# **ASX Announcement**



17 March 2023

ABN: 45 116 153 514 ASX: TMX

# Smokebush IP Survey & Lithium Update Priority Gold Drill Targets Emerging

**Terrain Minerals Limited (ASX: TMX) (Terrain)** is excited to provide the following update at its 100% owned Smokebush Project, located 350 kilometres north of Perth, Western Australia.

# Induced Polarisation (IP) New Drill Targets Identified - Survey 70% Complete

Terrain is pleased to announce that two thirds of the IP program has now been completed by the Newexco Exploration team over the Hurley & Paradise City prospects. The initial data is ground-based gradient array IP shown in plan view or single dimension. Two drill worth gold anomalies have been identified, both hidden under cover. The first being ~400 metres long located near Hurley with the second ~600 metres long located near Paradise City and both previously unknown (refer to Diagram 1 & 2).

The Monza IP survey will commence next week along with additional work over the two identified targets. The current data helps guide the next stage of the survey being dipole-dipole IP to enable a 3D modelling for targeting purposes for which drilling permits (POW) are already granted over.

# Soil Sampling Program Completed over Larin's Lane - Gold Exploration

XM Logistic has completed the close spaced Mobile Metal Ion (MMI) soil sampling program over the Larin's Lane target area with 834 sample submitted to the Company's assay lab for multi-element analysis (foot note 1). The results from this sampling program are expected within the next four weeks (refer to diagram 4).

# Smokebush - Pegmatite Samples & Further Field Activities

Terrain has recently identified 20+ pegmatites which have been sampled for Lithium (foot note 1). Samples results are currently overdue due to excessive demand for lithium testing and are expected in the next 2-3 weeks.

In the meantime, Terrain has engaged the services of a senior geologist with extensive field experience with lithium bearing pegmatites from RSC - Mining & Minerals Exploration who will be on site next week to better assess the known pegmatite occurrences. The RSC team will be following up petrology sample data received by the Company that highlighted the possible existence of lithium-rich lepidolite mineralisation (refer to Appendix 1).

# Wildviper Gold project - Update

Terrain's geological team was on site during February mapping and sampling several areas.

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# Foot Note 1:

