Gold Mountain Limited
(ASX: GMN)

24/589 Stirling Highway
Cottesloe WA 6011
Australia

Projects

Lithium Projects (Brazil)
Cococi region
Custodia
Iguatu region
Jacurici
Juremal region
Salinas region
Salitre
Serido Belt

Copper Projects (Brazil)
Ararenda region
Sao Juliao region
Iguatu region

REE Projects (Brazil)
Jequie

Copper Projects (PNG)
Wabag region
Green River region

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ASX Announcement/Press Release | 13 February 2025

Gold Mountain Limited (ASX:GMN)

Drilling Confirms High Grade Rare Earths at the Down Under REE Project, Brazil

Gold Mountain Limited (ASX: GMN) ("Gold Mountain" or "the Company" or "GMN") is pleased to announce that it has received results from a further 56 drill holes at the Down Under Project, confirming high-grade Rare Earth Oxide (TREO) mineralisation at the Irajuba Prospect. More significantly, the results include exceptionally high levels of the valuable Magnet Rare Earths, a crucial ingredient in the production of the high-strength magnets used in electric motors.

HIGHLIGHTS

- High-grade TREO and Magnet Rare Earths (MREO) intercepted in multiple drill holes, including:
    - **AD0353:** 2 metres at 1,738 ppm TREO with 495 ppm $Nd_2O_3 + Pr_6O_{11}$ and 49 ppm $Dy_2O_3 + Tb_4O_7$,
        - including 1 metre at **2,689 ppm TREO.**
    - **AD0215**: 3 metres at 1,485 ppm TREO,
        - including 1 metre at **2,232 ppm TREO.**
- 28 drill holes had intersections exceeding 400 ppm TREO, with **averages of around 64% MREO.**
- Drilling indicates that GMN is primarily intersecting the very top of the saprolite zone, where most of the REE mineralisation is expected to occur.
- Mineralisation is generally open to depth, with many drill holes intersecting only the top of the mineralised zone.
- Areas for initial resource drilling have been identified.
- **Auger drilling is ongoing** with deeper holes, and additional results are expected on an ongoing basis.

Future Workplan

- Deeper auger drilling will continue throughout 2025.
- Initial resource sonic drilling will focus on areas with significant auger drilling mineralisation. Drilling targets are based on TREO, CIA and Nb-U-Sc prospectivity analysis, highlighting potential hard rock mineralisation zones.
- Regional stream sediment sampling will be completed on Down Under Project tenements.
- Extensive radiometric surveying will be conducted along all drill hole traverses. Applications for additional drilling permits will be submitted for resource drilling in areas with demonstrated continuity of significant grades.

"As a director, I am thrilled by the exceptional results we've achieved from the 66 shallow auger drill holes at the Down Under Project. With assays of up to 4,436ppm TREO and consistently high percentages of Magnet Rare Earths (MREO), this drilling program confirms the strong potential of this project. The fact that mineralisation is open at depth is particularly exciting, as it offers a significant opportunity for further exploration and resource definition.

"Looking ahead to the next stage, the identification of areas for initial resource drilling alongside our ongoing auger drilling across our large ground position, means we're well-positioned to continue advancing the project. Gold Mountain is in the right neighbourhood to make a significant Rare Earth discovery, and this is just the beginning; we are fully committed to progressing the project toward continued success."

David Evans, Executive Director
Gold Mountain

The Irajuba Prospect:

A total of 66 auger drill holes in Irajuba prospect tenements (Down Under Project) have intersected lateritic weathered profiles. The Irajuba prospect area had outstanding stream sediment values previously reported on 2/8/2024 and highly significant channel sample results reported on 14/8/2024. Previous stream sediment results reported on 2/8/2024 were outstanding. Highly significant channel sample results were reported on 14/8/2024.

Table 1 provides a summary of significant intersections, demonstrating the presence of a high proportion of Magnet Rare Earths (MREO). Hole details and collar locations are presented on table 2 and a summary of REE intersections with TREO > 400 ppm are presented in table 3.

