



TERRAIN MINERALS

# Gallium (REE), Gold, Nickel & Copper

Investor Presentation

ASX:TMX | JULY 2024





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The information in this presentation that relates to exploration results within Terrain Minerals' tenements has been compiled by Mr Benjamin Bell, consultant to Terrain Minerals. Mr Bell has over 20 years' experience in exploration and evaluation of mineral properties throughout Australia and overseas. Mr Bell is a Member of the Australian Institute of Geoscientists and has sufficient experience that is relevant to the style of mineralisation and types of deposits under consideration and to the activities that he is undertaking to qualify as a Competent Person as defined in the JORC Code 2012. Mr Bell has consented to the inclusion of statements made by him, in the form and context in which they appear within this presentation and has not withdrawn consent prior to the release of this presentation.



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## References

1. Terrain Minerals Ltd, ASX announced dated 11 March 2024
2. Terrain Minerals Ltd, ASX announced dated 27 May 2024
3. Terrain Minerals Ltd, ASX announced dated 27 May 2024
4. Terrain Minerals Ltd, ASX announced dated 11 March 2024
5. Terrain Minerals Ltd, ASX announced dated 11 March 2024
6. Terrain Minerals Ltd, ASX announced dated 22 February 2024
7. Terrain Minerals Ltd, ASX announced dated 22 February 2024
8. Terrain Minerals Ltd, ASX announced dated 27 May 2024
9. Terrain Minerals Ltd, ASX announced dated 27 May 2024
10. Terrain Minerals Ltd, ASX announced dated 22 February 2024
11. Terrain Minerals Ltd, ASX announced dated 22 February 2024
12. Terrain Minerals Ltd, ASX announced dated 23 October 2023
13. Terrain Minerals Ltd, ASX announced dated 23 October 2023

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# Why Terrain Minerals?

## Smokebush Project - (Larin's Lane)

- Gallium and Rare Earth Element (REE) mineralisation extending over 9 kilometres <sup>(1)</sup>.
- Multiple high-grade zones up 53.74 g/t (ppm)  $\text{Ga}_2\text{O}_3$  <sup>(2)</sup>.
- 70% of holes returned impressive intersection of Gallium up to 64 metres wide <sup>(2)</sup>.
- Total Rare Earth Oxide (TREO) grades up to 3,254 ppm <sup>(2)</sup>, MREO averaging 25% of TREO <sup>(3)</sup>.
- Alternative REE processing solutions currently being assessed.
- Three historic gold targets, currently under assessment for potential drilling.

## Lort River Project

- Potential repetition of Nova nickel "eye" feature present <sup>(6)</sup>.
- Bedrock conductor already detected within Terrain's "eye" feature <sup>(7)</sup>.
- 1,281 kilometre Vtem line survey now completed (May 2024) <sup>(8)</sup>.
- Vtem survey data currently being processed & due in 6 to 8 weeks (estimate).

## Project Pipeline

- Lithium and Copper/Gold - See Appendixes.  
(Priority is being given to advancing the grant of these tenements).





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# Company Profile

## Capital Structure

Shares on Issue: 1.423 Million

### Unlisted Options

Various expiry dates / prices 41 Million

Market Cap (Million): 4.3

Cash at Hand (Million): (March Q end) \$0.761

Asset Sales (Million): (16/05/2024) \$0.300

Debt Nil

Share Price \$0.003

## Major Shareholders

Top 20: 37.52%

Top 100: 70.56%

Board & Associated: 12.7%

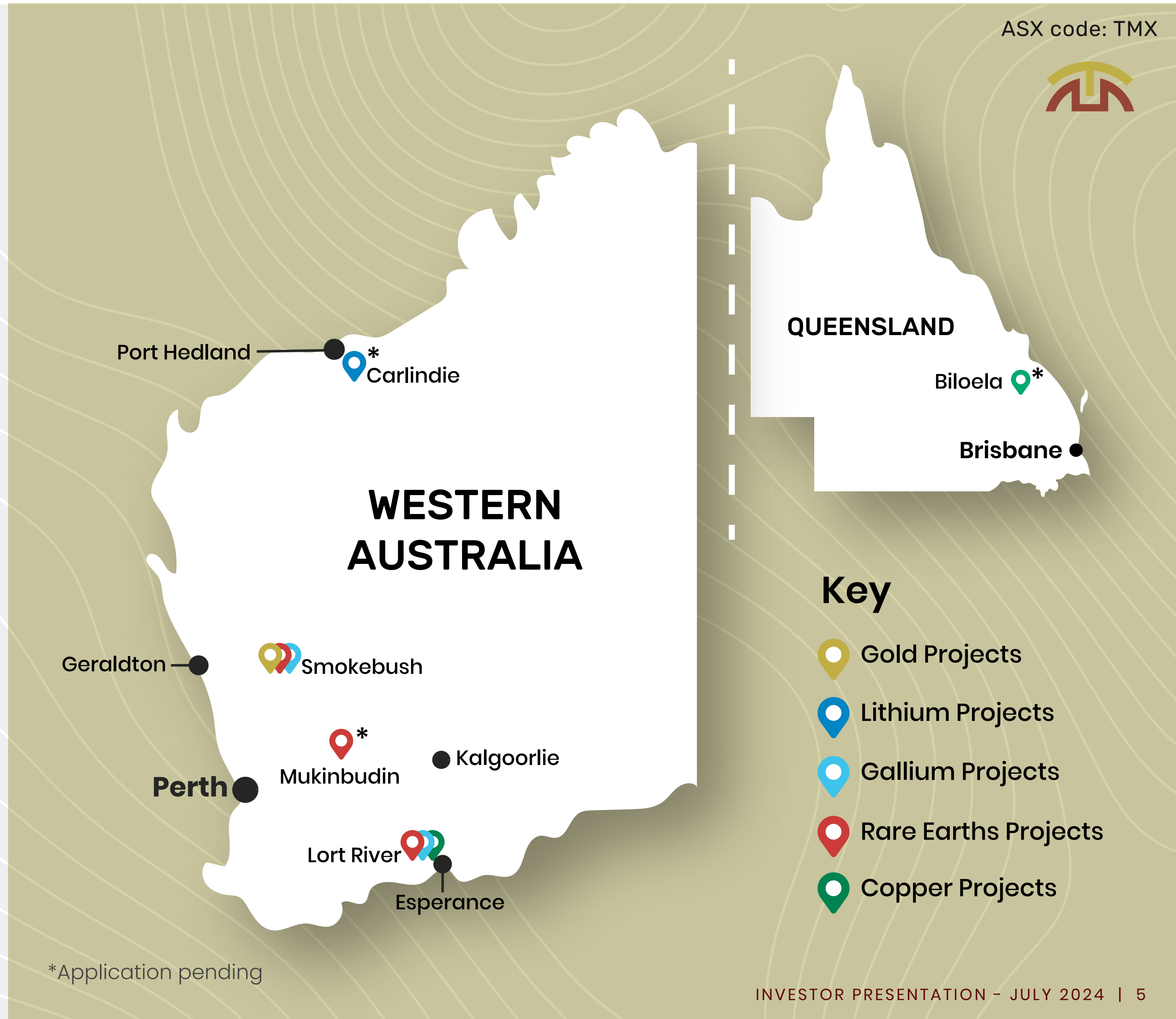
No. of Shareholders: 1,198

## Board Members

**Justin Virgin** Executive Director

**Jason MacDonald** Non-Executive Director


**Johannes Lin** Non-Executive Director




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# Smokebush Project

Larins Lane

31   
**Ga**  
Gallium

  
**Ree**  
Rare Earth  
Elements

79   
**Au**  
Gold

Located 350 kilometres north of Perth.

300km<sup>2</sup> of tenure within Western Australia's emerging Midwest REE district.

Proven host of high grade Clay Gallium and REE mineralisation.

Three historic gold targets, currently under assessment for potential drilling.

Benefits from close proximity to existing mining and related infrastructure.



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# Smokebush Project | Gallium

Larins Lane

High grade Gallium Clays appear to be sitting above the layers of REE.

Selected holes include(9):