## Refer to ASX release:

6 December 2022 - Smokebush - Pegmatite Swarms Identified, Sampling for Lithium Mineralisation Underway.

**7 February 2023** - Smokebush - 2023 Field Season Now Underway, IP Survey & MMI Soils Programs

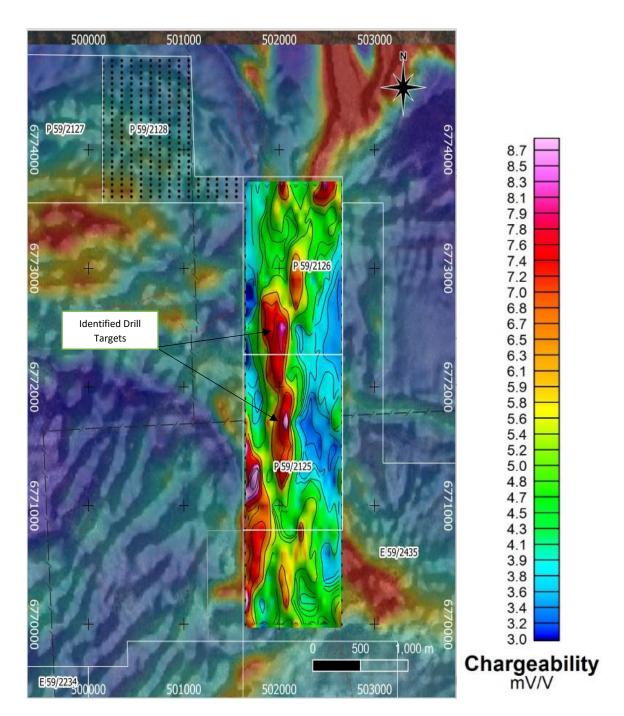


Diagram 1. Smokebush Gradient Array IP Resistivity with Contours & Legend

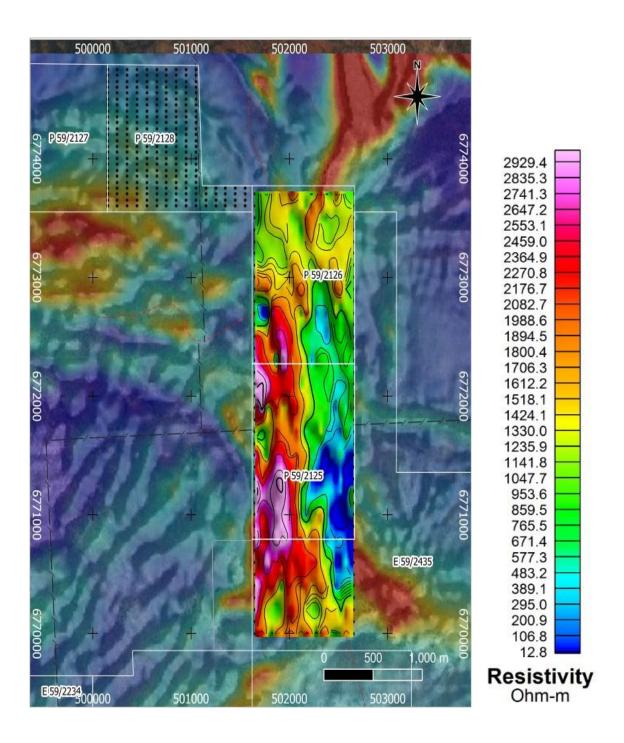
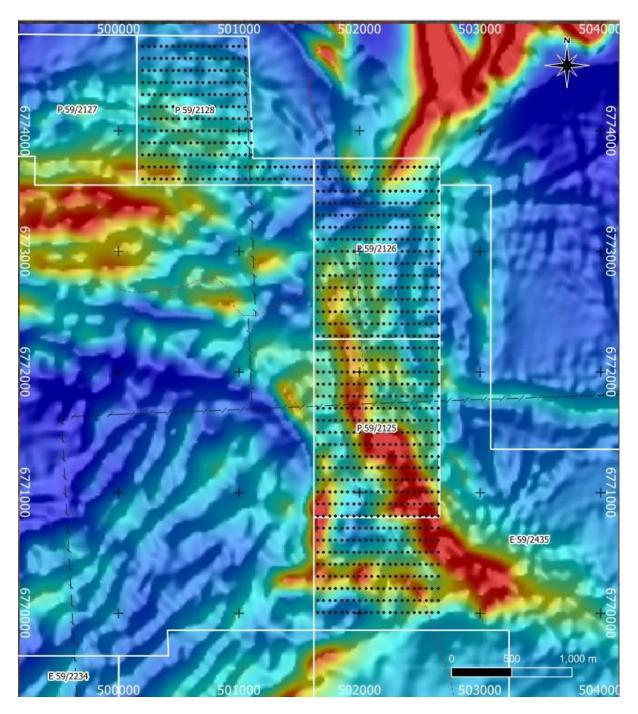