Hole Number	Intersection Cut off 400 ppm TREO				TREO	TREO - CeO2	CIA	MREO	MREO/ TREO-CeO2	HREO	HREO /TREO-CeO2	Nd2O3+ Pr6O11	Dy2O3+ Tb4O7	End of Hole
	Intersection metres	From m	To m	Interval m	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	metres
DU-IRA-24-AD0353	2	5	7	2	1677.0#	*	92.1	851.1	*	402.5	*	494.9	49.5	7
DU-IRA-24-AD0353	including	6	7	1	2688.8#	*	91.0	1433.5	*	677.0	*	834.6	84.0	7
DU-IRA-24-AD0215	3	7	10	3	1444.1#	*	95.1	382.8	*	126.2	*	270.3	16.2	10
DU-IRA-24-AD0215	including	8	9	1	2232.2#	*	92.5	557.9	*	153.8	*	420.4	19.4	10
DU-IRA-24-AD0061	3	6	9	3	935.9	530.1	95.7	347.9	65.1	161.4	29.9	204.6	19.2	9
DU-IRA-24-AD0061	including	7	9	2	1202.8	688.7	94.4	454.6	66.0	212.2	30.8	266.1	25.4	9
DU-IRA-24-AD0068	7	0	7	7	658.8	396.4	97.2	273.4	67.5	150.7	36.9	141.4	16.8	7
DU-IRA-24-AD0068	including	5	7	2	1091.4	761.6	91.7	543.6	71.2	302.0	39.4	280.4	34.0	7
DU-IRA-24-AD0214	2	10	12	2	835.4#	*	96.1	161.7	*	71.0	*	99.3	8.6	12
DU-IRA-24-AD0214	including	11	12	1	957.3#	*	95.5	211.6	*	91.6	*	130.7	11.1	12
DU-IRA-24-AD0318	2	5	7	2	809.1	456.6	94.9	314.4	68.9	136.9	30.0	194.2	17.7	7
DU-IRA-24-AD0318	including	5	6	1	866.6	476.0	94.6	327.5	68.8	135.9	28.6	207.6	17.6	7
DU-IRA-24-AD0022	3	0	3	3	788.8	448.5	98.4	297.0	66.7	146.4	33.4	166.8	15.9	3
DU-IRA-24-AD0022	including	2	3	1	1060.3	648.8	96.9	423.9	65.3	203.6	31.4	241.6	21.6	3
# Minimum value as Ce >500 ppm														
* not calculated as Ce>500 ppm														

Table 1. Summary of the most significant intersections from 56 shallow auger drill holes

DETAILS

High-grade TREO and Magnet Rare Earths (MREO) were intersected in multiple drill holes. The auger drilling prospectivity analysis, utilizing TREO, CIA along with anomalies of niobium, scandium, and uranium in the upper parts of the weathering profile, has highlighted potential zones of significant IAC and probable hard rock mineralization, which are identified as target areas for sonic drilling.

The drill holes intersected exceptionally high levels of Nd and Pr, which are important magnet REE metals. Additionally, the better intersections revealed very high percentages of magnet REE (MREO), ranging from 60% to 70% MREO, with intersections exceeding 400 ppm TREO averaging 64% MREO.

Where mineralisation was intersected, mineralisation remains open to depth. Most mineralised drill holes intersected the top of the mineralized zone at the end of the hole, except for those holes that intersected mineralisation from surface down. Mineralisation present at surface with a very high CIA suggests that residual REE mineral grains are present in the profile and a probably derived from a hard rock source.

Initially, drilling was limited to the top 10-12 meters to cover large areas in the shortest time possible. However, following the previous announcement, all auger drilling plans have been updated to include deeper drillholes. It became clear that the weathering depth was greater than anticipated, and GMN decided immediately to change the depths of drilling. The current drill hole results are from holes drilled prior to the decision to drill deeper holes.

In conclusion, the results from the 56 shallow auger drill holes are highly promising, with significant intersections of high-grade TREO and Magnet Rare Earths (MREO). The presence of a high proportion of Magnet REEs, along with mineralization that remains open at depth, suggests strong potential for further exploration and resource definition. The successful identification of areas for initial resource drilling, combined with the ongoing auger drilling program, positions the project for continued positive outcomes. These results provide a solid foundation for advancing the Down Under Project and highlight its exciting prospects in the rare earths sector.