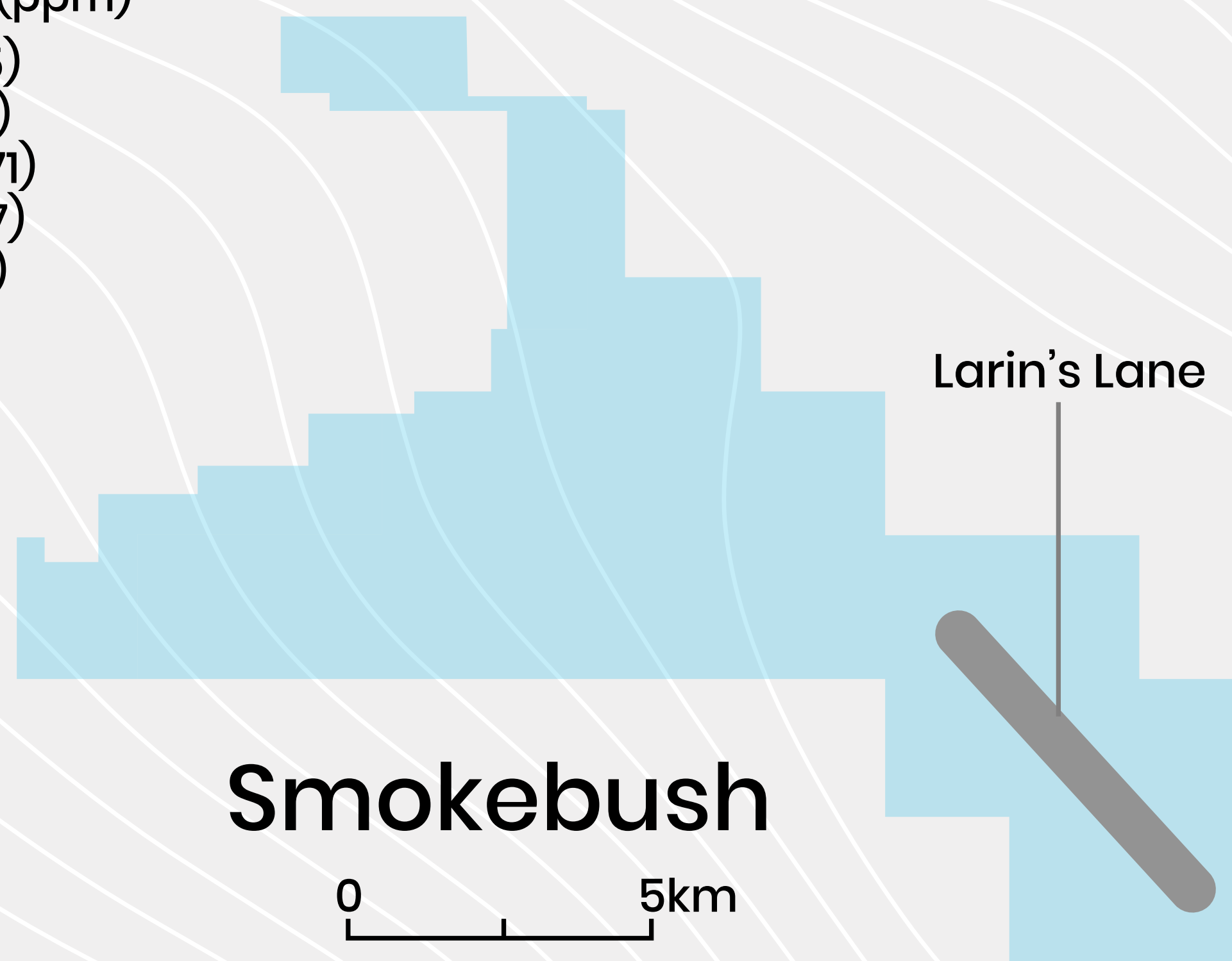
Applying: Gallium Oxide (Ga<sub>2</sub>O<sub>3</sub>) cut-off 40.32 g/t (ppm)

- 16m @ 53.74 ppm Ga<sub>2</sub>O<sub>3</sub> from 64m - (23SBAC035)
- 20m @ 48.33 ppm Ga<sub>2</sub>O<sub>3</sub> from 4m - (23SBAC045)
- 30m @ 40.32 ppm Ga<sub>2</sub>O<sub>3</sub> from 24m - (23SBAC071)
- 24m @ 46.34 ppm Ga<sub>2</sub>O<sub>3</sub> from 32m - (23SBAC077)
- 8m @ 52.62 ppm Ga<sub>2</sub>O<sub>3</sub> from 20m - (23SBAC080)

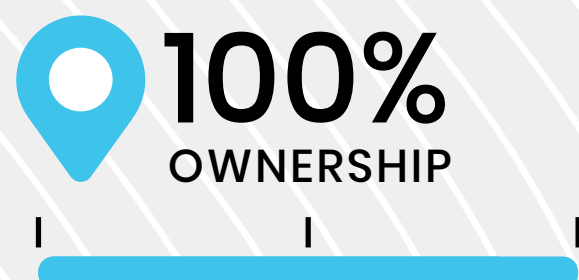
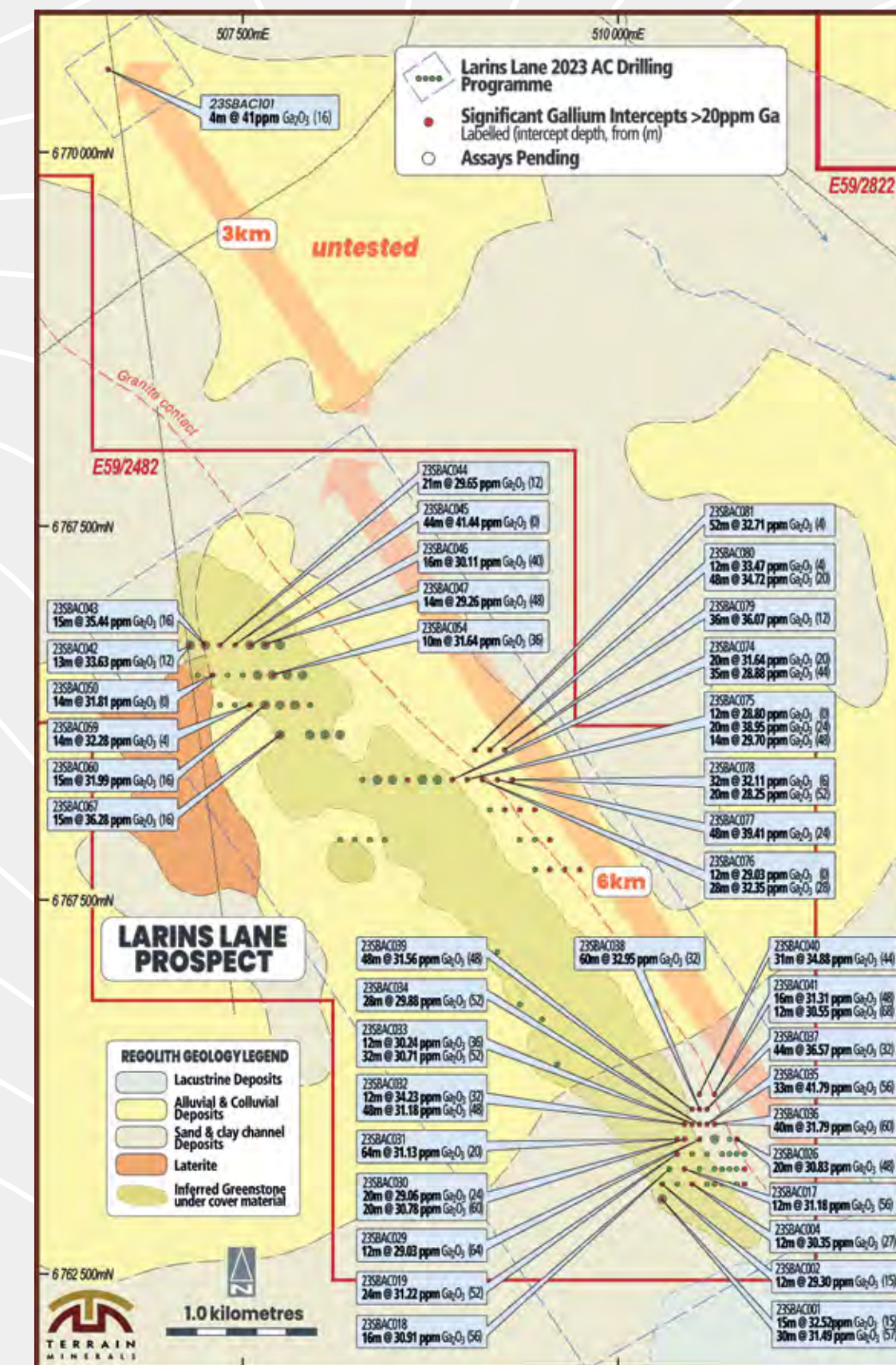
70% of holes returned impressive intersection of Gallium up to 64 metres wide(2).

Planning underway for a follow up drill program scheduled to commence in the third quarter.

On-going discussions with prospective industry and offtake partners.



## Smokebush



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# What is Gallium?

Gallium is classified as a critical metal by the USA, United Kingdom, European Union and Australia.

Main applications are in defence, semi-conductors and computer chips, electronic circuitry and photovoltaic cells.

Presently, 98% of global supply is ex-China. USA and European semi-conductors manufacturers are actively encouraging a more geographically balanced supply chain.

Terrain is rapidly expanding its Gallium focus to dovetail with the exponential growth of generative AI (and the associated demand for semi-conductors).

Gallium chips and other electrical components draw less power, are faster and allow for miniaturisation.





