

2024 Exploration Update Gold, Lithium, Gallium & Rare Earths

Smokebush: 'Larin's Lane' drilling completed – Assay results pending

Lort River: Successful reconnaissance drilling Identified massive clay REE & Gallium zones

Investment Presentation - 121 Conference Cape Town

ASX:TMX | FEBRUARY 2024

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Important Information

Forward Looking Statements

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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.

TERRAIN MINERALS

Company Profile

Capital Structure

Shares on Issue: 1,423 Million

Unlisted Options

(@ \$0.0056 - \$0.0214): 41 Million

Various expiry dates to 2028

(@\$0.015): 85.26 Million

Expiry: 20 May 2024

Market Cap (Million): 7.1

Cash at Hand (Million): 1.02

Share Price: \$0.005

Major Shareholders

 Top 20:
 36.6%

 Top 100:
 70.5%

 Board & Associated:
 12.7%

 No. of Shareholders:
 1,180



TERRAIN MINERALS

Board Members

Justin Virgin Executive Director

Mr Virgin has over twelve 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 to 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 onsite mobile fleet and of exploration programs.

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 ten years of management experience as an entrepreneur and Principal/Managing Director of Oprian Investments Ptx Ltd with interests and focus in minerals and properties/property construction of Pasir Ria Apartments in Singapore an investment team member of Monarch Parksuites Condominium in Manila Philippines. Past experience includes corporate restructuring as a member of an advisory team in the restructuring of Singapore listed Enzer Holdings Limited where debt negotiations, debt buy-out, capital raising by placements, rights issues, debt to equity conversion and eventual takeover by a marine group went through 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

Four Drilling Campaigns completed during 2023 at Smokebush, (inc. Larin's Lane) and Lort River Projects (all 100% owned) - Targeting Multiple Commodities.

Smokebush (SB) drilling at "Lightning" Induced Polarization (IP) target (running parallel to Monza) identified high grade gold mineralization, in the first 2 maiden drill holes, 400m apart as well as Gallium in 4 different holes.

Larins Lane (SB) Drilling Tested 3 Poly-metallic, MMI soil anomalies/targets hidden under cover - Assay results pending - Due February 2024.

Lort River 16 hole reconnaissance drilling, identified notable intersections of Clay Rare Earths in 7 holes as well as Gallium Clays in all 16 holes.

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 2024.

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

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

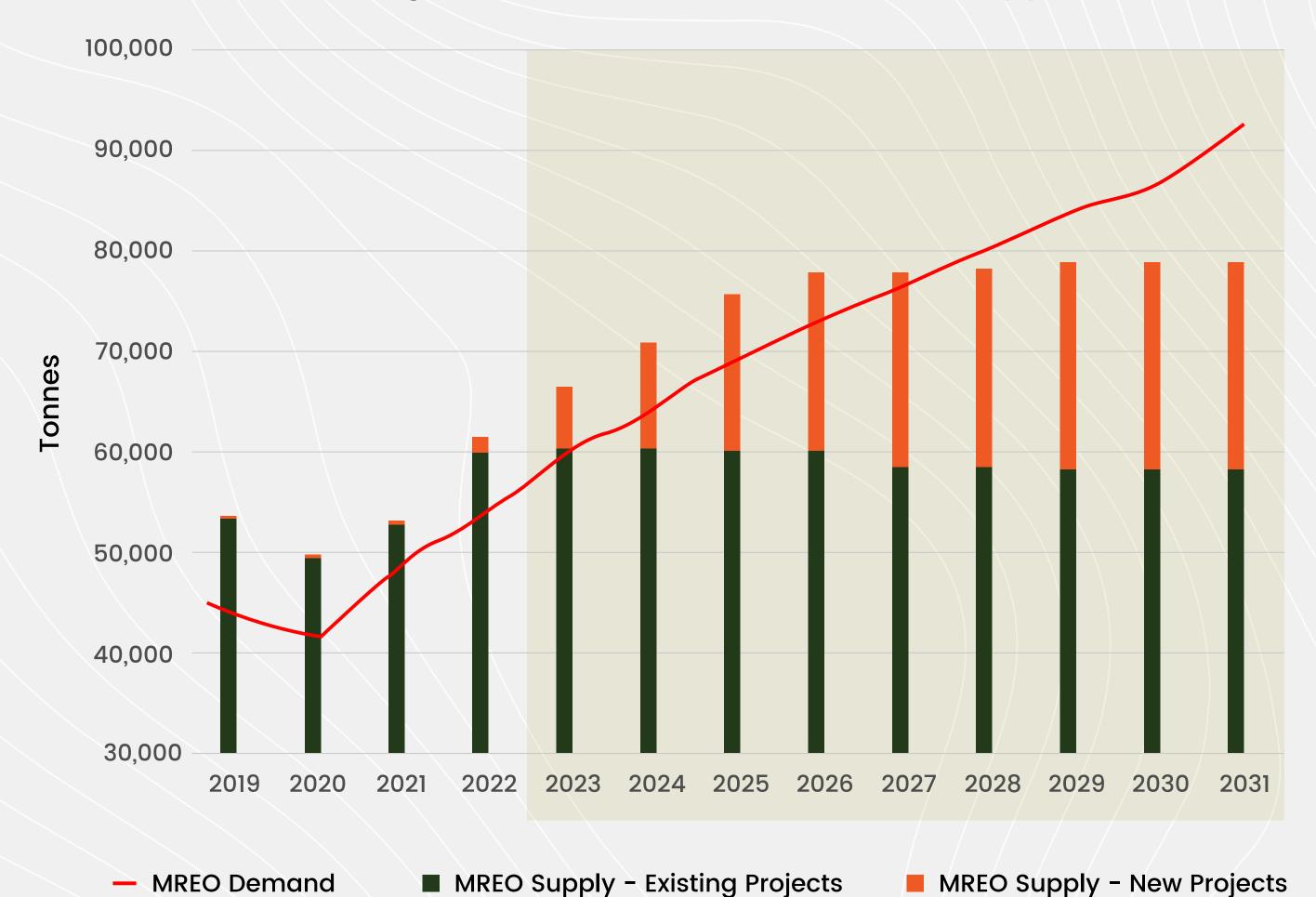
Magnet Rare Earth Oxide (MREO) Supply vs Demand*

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 continuing to implement a major exploration and drilling campaign across its portfolio of projects in 2024.

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





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.

The successful IP survey and corresponding drilling identified high grade mineralization at the New Lightning IP anomaly, which runs parallel to the historic Monza mineralization.