Images & Maps

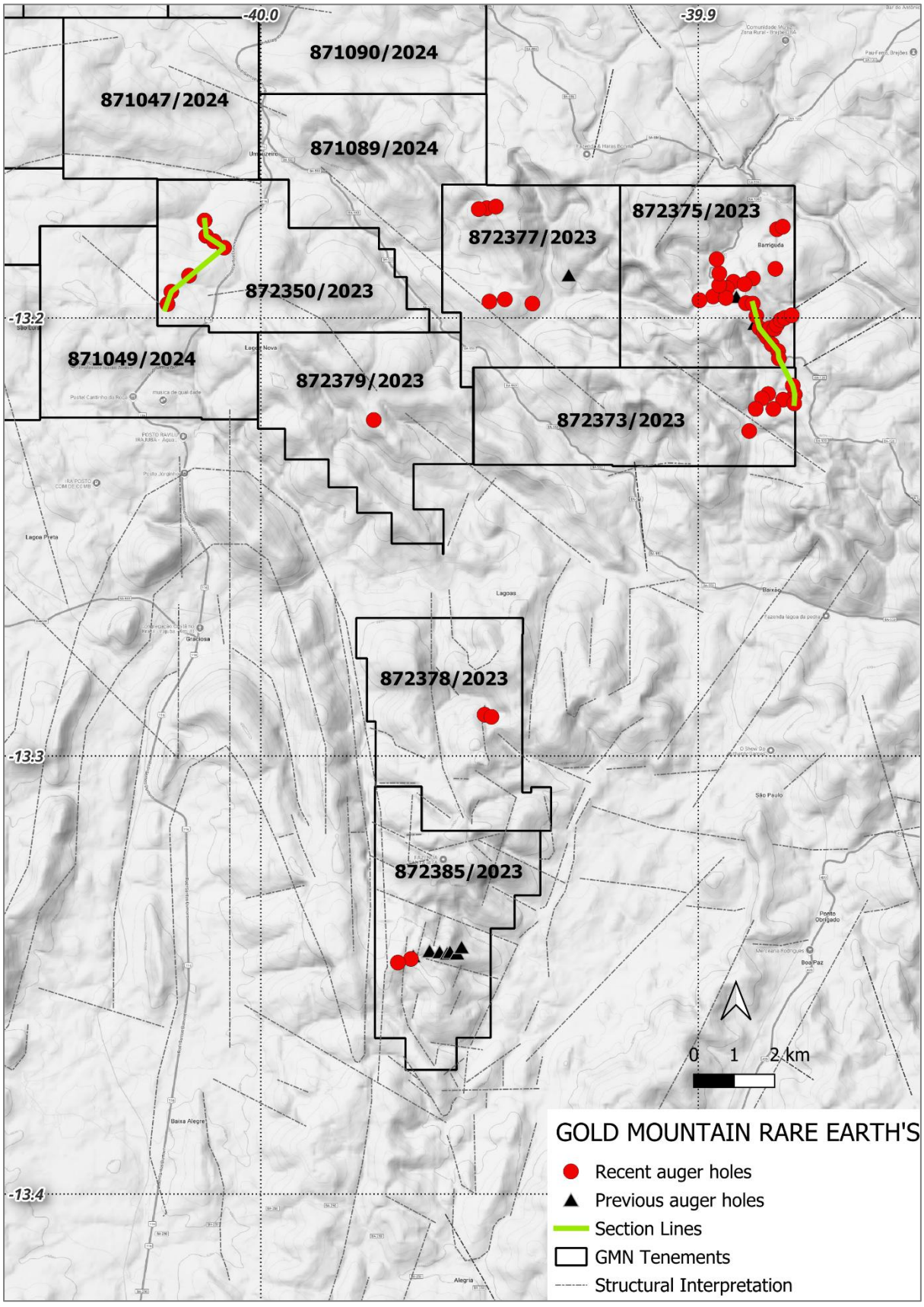

Figure 1. Location of all drill holes to date. Previous drillholes shown in black and latest drillholes are shown in red. Section lines shown in green.

