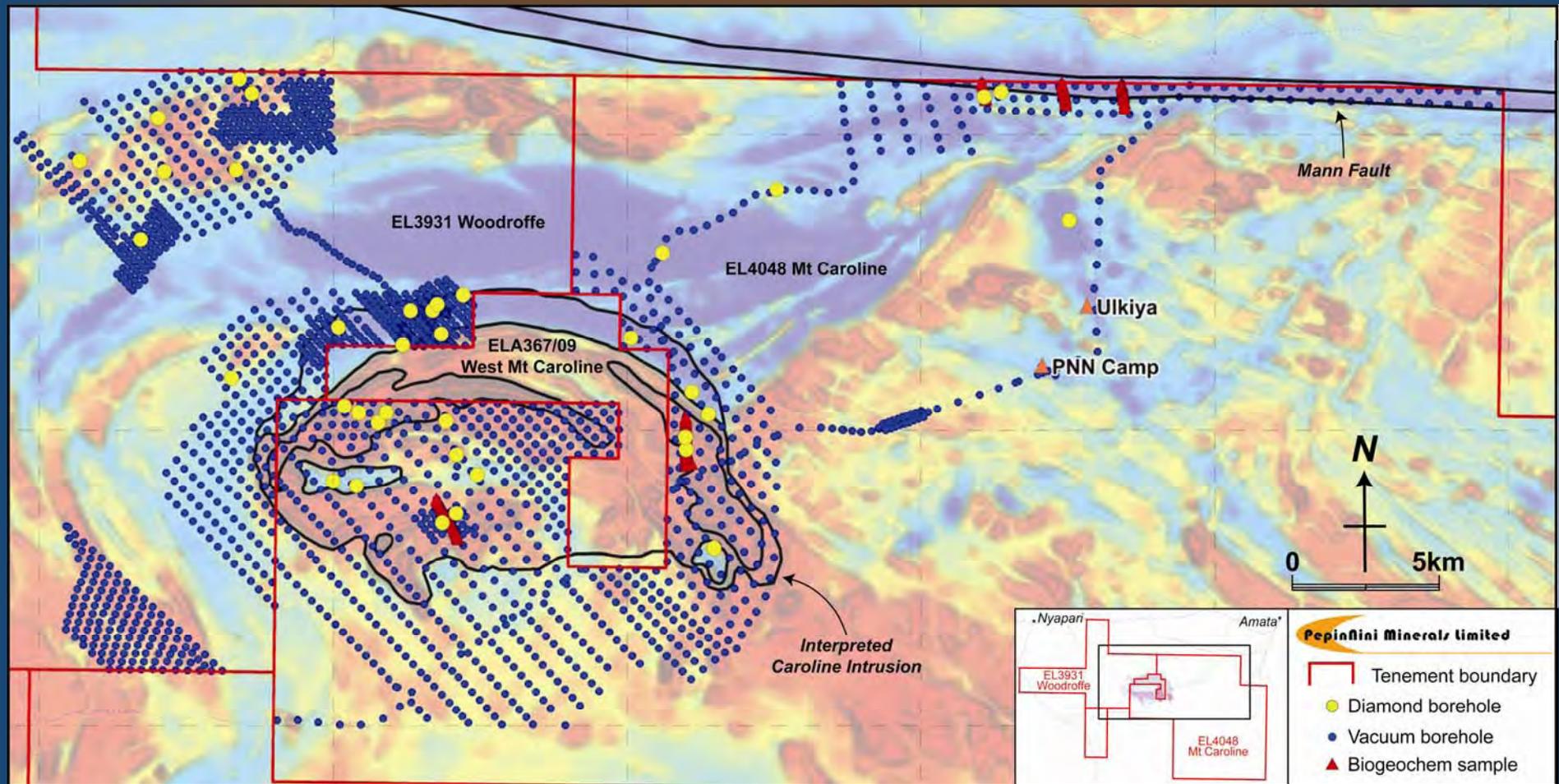


# Mt Caroline – Nickel Sulphide Target



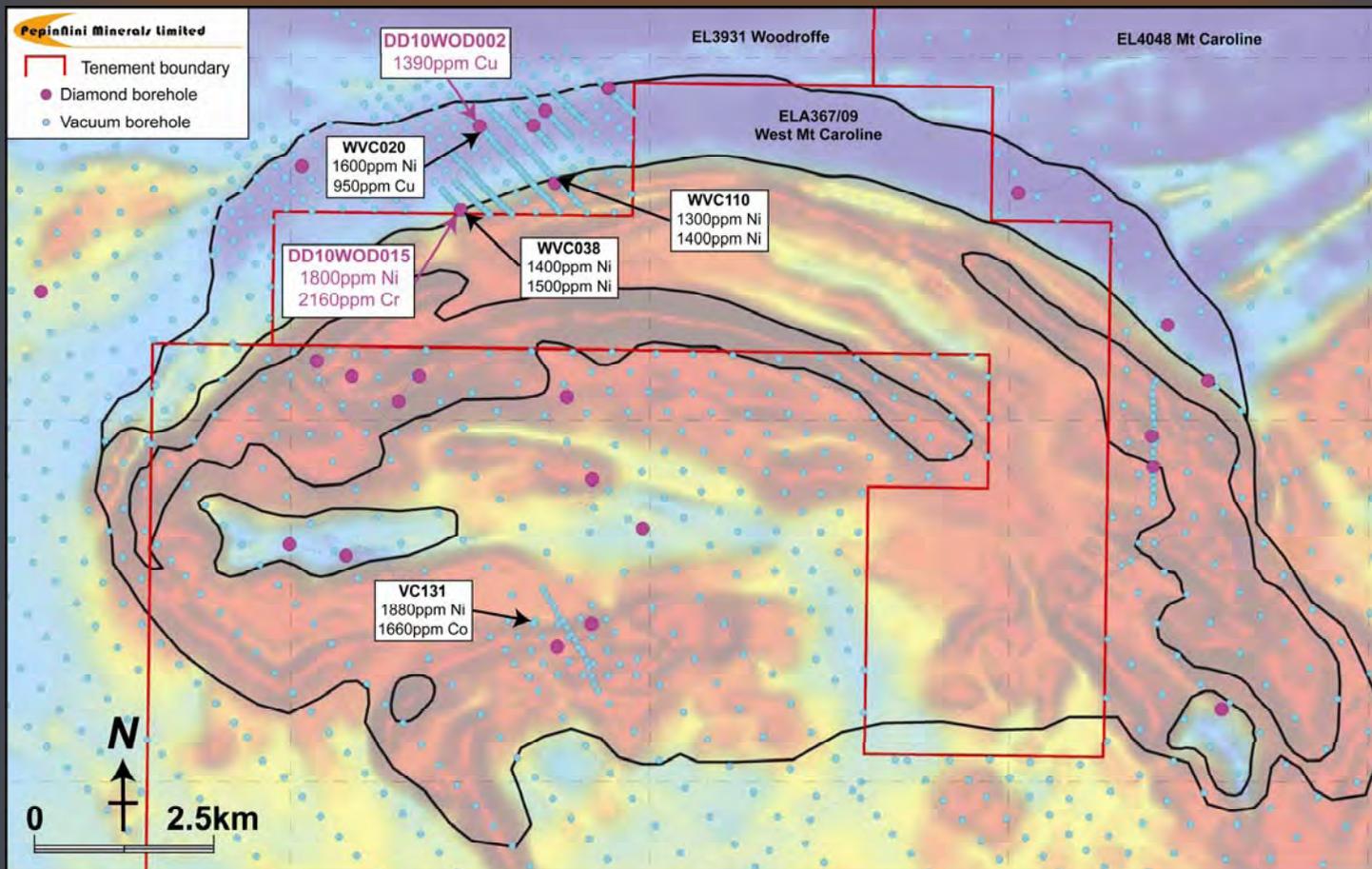
- Mt Caroline intrusion - nickel copper sulphide & platinum group metal target
- Similar geological setting to Voisey's Bay
- Large (18x8kms), undercover, layered mafic/ultramafic intrusion
- Pendlandite reported in surface sample collected by PIRSA in 2004
- Airborne EM survey conducted by Rio Tinto over much of the intrusion