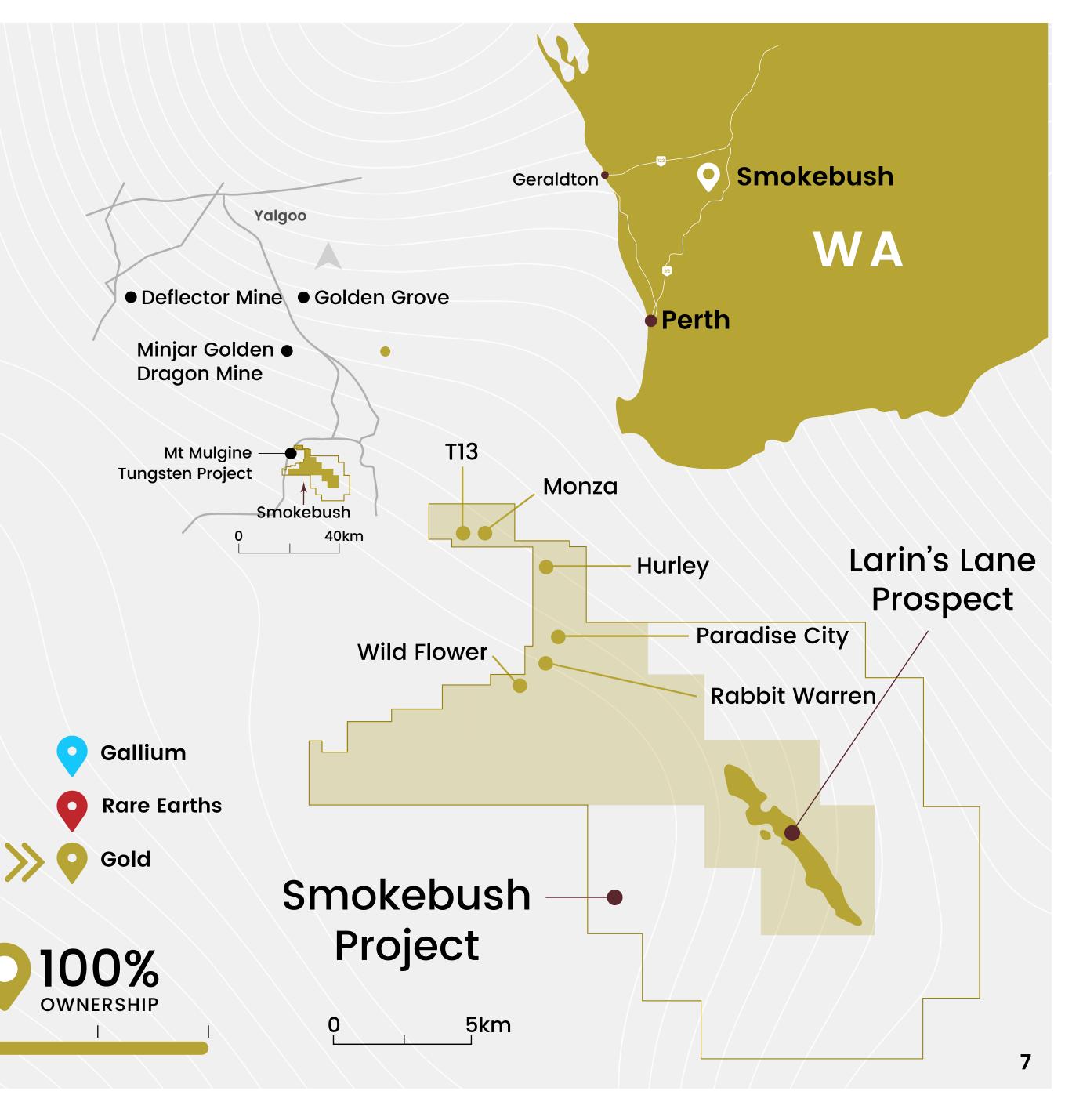
Larin's Lane

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) soils identified 3 poly-metallic; gold, copper, nickel and silver targets (overlaying anomolies).

Drilling campaign consisted of 101 holes for 6,611m (air-core) completed in December 2023.

Assay results pending - Due early February 2024.



Smokebush | Gold Project | IP targets

Maiden RC holes drilled at the 'Lightning IP' Target has confirmed the existence of high-grade gold mineralisation;

- 2 metre @ 6.22 g/t Gold from 61 metres (hole 23SBRC012) and;
 1 metre @ 5.94 g/t Gold from 82 metres (hole 23SBRC232).

The 'Lightning' target runs parallel to the Monza prospect. Only a single hole has tested each end of 600-meter-long IP chargeability anomaly and 400 meters apart from each other.

Both holes successfully intersecting high grade gold mineralisation within the modelled IP chargeability zone thus cementing Terrain's view that its 100% owned Lightning and Monza Gold Prospect has the potential to host a possible future gold deposit.

Previous drilling by Terrain, at Monza 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



Lightning hole

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 identified Lighting high grade gold mineralization shown in white.

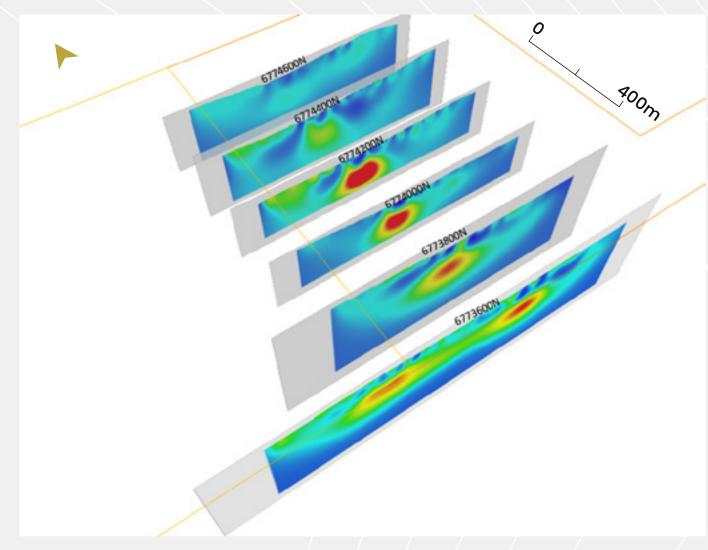


Diagram above: New identified 600m long chargeability Anomaly identified parallel to historic Monza drilling.

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.