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# Smokebush Project | REE

Larins Lane

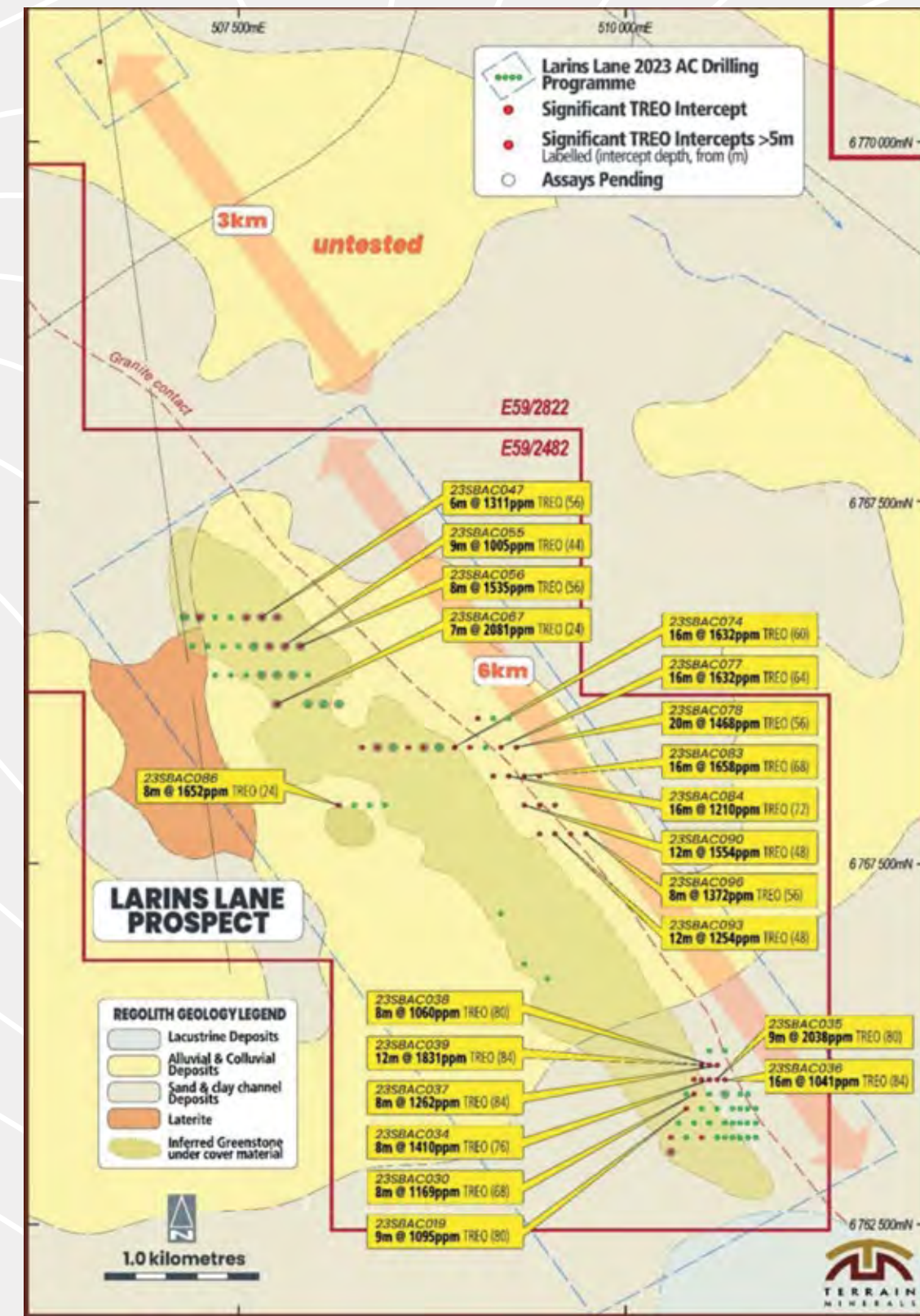
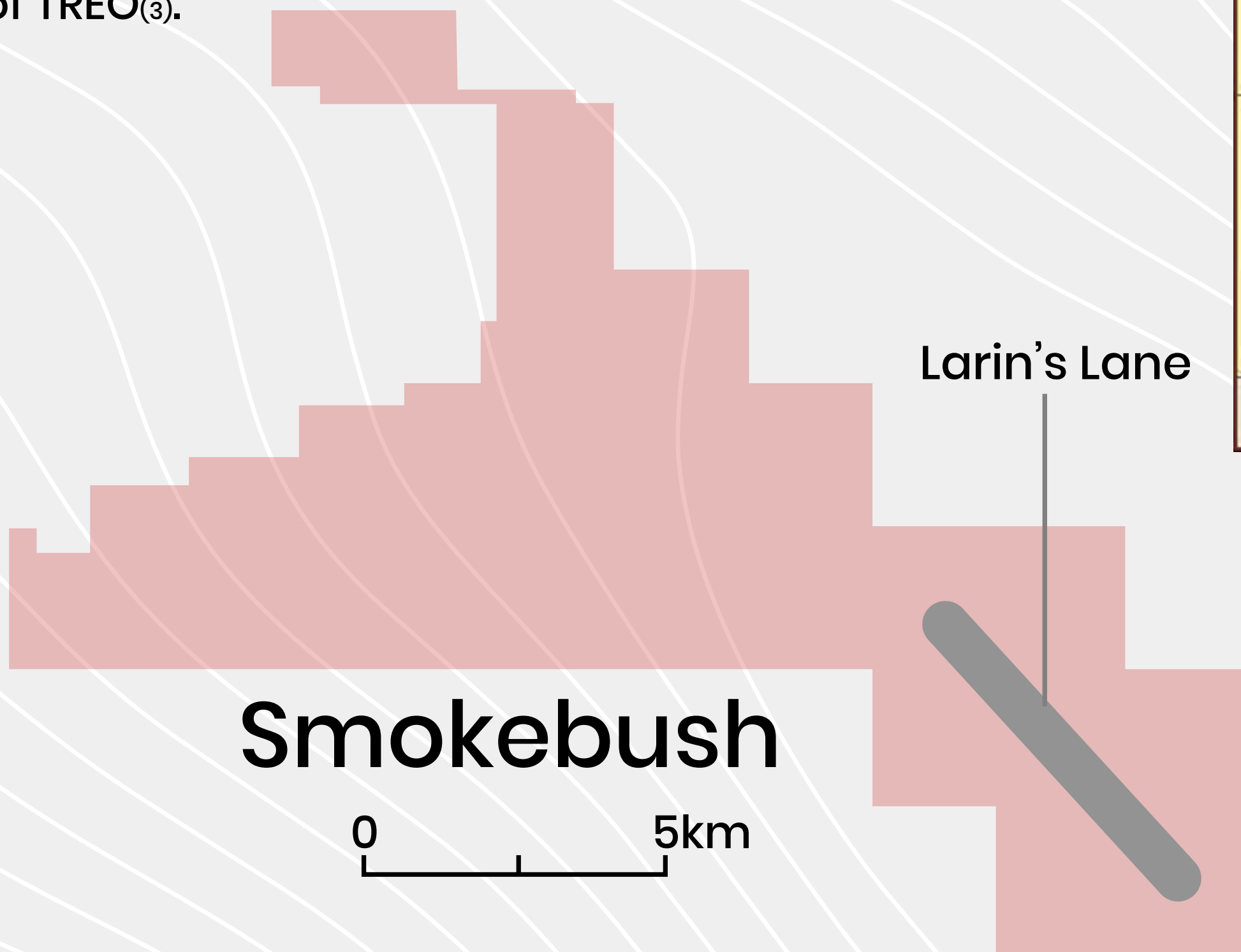
Maiden drilling totalling 6,611 metres returned thick zones of high grade Clay REE mineralisation.

- Total Rare Oxide (TREO) grades up to 3,254ppm<sup>(2)</sup>.
- Magnetic Rare Earth Oxide (MREO) averaging 25% of TREO<sup>(3)</sup>.
- Neodymium (Nd) + Praseodymium (Pr) averaging 80% of MREO<sup>(4)</sup>.

**Selected holes include<sup>(8)</sup>:**

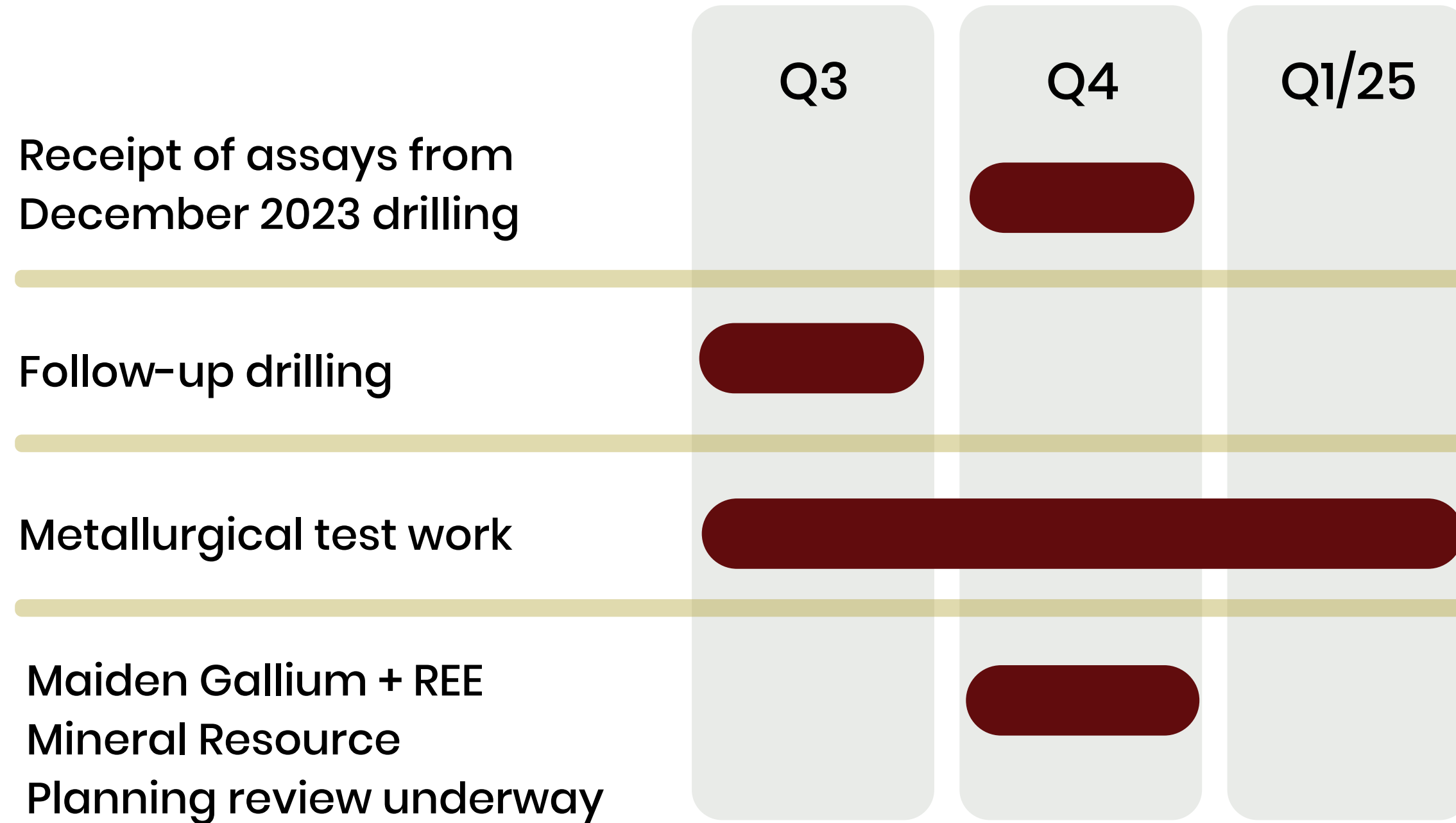
- 8m at 1410.23 ppm TREO from 76m - (23SBAC034)
- 9m at 2038.79 ppm TREO from 80m - (23SBAC035)
- 16m at 1041.87 ppm TREO from 84m - (23SBAC036)
- 12m at 1831.44 ppm TREO from 84m - (23SBAC039)
- 8m at 1535.90 ppm TREO from 56m - (23SBAC056)

Alternative metallurgical process currently being considered.