# Diamond and Vacuum Drilling Mount Caroline Intrusion



**Pepinini**

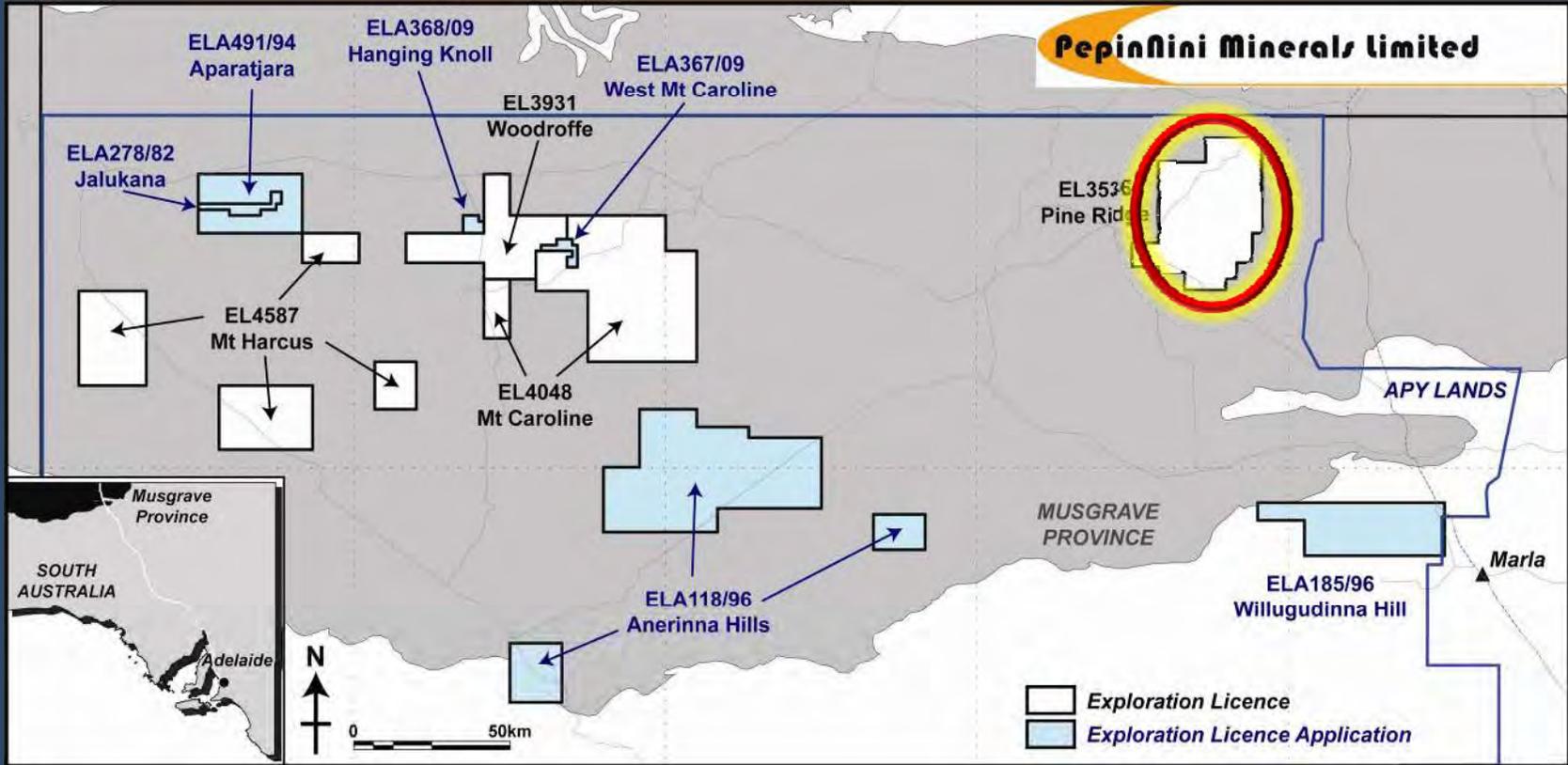
# Anomalous Diamond and Vacuum Drilling Results