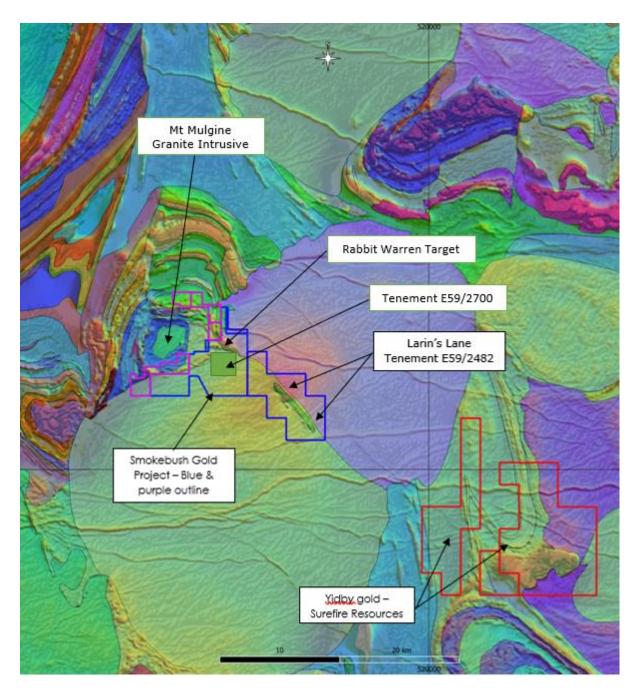
Diagram 2. Smokebush Gradient Array IP Chargeability with Contours



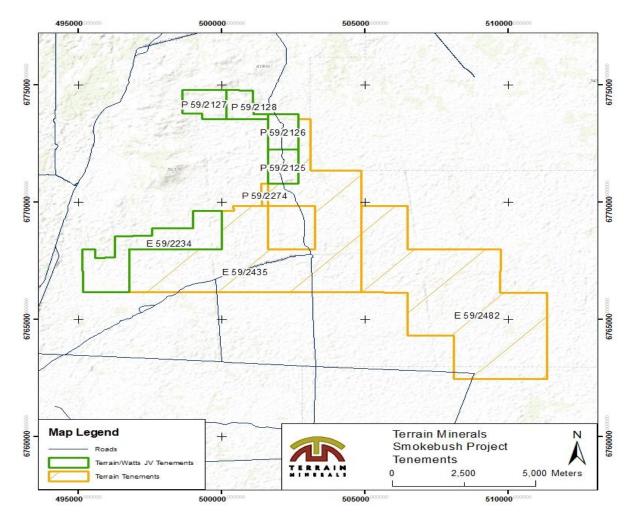
**Diagram 3:** The above plan shows the survey points for the current Induced Polarisation (IP) survey. The specifications and details of the IP survey include 200 metre line spacing (with infill 100 metre line spacing order any anomaly), and 50 metre along line sample spacing.

This IP survey is designed to detect and map the location of any sulphides present within the underlying bedrock, which is potentially associated with the high-grade gold mineralisation. This exploration technique for discovering gold mineralisation has proven successful in the past across the Yalgoo gold province.

Previous drilling by Terrain at its Monza target appears to have established a possible positive relationship between the increased occurrence of sulphide mineralisation and higher recorded gold grades.



**Diagram 4:** Smokebush Project Location: The Mt Mulgine granite intrusive can been identified and shows that Terrain pegmatites are in the so-called Goldilocks zone for potential lithium mineralisation. The area also hosts Terrains new Larin's Lane gold target a ~4.5km long by 200-300m wide untested and undercover greenstone that is wedged between two granites.



**Diagram 5:** Smokebush Project Location (tenements 100%). The new Hurley IP target is located on P59/2126 with the other target located on P59/2125 and north of Paradise city which is located on E59/2435. Monza is located on P59/2128.

# **Location & Access**

The Smokebush Project area is located approximately ~350km from Perth Western Australia and 85 kilometres east northeast of the Perenjori township and 65 kilometres west of Paynes Find within the Yalgoo Mineral Field. The tenements can be accessed via the unsealed Perenjori - Warriedar Road, and thence via extensive historical exploration grid lines, station tracks and fences lines.

The now 100% owned project consist of Prospecting Licenses (P59/2125, 2126, 2127, 2128 & 2774) and Exploration Licence E59/2234, 2435, 2482 & 2700 (refer to diagram 1).

The geology of the area consists predominantly of a complexly folded, regionally metamorphosed Archaean greenstone sequence at the southern end of the Yalgoo Singleton Greenstone Belt that has been subjected to multi-phase granitoid intrusion. Located adjacent to a large tungsten resource at Mt Mulgine (Tungsten Mining NL) and a number of recently developed gold open pit mines (Minjar Gold Pty Ltd).