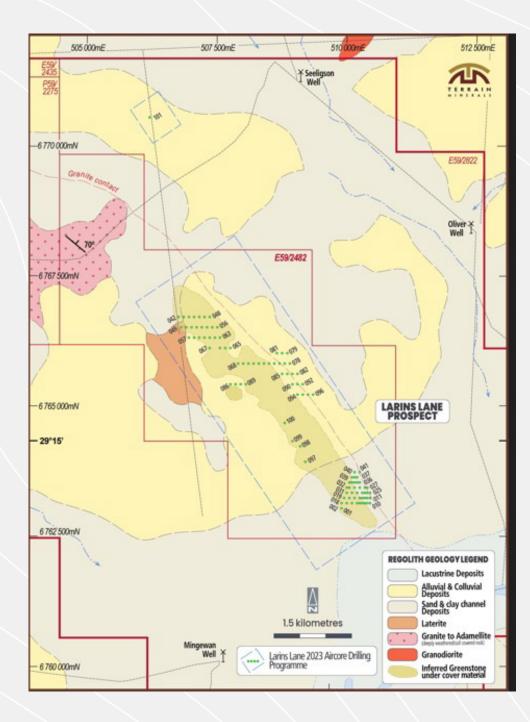
26 July 2023 - Smokebush "Phase 2" Drilling completed & Project Update.

14 November 2023 - Smokebush - High Grade Gold mineralisation intersected, Confirming 600-metre-long gold target zone, next door to 945,000 ounce gold Mineral Resource.

Smokebush Larin's Lane

Maiden air core drilling campaign tested the three (3) Poly-metallic targets.

- A total of 101 holes drilled for 6,611 metres that was completed in December 2023 – assay results pending.
- Drilling encountered occurrences of traces of sulphides and an indication of alteration in all three target areas.
- Drilling tested the underlying bedrock for Copper, Nickel, Gold and Silver anomalies identified in, Mobile Metal Ion (MMI) soil sampling.
- All three (3) MMI geochemical anomalies, having common areas of overlap between the elevated elements.
- Soil anomalies range in size between ~1,100m by ~350m and ~700m by ~250m (still open).
- Geology at Larin's Lane prospect interpreted as potentially part of same greenstone belt that hosts the Golden Grove Copper + Gold + Silver + Zinc + Lead Mine.
- Assay results pending Due February 2024.



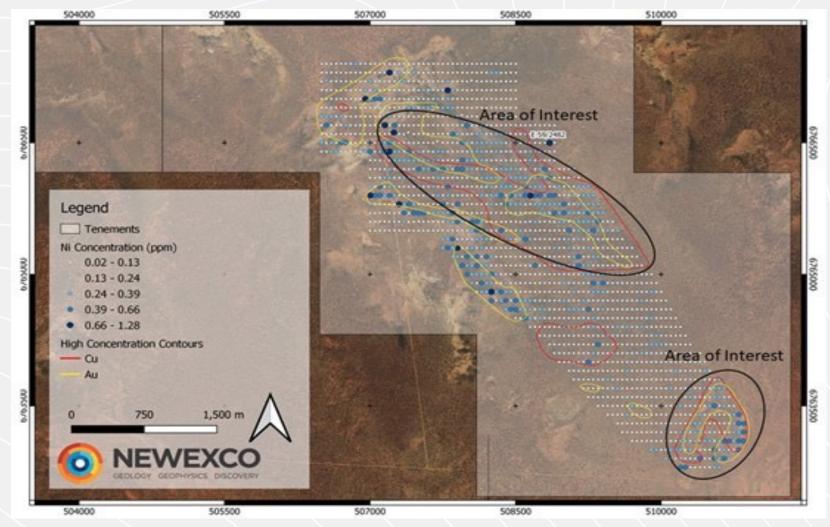


Diagram 1: Cu and Au contours overlying Ni sample concentrations (ppm), with highlighted areas drill tested.

Diagram 2: Regolith zones between ~30m (western zone) increasing deeper to ~95m (eastern zone), dots represent drill traverses and hole color numbers.













OUR PROJECTS - 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 500m x 500m soil sampling program over the entire tenement package area.

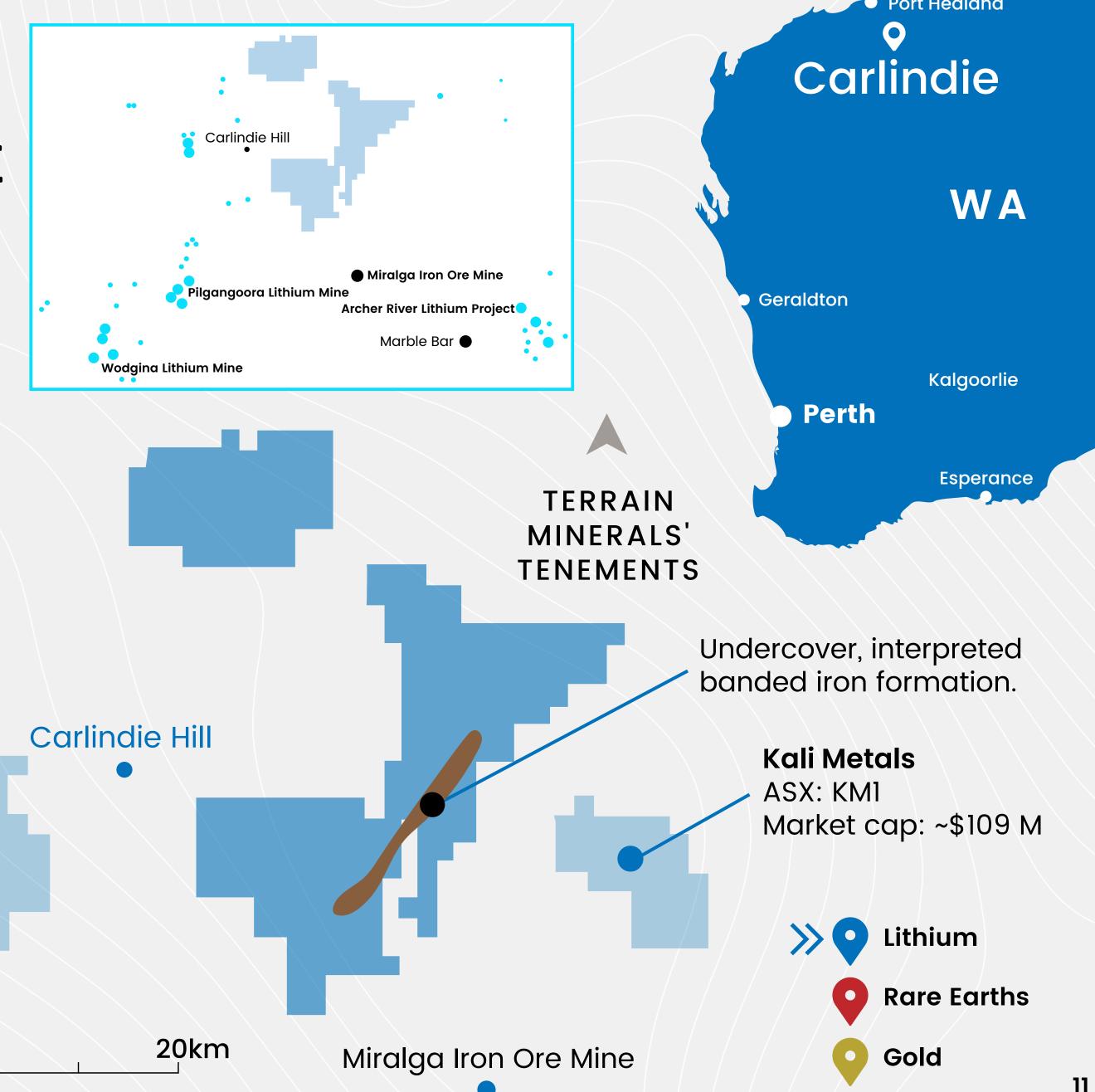
Field work to commence immediately following the grant of tenement including soil sampling and follow up drilling.