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# Smokebush Project - Larins Lane Forward Program



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# Lort River Project

28   
**Ni**  
Nickel

31   
**Ga**  
Gallium

  
**Ree**  
Rare Earth  
Elements

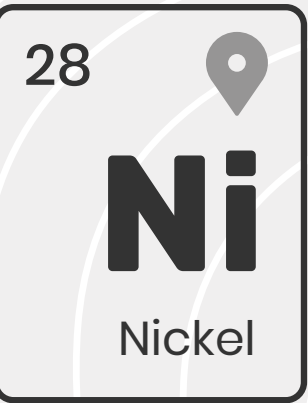
Located 650 kilometres southeast of Perth.

640km<sup>2</sup> of tenure along interpreted strike of IGO's Nova nickel-copper mine.

Nova-style "eye" feature (with conductor) identified within project <sup>(10)</sup>.

Terrain has confirmed Gallium and REE mineralisation across the tenement package.





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# Lort River Project | Nickel

Same geological belt as Nova- Bollinger nickel-copper ore body.

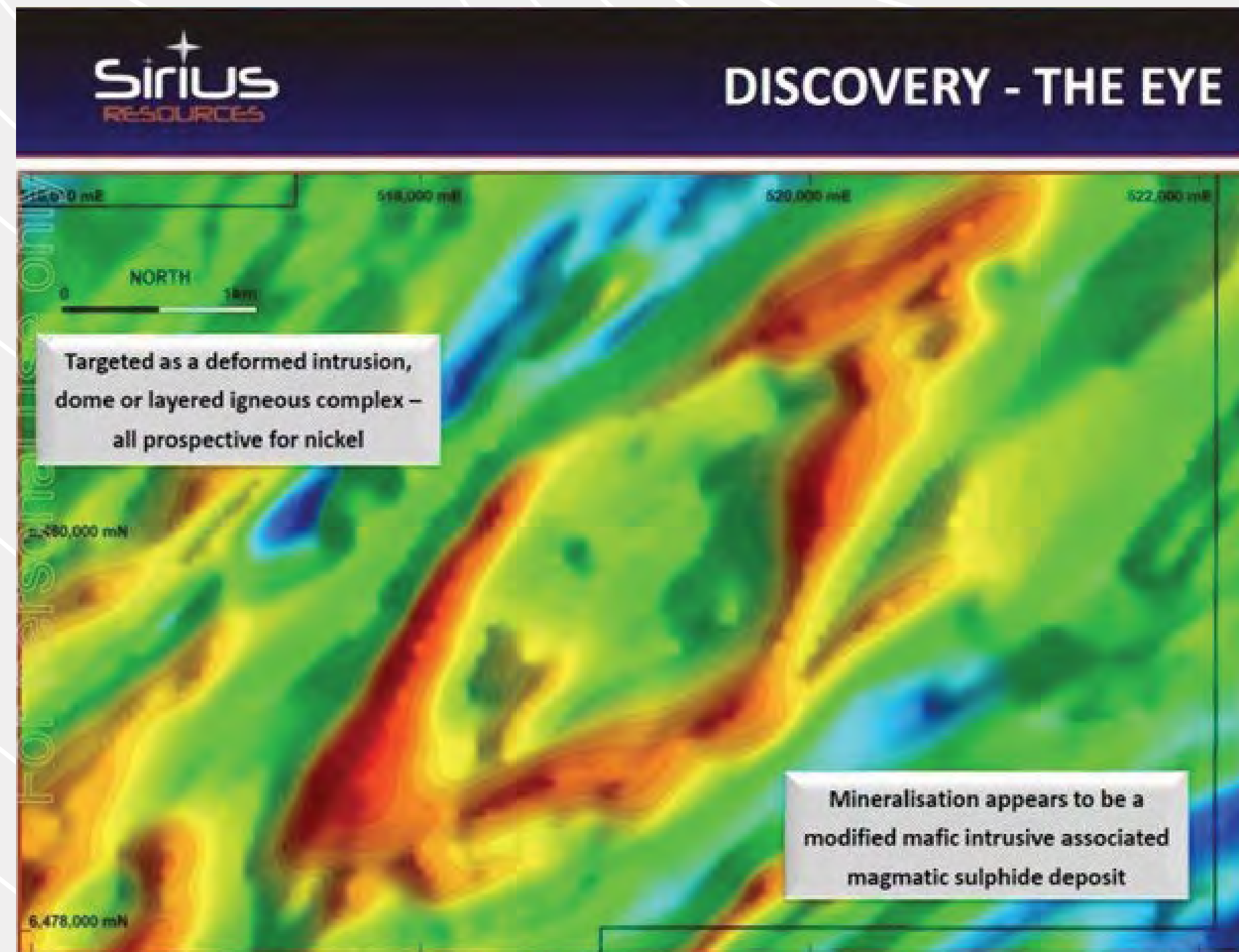
Same characteristics “eye”<sup>(1)</sup> feature in our aeromagnetic data.

We know that Nova-style nickel-copper ore bodies occur as clusters.

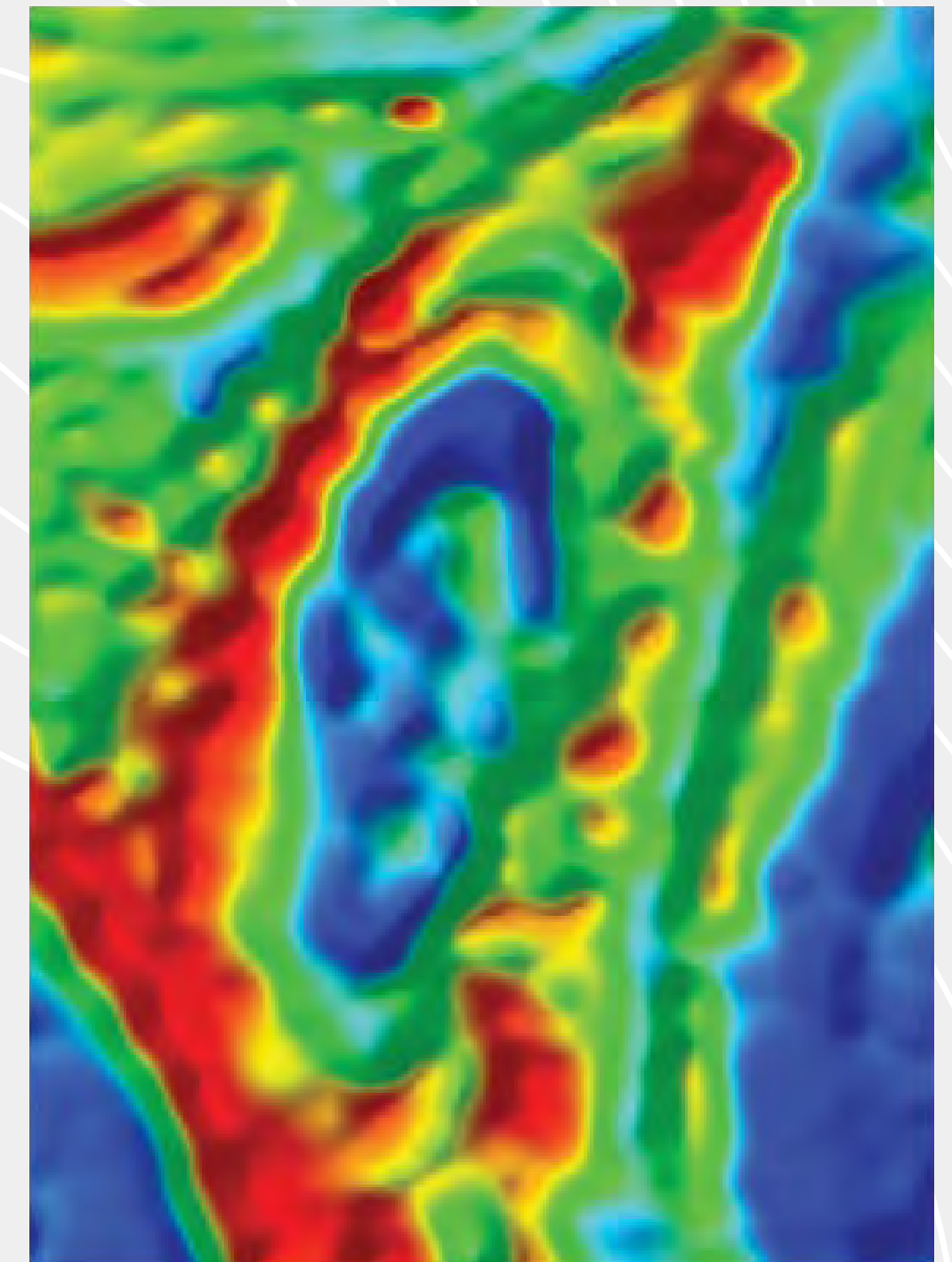
And we know that IGO purchased Nova for \$1.8 billion back in 2015.

Airborne EM (Vtem) survey to test for sulphide bodies has been completed after flying a 1,281 km line survey.

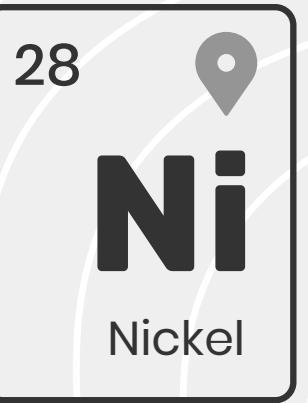
The data is currently being processed & estimated to be back in 6 to 8 weeks.



