ASX Announcement

TERRAIN MINERALS

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Larin's Lane Metallurgical Studies Confirm High Rare-Earth Recoveries with Promising Gallium & Scandium Upside

Curtin University leaching test work returns >80% total rare-earth recovery with a recoverable scandium credit (MRIWA Research Project M10528)

Terrain Minerals Limited (ASX: TMX) is pleased to report positive metallurgical leaching results for its 100%-owned Larin's Lane Prospect, part of the Company's Smokebush Project located approximately 350 kilometres north of Perth, Western Australia.

The test work was undertaken by Curtin University's Critical Minerals, Metals and Materials for the Energy Transition (C3MET) Research Group as part of Minerals Research Institute of Western Australia (MRIWA) Research Project M10528 – Extraction of Clay-Hosted Rare-Earth Element Deposits in Australia[1].

These Exciting first-stage metallurgical results further confirm the potential of the Larin's Lane Prospect. Importantly, the test work identified the MSA leaching process as particularly successful. The knowledge gained from these exciting results will provide a strong foundation for further studies aimed at developing a viable pilot-plant-scale operation and processing flowsheet.

Key Points

- **Rare earths confirmed recoverable –** metallurgical leaching test work by Curtin University's C3MET, under MRIWA Research Project M10528 led by RSC, achieved total rare-earth element (REE) recovery of 83% from Larin's Lane clay material (3 M methanesulphonic acid, 50°C, 1 wt% solid-to-liquid, 24 h).
- **Recovery increases with pre-treatment –** REE recovery rose to up to 99% with thermal pre-treatment (calcination) of the clay prior to leaching at 80°C.
- **Scandium credit confirmed –** scandium reported as a consistent recoverable credit, with extraction rising to ~67–79% under elevated-temperature and calcined conditions (~46% under mild conditions), offering the potential for an additional critical mineral product stream.
- **Gallium upside identified –** Ga also brought into solution, improving from ~12–25% under mild conditions to up to 89% with calcination followed by 3 M MSA at 80°C dissolution; head Ga grades are modest (20–24 ppm) and recovery tracks Al dissolution; selective Ga recovery remains subject to further study.

Key points continue next page:

[1] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/extraction-of-clay-hosted-rare-earth-element-deposits-in-australia/

- **MSA the standout lixiviant –** methanesulphonic acid (MSA) outperformed the citric and tartaric organic acids tested.
- **A lower-impact reagent –** high recoveries achieved using MSA, a readily biodegradable, non-oxidising organic acid, rather than the hydrochloric acid (HCl) on which many peer clay-hosted REE recoveries are reported. MSA breaks down in the natural sulfur cycle, is classified as readily biodegradable, and does not generate the chlorine-bearing off-gases associated with HCl leaching, pointing to a potentially lower-impact and lower-hazard processing route.
- **An established, off-the-shelf reagent –** MSA is a widely used industrial acid available off-the-shelf from major suppliers.
- **Foundation for resource and scoping work –** the results provide an important technical input to underpin any future Mineral Resource estimate and Scoping Study for Larin's Lane and confirm the metallurgical amenability of the regolith.

Two representative clay samples were assessed across a range of leaching agents, acid strengths, solid-to-liquid ratios, temperatures and leach durations. The results confirm that the rare earth elements, that are the primary focus of the MRIWA program, can be recovered at high efficiency, *with scandium as a valuable credit.*

Executive Commentary

Commenting on the results, Mr Justin Virgin, Executive Director of Terrain Minerals, said:

"These results are an important technical milestone for Larin's Lane. Working with Curtin University through the MRIWA M10528 program, we now have direct evidence that the rare earths in our clay-hosted material can be recovered at high efficiency, with scandium reporting as a valuable additional credit and gallium offering further upside as metallurgical studies advance."

"This test work gives Terrain a genuine technical foundation to advance the Project towards resource and scoping-level studies, and to progress discussions with potential partners."

"Larin's Lane continues to demonstrate strong potential, with these studies highlighting the opportunity to recover valuable, rare-earth elements alongside gallium and scandium. We are very grateful to the WA Government for supporting this important research, and to the teams at RSC and Curtin University for their significant efforts. Research such as this drives innovation, supports new discoveries and helps unlock opportunities that can continue to strengthen Western Australia's mining industry."

Project Background

The Larin's Lane Prospect lies within the 100%-owned Smokebush Project in the Yalgoo Mineral Field, approximately 350 kilometres north of Perth and approximately 85 kilometres southwest of Critica's (ASX: CRI) Jupiter REE Project.

Maiden air core drilling in late 2023 intersected broad zones of clay-hosted rare earth element and gallium mineralisation over an interpreted strike of approximately 9 kilometres by 3 kilometres, which remains open horizontally in all directions[2].

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[2] Previously reported by Terrain Minerals via the ASX Market Announcements Platform on 6 November 2024.

The Company released an Exploration Target for the Project, reported in accordance with the JORC Code (2012), in November 2024[2].

As part of the MRIWA-funded M10528 research program, co-funded by industry, Curtin University Resources Technology and Critical Minerals (RTCM) Trailblazer program, and the Western Australian Government, two representative composite samples (D1 and D2,Table 1) from Larin's Lane air core samples were submitted to Curtin University's C3MET for metallurgical leaching test work to assess the amenability of the regolith to critical-mineral extraction. The geochemical analyses of the feed samples are presented in Table 1 with head grades of 2,237 ppm and 694 ppm TREO and low radioactive Th and U.

Terrain gratefully acknowledges the support of the Minerals Research Institute of Western Australia (MRIWA), the Western Australian Government, Curtin RTCM Trailblazer program, and the industry co-sponsors of MRIWA Research Project M10528, together with Curtin University's C3MET as research provider.

Table 1: Feed sample composition.

Sample ID	Composite intervals	Weight (kg)	TREO	MREO	HREO	Sc	Ga	Th	U
D1	SBRC067: 68-70 m, 72-73 m	20.5	2,237	465	260	34	20	15	4.6
D2	23SBAC047: 56–58 m; 23SBAC054: 44–46 m; 23SBAC056: 61–63 m; 23SBAC067: 28–30 m	25	694	141	153	21	24	23	6.7

TREO = Sum of total rare earth oxides La_2O_3, CeO_2, Pr_6O_{11}, Nd_2O_3, Sm_2O_3, Eu_2O_3, Gd_2O_3, Tb_4O_7, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, Lu_2O_3, Y_2O_3

MREO = Sum of magnet rare earth oxides (Pr_6O_{11}, Nd_2O_3, Tb_4O_7, Dy_2O_3) used in the manufacture of permanent magnets.