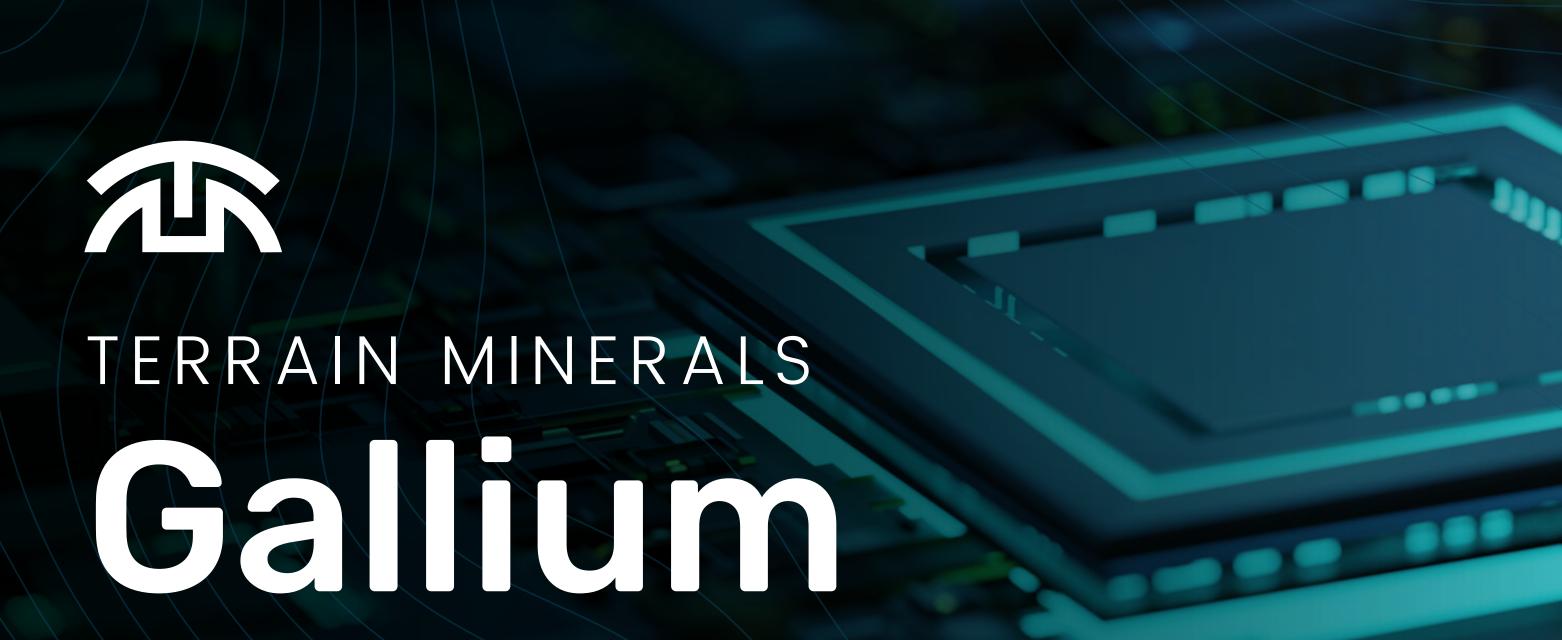
Desktop studies have identified key areas fitting to Terrain's internal geological modeling.

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

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







WESTERN AUSTRALIA Smokobush

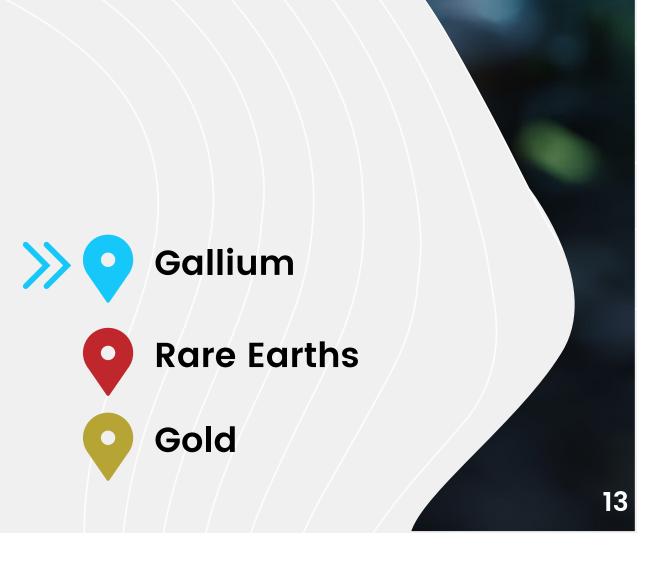
Smokebush

Lort River

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.
- New demand for Gallium has also come from the manufacturer of Photovoltaic cells (solar panels), due to a recent patent expiry. This has allowed producers to use gallium doping, which improves panel stability (longer life), rises voltage (increased performance) and potentially reduces manufacturing costs.
- On 1 Aug 2023, China which produces 98% of the worlds Gallium cancelled all exports, weaponizing supply, highlighting the need to secure safe and reliable supply of critical elements and metals.
- It is anticipated that USA, European and Asian 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. Funaiole, 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.
Reference: NSW University article - The sunlight that powers solar panels also damage them. 'Gallium doping' is providing a solution.
Date 23/06/2021 by M Wright, B Hallam & B Stefani.



Smokebush | Gallium Project

Gallium (Ga2o3) 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.

