



TERRAIN MINERALS

2023 Exploration Update Gold, Lithium, Gallium & Rare Earths

Exploration to support new & emerging technologies

Smokebush: MMI soils and drilling completed - Assay results pending

Lort River: Drilling completed - Assay results pending

Investment Presentation

ASX:TMX | SEPTEMBER 2023





Important Information

Forward Looking Statements

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Compliance Statement

The Company notes that within the announcement all the information is referenced directly to the relevant original ASX market releases of that technical data.

Terrain would like to confirm to readers that it is not aware of any new information or data that materially affects the information included in the relevant market announcement and, in the case of the estimates 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.

Competent Persons Statement

The information in this report that relates to Exploration Results are based on information compiled by Mr. Xavier Braud, who is a Member of the Australian Institute of Geoscientists and is a member of the board of Terrain Minerals Ltd. Mr Braud is a shareholder and options holder of Terrain Minerals Ltd. Mr Braud 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 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mr. Braud consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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TERRAIN MINERALS

Company Profile

Capital Structure

Shares on Issue: 1,083 Million

Unlisted Options

(@ \$0.0065 - \$0.0214): 35 Million
various expiry dates to 2028

Market Cap (Million): 6.5

Cash at Hand (June Q/Million): 1.3*

Share Price : \$0.006
Share price at 1 Sept 2023

Major Shareholders

Top 20: 43%

Top 100: 74%

Board & Associated: 16%

No. of Shareholders: 1,133

* Comprises of June cash balance as in Quarterly report released on the 19 July 2023.





TERRAIN MINERALS

Board Members

Justin Virgin Executive Director

Mr Virgin has over eleven years' experience as an ASX Director of listed exploration companies as well as sixteen years of experience in the financial services and securities industry with expertise in providing a wide range of financial services which includes capital raisings, promotion, providing general corporate advice listed small-cap companies and other investment advice involved in negotiations, mergers, acquisitions and valuations. Mr Virgin also has over ten years of onsite mining experience operating in remote and isolated sites throughout Western Australia and Northern Territory on site. His experience covers project acquisition and sale negotiations, mine closures and rehabilitation work as well as extensive preventative maintenance planning and execution on onsite mobile fleet and of exploration program.

Xavier Braud Non-Executive Director – Geology

Mr Braud is an experienced geologist and mining analyst with over eighteen years' experience in a broad range of deposits and commodities. His geological experience spans the whole spectrum of geology from greenfield exploration to resource definition and extension. Up until January 2023 Mr Braud was the CEO of ASX listed Benz Mining, spearheading the discovery of multiple new high grade gold zones at the Eastmain project in Quebec. During the same period, he also served on the board of another ASX listed company where he actively participated in Riversgold's transition and currently holds a position at Crown Metals Limited as MD. For the three years prior, Mr Braud was a Resources/Mining Analyst at Patersons Securities and at Canaccord Genuity covering ASX listed junior resources companies. This role involved researching companies at both technical and financial level with an emphasis on identifying companies with true discovery potential. Mr Braud is a member of the Australian Institute of Geoscientists.

Johannes Lin Non-Executive Director

Mr Lin has seven years of management experience as an entrepreneur and Principal/Managing Director of Oprian Investments Pte Ltd with interests and focus in minerals and properties/property construction of Pasir Ria Apartments in Singapore and investment team member of Monarch Parksuites Condominium in Manila Philippines. Past experience includes corporate restructuring as member of advisory team in the restructuring of Singapore listed Enzer Holdings Limited where series of debt negotiations, debt buy-out, capital raising by placements, rights issues, debt to equity conversion and eventual takeover by a marine group successfully. He holds a Bachelor of Commerce, Finance and Accounting from University of Western Australia and has been a long-term investor in Terrain Minerals Limited.



Why Terrain Minerals?

Multiple exploration campaigns currently underway

Two Drilling Campaigns completed in June/July 2023 at Smokebush project (100% owned), Targeting Multiple Strategic Commodities.

Drilling tested ~6 pegmatite for Lithium & 6 Gold IP targets hidden undercover - **Assay results pending.**

Maiden Drill program completed August 2023 at Lort River (100% owned) Testing for Ionic Clay Rare Earth (REE) - **Assay results pending.**

All tenements within regions known to host substantial mineral deposits with access to world class mining services.

Pursuing "future-facing", high demand critical commodities that support new technologies & advanced electronics.

Rare earths mineralisation, multiple potential Lithium bearing pegmatites, gold, gallium & emerging copper/nickel targets confirmed across the Company's project areas.

Targeting a potential company-making discovery in 2023.

There are 1.7 tonnes of rare earths in an average wind turbine.



Why the emphasis on high value "future-facing" commodities?

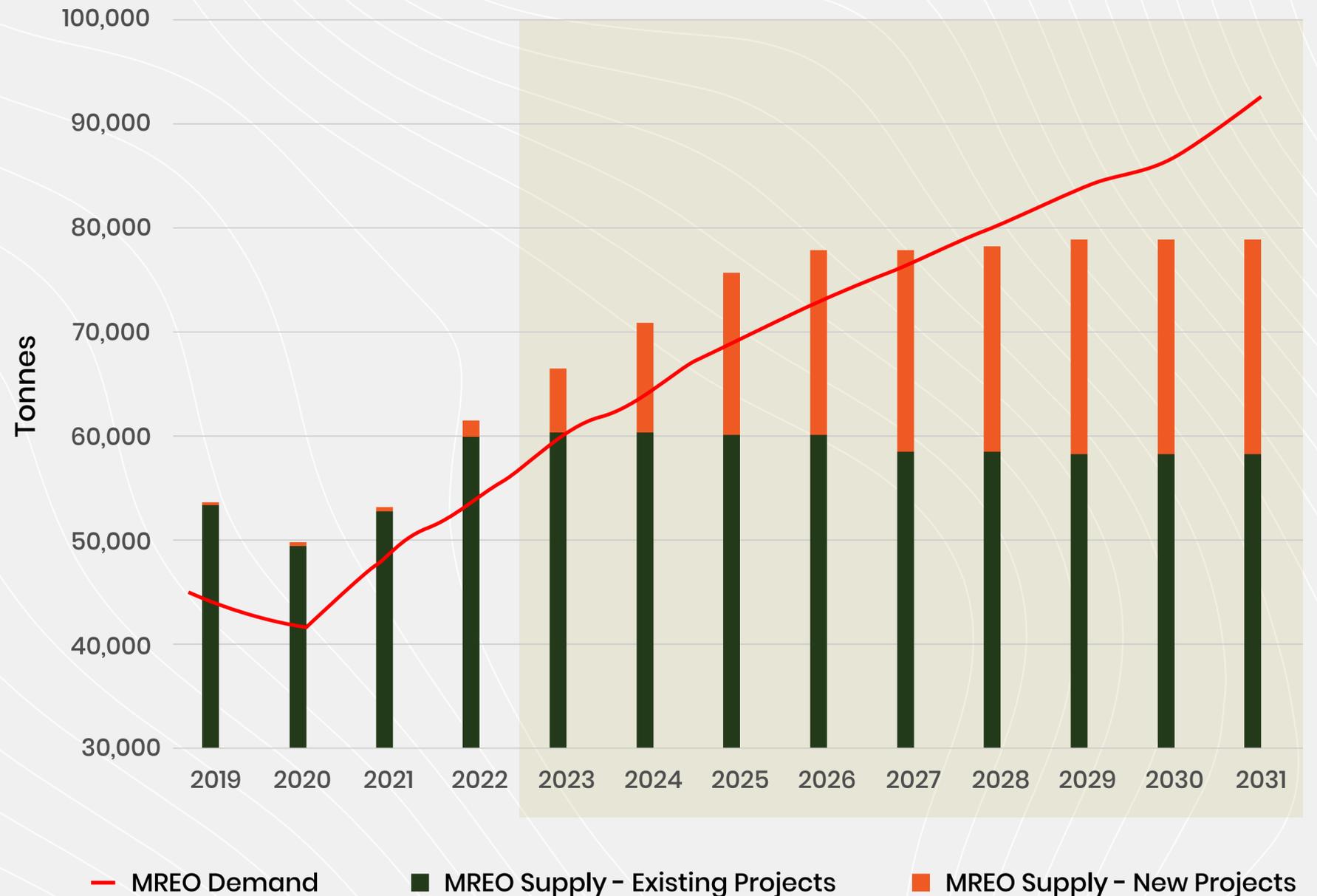
Even if all the planned projects come online and produce as forecast, there will likely still be supply deficits in key "future-facing" commodities such as lithium and rare earths.