HREO = Sum of heavy rare earth oxides ($Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3$).

Metallurgical Test Work Results

Of the leaching agents assessed, methanesulphonic acid (MSA) was the strongest performer, outperforming the citric and tartaric organic acids tested (Table 2, 3).

For 3-molar MSA, total REE recovery of up to 83% was achieved for Sample D1 at only 50 °C (Table 2, 3). Increasing the slurry density (i.e. adding more clay to the reactor while maintaining the same amount of lixiviant), did not result in a noticeable reduction in recovery. This suggests acid consumption per tonne of clay treated could potentially be reduced by operating at higher pulp density without a material loss in recovery, a variable worth testing further. Recovery itself is driven primarily by acid strength rather than acid quantity, with total REE recovery for Sample D1 falling from 82% to 28% at 24 hours when MSA concentration was reduced from 3 M to 0.1 M. Higher recoveries were also accompanied by increased co-dissolution of gangue elements including aluminium and iron, so further test work will focus on balancing REE recovery against reagent consumption and gangue dissolution rather than simply reducing acid dosage.

REE recovery is largely uniform across the REE suite with highest recoveries (>80%) noted for the middle REEs at ~Nd–Ho in the example in Diagram 1.

REE recovery increased with thermal pre-treatment (calcination) of the clay prior to leaching, reaching close to 100% REE recovery.

Gangue dissolution was typically minor for the organic acid experiments carried out at 25–50 °C, see Al, Fe, and Si results in Table 1, 2. For instance, sample D1 yielded 74 % TREE recovery, while only 0.7% Si, 3% Al and 16% when reacting with 3 M MSA for 24 h at 25 °C (Table 3).

Citric acid (3-molar) recovered ~10–20% TREE and 3-molar tartaric acid up to 44% TREE.

A notable feature of these results is that the recoveries were obtained using methanesulphonic acid (MSA) rather than hydrochloric acid (HCl). Many published clay-hosted rare-earth recoveries, including those of nearby and peer projects, are reported on the basis of HCl leaching. MSA is a strong organic acid that is readily biodegradable, non-oxidising and breaks down within the natural sulfur cycle, and it does not generate the chlorine-bearing off-gases associated with hydrochloric acid. Together these properties point to a potentially lower-impact and lower-hazard processing route, which the Company considers a meaningful point of differentiation when comparing recovery outcomes reported by other clay-hosted rare earth projects.

MSA is a commercially mature, off-the-shelf reagent, supplied at industrial scale by producers including BASF (under the Lutropur® brand), and is used widely in everyday products such as household bathroom cleaners and rust removers. The test work therefore relies on a readily available reagent rather than a specialised or proprietary chemistry.

Encouraging recoveries using MSA indicate that REEs in clay at Larin's Lane are susceptible to extraction by acid leaching, supporting further hydrometallurgical testwork focussing on lower-cost reagents.

Scandium reported consistently as a recoverable credit across the MSA test work, with extraction increasing under elevated temperature (~68% Sc recovery at 80 °C) and after calcination (79% Sc recovery). The presence of a recoverable scandium credit alongside the rare earths is a positive feature of the Larin's Lane regolith.

Gallium was also brought into solution. Whilst under initial mild leach conditions gallium extraction was low at ~12–25%, gallium recovery was successfully improved with up to 89% being demonstrated under the combination of thermal pre-treatment and 3M MSA leaching at 80°C. The Company notes that the gallium head grade in the samples tested is modest (20–24 ppm) and that gallium recovery is positively correlated with Al recovery, due to dissolution of aluminosilicate minerals. Gallium therefore represents potential upside, but economic gallium recovery remains subject to significant further optimisation and study.

Higher recoveries were generally accompanied by increased co-dissolution of gangue elements. Importantly, the material did not respond to ammonium sulphate leaching, indicating the rare earths and associated critical minerals are not present in a readily ion-exchangeable form and that an acid-based leach is required.

The two bulk metallurgical samples are very well characterised using mineralogical and geochemical techniques including X-ray diffraction, scanning electron microscopy, ionic leach tests, and flux-fusion results, and are split into pulp duplicates using a rotary splitter. These well-characterised samples serve as base for further studies.

Table 2: Summary of best-case recovery by leach condition (Sample D1, 24 hr).

Condition (Sample D1)	REE	Sc	Ga	Gangue (Al/Fe)
3M MSA, 50 °C, 1 wt%, 24 h	83%	52%	12%	Low
3M MSA, 80 °C, 1 wt%	86%	68%	29% (37% after 48h)	Elevated
3M MSA, 80 °C, 1 wt% + thermal pre-treatment	99%	79%	89%	High
3M ammonium sulphate, 50 °C, 1 wt%	<2%	7%	Below detection limit	Low