Nova “eye”



Terrain Minerals’ “eye”



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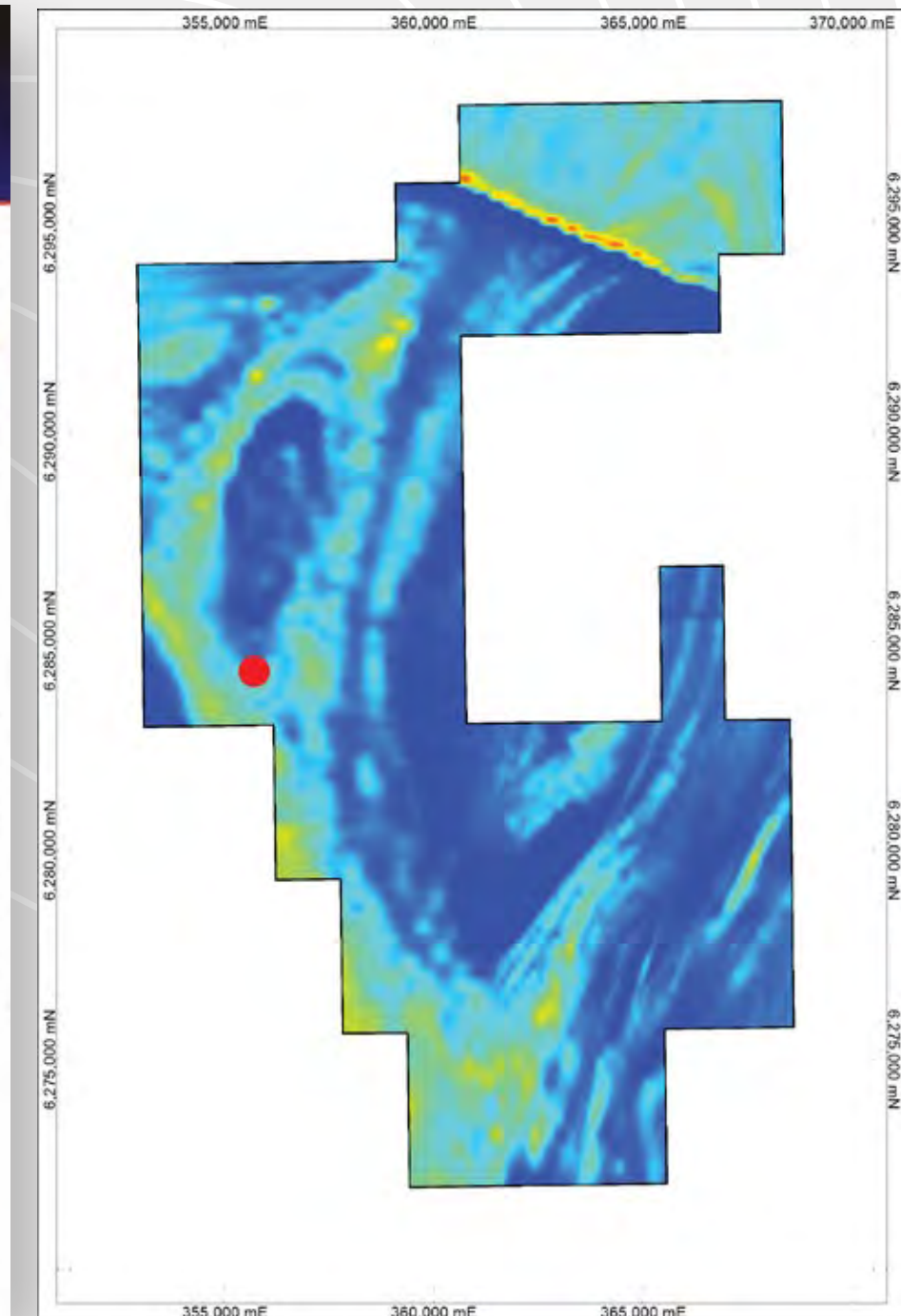
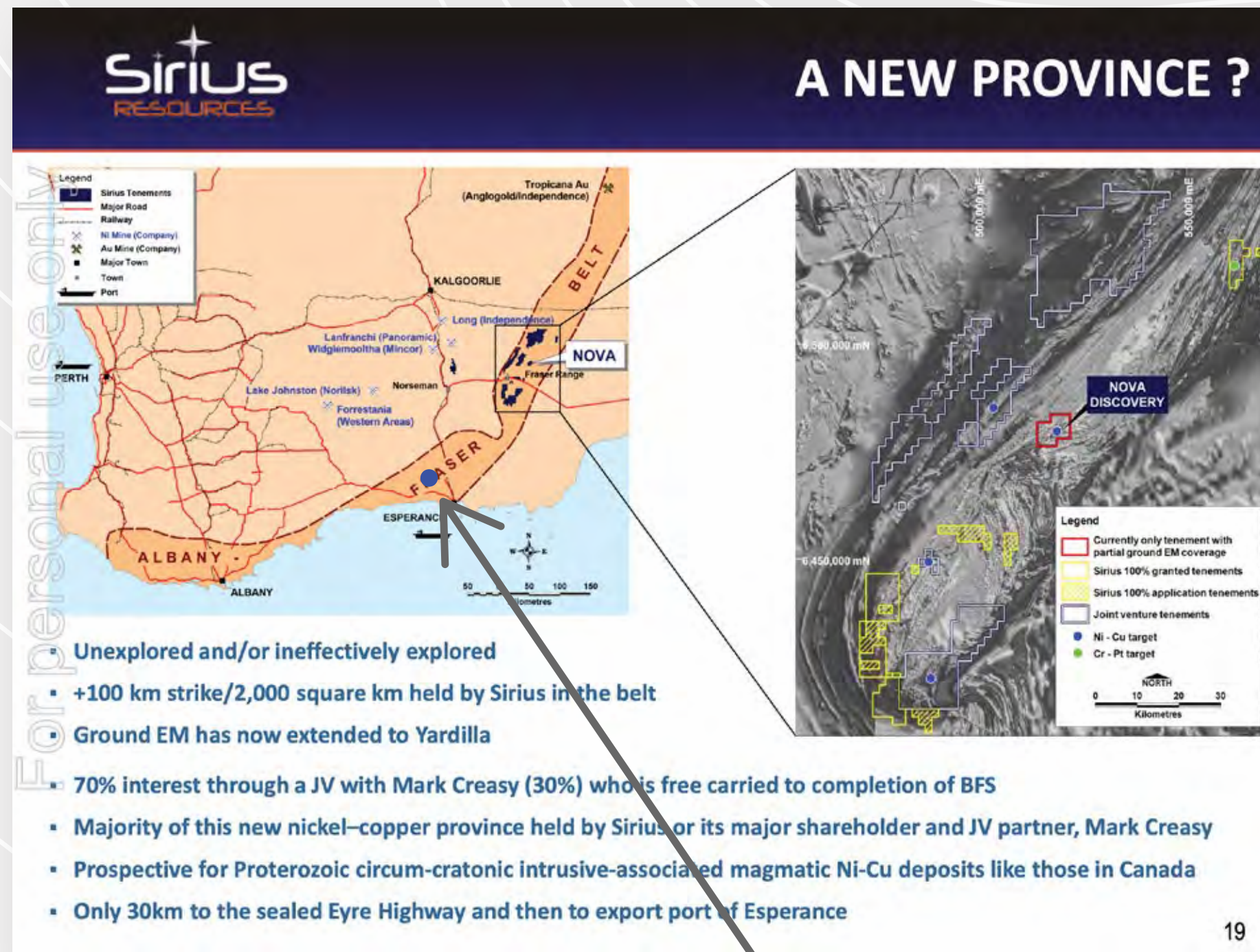
# Lort River Project | Nickel

Nova was meant to be part of a “New Province”. So where are the other nickel-copper orebodies?

Following the discovery of the Nova orebody, Sirius Resources were adamant that:

- Nova is not a standalone deposit.
- the entire Albany – Fraser Belt appears perspective for magmatic nickel-copper mineralisation.


Terrain Minerals’ Lort River Project is located squarely within the Albany Fraser Belt, approximately 300 kilometres southwest of the Nova orebody.




**Location of Terrain Minerals’ Lort River Project**

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# Lort River Project | REE & Gallium

31   
**Ga**  
 Gallium

  
**Ree**  
 Rare Earth Elements

- Highly successful reconnaissance drilling campaign, 16 holes for 300m, drilled with 7 returning encouraging Clay REE mineralisation.
- First pass, drilling consisted of wide-spaced (3km) completed along road verges across the three tenements with all returning significant intersections.
- Remarkably High Magnetic Rare Earth Oxide (MREO) content that includes the in-demand permanent magnetic metals of Neodymium (Nd) and Praseodymium (Pr), which were encountered during the drill program and run as high as 43% of the Total Rare Earth Oxide (TREO) grade (12).