That said, Terrain Minerals is aware that maximising the speed to production is crucial to likewise maximizing shareholder return.

With strong and sustained tail winds behind the lithium and rare earths sectors, Terrain Minerals is committed to implementing a major exploration and drilling campaign across its portfolio of projects in 2023.

The ultimate objective is a company-making discovery and maiden mineral Resource within the coming 12 months.

Magnet Rare Earth Oxide (MREO) Supply vs Demand*



* 1 Argus, "Rare Earth Analytics", Report, April 2022.

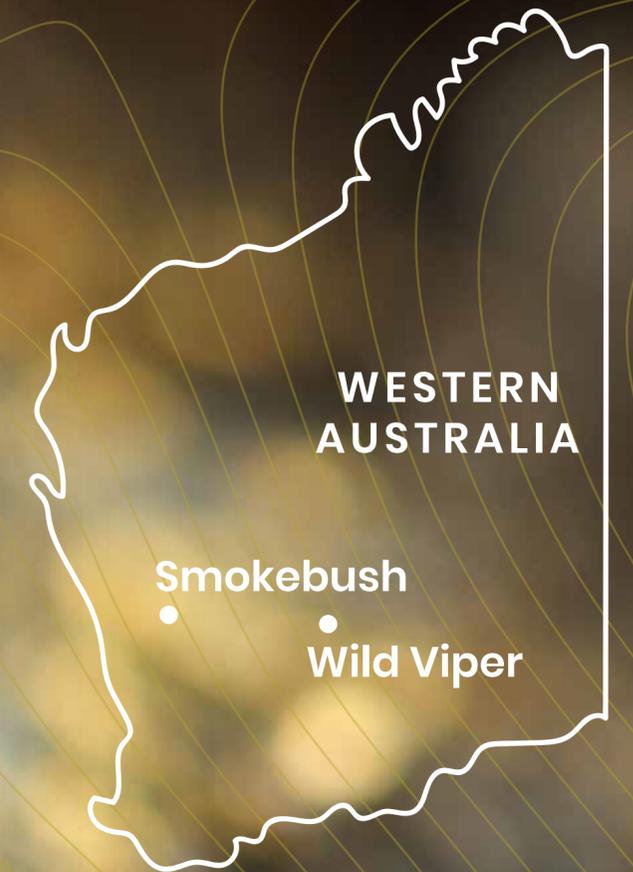
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TERRAIN MINERALS

Gold



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OUR PROJECTS

Smokebush | Gold Project

Historic exploration focused on areas of outcrop or minimal cover.

Significant potential for bedrock-hosted gold mineralisation beneath barren transported cover Identified.

Successful IP survey identified 4 “under cover” sulphide targets all within the proximity of historic drilling; Monza, T13, Paradise City & Hurley.

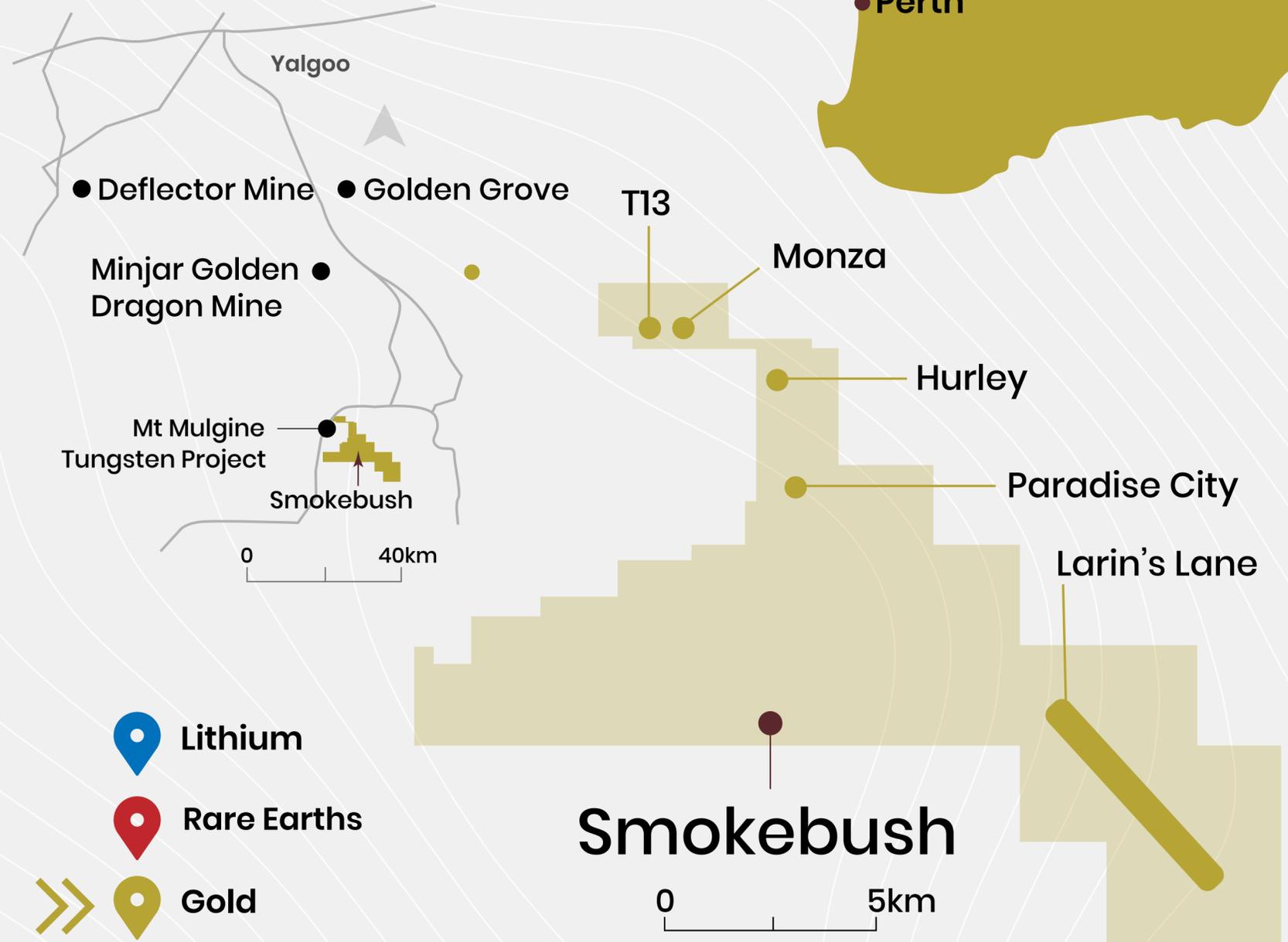
IP Targets drill tested in July 2023 – **Assay results pending.**

Larin’s Lane

4km long and 300m-400m wide Magnetic “high” feature located within an interpreted structural corridor of archean greenstones interpreted from regional magnetics pinched between monzogranite units.

Mobile Metal Ions (MMI) 9km2 extension program completed – **Assay results pending.**

100%
OWNERSHIP



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OUR PROJECTS

Smokebush | Gold Project | IP targets

6 RC holes drilled for ~700m targeting IP anomalies all successfully intercepting sulphides (pyrite) spatially related to modelled geophysics - **Assay results pending.**

North to northeast trending shear zones are the interpreted control of gold mineralisation across the Smokebush region of the Yalgoo Mineral Field & successfully mapped using IP geophysics.

Four (4) north to northeast-trending shear zones have been mapped within the Company's Smokebush Project & now all drill tested.

Induced polarisation (IP) geophysical surveys across three of these shear zones at Smokebush returned encouraging chargeability anomalies.

Previous drilling by Terrain, whilst intersecting gold mineralisation, now appears to have missed the newly interpreted main mineralisation zones by 50m to 300m and sit in an interpreted "Halo" zone.