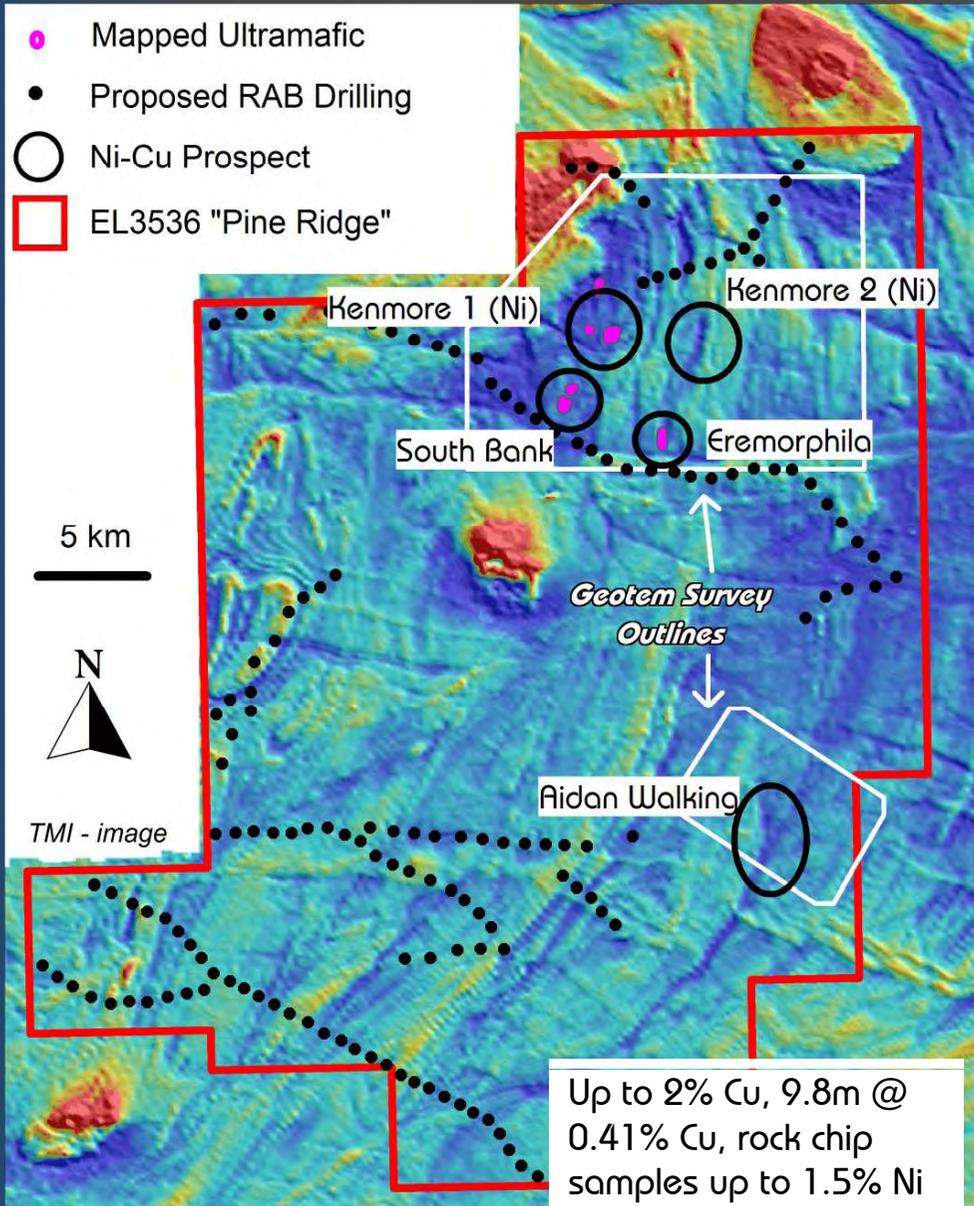
- Sulphides intersected in the majority of diamond holes