**Selected drilling intersections included (13):**

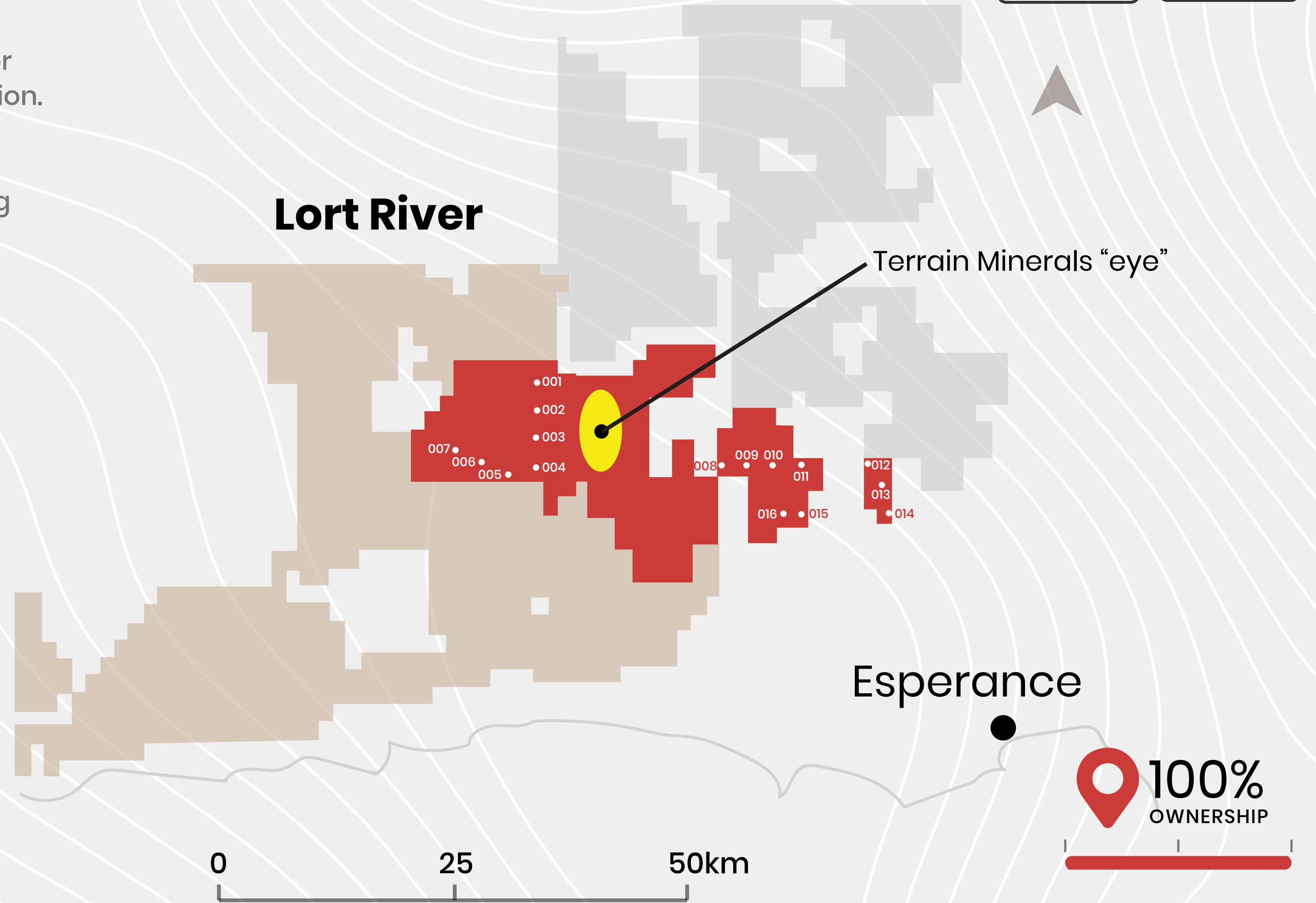
- 12m @ 614ppm TREO from 26m down hole (hole 23LRAC001)#  
 38m @ 34.1g/t - Ga<sub>2</sub>O<sub>3</sub> from surface (hole 23LRAC001)#

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- 6m @ 900ppm TREO from 18m down hole (hole 23LRAC005)#  
 32m @ 36.8 g/t - Ga<sub>2</sub>O<sub>3</sub> from 13m down hole (hole 23LRAC005)#

Note: Above same drilling campaign/holes with Lort River Gallium results.  
 # Gallium mineralization also identified in these REE intersections.

- Terrain is part of the Minerals Research Institute of Western Australia. (MRIWA) projects M10500 partly industry funded study on WA REE including metallurgical analysis.



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# Lort River Project Forward Program

Airborne Electromagnetic  
Anomaly modeling

Q3



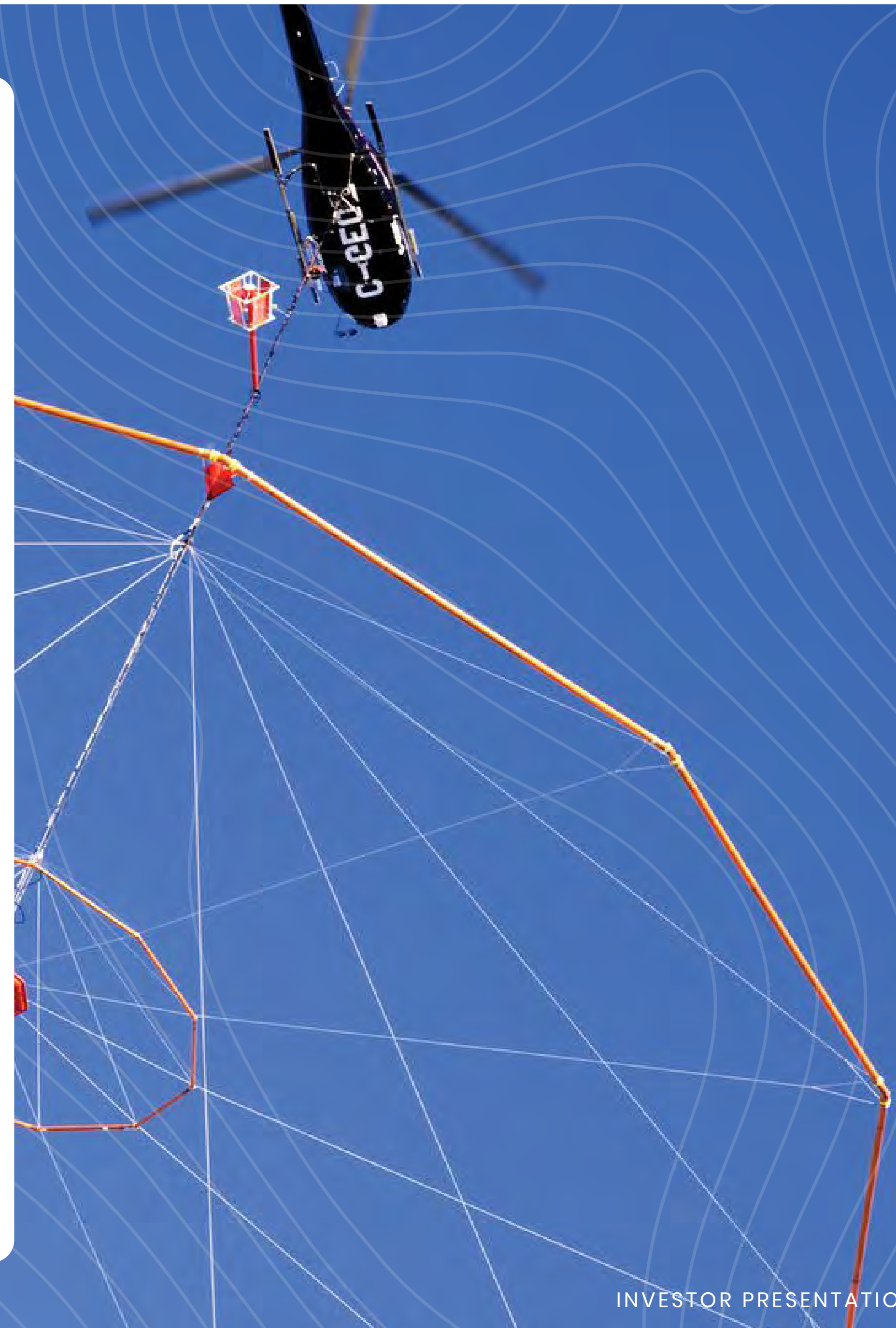
Q4

Q1/25

Follow-up ground  
EM survey



Drill testing of  
EM conductors



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# Summary

## Smokebush – Larins Lane (Clay Gallium & REE) & Gold Prospects

- Located in the newly emerging WA Mid-West High Grade REE district.
- 70% of holes returned impressive intersection of Gallium up to 64 metres wide (2).
- Gallium clay mineralisation layers appear to be sitting above REE clay zones across the 9km long target area.
- Recent Gallium drilling results are currently being reviewed, along with next drilling campaign to advance the project towards a potential JORC compliant resource.
- Three historic gold targets, currently under assessment for potential drilling.

## Lort River – Nickel “EYE”

- Exciting new “EYE” feature identified (with new conductor)
- Sulphide Ni/Cu deposits are known to exist in clusters. Only NOVA identified to date in the Albany-Fraser belt.
- “EYE” located in under explored farming district of the Southern Albany-Fraser mineralised belt.
- Maiden Airborne Electromagnetic (Vtem) survey to properly test sulphide bodies, now completed.
- Data processing expected to take an estimate 6-8 weeks to complete.
- Drilling to test of Conductors for Sulphide mineralisation in the second half of the year.

## High Quality Project Pipeline

- Projects: Lithium, Copper/Gold and REE – Refer to following appendixes.

Priority is being given to advancing the grant of the Pilbara (Lithium/Fe) and Queensland (Copper/Gold) tenements as Terrain continues to reposition the company.







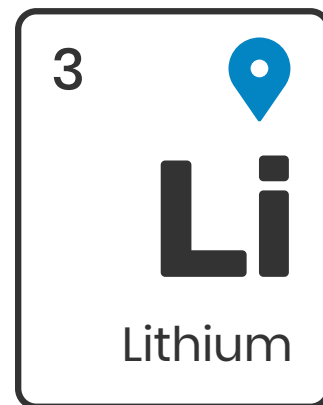
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# Appendix



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# Carlindie Project



Located 90 kilometres south-east of Port Hedland Western Australia.

Tenement applications cover + 850km<sup>2</sup>.

Along strike of Wildcat Resources Bolt Cutter Lithium Project.

Neighbours SQM and Kali Metals Pilbara Lithium Project.

\*Application pending.





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# Carlindie Project | Lithium

Located 90km S/E of Port Headland & covering + 850 km<sup>2</sup>.  
~50km N/E of Pilbara Minerals, Pilgangoora mine.