Example of Monza Halo intersections

(refer to diagram):

- 4m @ 4.46 g/t Au from 51m SBRC003
- 7m @ 2.72 g/t Au from 25m SBRC005
- 6m @ 2.12 g/t Au from 80m SBRC011



- Lithium
- Rare Earths
- Gold

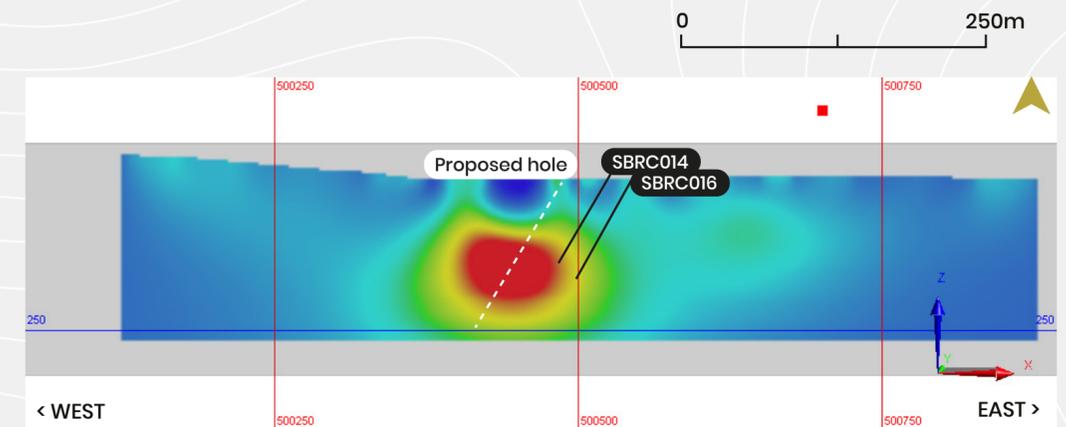


Diagram above: Two-dimensional (2D) inversion chargeability sections on 6774000N looking north with Terrain's 2020/21 Monza drill holes superimposed, which appear to have been drilled 50m away from the newly defined IP anomaly. Proposed drillhole shown in white.

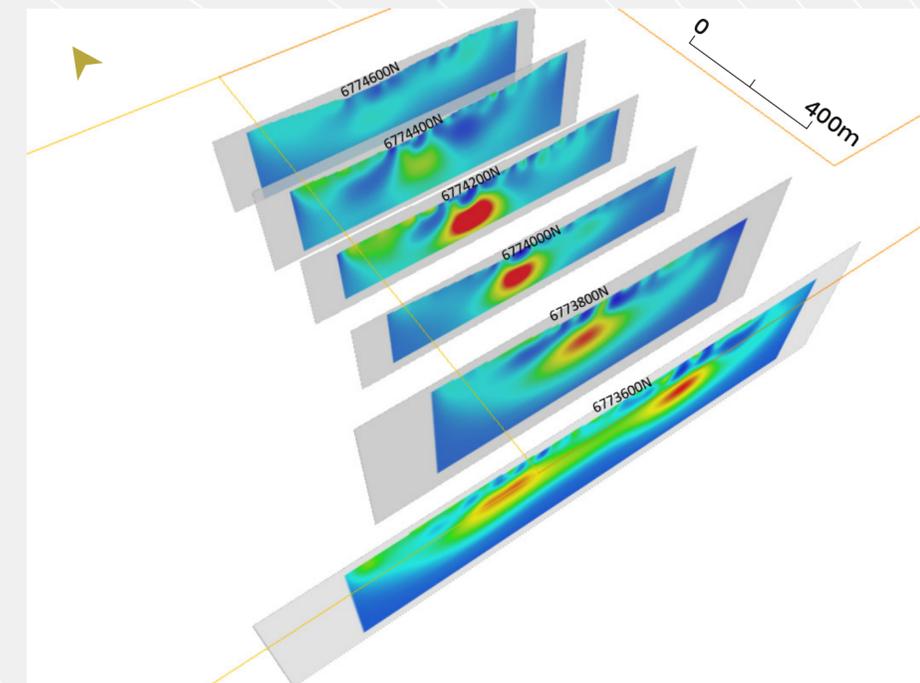


Diagram above: New identified 600m long chargeability Anomaly identified parallel to historic Monza drilling.

* Refer to ASX release: 22 May 2023 600-metre-long chargeability anomaly identified parallel to Monza Gold prospect, Smokebush Project, 19 July 2021 - Positive First Pass Drilling Results Smokebush 26 July 2023 - Smokebush "Phase 2" Drilling completed & Project Update.

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OUR PROJECTS

Smokebush | Gold Project | Larin's Lane

Highly Successful Mobile Metal Ions (MMI) Soils program (834 samples taken).

- Large New Gold Anomaly - ~700m by ~250m (Diagram 2).
- "Open" Copper (Cu) with associated Nickel (Ni) anomaly ~600m by ~350m open towards the S/E (Diagram 3).
- MMI - 9km² extension program completed. Cu/Ni anomaly - (900 samples taken) - **Assay results pending.**
- Newly identified anomalies within similar geological setting to Golden Grove.
- Planning for drill testing of gold and Cu/Ni targets once boundaries defined - Targeting October 2023 start date.

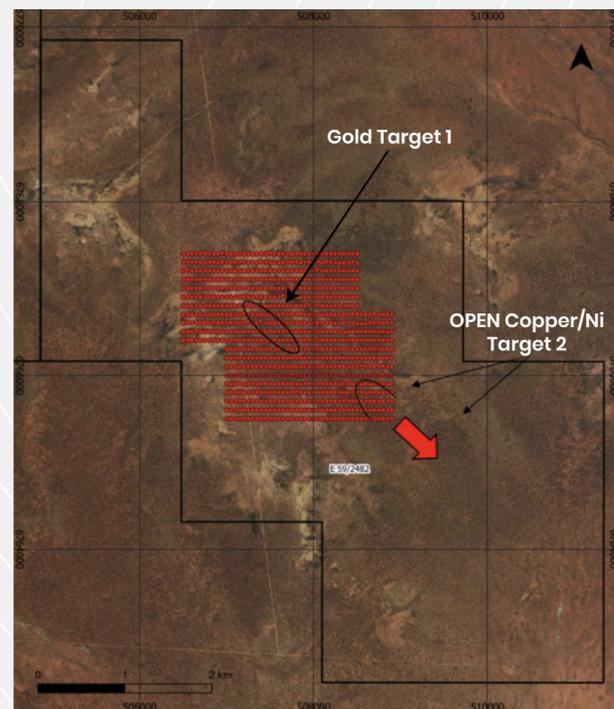


Diagram 1
MMI program coverage area.

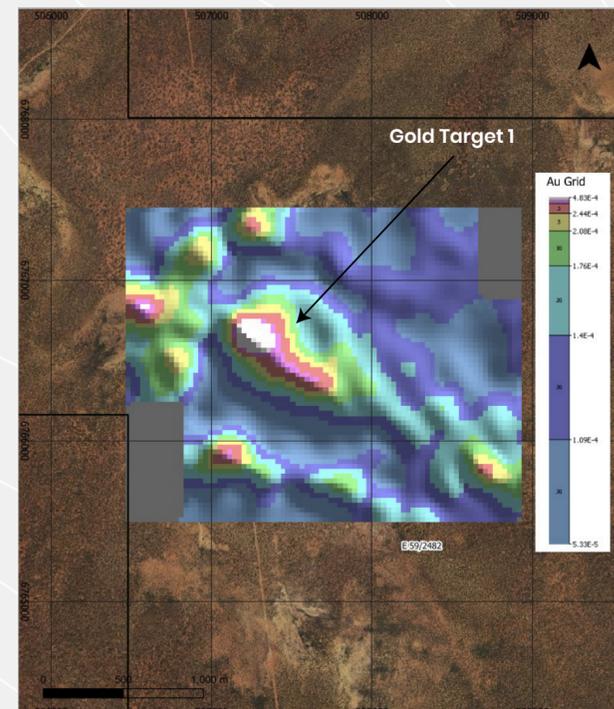


Diagram 2
MMI Gold anomaly 700m by 250m which is now ready for air-core drill testing.