Figure 2 shows mineralization that remains open at depth, with drill hole intersections exceeded 400 ppm TREO in red with averages of around 64% MREO, suggesting strong potential for further exploration and resource definition.

Figure 2. Drill section where drillholes intersect the top portion of the saprolite zone. The saprolite zone is the zone where most of the REE mineralization is expected to be located. TREO intersections greater than 400 ppm in red and CIA less than 97% in green.

Figure 3 highlights potential for further exploration with drillholes intersecting the top of the mineralized zone.

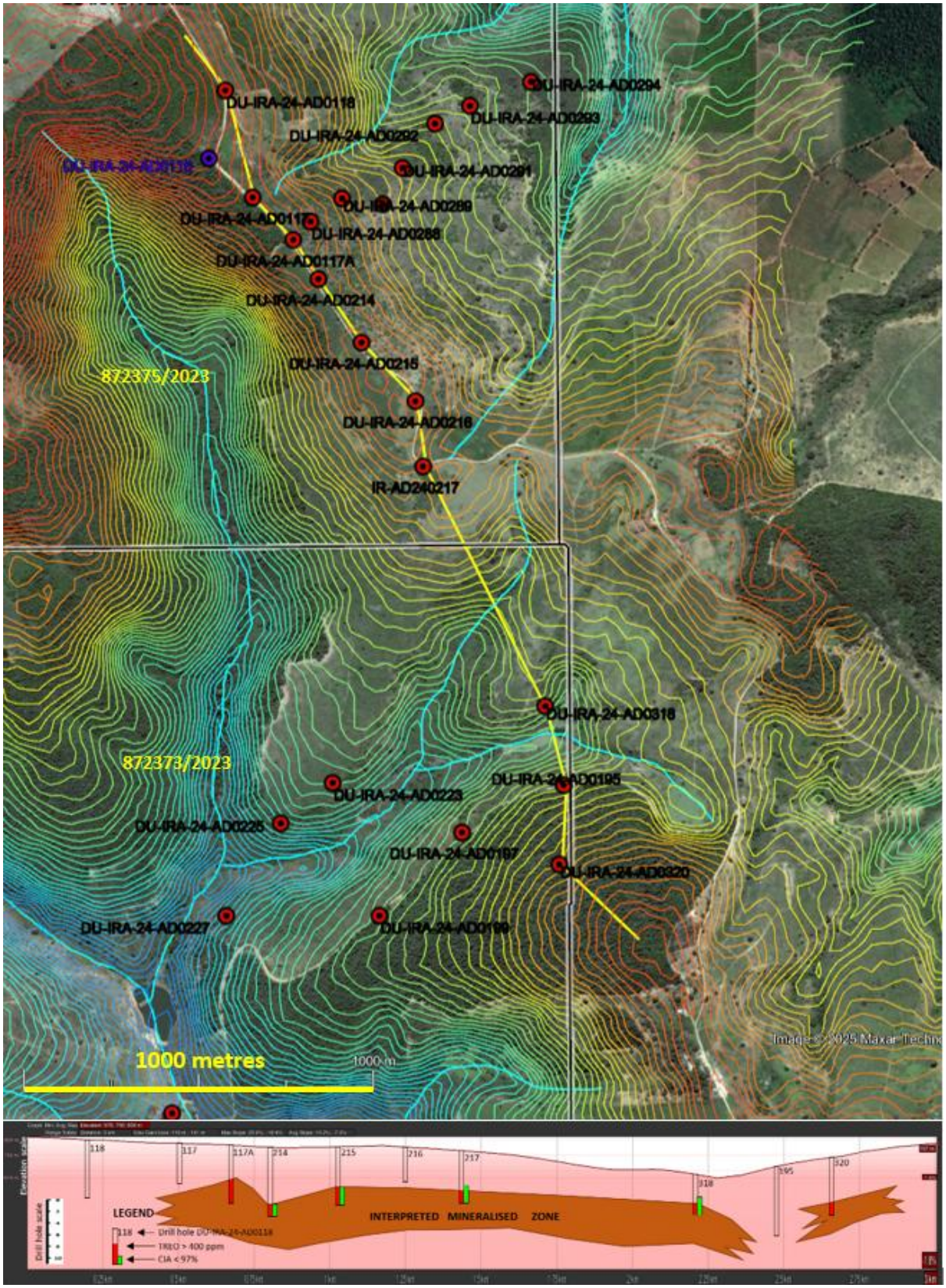

Figure 3. Contoured topography and a section line with projected REE mineralised zone. Drill holes intersections with TREO greater than 400 ppm in red and CIA less than 97% in green.

Figure 4 illustrates the Down Under sonic drilling target areas and satellite spectral targets.

The sonic drilling target areas were defined through prospectivity analysis. This analysis utilized the Chemical Index of Alteration (CIA) and TREO, along with anomalies of niobium, scandium, and uranium in the upper parts of the weathering profile. The results highlighted potential zones of both IAC and possible hard rock mineralization, which have been identified as target areas for sonic drilling.

Satellite imagery interpretation was conducted over the Down Under project area (formerly the Down Under and Ronaldinho Projects). To generate the targets, a training set based on publicly known mineralization was interpreted using Aster 30m and 10m resolution imagery. The initial spectral processing and targeting focused on sample locations from known mineralization, enabling the generation of Clay-hosted REE and Mafic-hosted REE targets within GMN's tenements using the training set data. These targets are now being assessed for follow-up and drilling permits. This map highlights target areas around the Irajuba prospect, where green indicates high-prediction Rare Earths targets and red represents potential mafic targets. All identified targets are considered potential hosts for high-grade IAC or hard rock mineralization.