Rabbit Warren Prospect

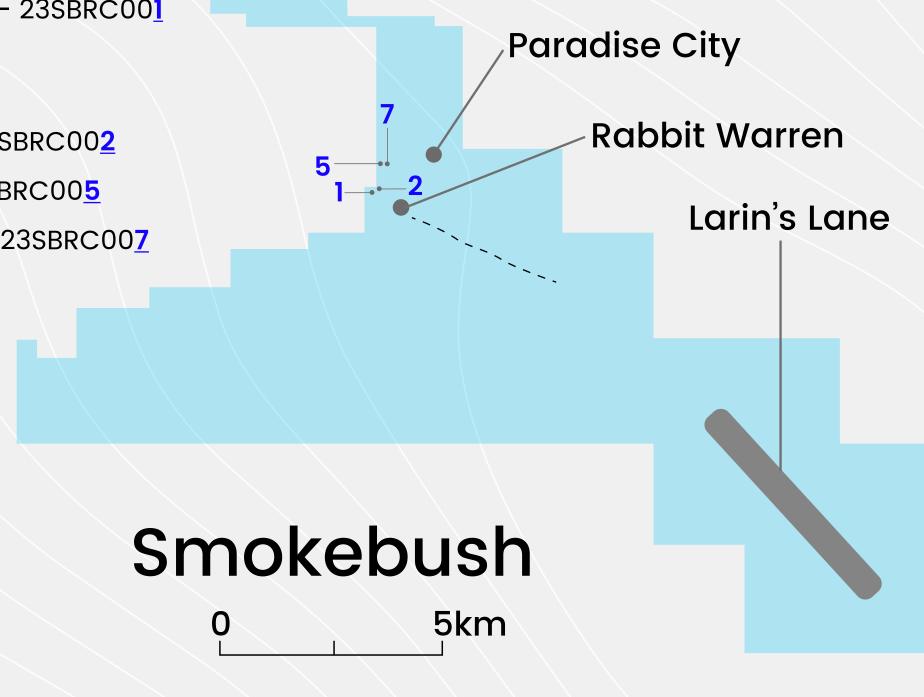
• 10m @ 37.6 g/t Ga2o3 within 86m @ 17.4 g/t Ga2o3 from surface - 23SBRC001

Paradise City Prospect

OWNERSHIP

- 4m @ 28.2 g/t Ga2o3 within 30m @ 20.1 g/t Ga2o3 from 80m 23SBRC002
- 9m @ 30.9 g/t Ga2o3 within 16m @ 24.1 g/t Ga2o3 from 11m 23SBRC005
- 7m @ 30.9 g/t Ga2o3 within 11m @ 28.2 g/t Ga2o3 from surface 23SBRC007

Follow up drilling being planned for 2024.





Gallium, 31 GA



Lort River | Gallium Project - Clays

Gallium (Ga2o3) mineralization discovered as part first pass REE reconnaissance drilling.

16 drill holes, 3km apart roadside intersecting Gallium Clays 'in all holes' identifying potential massive zone of mineralization across the project area.

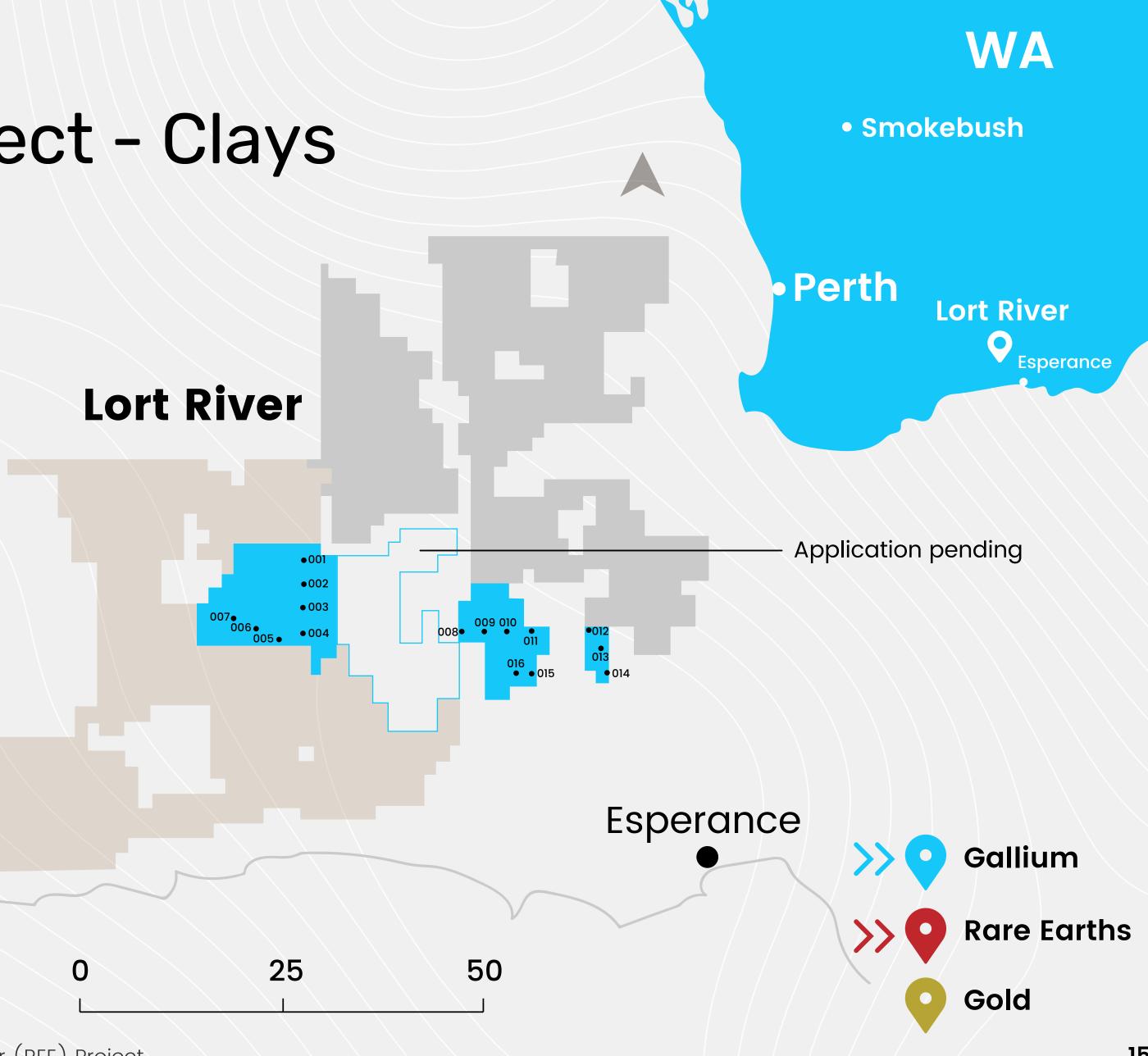
Selected drilling results (All holes ended in mineralisation):

- 38m @ 34.1 g/t Ga2o3 from surface (hole 23LRAC001)#
- 27m @ 35.6 g/t Ga2o3 from surface (hole 23LRAC002)#
- 21m @ 31.3 g/t Ga2o3 from 10 meters (hole 23LRAC004)#
- 32m @ 36.8 g/t Ga2o3 from surface (hole 23LRAC005)#
- 22m @ 31.6 g/t Ga2o3 from surface (hole 23LRAC009)#

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

Terrain is now preparing for a large scale drilling campaign on selected paddocks, as it aims to rapidly establish a JORC compliant Gallium & REE resource in 2024.