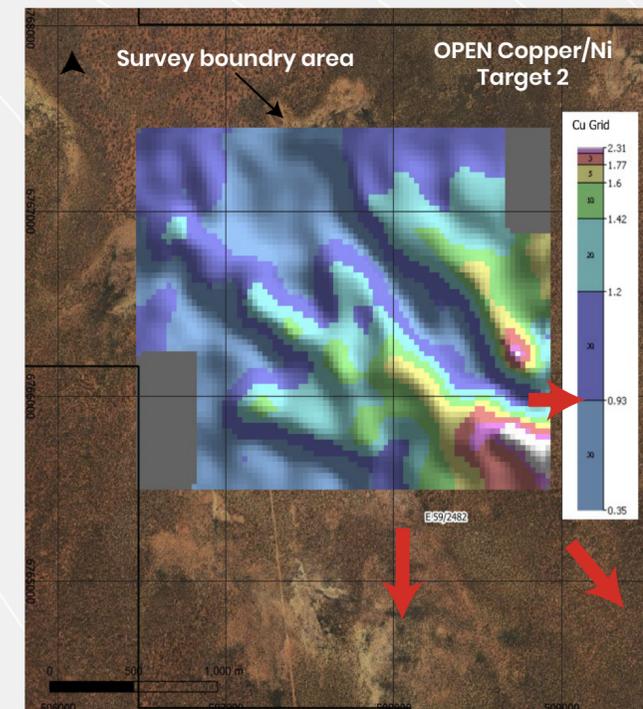


Diagram 3
Copper with associated Nickel anomaly S/E corner. Red arrows indicative of potential extension area and target for the MMI extension program.

100% OWNERSHIP

A horizontal bar chart showing 100% ownership, with a green bar extending to the right.

- Lithium
- Rare Earths
- Gold
- Copper

* Refer to ASX release: 16 May 2023 - Smokebush - New Gold & Copper/Ni Anomalies.



TERRAIN MINERALS

Lithium

Approximately 8 kilograms of Lithium is needed for a single Electric Vehicle.



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OUR PROJECTS

Smokebush | Lithium Project

Located 350 kilometres North of Perth, Western Australia.

- Six pegmatites drill tested (RC ~700m) completed in July 2023.
- Lithium **assay results pending** – due end of September 2023.
- Northern pegmatites areas identified as being the most prospective, by geological consultants, but discounted due to width's, clearing has exposed true width's up to +20m.
- Additional untested pegmatities located within the favourable greenstone lithology also identified across the project area.



KEY

- Confirmed Pegmatite locations
- Potential Pegmatite locations



TERRAIN MINERALS' TENEMENTS

- » Lithium
- » Rare Earths
- » Gold

Mt Mulgine Tungsten

Monza

Hurley

Geraldton

Smokebush

WA

Perth

* Refer to ASX release: 19 June 2023 – First phase of RC drilling successfully intersects pegmatites at Smokebush.
Refer to ASX release: 26 July 2023 – Smokebush – Phase 2 Drilling Completed & Project Update.



TERRAIN MINERALS

Gallium

Gallium is primarily used in electronics, semi conductors, transistors, LED's and solar panels providing more power and less heat that silicon.



WESTERN AUSTRALIA

● Smokebush

OUR PROJECTS

Smokebush | Gallium Project

- Gallium is a critical metal used in the defence industry and computer chip, semi-conductors, transistors, including light emitting diodes (LED) and electronic circuitry.
- On 1 Aug 2023, China which produces 98% of the worlds Gallium cancelled all exports, weaponize supply, highlighting the need to secure safe and reliable supply of critical elements and metals.
- It is anticipated that USA and European semiconductor chip makers will actively seek to establish long term supply contracts with future Gallium suppliers (outside of China), such as Australia.
- Terrain is rapidly expanding its Gallium (and Germanium) focus to dove-tale with the exponential growth of generative AI (and the associated demand for semi-conductors).

Reference: De-risking Gallium Supply Chains The National Security Case for Eroding China's Critical Mineral Dominance By: Matthew P. Funaiolo, Brian Hart, and Aidan Powers-Riggs | August 2023.
<https://www.csis.org/analysis/de-risking-gallium-supply-chains-national-security-case-eroding-chinas-critical-mineral#:~:text=As%20of%202022%2C%20China%20produced,which%20most%20gallium%20is%20extracted.>

- »  Gallium
-  Lithium
-  Rare Earths
-  Gold

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OUR PROJECTS

Smokebush | Gallium Project

Gallium (Ga_2O_3) mineralisation discovered as part of Phase 1 RC drilling, is hosted in four separate mafic units. Three running parallel N/S north of Paradise City and one at Rabbit Warren heading appearing to follow a West to South West structure towards Larin's Lane targets.



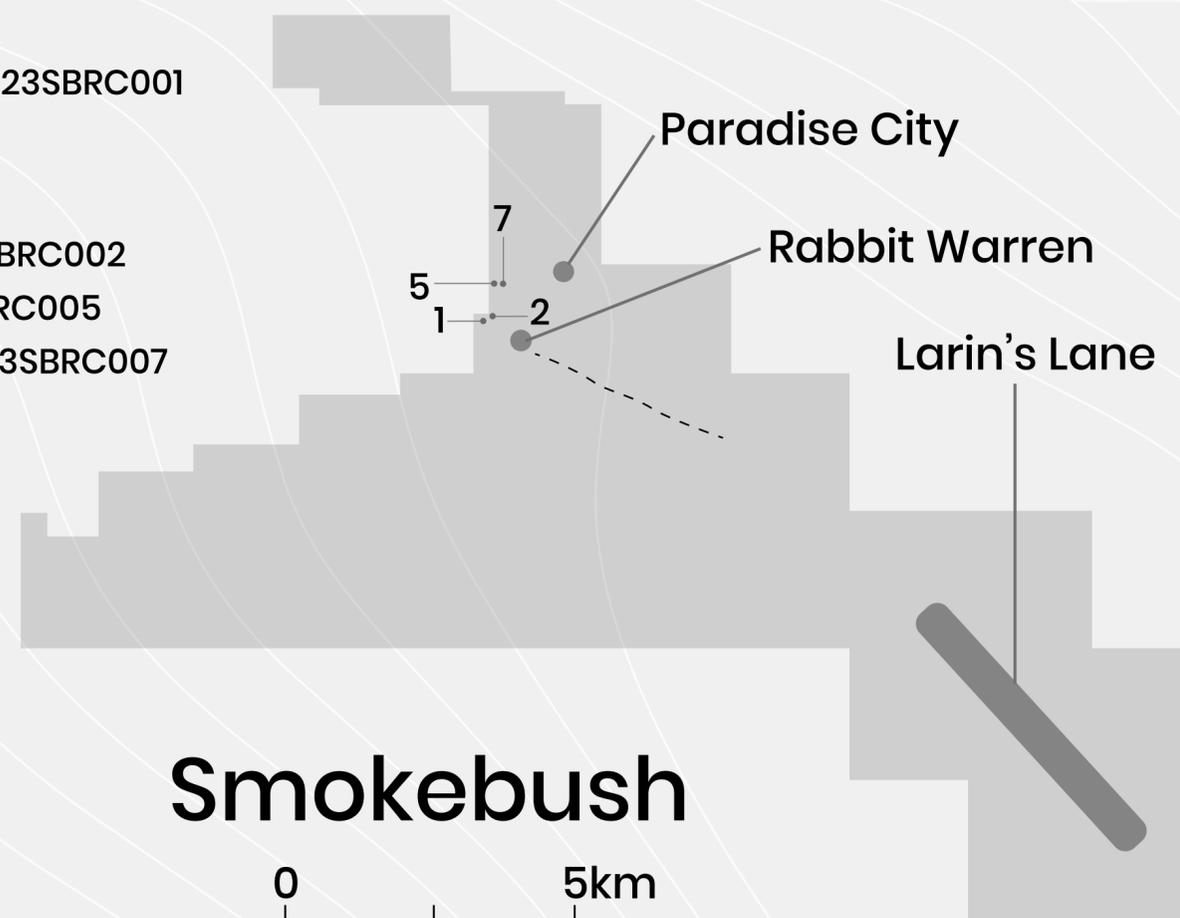
Gallium, 31 GA

Rabbit Warren Prospect

- 10m @ 37.6 g/t Ga_2O_3 within 86m @ 17.4 g/t Ga_2O_3 from surface – 23SBRC001

Paradise City Prospect

- 4m @ 28.2 g/t Ga_2O_3 within 30m @ 20.1 g/t Ga_2O_3 from 80m – 23SBRC002
- 9m @ 30.9 g/t Ga_2O_3 within 16m @ 24.1 g/t Ga_2O_3 from 11m – 23SBRC005
- 7m @ 30.9 g/t Ga_2O_3 within 11m @ 28.2 g/t Ga_2O_3 from surface – 23SBRC007



Smokebush

0 5km

- » Gallium
- Lithium
- Rare Earths
- Gold

100%
OWNERSHIP

* Refer to ASX release: 16 August 2023 – Gallium (Ga) Discovered at Smokebush RC drilling campaign.