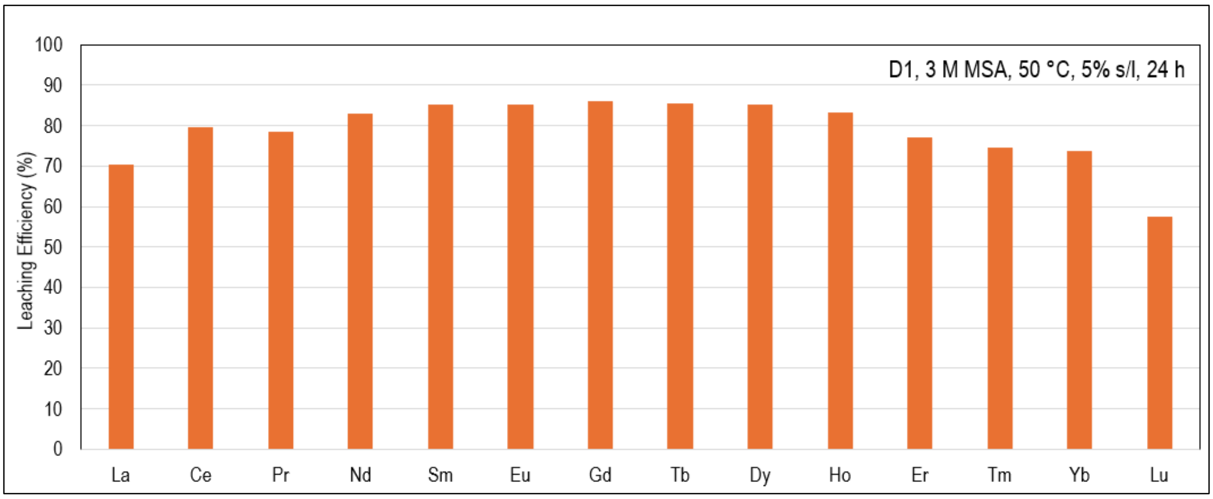

Diagram 1: Rare earth elements leaching efficiency for Larin's Lane sample D1 using 3 M MSA at 50 °C, at a 1:20 solid-to-liquid ratio after 24 h.

Geological and Metallurgical Interpretation

The test work confirms that the rare earth elements and scandium hosted within the Larin's Lane regolith are recoverable by acid leaching, with methanesulfonic acid the preferred reagent.

The lack of response to ammonium sulphate leaching indicates the mineralisation is not ion-adsorption clay-hosted in the same manner of South China deposits, and that recovery is driven by acid dissolution rather than ion exchange. This is in line with previous studies on Australian clay-hosted REE deposits that typically have a negligible ionic component as the REE mineralisation is dominated by residual and secondary REE minerals in the weathering profile (Knorsch et al., 2025).

Forward Program

With rare earth and scandium recovery confirmed, the Company will progress the following:

- optimisation test work to define the preferred leaching agents and leach conditions, balancing REE and scandium recovery against reagent consumption and gangue co-dissolution;

- further evaluation of the scandium credit, and of gallium recovery and head grade;
- integration of metallurgical recovery assumptions into future Mineral Resource and scoping-level studies for Larin's Lane; and
- continued progression of any discussions with potential partners in relation to the critical mineral mineralisation at Larin's Lane.

Any forward program will be reported in due course.

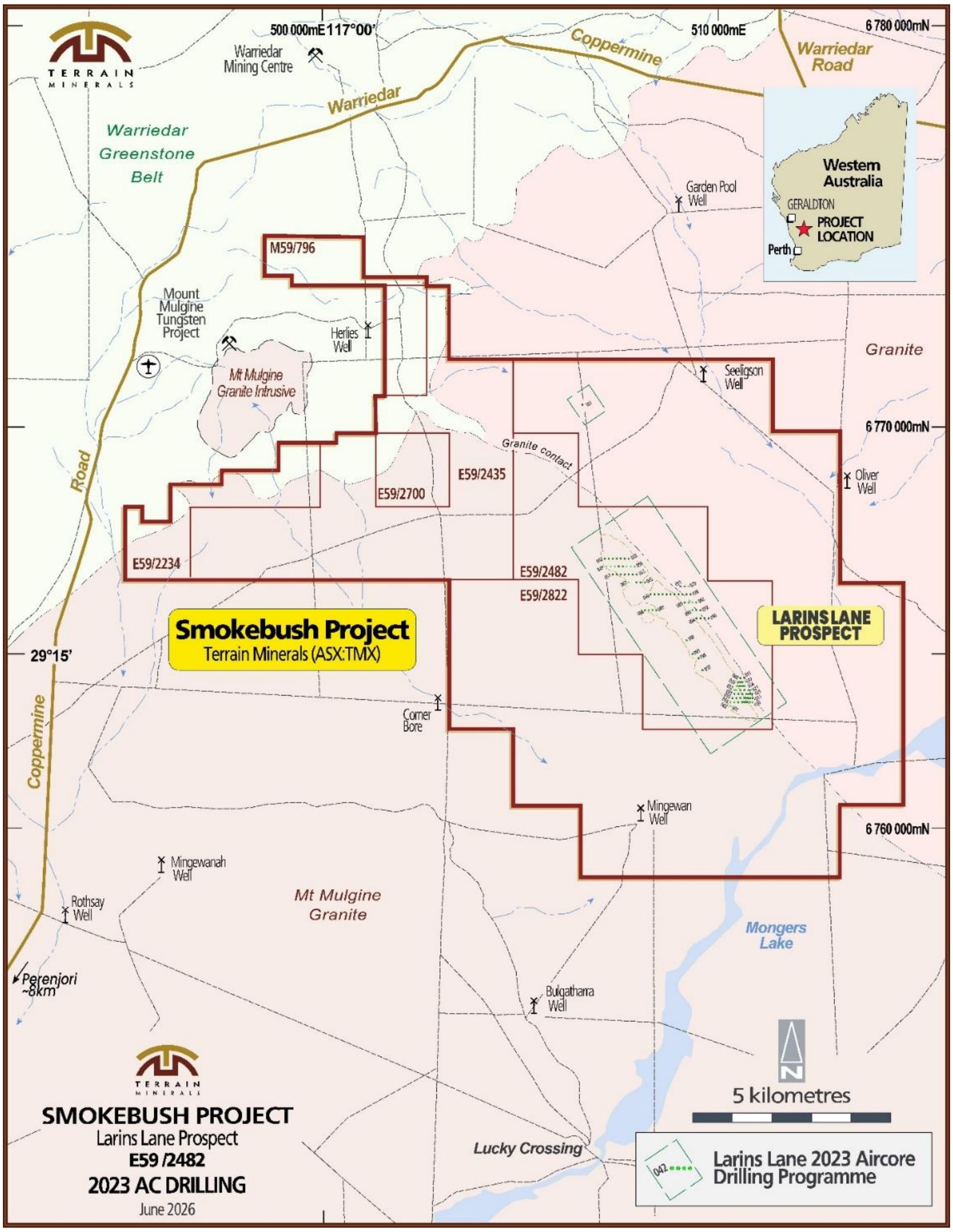

Diagram 2: Location of the Larin's Lane Prospect within Terrain Minerals' 100%-owned Smokebush Project, Murchison region, Western Australia.