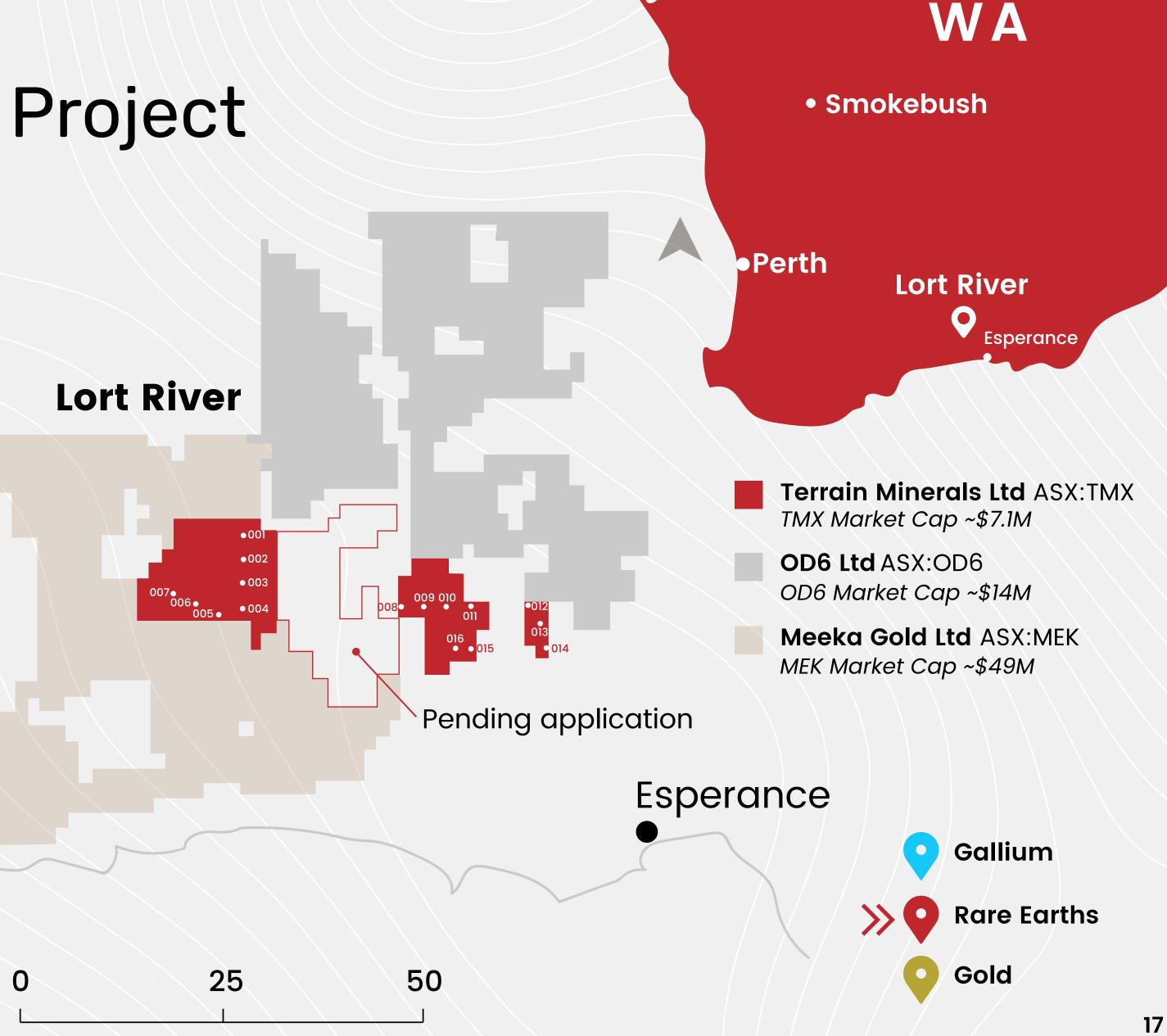






OUR PROJECTS Lort River | Rare Earths Project Located 650 kilometres southeast of Perth. Covers 320 square kilometres of prospective geology. New pending application (strategically located) adds 255 square km (New Total 485 km2). Immediately adjoins OD6 Metals (ASX:OD6) and Meeka Metals (ASX: MEK) rare earth projects. Rare earth mineralisation confirmed within

Terrain Mineral's project area.