TERRAIN MINERALS

Rare Earths

There are 4 tonnes of rare earths in each Virginia-class submarine.

Geo-political tensions are driving the global desire to develop alternative rare earths supply chains to protect manufacturing and defence.



WESTERN AUSTRALIA

Mukinbudin

Lort River

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OUR PROJECTS

Lort River | Rare Earths Project

Located 650 kilometres southeast of Perth.

Covers 320 square kilometres of prospective geology.

Immediately adjoins OD6 Metals (ASX:OD6) and Meeka Metals (ASX: MEK) rare earth projects.

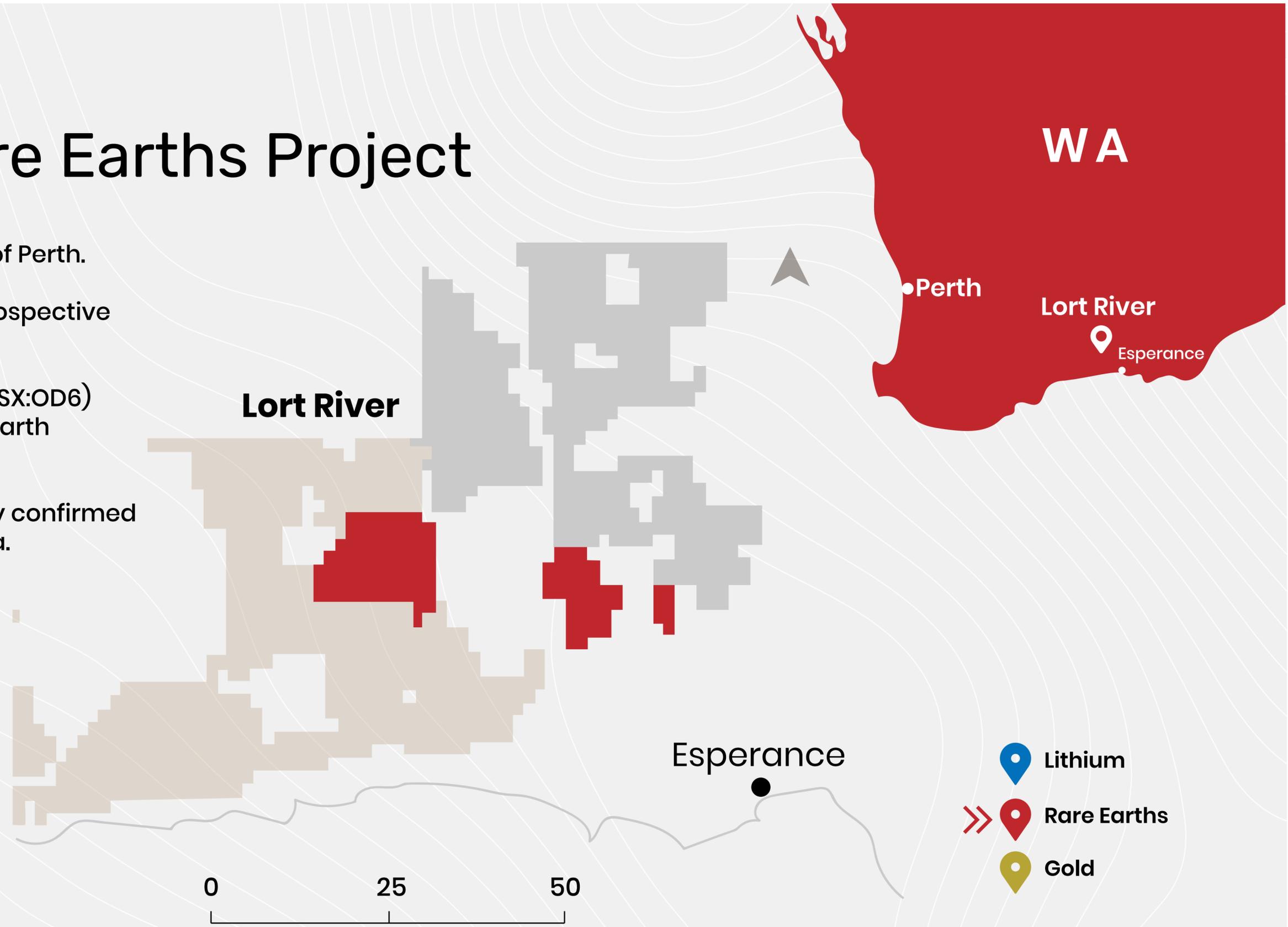
Rare earth mineralisation is already confirmed within Terrain Mineral's project area.

Terrain Minerals Ltd ASX:TMX
TMX Market Cap \$6.5M

OD6 Ltd ASX:OD6
OD6 Market Cap \$17M

Meeka Gold Ltd ASX:MEK
MEK Market Cap \$62M

 **100%**
OWNERSHIP



* Refer to ASX release: 30 May 2022 - High-Grade Clay Type Rare Earths (REE) Soil Anomaly Identified at Lort River Project.

OUR PROJECTS

Lort River | Rare Earths Project

Encouraging Total Rare Earth Oxide (TREO) grades returned from historic shallow auger drilling.

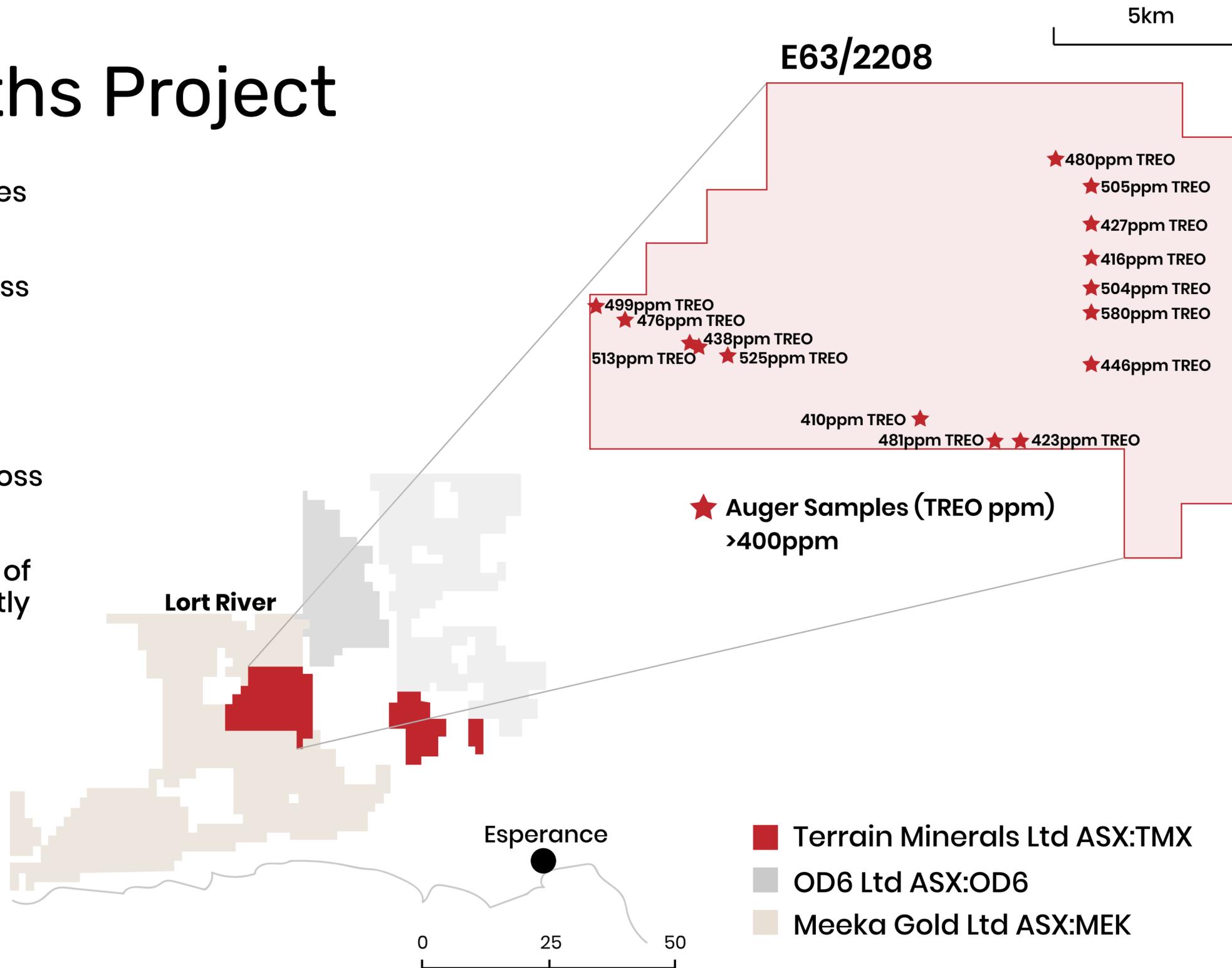
Heritage assessment completed and land access agreements progressing.