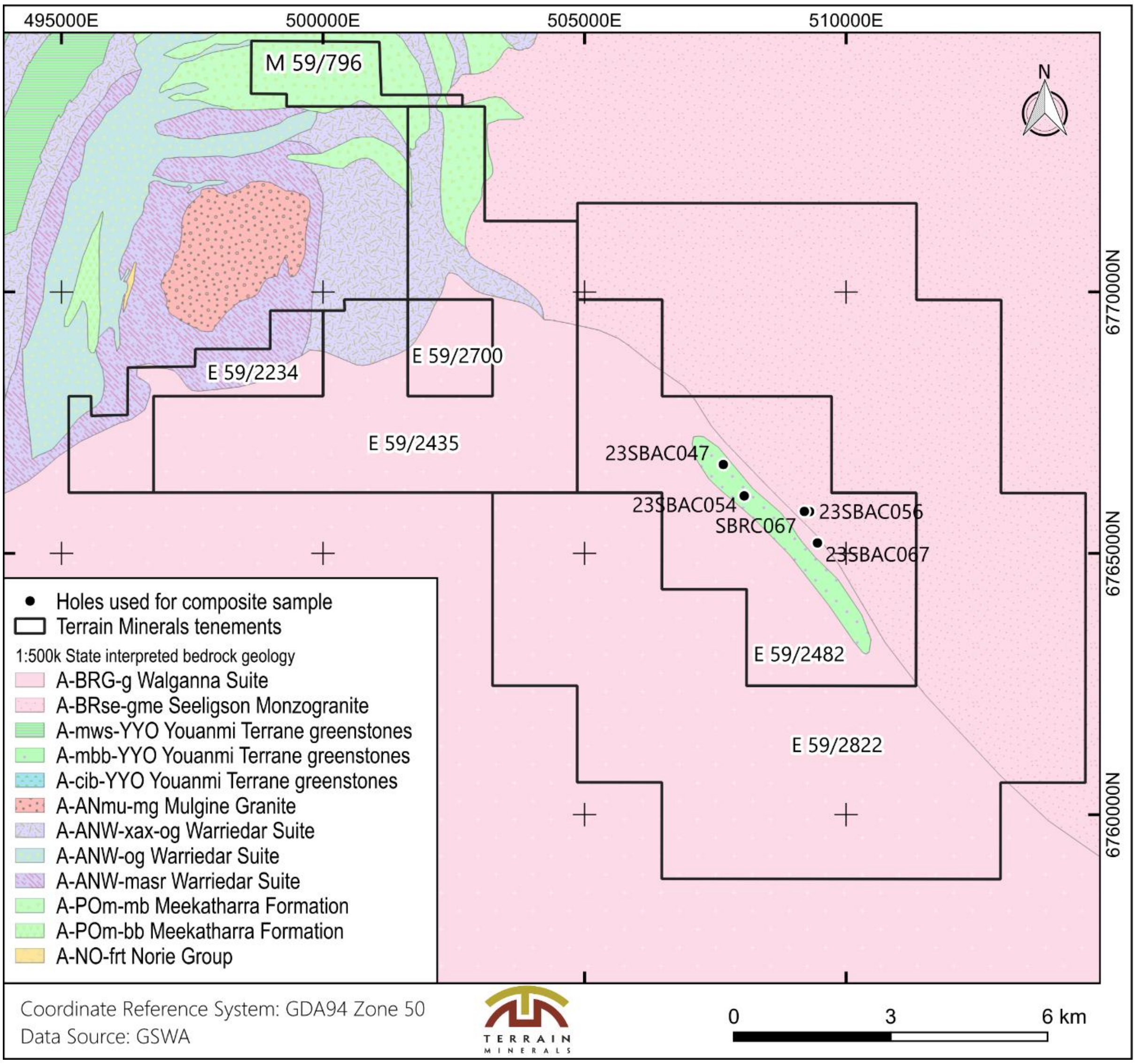

Diagram 3: Local geology map and location of the holes used for compositing the metallurgical sample.

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Authority

This announcement has been authorised for release by Mr Justin Virgin, Executive Director, Terrain Minerals.

About Terrain Minerals

Terrain Minerals (ASX: TMX | FSE: T4Y) is an exploration company with a portfolio of projects across Western Australia and Queensland. The company's primary focus is advancing the flagship Smokebush Gold & Silver Project toward resource definition, where the Lightning maiden Mineral Resource Estimate (MRE) was released on the ASX on the 27 July 2026. The company's focus now aimed at growing it's the maiden MRE. The company's portfolio approach provides upside optionality in copper, gallium, rare earths, and lithium while maintaining disciplined capital allocation to the gold-focused core.

The Company main focus is on advancing its flagship Smokebush gold/silver project.

Key Projects

⚒ <u>Smokebush Gold & Gallium Project - (Flagship Project)</u>

- Located in the Yalgoo Mineral Field, neighbouring Warriedar Resources' Golden Range Project (now Capricorn Metals) and 50 kilometres south of 29Metals' Golden Grove mine. Vault Mining's Rothsay Gold Mine lies only 10 km's away.
- Lightning Gold Prospect – RC drilling continues to deliver exceptional gold and silver grades with assays confirming significant mineralisation potential. Mining Lease now granted, and also holds the Lightning deposit. Lightnings Maiden 'STARTER' Mineral Resource Estimate (MRE), refer to ASX releases 27 July 2026.
- Smokebush tenement package has multiple emerging gold and silver targets that are also being systematically advanced, and other targets include the Wildflower area, Hurley and Paradice City.
- Larin's Lane Gallium Prospect – Broad gallium intersections from 102 air-core holes across a 9 km x 3 km area. JORC Exploration Target defined over 5% of the 27 km² footprint. Metallurgical studies with MRIWA and WA Government support are now completed. Refer to the above release.

⚒ <u>Biloela Gold and Copper Project</u>

- Covers 2,500 km² near Aeris Resources, Cracow Gold Mine and hosts multiple gold and copper targets, first identified by Newcrest.

⚒ <u>Lort River Rare Earths Project - Drill Results Pending</u>

- Located 50 km's northwest of Esperance in the Albany-Fraser Belt where early drilling confirmed high-grade clay-hosted rare earths (Nd, Pr) with results comparable to leading Australian and Brazilian projects. Air-core drilling was highly successful (refer to ASX release 13 March 2026 and 1 July 2026).