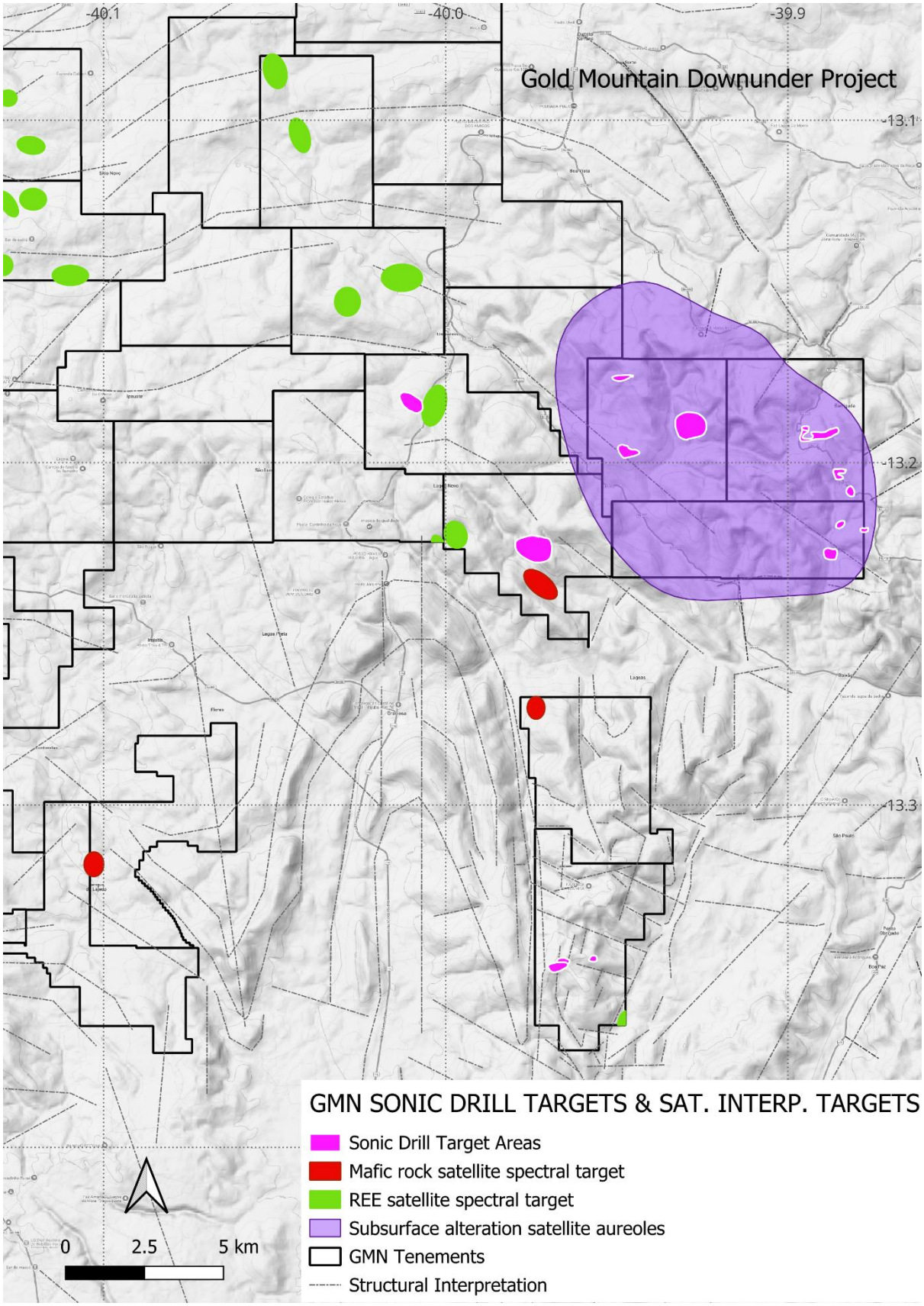

Figure 4. Sonic drilling target areas and satellite spectral targets generated by using Aster 30 and 10 metre resolution imagery.

REE metals concentrate in specific areas of the lateritic weathering profile, which is zoned into regions with the potential to carry ore-grade REE. The Chemical Index of Alteration (CIA = Al_2O_3 * 100 / (Al_2O_3 + CaO + K_2O + Na_2O)) is an effective method for mapping the chemical zones within the laterite.

Figure 5 shows where potential ore grade mineralisation can occur in a strongly weathered lateritic profile. Note potential ore zone falls within the saprolite with CIA varying from 95% to 65%.