Wide-spaced (3 kilometre) drilling program completed in August 2023.

16 drill holes completed along road verges across the three tenements - **Assay results pending.**

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

Targeting a Maiden Mineral Resource. Estimate in second half of 2024.



* Refer to ASX release: 30 May 2022 - High-Grade Clay Type Rare Earths (REE) Soil Anomaly Identified at Lort River Project.



TERRAIN MINERALS

Project Pipeline

Carlindie Prospect – East Pilbara/Lithium *(applications pending grant, appendix 1)*

- Located 90km from Port Headland & 50km N/E of Pilbara Minerals – Pilgangoora mine.
- Desk top studies underway over the 737km² application area.

Calcaling Prospect – Mukinbudin Rare Earths Project *(applications pending grant, appendix 2)*

- Located north of Mukinbudin WA and covering 1,408km².
- Targeting pegmatite-hosted Dysprosium, Neodymium, Terbium and Praseodymium.
- Ultra high resolution airborne and radiometric survey to define pegmatites and define primary controls on mineralisation, anticipated immediately after tenement granted.

Biloela Prospect – Queensland/Copper/Gold *(applications pending grant, appendix 3) **

- Located 40km west of Biloela Qld, north & on strike to Cracow Gold mine and package has 2 historic Copper mines and 7 other known Copper/Gold prospects.
- Area, originally identified by Rio Tinto, Newcrest Mining Ltd & Gold Fields Ltd.

Wild Viper Gold Project – Wilsons Arc **

- Located 76km north from Leonora WA & surrounds Red5 Limited (ASX: RED) Great Western Gold mine.
- Rock chip sampling returned positive results including 9.92 g/t gold and 4.67 g/t gold.

* Refer to ASX release: 21 June 2023 – Terrain Secures 100% ownership of historic Copper Mines next door to Cracow Gold Mine, Queensland.

** Refer to ASX release: 27 March 2019 – Great Western Gold Project Update & New Exploration Program Great Western Gold Project Update & New Exploration Program and 29 June 2020 – Strategic Acquisition at Wildviper Gold Project “The Missing Piece of the Puzzle” & New Targets.



TERRAIN MINERALS

Planned Work Program* | 23 + 24

📍 Lithium Work Program

Reconnaissance drilling - (Smokebush Project)

Resource-focused drilling - (Smokebush Project)*

Metallurgical test work - (Smokebush Project)**

📍 Gold Work Program

Induced Polarisation (IP) Survey - (Smokebush Project)

Reverse circulation drilling - (Wild Viper Project)

Drill Campaign - (Smokebush Project)

MMI & Air Core Drilling - (Larin's Lane Project)

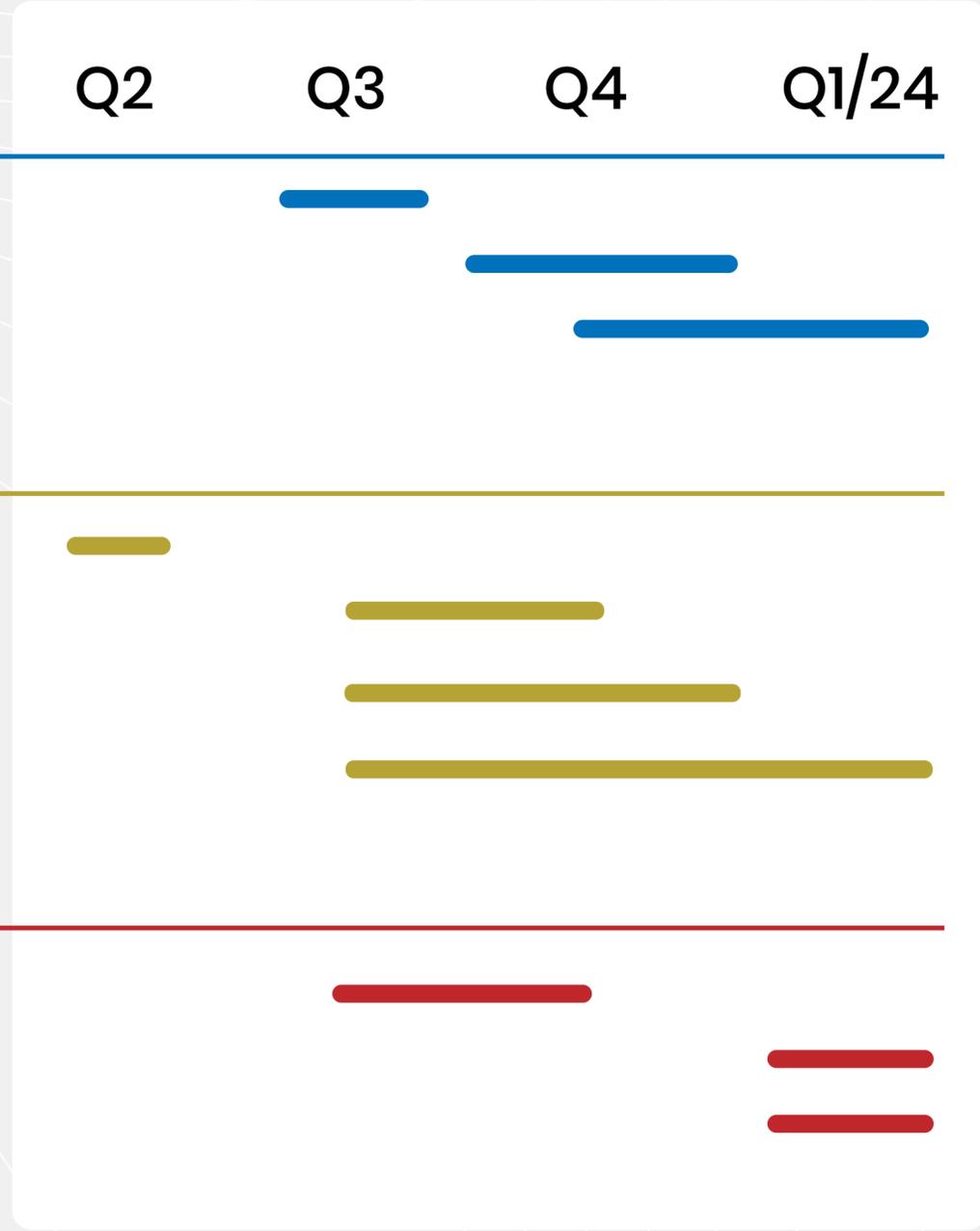
📍 Rare Earths Work Program

Air core drilling - (Lort River Project)

Resource-focused infill drilling - (Lort River Project)*

Metallurgical test work - (Lort River Project)**

Maiden JORC Resource Q3/24 - (Lort River Project)**



* Subject to change; dependent on (amongst other things) the result returned from the Company's exploration activities each quarter and Company's ability to raise additional capital when required.

** Subject to change; dependent on (amongst other things) drill results and metallurgical test work.

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A new era of **Terrain Minerals** is here.