⚒ <u>Carlindie Lithium & Gold Project</u>

- Located 90 km's southwest of Port Hedland, strategically situated between Wildcat Resources and SQM.
- Large 15 km long soils program and Machine Learning study identified three targets with one target having been tested with a soil sampling program, refer to ASX release on the 04 June 2026 and 01 September 2026.

<u>Project Pipeline & Growth Strategy</u>

Terrain continues to actively review additional opportunities across gold, copper, industrial minerals, and battery/critical metals. While the Companies 100% owned flagship Smokebush gold and silver project is the company's focus its other WA and Queensland projects will be advanced forward on the side lines (see diagram 4). The Company is open to also assess opportunities in base and specially metals and other economic commodities in Africa, Europe, Asia and the Americas, but is currently not actively pursuing such opportunities.

Diagram 4. Terrain project location map and commodities.

Previously Reported Results

Information in this report that relates to previously reported results was released by Terrain Minerals via the ASX Market Announcements Platform on 6 November 2024. Terrain Minerals confirms that it is not aware of any new information or data that materially affects the information included in this original announcement.

Competent Person's Statement

The information in this report that relates to metallurgical testwork results is based on information compiled under the supervision of Dr Manuel Knorsch, a Competent Person who is a Member of The AusIMM and a Member of the AIG. Dr Knorsch is employed by RSC as Senior Geoscientist. The full nature of the relationship between Dr Knorsch and Terrain Minerals has been declared, including any issue that could be perceived by investors as a conflict of interest. Dr Knorsch has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity he has undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for the Reporting of Mineral Resources and Ore Reserves. Dr Knorsch consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

Disclaimer

Information included in this report 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. 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. The results of metallurgical test work reported herein are preliminary and at an exploratory bench-scale stage; no assumptions should be made as to the economic viability of recovering rare earths, scandium or gallium from the Company's tenements. Readers are cautioned not to place undue reliance on forward looking statements, which are only current and relevant as at the date of issue.

Knorsch, M., Gazley, M., Ince, M., Kartal, M., Trunfull, E., Lilly, K., Piechocka, A., Lu, Y., Cooke, B. & Kelaart, C., 2025. Characterisation of clay-hosted rare-earth element deposits in Australia: mineralogy, geochemistry and metallurgy. *Australian Journal of Earth Sciences*, **72**, 1005-1024. https://doi.org/10.1080/08120099.2025.2570934.

Table 3: Summary of total REE (TREE), Ga, Sc and gangue recovery in % and experimental conditions. AS = ammonium sulphate, MSA = methanesulphonic acid, TA = tartaric acid, CA = Citric acid. *Samples were heated to 600°C for 120 minutes prior to leaching with 3 M MSA

Sample ID	Lixiviant	Acid Strength (M)	time (h)	S/L %	Temp (°C)	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Y	Sc	Ga	Th	U	Fe	Al	Si	TREE
D1	AS	0.1	24	1	50	0.4	0.4	0.4	0.4	0.5				0.6		1.4		0.9		1.3				3.9	2.1	0.1	0.1	0.4
D1	AS	0.1	48	1	50	0.4	0.4	0.4	0.4	0.5				0.8		1.3		1.7		1.2				3.6	1.4	0.1	0.2	0.5
D2	AS	0.1	24	1	50	1.0	1.0	1.2	1.2	1.0				1.3		1.2		1.2		1.9				4.1	0.7	0.0	0.3	1.1
D2	AS	0.1	48	1	50	1.0	1.0	1.1	1.2	0.9				1.8		2.2		1.2		2.3				3.8	0.5	0.1	0.4	1.2
D1	AS	3	24	1	50	0.8	0.6	1.0	0.8	1.4		1.9								1.5	6.5			16.3	7.1	0.6	0.2	0.8
D1	AS	3	48	1	50	0.8	0.7	0.9	0.7	1.3		1.8		2.3						2.1	6.1			15.1	6.6	0.7	0.3	0.8
D2	AS	3	24	1	50	1.4	1.6		1.8			5.1								3.1	6.9		3.2	11.4	0.8	1.4	0.5	1.6
D2	AS	3	48	1	50	1.3	1.5	3.0	1.6			4.7								2.8	6.3		2.9	10.4	0.7	1.3	0.6	1.6
D1	MSA	0.1	24	1	50	24	28	27	29	29	32	35	34	36	34	33	31	32	26	35		6.8	7	28	15	2.7	0.7	28
D1	MSA	0.1	48	1	50	26	31	30	32	32	34	37	37	37	36	37	34	32	24	37		8.3	7	27	16	3.0	0.9	31
D2	MSA	0.1	24	1	50	21	26	28	32	32	32	40	38	33	30	26	24	20	17	23		7.8	11	32	7	8.9	2.4	26
D2	MSA	0.1	48	1	50	24	30	32	37	37	39	44	44	36	31	27	23	21	16	25		11.0	13	31	8	10.0	3.0	30
D1	MSA	3	24	1	50	77	85	79	83	86	82	82	86	83	80	76	93	64	58	78	52	12.1	76	53	27	6.5	1.3	83
D1	MSA	3	48	1	50	67	74	70	71	73	74	72	64	72	72	68	84	65	52	71	46	14.4	73	47	30	8.0	1.1	72
D2	MSA	3	24	1	50	50	69	68	71	73	61	77	75	63	59	53	71	45	77	50	26	24.3	38	49	18	20.9	1.5	63
D2	MSA	3	48	1	50	46	66	62	69	70	55	75	68	62	54	57	65	50	70	55	27	25.2	40	45	20	24.2	1.2	61
D1	MSA	3	24	1	25	70	76	72	77	74	82	80	72	75	80	70	47	56	58	69	42	4.0	76	53	16	3.0	0.7	74
D1	MSA	3	48	1	25	69	75	70	75	70	78	78	81	74	76	72	44	61	55	69	44	3.8	72	50	17	3.4	0.7	73
D1	MSA	3	24	1	80	79	87	80	86	83	85	89	89	89	83	85	96	83	59	89	68	29.1	84	54	54	20.8	1.4	86
D1	MSA	3	48	1	80	74	80	74	79	77	83	80	79	77	74	76	86	74	53	79	67	37.2	75	65	61	30.9	1.9	79
D1	MSA	3	24	5	50	70	80	78	83	85	85	86	86	85	83	77	75	74	57	77	51	10.4	79	56	25	6.0	0.3	79
D1	MSA	3	48	5	50	66	74	73	77	80	78	80	80	79	78	73	70	71	65	74	50	15.0	75	52	31	8.1	0.2	74
D1	MSA	3	24	10	50	73	82	84	89	84	88	92	80	82	80	74	66	68	54	80	53	10.6	84	58	26	6.4	0.1	82
D1	MSA	3	48	10	50	69	76	77	83	76	83	85	77	78	75	71	65	66	55	75	51	15.1	81	56	30	8.2	0.1	76
D1*	MSA	3	24	1	80	100	100	100	100	96	100	91	100	100	99	92	98	80	61	89	79	89.3	100	70	91	94.3	1.2	99
D1*	MSA	3	48	1	80	100	94	98	94	88	95	87	97	93	92	91	91	82	57	83	73	83.0	88	65	85	88.8	1.1	94
D1	TA	1	24	1	50	16	18	19	21	20	24	26	26	27	27	27	24	26	24	25	49	6.3	24	22	27	5.3	2.1	19
D1	TA	1	48	1	50	21	24	25	27	26	30	32	31	33	33	33	27	31	28	31	45	11.7	32	26	37	6.9	2.6	25
D2	TA	1	24	1	50	15	21	21	24	24	28	35	31	29	25	24	22	20	16	20		18.2	21	31	18	14.9	5.9	21
D2	TA	1	48	1	50	17	24	24	27	27	29	37	36	30	28	25	21	20	22	21		20.1	24	32	23	17.0	5.2	24
D1	TA	3	24	1	50	28	33	32	32	32	38	39	40	41	39	37	39	36	32	37	44		43	29	31	6.2	2.1	33
D1	TA	3	48	1	50	39	44	43	43	43	49	50	51	51	50	46	44	45	40	46	40		56	36	40	8.2	2.3	44
D2	TA	3	24	1	50	21	31	30	33	33	36	44	42	35	33	27	27	24	21	25		21.0	27	33	18	17.0	3.4	29
D2	TA	3	48	1	50	26	39	37	38	39	41	48	45	40	33	30	25	28	20	29		24.1	33	35	23	20.5	2.9	35
D1	CA	3	24	1	50	7	9	10	11	11	12	14	14	15	16	16	17	16	16	14	42	7.2	14	16	23	4.8	1.3	10
D1	CA	3	48	1	50	10	12	13	14	14	15	18	18	18	18	19	19	18	14	18	38	6.6	18	17	26	5.8	1.2	13
D2	CA	3	24	1	50	8	13	13	15	16	16	22	20	19	16	16	13	13	14	14		17.2	14	24	13	14.0	1.9	13
D2	CA	3	48	1	50	10	16	15	18	19	20	25	25	21	19	19	18	16	13	16		17.1	16	24	15	16.2	1.5	16