**Pepinini**

# EL3536 Pine Ridge

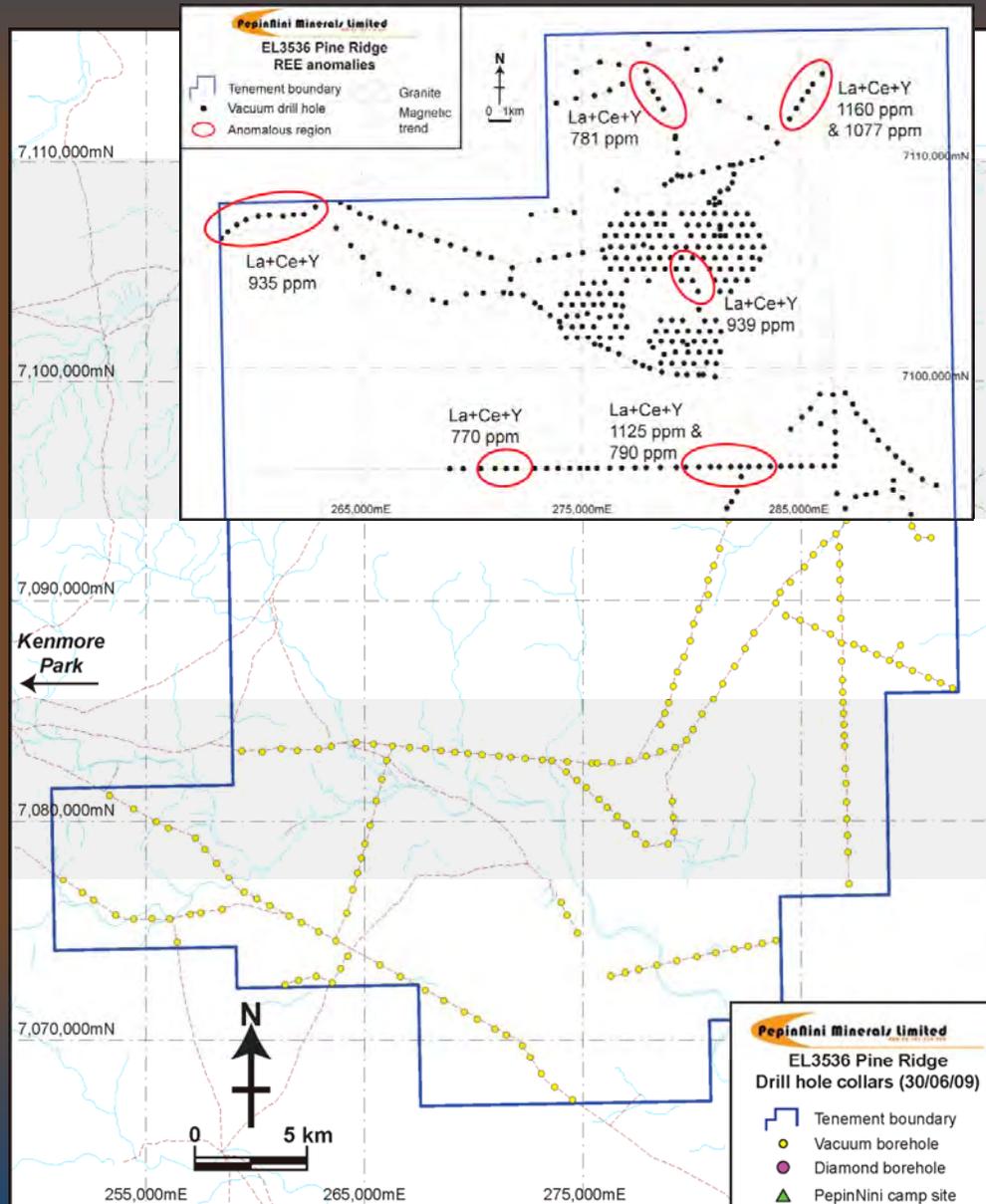


# EL3536 Pine Ridge



- Acquired from Rio Tinto
- Mapped ultramafic rocks
- Known Ni & Ni-Cu prospects
- Basement rocks similar to Broken Hill region
- Potential base metal targets

# EL3536 Pine Ridge



# EL3536 Pine Ridge



Mineralised migmatitic gneiss  
and metabasites rocks  
(Birksgate Complex)

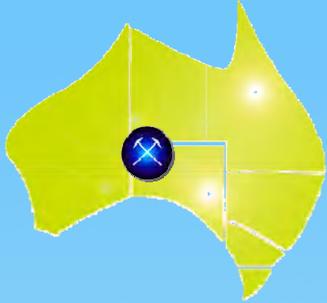


Serpentinitised olivine-bearing  
ultramafic rocks (Giles  
Complex?)



Garnetites & calcsilicates  
→ Broken Hill-type?

**PepinMini**



## Musgrave Project Summary

- m 10 tenements covering 9,600 sq kms
- m Long term commitment to explore potential for world class size mineral deposits
- m Targeting Giles Complex mafic-ultramafic intrusions – prospective for Ni-Cu sulphide & PGE mineralisation
- m Base metal (Cu, Ag-Pb-Zn) mineralisation in felsic and mafic gneisses of the Birksgate Complex is also being targeted



**Pepinini**



## Curnamona Project Summary

- m 5 tenements covering 3,778 sq kms
- m Joint Venture with Sinosteel Corporation (Sinosteel 60% / PepinNini 40%)
- m Advanced uranium project at Crocker Well (11.6Mlbs @ 281ppm)
- m Base Metal (Copper, Lead, Zinc) and gold
- m Investigation of Braemar Iron Formation Magnetite Potential currently prioritised



**PepinNini**

# Thank You



## Disclaimer:

- The information in this presentation is published to inform you about PepinNini Minerals Limited and its activities. All reasonable effort has been made to provide accurate information, but we do not warrant or represent its accuracy and we reserve the right to make changes to it at any time without notice.
- To the extent permitted by law, PepinNini Minerals Limited accepts no responsibility or liability for any losses or damages of any kind arising out of the use of any information contained in this presentation. Readers are advised to consult a stockbroker or professional adviser before making any investment decisions.
- The information in this presentation that relates to Exploration Results and Mineral Resources is based on information compiled by Norman Kennedy BSc MAusIMM. Norman Kennedy is the Managing Director of PepinNini Minerals Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2004 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Norman Kennedy consents to the inclusion in the report of the matters based on his information in the form and context in which it appears



# PepinNini