Targeting potential company-making discovery in 2023

Smokebush – Two drill campaigns & MMI soils completed – **Assay results pending**

- Lithium – 6 pegmaties targets RC drill tested during July 2023 – **Assay results pending.**
- Gold – 6 IP targets RC drill tested during July 2023 – **Assay results pending.**
- Gold & Copper/Nickel anomalies – Larin’s Lane MMI extensions completed July 2023 – **Assay results pending.**
- Larin’s Lane air-core drilling, approvals in place targeting October 2023 start date.
- Gallium – Pegmatites RC drilling in June 2023 – 4 zones of Gallium (Ga) discovered, additional testing underway, for Germanium (Ge) and other critical (political) metals – **Assay results pending.**

Lort River – “Proof of concept” REE drilling completed – **Assay results pending**

- Rare Earths (REE) and Gallium – 16 hole, "proof of concept" Air-core drill tested in August 2023.
– **Assay results pending.**
- Comprehensive drill program targeting a JORC resource end of 2024, and approvals to access private land progressing.
- Quality in-house project generation with high quality project applications currently pending grant.
- Utilising proven exploration approach and industry-standard tools in world leading mining jurisdiction.
- Focused on "future-facing" commodities including Gold, Copper, Gallium, Lithium and Rare earths.
- Operating in regions known to host significant mines.
- Favourable geology including pegmatites and clay-hosted rare earth mineralisation already confirmed across project areas.
- Motivated & focussed team driving regular news flow anticipated throughout 2023 & 2024.

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APPENDIX 1 – APPLICATION PENDING

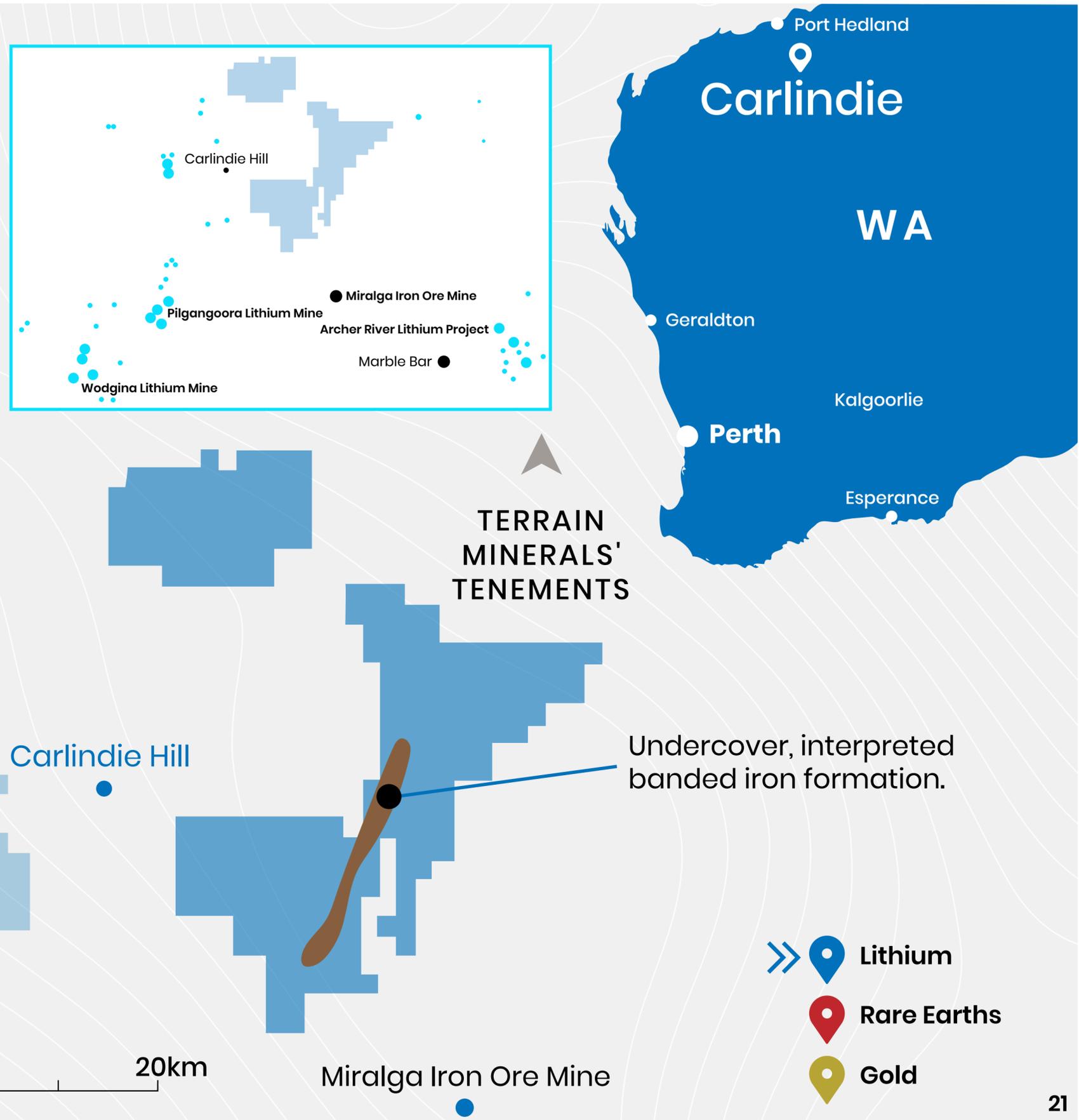
Carlindie | Lithium Project

Located 90km S/E of Port Headland & covering 737 km².
~50km N/E of Pilbara Minerals, Pilgangoora mine.

Terrain is seeking to fast track granting of this tenement.
Terrain will then undertake a 100m x 500m soil sampling program over the entire tenement package area (being ~1600 samples).

Field work to commence immediately following the grant of tenement including soil sampling and assay results.

Terrain's Carlindie Project is geologically similar to Wildcat Resources – Bolt Cutter Lithium Project.



Wildcat Resources
ASX: WC8
Market cap: ~\$225 M

100%
OWNERSHIP

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APPENDIX 2 – APPLICATION PENDING

Mukinbudin | Rare Earths Project

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

Extensive 1,408km² tenement area adjoining both Rio Tinto's and IGO's tenement holdings.

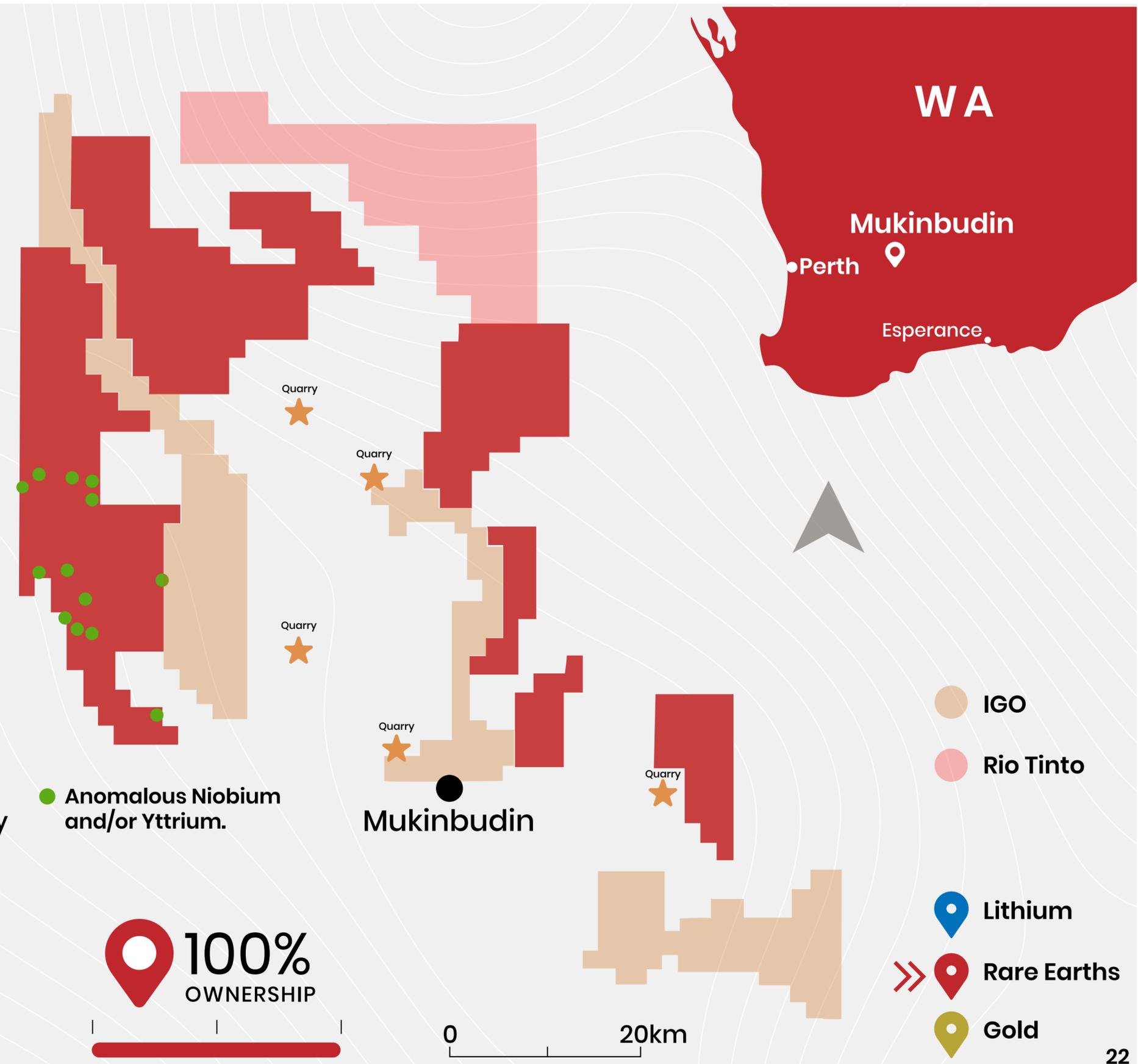
Highly prospective for primary (hard rock hosted) light and heavy rare earth mineralisation.