JORC Table 1

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Appendix 1

Section 1: Sampling techniques and data

(Criteria in this section apply to all succeeding sections).

Criteria	JORC Code explanation	Commentary
Sampling techniques	▪ Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. ▪ Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. ▪ Aspects of the determination of mineralisation that are Material to the Public Report. ▪ In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	▪ The metallurgical test work presented in this release have been prepared using data collected from a drilling program conducted by Terrain Minerals in 2023. The Exploration Results have previously been reported by Terrain Minerals in ASX announcement entitled *Exciting Gallium & REE drilling results at Larin's Lane*, dated 27 May 2024. Drill hole SBRC067 was a metallurgical test hole drilled at the Company's Larins Lane Project. Drilling was supervised and samples collected by field personnel from both Terrain Minerals and Apex Geoscience, the latter being an independent geological consultancy. ▪ The drilling was conducted as a reconnaissance program to assist in assessing the prospectivity of the project area. Terrain acknowledges that, for this initial stage of exploration, sample collection and field preparation procedures may not be consistent with 'best practice' approaches. ▪ The samples were taken over 1 metre intervals and laid out as drill spoil piles. Spear sampling was used to collect a sub-sample from each pile, and the sub-samples were combined in the field to produce composites. Over 70% of the samples submitted for assaying were composited over 4 metre intervals, with most of the remainder composited over 3 metre intervals. A small number of samples were collected over 1 metre or 2 metre intervals (<5%) – most of these occur at the ends of the drill holes.
Drilling techniques	▪ Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	▪ All the AC drilling was completed in late 2023 by Raglan Drilling using a single air core drill rig fitted with a 4.25" bladed bit. ▪ Hole SBRC067 was completed in 2025 by KTE Mining Services using a truck mounted reverse circulation (RC) drill rig with auxiliary compressor. RC drilling used a 6 ½ inch face sampling hammer with 4 ½ inch rods. ▪ The holes are all relatively shallow, with an average depth or 65 metre and a maximum depth of 107 metre. All holes are assumed to be vertical, and downhole surveying was not performed.

Criteria	JORC Code explanation	Commentary
Drill sample recovery	▪ Method of recording and assessing core and chip sample recoveries and results assessed. ▪ Measures taken to maximise sample recovery and ensure representative nature of the samples. ▪ Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	▪ An assessment of recovery is understood to have been limited to visual assessment of the volume of sample collected from each interval. ▪ There is insufficient information available to determine whether there is a relationship between sample recovery and grade. Given the nature of the material and the sampling method, a significant relationship is not expected. ▪ The drill string and cyclone were flushed at the end of each hole to reduce the likelihood of contamination. A booster was also used in conjunction with the RC drill rig to ensure dry samples are achieved
Logging	▪ Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. ▪ Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. ▪ The total length and percentage of the relevant intersections logged.	▪ Geological logs were prepared for all holes and provided in electronic form. ▪ The logging is qualitative and quantitative in nature and data have been collected over the total lengths of the holes. ▪ The logs were prepared from a visual examination of the drill cuttings. Portable x-ray fluorescence (XRF) readings were taken on the drill spoil samples, and these results were used to assist with lithological interpretation.