Lort River | Rare Earths Project

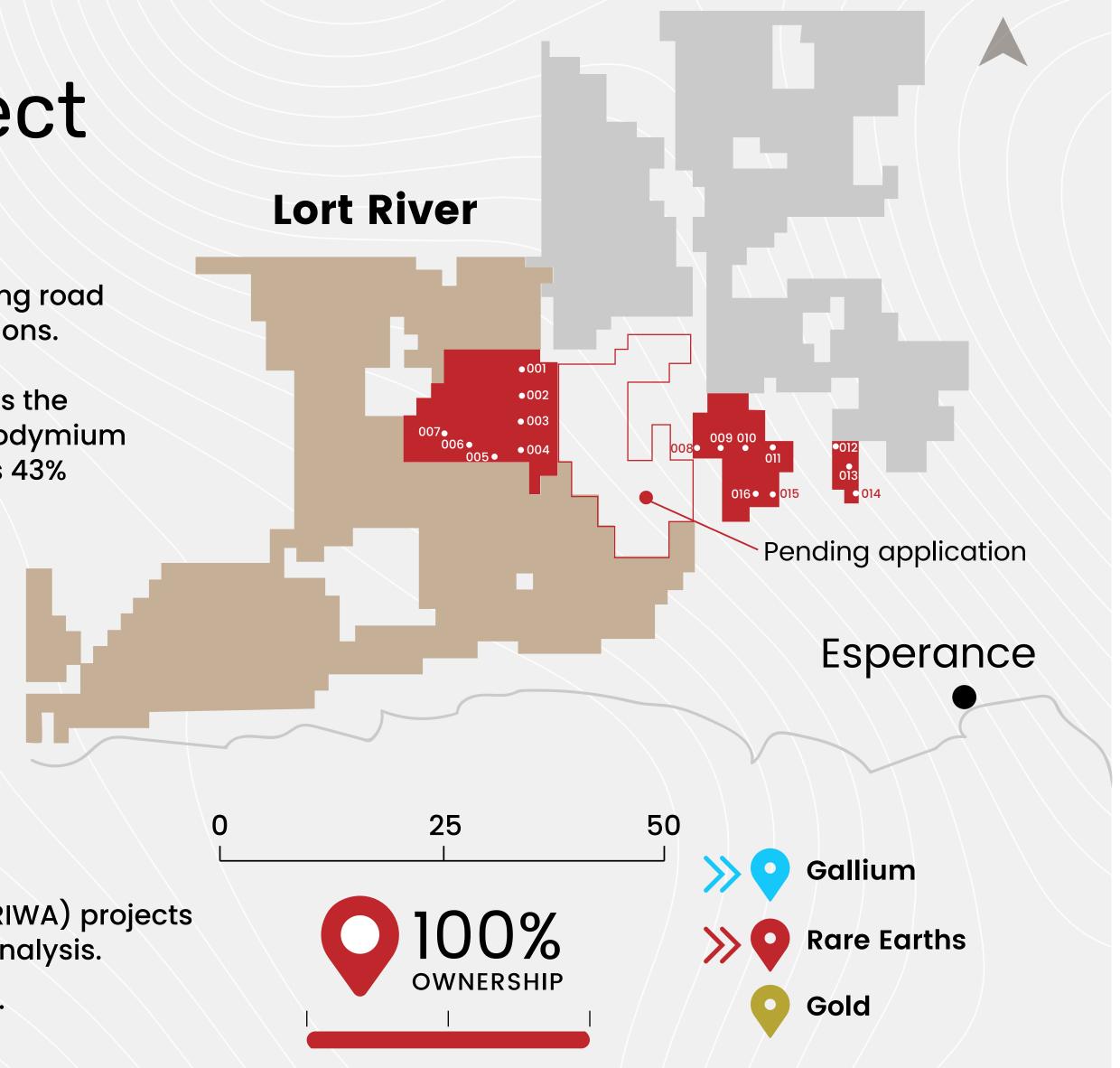
- Highly successful reconnaissance drilling campaign, 16 holes for 300m, drilled with 7 returning encouraging Clay REE mineralisation.
- First pass, drilling consisted of wide-spaced (3 kilometre) completed along road verges across the three tenements with all returning significant intersections.
- Remarkably 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*.

Significant drilling intersections included:

- 12m @ 614ppm TREO from 26m down hole (hole 23LRAC001)#
- 3m @ 919ppm TREO from 23m down hole (hole 23LRAC002)#
- 6m @ 900ppm TREO from 18m down hole (hole 23LRAC005)#
- 5m @ 591ppm TREO from 13m down hole (hole 23LRAC009)#

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.
- Targeting a Maiden Mineral Resource. Estimate in second half of 2024/25.



^{* 19} October 2023 - Rare Earth Element (REE) Mineralisation Intersected across the Lort River project area.

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Project Pipeline

Carlindie Prospect – East Pilbara/Lithium (applications pending grant)

- 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 1)

- Located north of Mukinbudin WA and covering 1,408km².
- Targeting pegmatite-hosted Dysprosium, Neodymium, Terbium and Praseodymium.
- Ultra high solution 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 2)*

- 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.



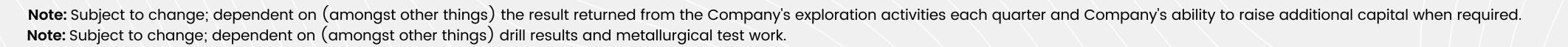
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Planned Work Program | 2024/25

- Lithium Work Program
 - First pass soil sampling (once granted) (Carlindie Project)

 Reconnaissance drilling (Carlindie Project)
- Gold Work Program
 - Lightning infill / Reverse circulation drilling (Smokebush Project)
 - Reverse circulation drilling (Wild Viper Project)
 - Reverse circulation 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 Q3/25 (Lort River Project)
- Gallium Work Program
 - Reverse circulation drilling (Smokebush Project)

 Aircore infill drilling (Lort River Project)



Q1/25

Q2

Q3

A new era of Terrain Minerals is here.

Targeting potential company-making discovery in 2024

Smokebush - Three drill programs, IP survey & MMI soils completed - Assay results pending

- Larin's Lane prospect, three Poly-metallic targets air core drill tested in December 2023 Assay results pending Due February 2024
- Lighting prospect, high grade Gold Infill RC in planning for 2/3 quarter 2024.
- Gallium RC drilling identified 4 zones of Gallium (Ga) discovered, testing underway, for Germanium -Assay results currently being analysed.

Lort River – "Proof of concept" REE & Gallium drilling completed - Assay results pending

- Rare Earths (REE) and Gallium 16 hole, highly successful "proof of concept" Air core drilling, completed with stage two drilling due
 to start February 2024.
- Comprehensive drill program targeting a JORC resource end of 2025, and approvals to access private land progressing.

Carlindie East Pilbara – Large prospective Lithium/Fe Project – Tenements pending

- Fast tracking the grant process now under way.
- 737 km2 of highly prospective area in the heat of the Pilbara WA lithium district.
- Desk top studies have identified key areas fitting to internal geological modeling.
- Geological team ready to immediately commence exploration works once granted.

Terrains exploration approach

- 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 2024 & 2025.

APPENDIX 1 - 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.