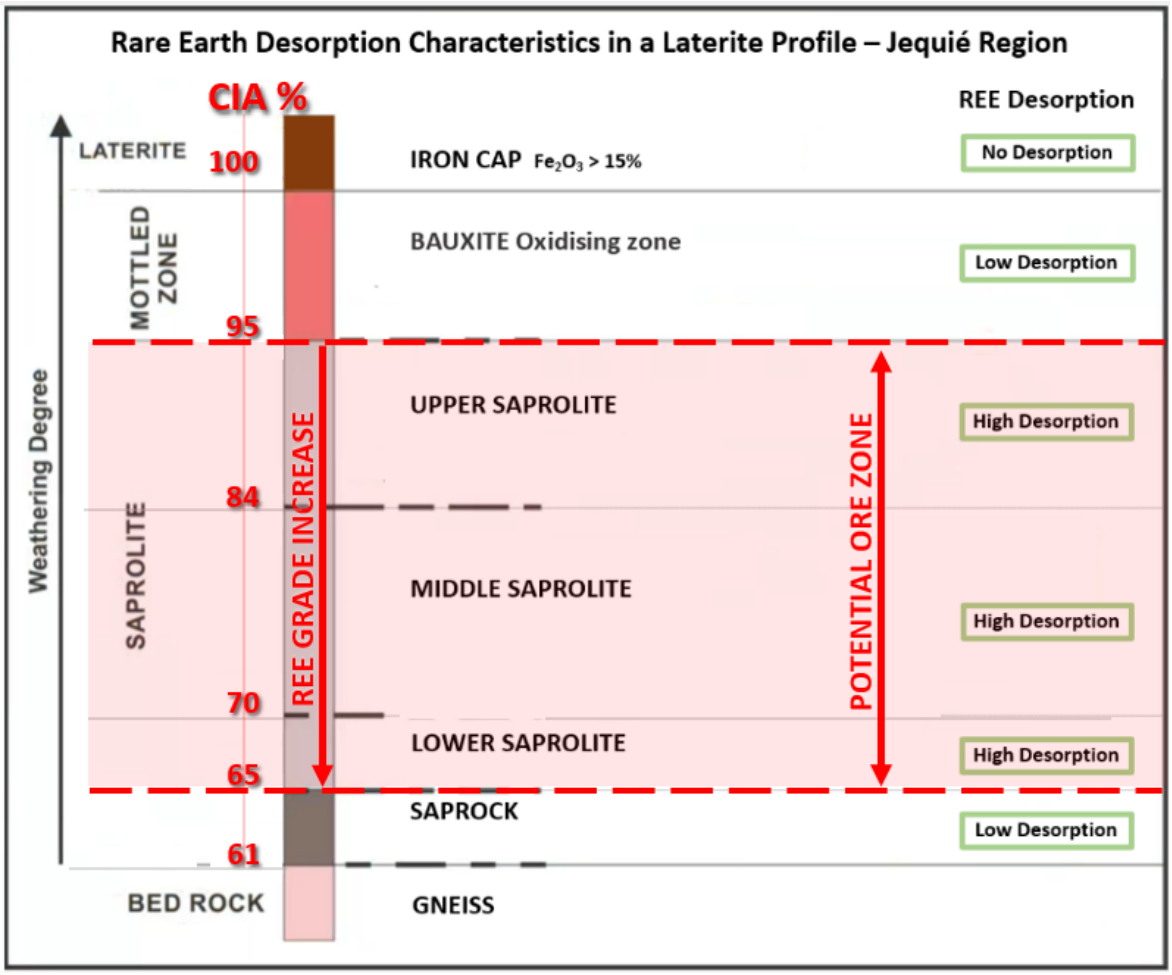

Figure 5. Diagrammatic section of a strongly weathered profile showing ore grade REE can accumulate within the saprolite zone with CIA varying from 95% to 65%.

Competent Persons Statement

The information in this ASX release is based on information compiled by Peter Temby, a Competent Person who is a Member of Australian Institute of Geoscientists. Exploration results have been compiled and interpreted by Peter Temby who is an independent consultant working currently for Gold Mountain Ltd. Peter Temby confirms there is no potential for a conflict of interest in acting as the Competent Person. Peter Temby has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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'. Peter Temby consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

- END –

This ASX announcement has been authorised by the Board of Gold Mountain Limited

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About Us

Gold Mountain (ASX:GMN) is a mineral explorer with projects based in Brazil and Papua New Guinea (PNG). These assets, which are highly prospective for a range of metals including rare earth elements, niobium, lithium, nickel, copper and gold, are now actively being explored.

Gold Mountain has gradually diversified its project portfolio. The Company has highly prospective rare earth element, niobium, copper and lithium licences located within the eastern Brazilian lithium belt including in Salinas, Mines Gerais and spread over parts of the Borborema Province and São Francisco craton in north-eastern Brazil