<table>
<tr>
<td>Sub-sampling techniques and sample preparation</td>
<td>

If core, whether cut or sawn and whether quarter, half or all core taken.
If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.
For all sample types, the nature, quality and appropriateness of the sample preparation technique.
Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.
Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.
Whether sample sizes are appropriate to the grain size of the material being sampled.

</td>
<td>

The air core samples were collected on 1 metre intervals from the cyclone underflow and then dropped into spoil piles. Spear sampling was used to collect a split from each pile, and the splits were then combined to represent 3 metre or 4 metre composites.
The weights of the 1 metre samples, the speared splits, or the composites were not recorded.
As outlined above, this work was conducted as part of a reconnaissance program. Procedures specifically designed to maximise recovery and monitor quality were not included.
The RC drill samples were collected at one metre intervals through a cone splitter mounted to a vertical cyclone. The samples were collected as ~ 3 kg sub-sample splits.
The sample size is considered to be suitable for this style of mineralisation.
The drill samples were composited at RSC and submitted to ALS, Malaga for drying at 60 °C, before homogenisation and splitting of the samples using a rotary splitter. A ~14 kg was split for further processing, and the remaining coarse material was returned to RSC. RSC scooped a 10-g representative split of the returned coarse material for SEM sample preparation.
The 14-kg samples were crushed to 90% passing 3 mm, and subsequently pulverised to 90% passing 75 µm. A 10-g scoop split was taken from the pulverised material for XRD analysis. Laser size distribution analyses were carried out on one split sample from the pulverised material from each of the two composite samples.
Each pulverised sample was rotary split into seven 2-kg subsamples, and each subsample was analysed using ALS method ME-MS81d.

Leach test work was conducted at Curtin University, Perth, using bottle rollers or stirred glass reactors with ~300-mL leach solution. Experiments were conducted under varying conditions of temperature, lixiviant concentration, and leach duration. The conditions used in each leach test are summarised in the table below. Typical leaching conditions comprised a temperature of 50°C and a solids concentration in reactor of 1 wt.% (~3 g of clay in 297 mL of solution). 7.7 mL aliquots were sampled at 1, 3, 6, 24, and 48 hours, with corrections applied for cumulative solution volume loss when calculating recoveries for the 3–48 hour time intervals.
The lixiviants used comprised ammonium sulphate to determine the ionically adsorbed REE fraction, and methanesulphonic acid (MSA), citric acid (C), and tartaric acid (T) as representative organic lixiviants.
Sample D1 was calcined at 600°C prior MSA leaching to evaluate the effect of thermal decomposition of REE minerals and clay-bound REEs on subsequent leach performance.

<table>
<tr><th>Lixiviant</th><th>Concentration (M)</th><th>Temperature (°C)</th><th>Solid Weight % in Reactor (s/l ratio by weight)</th><th>Duration (h)</th></tr>
<tr><td>Ammonium Sulphate</td><td>0.1, 3</td><td>50</td><td>1 (1:99)</td><td>1, 3, 6, 24, 48</td></tr>
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</tr>
</table>

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Citric Acid</td><td>3</td><td>50</td><td>1 (1:99)</td><td>1, 3, 6, 24, 48</td></tr>
<tr><td>Tartaric Acid</td><td>1, 3</td><td>50</td><td>1 (1:99)</td><td>1, 3, 6, 24, 48</td></tr>
<tr><td>Methanesulphonic Acid</td><td>0.1, 3</td><td>25, 50, 80</td><td>1 (1:99), (1:19), 10 (1:9)</td><td>1, 3, 6, 24, 48</td></tr>
<tr><td>Methanesulphonic Acid on Pre-Treated (Calcined) Sample</td><td>3</td><td>80</td><td>1 (1:99)</td><td>1, 3, 6, 24, 48</td></tr>
</table>
</td></tr>
<tr><td>Quality of assay data and laboratory tests</td><td>

The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.
For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.
Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.

</td><td>

ALS method ME-MS81d provides the full REE suite together with major elements determined by method ME-ICP06 (Na, K, Al, Si, Mg, Fe, etc.). Lithium borate fusion was carried out prior to acid dissolution and ICP-MS/AES analysis, and the method typically results in total digestion of the sample and is considered best practice by the Competent Person. Each 2-kg subsample was further riffle split into two 1-kg samples, transferred into plastic bags and transported to Curtin University for leach testing.
Following leaching experiments, pregnant leach solutions (leachates) were analysed for metal content using ALS method ME-MS02 (ICP-MS). Recoveries of REEs, Sc, Ga, and gangue elements were calculated based on reagent volumes, solution densities, and the chemical composition of both feed and leachate.
For experiments with high recoveries, solid leach residues were also analysed at ALS to enable mass-balance calculations. Leach residues were analysed using the same method as the feed samples (ME-MS81d).
ALS performed sizing tests for crushed and pulverised materials, inserted blanks and certified reference materials (CRMs) into the sample stream, and carried out repeat analysis on a subset of samples. All data passed ALS’ internal quality control checks and and were double checked by the Competent Person and the analyses were accurate and precise.

</td></tr>
<tr><td>Verification of sampling and assaying</td><td>

The verification of significant intersections by either independent or alternative company personnel.
The use of twinned holes.
Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.
Discuss any adjustment to assay data.

</td><td>

Twinned hole drilling has not been conducted.
All logging and assay data are stored within an independently managed database, with auto-validation of all data.
The assay data were provided by the laboratory in elemental form. These data were converted to their oxide equivalents for the estimation of TREO, MREO and HREO.
Recoveries of REEs, Sc, Ga, and gangue elements were calculated based on reagent volumes, solution densities, and the chemical composition of both feed and leachate by Curtin University. No other adjustments were made to the assay data.