## For further information, please contact:

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# **Appendix 1**

Brief Petrographic Descriptions 8

SAMPLE NO: Sample 11 LOCATION: Smokebush Area

TYPE: Rock Chip GDA 499841mE 6768823mN

FIELD IDENTIFICATION: Weathered muscovite aggregate - possible lepidolite.

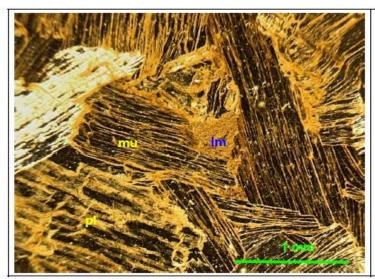
SECTION TYPE: Thin Section

#### DESCRIPTION:

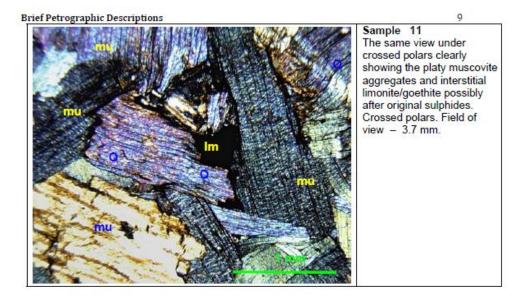
Medium to coarse grained (up to 4 mm), interlocking platy muscovite dominates in the phyllosilicate aggregate and is associated with minor anhedral quartz in one portion of the sample. Limonite has penetrated along grain boundaries and cleavage planes in the weathering profile and has imparted the brownish/purpalish colour in hand specimen. Limonite/goethite concentrations occurring interstitially in the platy muscovite host may have represented original sulphides (?).

Comments: The dominance of platy muscovite associated with minor quartz may have a pneumatolytic source associated with a granitic parent. The mica is potentially Li – rich although this will need to be confirmed by analysis. The purplish colour is partially masked by limonite – flooding in the weathering profile. Possible sulphides have also been oxidised.

CLASSIFICATION: Medium to coarse grained muscovite assemblage associated with minor quartz and possibly original sulphides. Li content of the mica will need to be established by laboratory analysis.



# Sample 11 Platy muscovite (mu) with limonite flooding along cleavages occurring in the weathering profile. Limonite (lm) occurs interstitially and may have replaced original sulphides (arrowed). Plane polarised incident light. Crossed polars. Field of view – 3.7 mm.



Reference: Internal Terrain Report - Petrology report compiled by Pathfinder Exploration Pty Ltd.

**Note:** For additional information refer to ASX announcement:

- 2 December 2019 Farm-in Agreement for the Smokebush Gold Project at Mt Mulgine, 65km West of Paynes Find WA.
- 18 December 2019 Smokebush Exceptional Historic Drilling Results Identified During Project Due Diligence.
- 3 March 2020 Exciting Results from Smokebush Gold Project.
- **08 October 2020 -** High Grade Rock Chips at Smokebush Gold Project.
- 12 October 2020 Exciting Drilling Results at Smokebush Gold Project.
- 3 December 2020 New Application Granted with Exciting Historic Results at the Paradise City Gold Prospect -Smokebush Gold Project.
- 12 February 2021 Ground Geophysics & Mapping Refines Targeting Matrix at Smokebush Gold Project.
- 17 March 2021 Drilling & Project Update Smokebush Gold Project.
- 22 April 2021 2,100m RC Drilling Program Commenced at the Smokebush Gold Project.
- 27 May 2021 New Rock Chip Samples & Drilling Update Smokebush Gold Project.
- 19 July 2021 Positive First Pass Drilling Results Smokebush Gold Project.
- 13 September 2021 New Geological Interpretation (Monza) & Exploration Update, Smokebush Gold Project.
- 23 August 2022 New Project Calytrix & Smokebush & Wild-viper Gold Project Updates.
- 2 December 2022 Acquisition Smokebush JV Tenement Now 100% owned.
- 6 December 2022 Smokebush Pegmatite Swarms Identified, Sampling for Lithium Mineralisation Underway.
- 7 February 2023 Smokebush 2023 Field Season Now Underway, IP Survey & MMI Soils Programs