In PNG, Gold Mountain is exploring the Green River Project, covering a total of 1,048 km^2 in two exploration licences at where high grade Cu-Au and Pb-Zn float has been found and porphyry style mineralisation was identified by previous explorers. Intrusive float, considered to be equivalent to the hosts of the majority of Cu and Au deposits in mainland PNG, was also previously identified.

List of references

1. GMN ASX release 29 November 2024 High Grade Intersection in initial 10 drill holes, Down Under REE Project
2. GMN ASX Release 30 September 2024 Drill samples on Irajuba Prospect submitted to Laboratory, Down Under REE Project
3. GMN ASX Release 14 August 2024 High Grade REE Assays in Channel Sample Down Under
4. GMN ASX Release 2 August 2024 Down Under Rare Earths major extensions high grade zones
5. GMN ASX Release 24 July 2024 Very High Grade REE Assays in 2nd area in Down Under Project
6. GMN ASX Release 22 July 2024 Rare Earth (REE) drill targets defined at Down Under Project
7. GMN ASX Release 8 July 2024 Highly anomalous Widespread Rare Earths Assays and Radiometric anomalies confirmed on Down Under REE Project
8. GMN ASX Release 7 June 2024 Significant anomalies identified on Ronaldinho Project
9. GMN ASX Release 2 April 2024 GMN acquires Ronaldinho Rare Earths Project
10. GMN ASX Release 21 March 2024 GMN identifies rocks prospective for high grade REE
11. GMN ASX Release 15 February 2024 Exploration commences on Clay Hosted REE tenements
12. GMN ASX Release 2 February 2024 Down Under Rare Earths Project Update
13. GMN ASX Release 11 December 2023 Investor Presentation REE