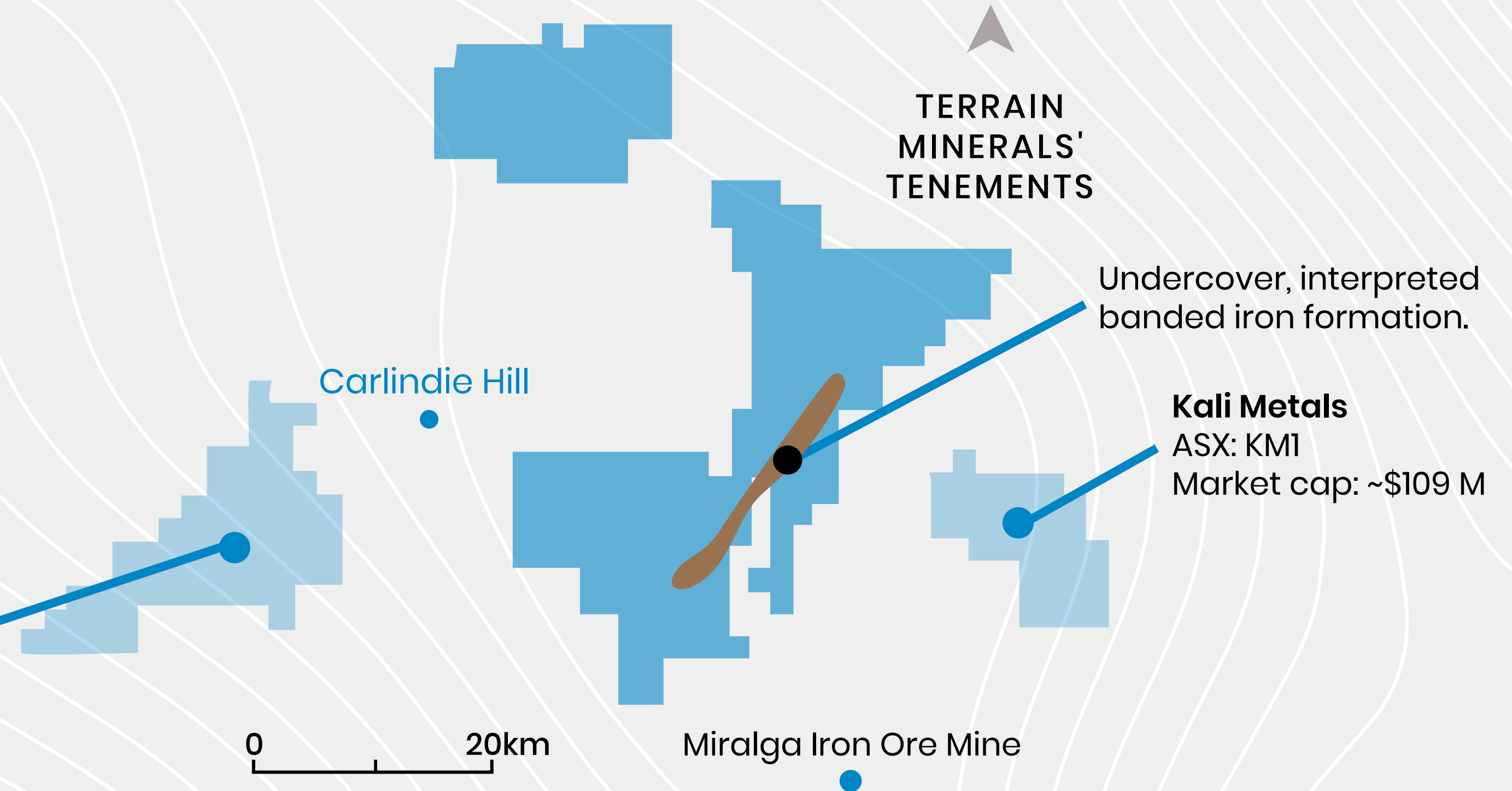
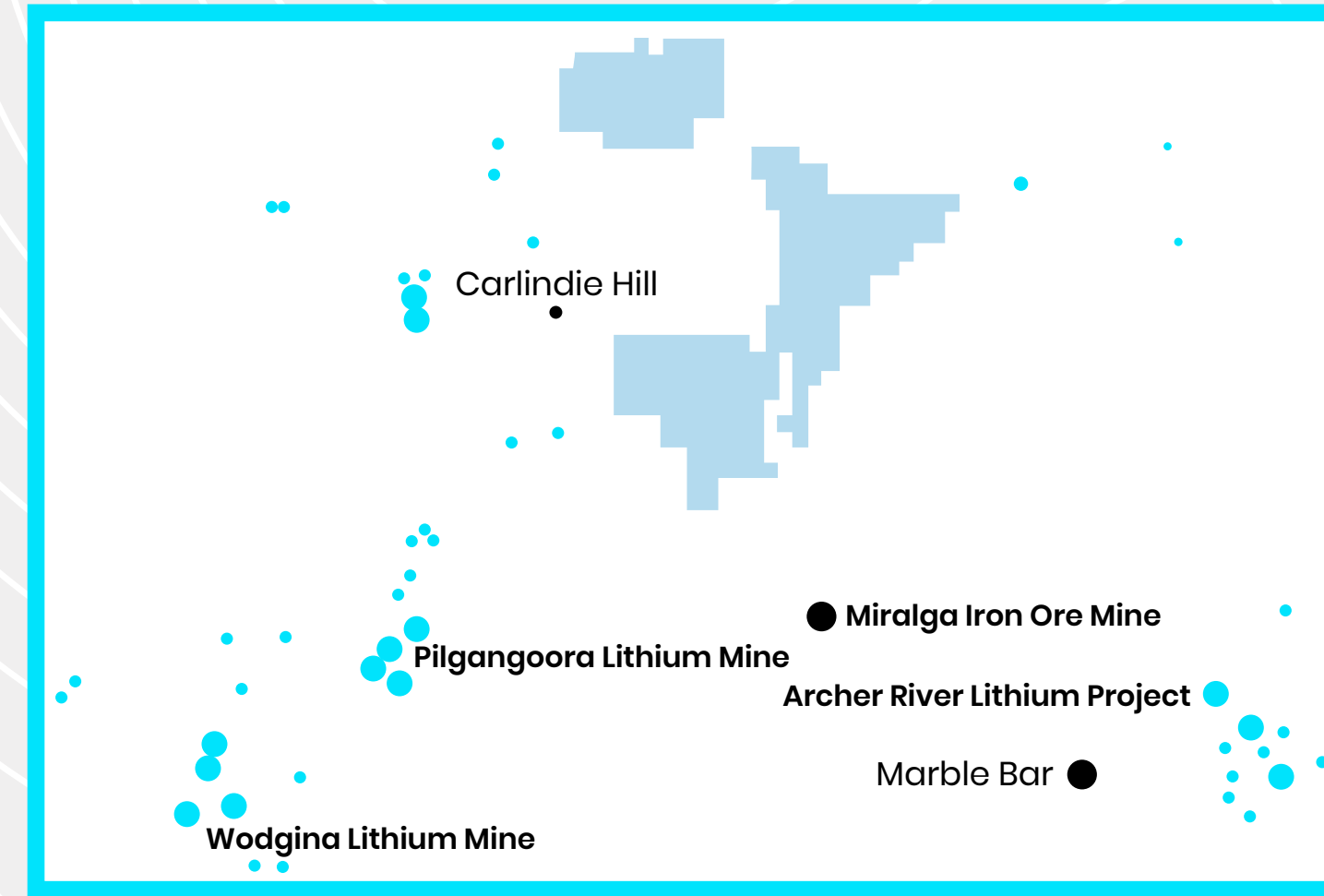
Terrain is seeking to fast track granting of this tenement.  
Terrain will then undertake a 500m x 500m soil sampling  
program over the entire tenement package area.

Field work to commence immediately following the grant  
of tenement including soil sampling and follow up drilling.

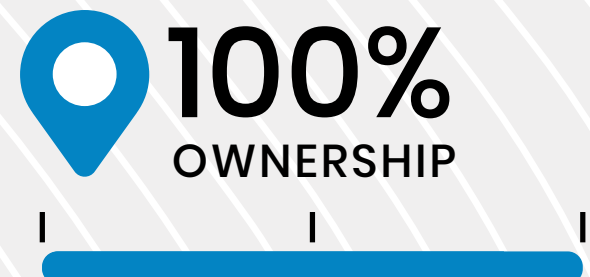
Desktop studies have identified key areas fitting to Terrain's  
internal geological modelling.

Terrain's Carlindie Project is under 3m of soil cover  
and in a favourable geological setting within  
WA's premier Lithium district.

\*Application pending

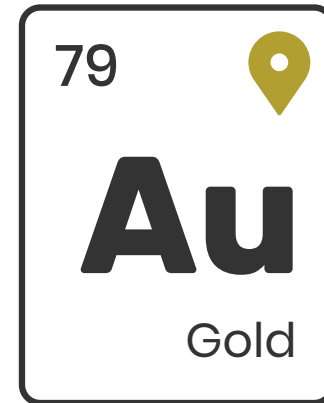
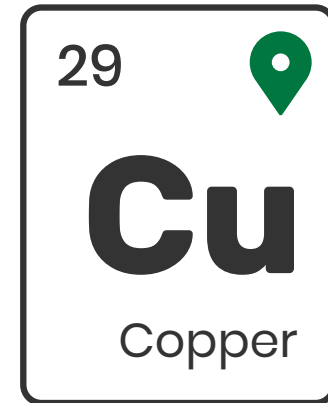


**Wildcat Resources**  
ASX: WC8  
Market cap: ~\$500 M



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# Biloela Project



Located 400 kilometres northwest of Brisbane.

Exploration permits totalling 2,462km<sup>2</sup> of tenure.

Seven historic copper-gold mines reported within Biloela Project.