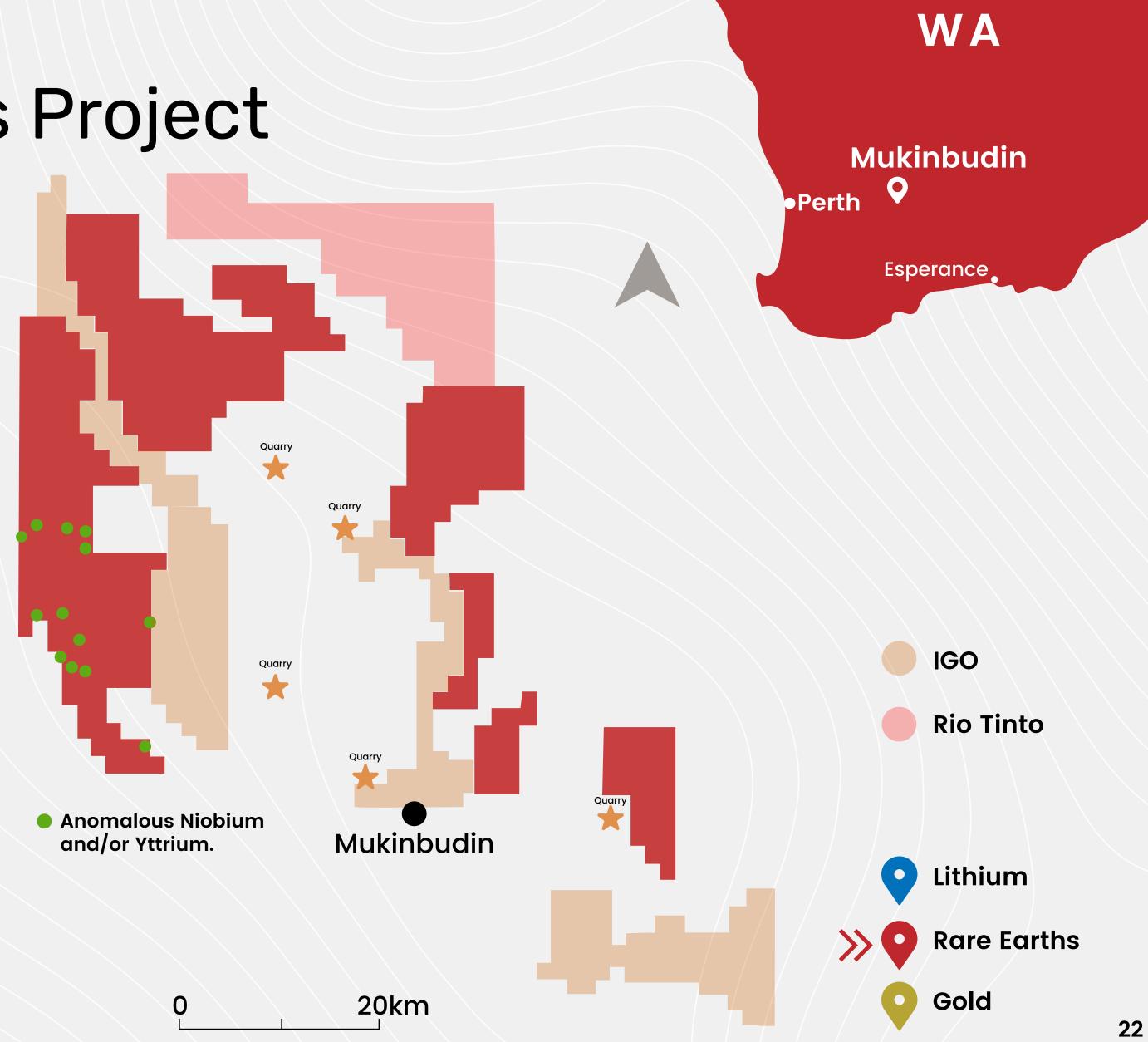
Mukinbudin one of the very few regions of Australia known to host NYF (Niobium-Yttrium-Fluorine) pegmatites.

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 2 - APPLICATION PENDING

Biloela Copper Project

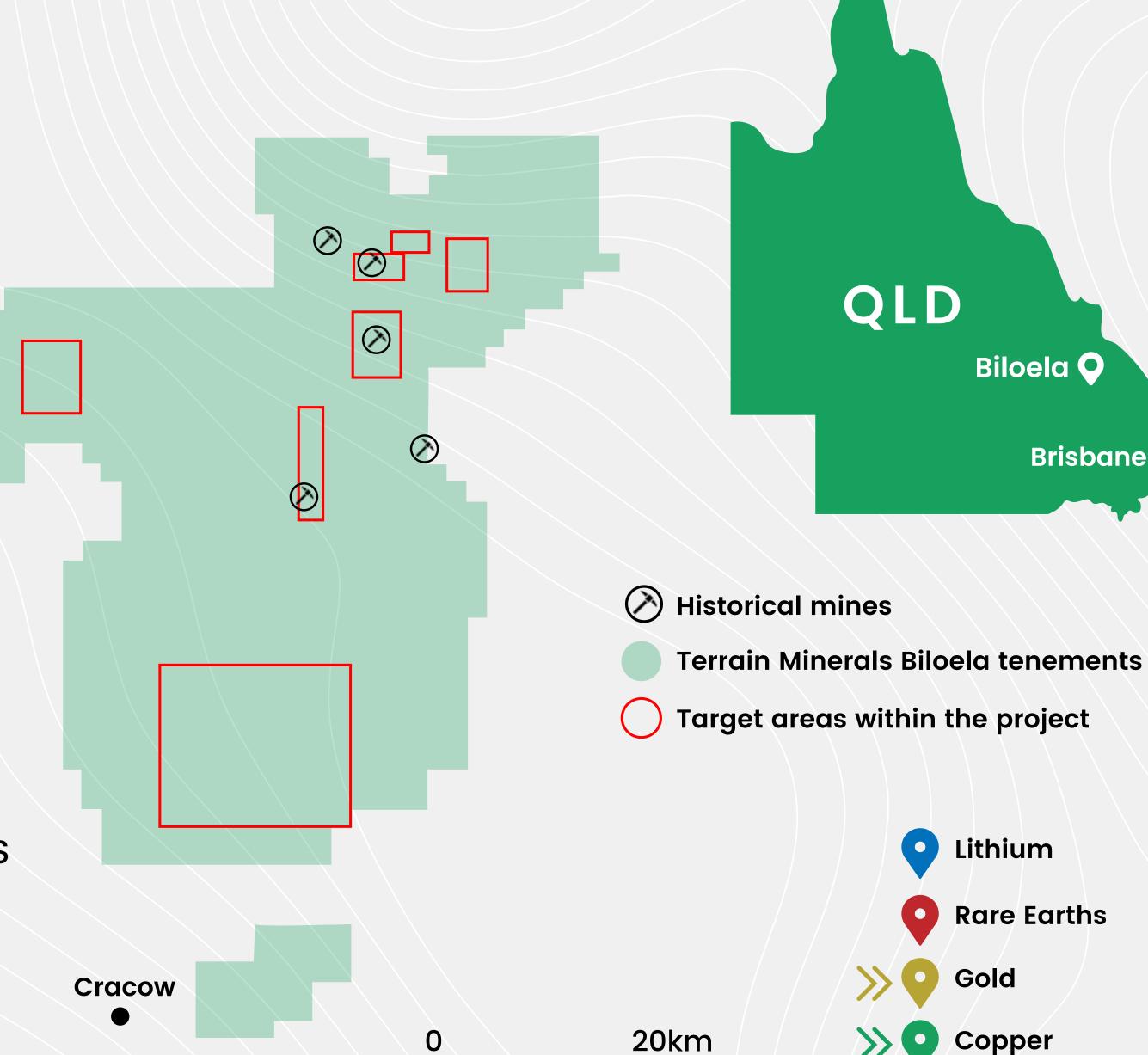
The Biloela Project lies 13 kilometres north of the Cracow Gold Mine in the Glandore and Theodore region of Queensland.

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**



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

QLD

Biloela 🔾

Lithium

Rare Earths

Brisbane

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