# **ABOUT TERRAIN MINERALS LIMITED:**

Terrain Minerals Limited (ASX:TMX) is a mineral exploration company with a Western Australian based asset portfolio consisting of:

- **Investments:** As of the date of this announcement, Terrain holds 650,000 Red 5 Limited shares (ASX: RED) from the GW sale.
- Lort River Western Australian Rare Earth Elements exploration project 100% owned. Covering 320km2 of highly prospective exploration acreage for REE within the now tightly held and emerging southern Esperance clay hosted REE province of Western Australia Cube Consulting has been appointed to ensure that all exploration drilling is compliant with JORC code. Terrain is currently planning for a large wide spaced 8,500m 1600m by 1600m, 60m deep air core program over tenement package under way. All holes will be drilled to be JORC compliant. Drilling aims to test two targets: Firstly: Shallow clay REE and Secondly: Bottom of hole samples will be testing for Tropical style gold and Nova style base metal targets.

- Smokebush (SB) WA Gold exploration Project 100% owned Terrain has identified multiple drill targets along with several other prospective areas. Terrain executed its extraordinarily successful maiden RC drill program in 2020, which followed up on historic drilling and extended mineralisation a further 400m, (now 700m in length). As well as identifying a new zone Monza Norths that appears to be on a different orientation. MMI soil sampling results are pending at Larin's Lane, and an IP survey is being completed over Paradise City, Hurleyadn Monza. Refer to the above release for comprehensive update.
- **SB Lithium -** 15+ pegmatites identified to date, ranging from 5m to 30m wide and up to 200m long until appearing to go under cover. These areas have been sampled and results are expected first Q 2023. Terrain intends to drill these pegmatites subject to sample results identify Lithium mineralisation.
- **Wild-viper** WA gold exploration Project 100% owned which incorporates the strategic land holding known as Wilson Patch (WP). Wild-viper tenement package is strategically located and surrounds Red5 Ltd Great Western Project (GW) as well as being adjacent to Northern Stars (ASX: NST) Bundarra gold deposits.
- **Project Review** Terrain Minerals continues to investigate potential projects across various commodities including Gold, Copper, Nickel, and other industrial minerals, REE and the platinoids groups of metals in Australia and in other jurisdictions like Africa, Continental Europe, and the Americas.

# **Authority**

This announcement has been authorised for release by the Justin Virgin Director of Terrain Minerals Limited.

# **Competent Person Statement:**

The information in this report that relates to Exploration Results are based on information compiled by Mr. B. Bell, who is a Member of the Australian Institute of Geoscientists and is a consultant retained by Terrain Minerals Ltd. Mr Bell is a shareholder and options holder of Terrain Minerals Ltd. Mr Bell 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. Bell consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

# **ASX Listing Rule 14.3**

In accordance with ASX Listing Rule 14.3 and its Constitution, the Company advises that valid nominations for the position of director remain open throughout the year.

# **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.

#### Disclaimer:

Information included in this release constitutes forward looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward-looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue" and "guidance" or other similar words, and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the company's actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of

obtaining necessary licences and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the company operates or may in the future operate environmental conditions including extreme weather conditions, staffing and litigation

Forward looking statements are based on the company and its management's assumptions made in good faith relating to the financial, market, regulatory and other relevant environments that exist and effect the company's business operations in the future. Readers are cautioned not to place undue reliance on forward looking statements.

Forward looking statements are only current and relevant for the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the company does not undertake any obligation to publicly update or revise any of the forward-looking statements or advise of any change in events, conditions or circumstances on which such statement is based.