Ten additional mineralisation occurrences reported across the project.

Independent review confirmed volcanogenic massive sulphide (VMS), porphyry copper-gold and epithermal gold mineral systems present within the project area.

\*Application pending.



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# Biloela Project | Copper

The Biloela Project lies 13 kilometres north of the Cracow Gold Mine in the Glandore and Theodore region of Queensland.

Extensive ~2,500km<sup>2</sup> tenement area, first identified by Rio Tinto, Gold Fields Limited and Newcrest Mining Limited.

The northwest-trending faults within the north-eastern part of the Biloela Project are similar to those present at the Cracow Gold Mine and are considered the most prospective for epithermal- style gold mineralisation.

Terrain's internal geological team has identified 7 potential copper and gold sites.

\*Application pending



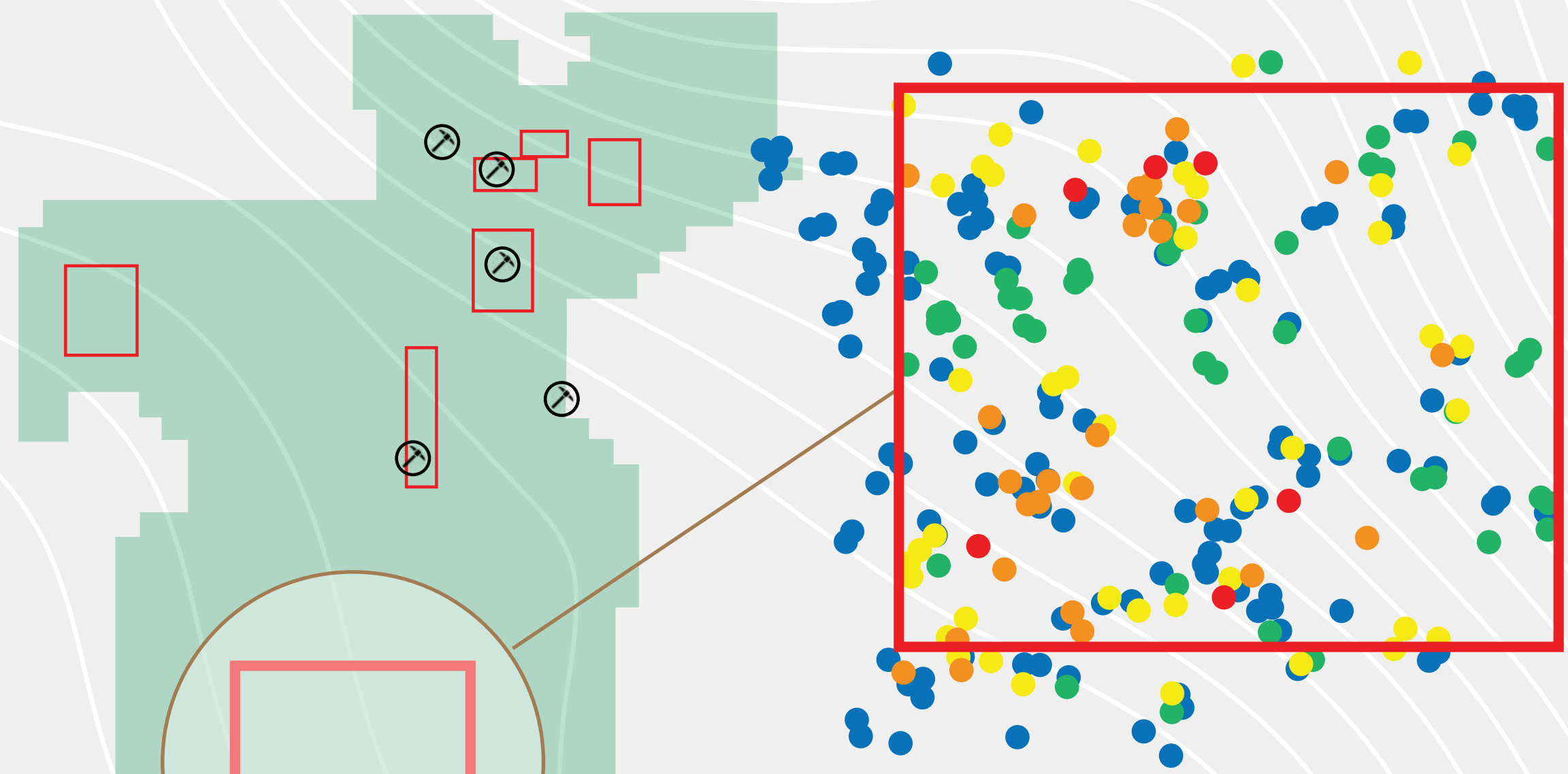
29

**Cu**

Copper

The element symbol for Copper (Cu) with the atomic number 29. It includes a green location pin icon above the symbol.

TERRAIN MINERALS' TENEMENTS



- Historical mines
- Terrain Minerals Biloela tenements
- Exploration Targets

- Stream Sediments: Cu (ppm)**
- 0 - 201
  - 201 - 694
  - 694 - 1350
  - 1350 - 2430
  - 2430 - 4450

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# Mukinbudin Project



Located within the Mukinbudin region of Western Australia, being approximately 300 kilometres east of Perth.

Extensive 1,408km<sup>2</sup> tenement area adjoining both Rio Tinto's and IGO's tenement holdings.

Highly prospective for primary (hard rock hosted) light and heavy rare earth mineralisation.

Mukinbudin one of the very few regions of Australia known to host NYF (Niobium-Yttrium-Fluorine) pegmatites.

\* Application pending





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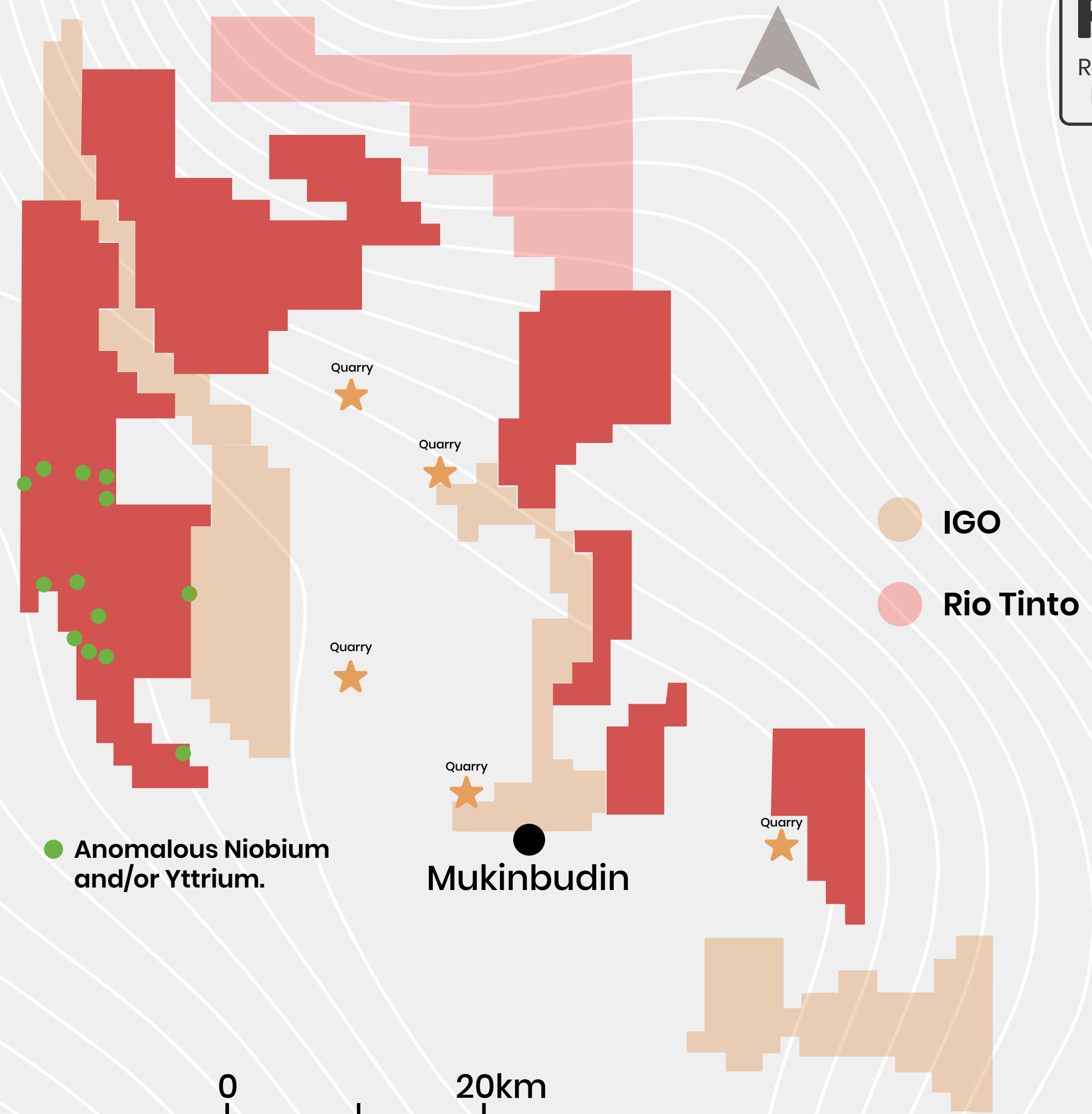
# Mukinbudin Project | REE

NYF (Niobium-Yttrium-Fluorine) pegmatites enriched in light and heavy rare earth mineralisation as well as Gallium.

More than thirteen anomalous Niobium-Yttrium zones already identified within Terrain Minerals' Mukinbudin project area.

Drill testing of known Niobium-Yttrium anomalies to commence immediately after tenement is granted.

\*Application pending



# Want to know more? Contact Terrain Minerals

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# Exploration to support new & emerging technologies

ASX:TMX