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

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.



APPENDIX 3 – APPLICATION PENDING

Biloela | Copper Project

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

Extensive ~2,500km² tenement area, first identified by Rio Tinto, Gold Fields Limited and Newcrest Mining Limited.

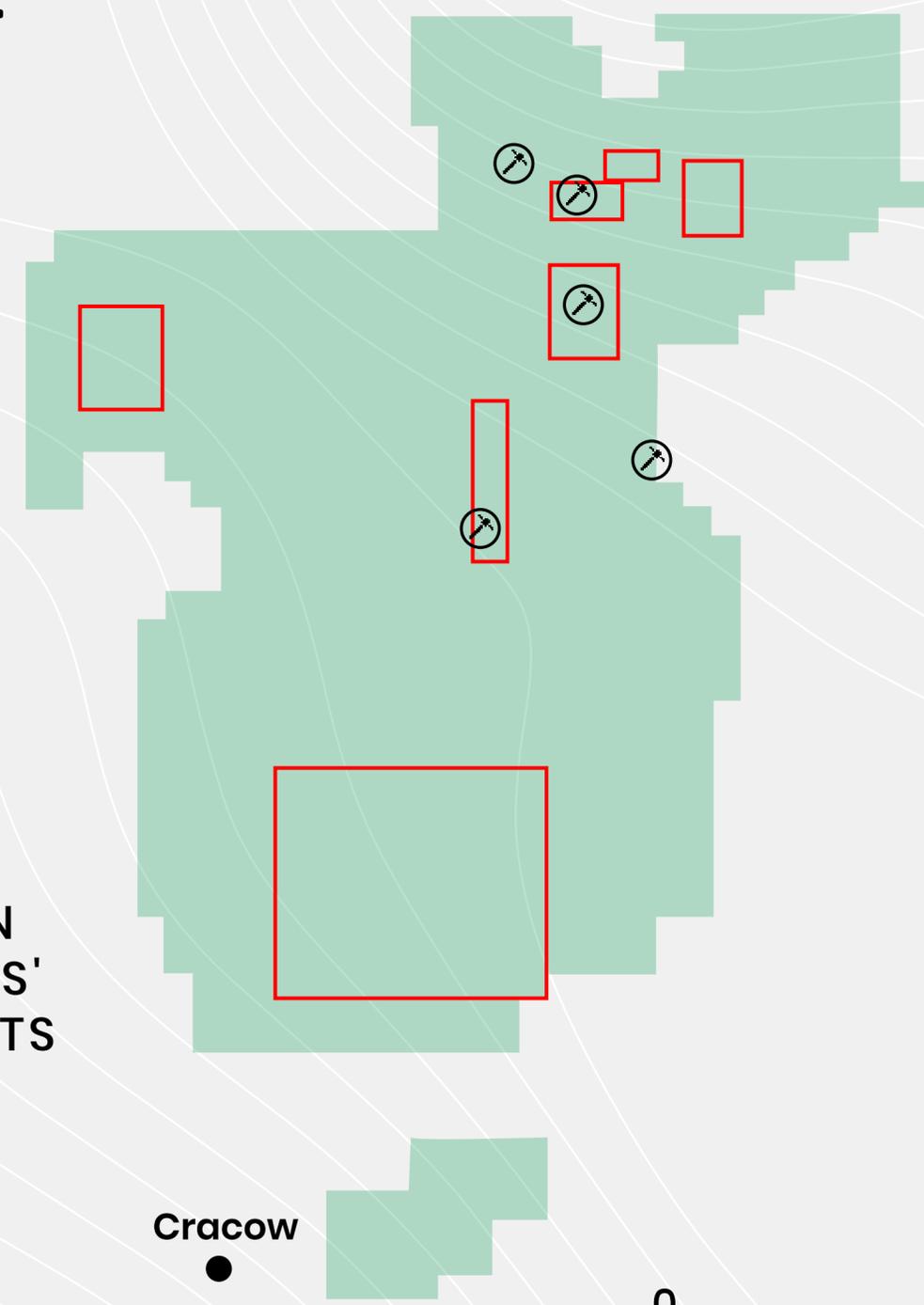
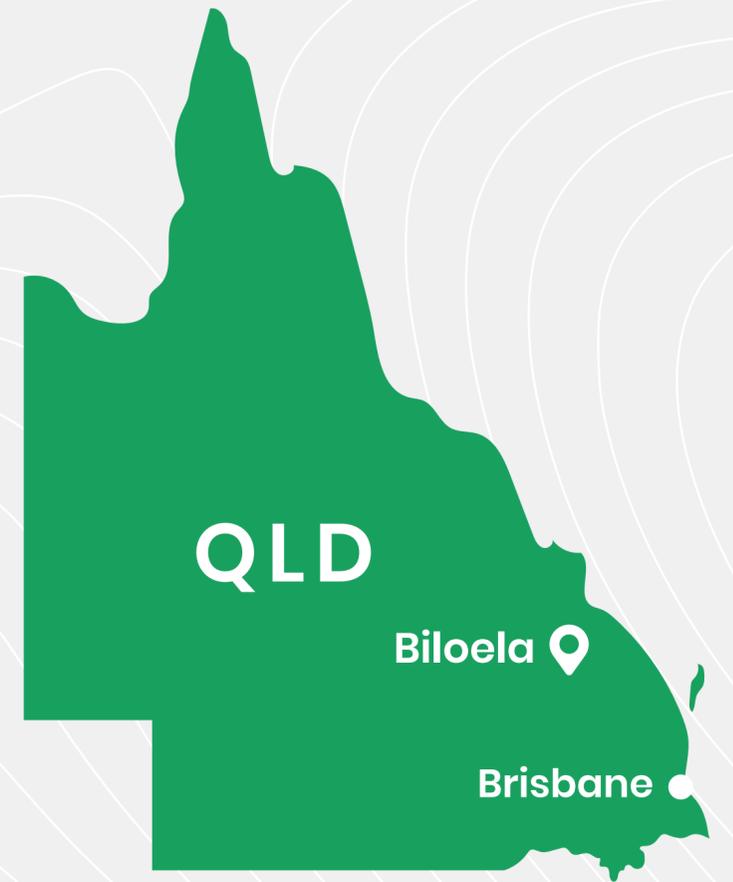
The northwest-trending faults within the north-eastern part of the Biloela Project are similar to those present at the Cracow Gold Mine and are considered the most prospective for epithermal-style gold mineralisation.

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



TERRAIN MINERALS' TENEMENTS

Cracow



- Historical mines
- Terrain Minerals Biloela tenements
- Target areas within the project

- Lithium
- Rare Earths
- Gold
- Copper



*Refer to ASX release: 21 June 2023 – Terrain Secures 100% ownership of historical Copper Mines Next door to Cracow Gold Mine, Queensland.

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Want to know more? Contact Terrain Minerals

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