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<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Location of data points</td><td>▪ Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.
▪ Specification of the grid system used.
▪ Quality and adequacy of topographic control.</td><td>▪ The spatial data are reported using the GDA94 Zone 50 coordinate system.
<table>
<tr><th>Hole ID</th><th>Grid</th><th>Northing</th><th>Easting</th><th>Elevation (m)</th></tr>
<tr><td>23SBAC067</td><td>GDA94 / MGA zone 50</td><td>6765200</td><td>509450</td><td>374</td></tr>
<tr><td>23SBAC056</td><td>GDA94 / MGA zone 50</td><td>6765800</td><td>509300</td><td>374</td></tr>
<tr><td>23SBAC054</td><td>GDA94 / MGA zone 50</td><td>6766100</td><td>508050</td><td>374</td></tr>
<tr><td>23SBAC047</td><td>GDA94 / MGA zone 50</td><td>6766700</td><td>507650</td><td>374</td></tr>
<tr><td>SBRC067</td><td>GDA94 / MGA zone 50</td><td>6765803</td><td>509199</td><td>374</td></tr>
</table>
▪ The drill hole collar locations were surveyed using handheld GPS to a reported accuracy of ±5 metres. The collar elevations have not been measured, and a nominal elevation of 374 mRL has been assigned to all drill hole collar records in Terrain’s database.
▪ Accurate topographic survey data are not available for the project area, however the publicly available SRTM data do not indicate that there is significant topographic relief in the drilling area.</td></tr>
<tr><td>Data spacing and distribution</td><td>▪ Data spacing for reporting of Exploration Results.
▪ Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.
▪ Whether sample compositing has been applied.</td><td>▪ The majority of the drilling at Larin’s Lane has been conducted in three clusters. A nominal spacing of 200mN × 100mE was used for the central and northern clusters. A nominal spacing of 100mN × 50mE was used for the southern cluster.
▪ The samples were collected on 1 metre intervals. The samples from the initial holes (~30 holes) were field composited over 3 metre intervals, and the remaining holes were field composited over 4 metre intervals.</td></tr>
<tr><td>Orientation of data in relation to geological structure</td><td>▪ Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.
▪ If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</td><td>▪ All the drill holes are vertical and located on a semi-regular grid, which means that the sampling is expected to be near orthogonal to the sub-horizontal mineralised units.
▪ No orientation-based sampling biases have been identified or are expected for this style of mineralisation.</td></tr>
<tr><td>Sample security</td><td>▪ The measures taken to ensure sample security.</td><td>▪ Terrain Minerals advised that the sampling program was supervised by a company appointed geologist, who was responsible for chain of custody. The samples were placed in labelled bags, that were sealed and transported by road to RSC and Curtin University in Perth.</td></tr>
<tr><td>Audits or reviews</td><td>▪ The results of any audits or reviews of sampling techniques and data.</td><td>▪ An external review of the assay data has been completed by Expedio Services
▪ Expedio Services did not raise any issues or concerns in relation to the data.</td></tr>
</table>

Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	▪ Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. ▪ The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	▪ The datasets described in this report are all contained within the Western Australian exploration tenement E59/2482, which is located ~350 kilometers north of Perth. ▪ Tenement E59/2482 is 100% owned and operated by Terrain Minerals Limited. ▪ There are no known material issues with third parties in relation to this tenement. ▪ Terrain advised that tenement E59/2482 is in good standing with no known impediments to exploration.
Exploration done by other parties	▪ Acknowledgment and appraisal of exploration by other parties.	▪ Terrain Minerals advised that a significant amount of historical work has been completed over the tenement, including drilling, geo-physical surveys and surface sampling. ▪ Previous operators of the tenement areas include Westfield Minerals (1965), Minefields Exploration (1970–82), ANZECO (1970–82), General Gold Resources NL (1991–93), Renison Goldfields Consolidated (1993-1996), Normandy Exploration (1997-1999), Gindalbie Gold NL (1999–2006), Vital Metals Ltd (2005–09), Minjar Gold Pty Ltd. (1999–2017), Hazelwood Resources Ltd (2010–15), and Tungsten Mining NL (2015–17).
Geology	▪ Deposit type, geological setting and style of mineralisation.	▪ The Smokebush Project covers a region in the Yalgoo–Singleton Greenstone Belt comprising Seeligson Monzogranite (Walganna Suite), monzogranite to syenogranite (Walganna Suite), amphibolite, and a more recent mafic dyke. ▪ The REE mineralisation in the Larin's Lane area is considered to be a clay-hosted REE regolith deposit, which is expected to have formed from residual and supergene enrichment of granitic rocks. Elevated REE concentration are observed in the lower part of the saprolite horizon. ▪ REEs are predominantly hosted in primary and secondary REE phosphate minerals.
Drill hole Information	▪ A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: ▪ easting and northing of the drill hole collar ▪ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar ▪ dip and azimuth of the hole ▪ down hole length and interception depth ▪ hole length ▪ If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not	▪ Detailed descriptions of the drilling data are listed in Terrain Minerals ASX announcement named *Exciting Gallium and REE drilling results at Larin's Lane* and dated 27 May 2024.

Criteria	JORC Code explanation	Commentary
	detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	▪ In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. ▪ Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. ▪ The assumptions used for any reporting of metal equivalent values should be clearly stated.	▪ Samples were composited as described in Table 1 prior to feed sample analysis. No adjustments or compositing of grades were applied. No high-grade or low-grade cuts have been applied to the datasets.
Relationship between mineralisation widths and intercept lengths	▪ These relationships are particularly important in the reporting of Exploration Results. ▪ If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. ▪ If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	▪ The mineralisation occurs in sub-horizontal layers and all drill holes are vertical. As such, the drill holes are approximately orthogonal to the mineralised zones, and the reported drill hole intercepts can be considered to represent the true thicknesses.
Diagrams	▪ Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	▪ Appropriate maps of the drilling data are listed in Terrain Minerals ASX announcement named *Exciting Gallium and REE drilling results at Larin's Lane* and dated 27 May 2024.
Balanced reporting	▪ Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	▪ All relevant information of 24 and 48h leach results have been included, providing an appropriate and balanced representation of the results.

Criteria	JORC Code explanation	Commentary
Other substantive exploration data	▪ Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	▪ All meaningful data and information considered material and relevant has been reported.
Further work	▪ The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). ▪ Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	▪ With REE and scandium recovery confirmed, the Company will progress the following: ▪ Optimisation test work to define the preferred leaching agents and leach conditions, balancing REE and scandium recovery against reagent consumption and gangue co-dissolution. ▪ Further evaluation of the scandium credit, and of gallium recovery and head grade. ▪ Integration of metallurgical recovery assumptions into future Mineral Resource and scoping-level studies for Larin's Lane. ▪ Continued progression of any discussions with potential partners in relation to the critical mineral mineralisation at Larin's Lane.