14. GMN ASX Release 1 December 2023 Massive Prospective Brazil REE tenement applications.

15. Brazil Geological Survey (CPRM) website https://geosgb.sgb.gov.br/ and the Brazil National Mining Agency (ANM) website https://geo.anm.gov.br/portal/apps/webappviewer/index.html?id=6a8f5ccc4b6a4c2bba79759aa952d908

16. Jitauna Project presentation. December 2023, .Gerson Romano, GR Consultoria em Prospecção Mineral Ltda

17. Assessment of the Geochemical Variability of Earth Elements Rare, Uranium and Thorium in Regolytic/Lateritized Profiles in Rocks of the Jequié Bahia Complex, Brazil. MSc thesis, Gerson Romano Dos Santos Junior, Natal 2019, Federal Institute of Education, Science and Technology of Rio Grande do Norte.

18. Google Earth, https://earth.google.com/intl/earth/download/ge/agree.html

19. SRTM, https://www.earthdata.nasa.gov/sensors/srtm#:~:text=The Shuttle Radar Topography Mission,global dataset of land elevations.

Table 2. Drill Hole collar locations and hole depths

Hole ID	From	To	Datum: SIRGAS 2000		
	metres	metres	UTM E	UTM N	RL
DU-IRA-24-AD0001A	0	11	389424	8541186	791
DU-IRA-24-AD0006	0	7	398367	8540922	598
DU-IRA-24-AD0061	0	9	389862	8541596	781
DU-IRA-24-AD0068	0	7	390281	8542600	694
DU-IRA-24-AD0069	0	5	390241	8542987	654
DU-IRA-24-AD0073	0	10	389330	8540875	798
DU-IRA-24-AD0110	0	8	394450	8537966	735
DU-IRA-24-AD0117	0	7	403995	8540324	790
DU-IRA-24-AD0117A	0	10	404110	8540203	785
DU-IRA-24-AD0118	0	10	403918	8540629	801
DU-IRA-24-AD0126	0	11	403661	8540951	816
DU-IRA-24-AD0127	0	10	403828	8540942	795
DU-IRA-24-AD0132	0	10	404384	8541821	741
DU-IRA-24-AD0135	0	8	404419	8542820	692
DU-IRA-24-AD0147	0	10	404562	8542885	677
DU-IRA-24-AD0183	0	9	403346	8541490	775
Du-IRA-24-AD0185	0	10	403190	8541330	775
DU-IRA-24-AD0191	0	12	403827	8541575	768
DU-IRA-24-AD0193	0	8	403623	8541430	807
DU-IRA-24-AD0195	0	12	404877	8538649	713
DU-IRA-24-AD0197	0	9	404585	8538516	693
DU-IRA-24-AD0199	0	10	404347	8538281	683
DU-IRA-24-AD0203	0	5	403750	8537723	561
DU-IRA-24-AD0214	0	12	404182	8540092	778
DU-IRA-24-AD0215	0	10	404304	8539910	782
DU-IRA-24-AD0216	0	6	404458	8539743	775
DU-IRA-24-AD0223	0	8	404215	8538659	663
DU-IRA-24-AD0225	0	7	404066	8538545	639
DU-IRA-24-AD0227	0	8	403908	8538283	611
DU-IRA-24-AD0251	0	9	402844	8541117	772
DU-IRA-24-AD0253	0	11	402507	8541020	792
DU-IRA-24-AD0276	0	11	403160	8541081	800
DU-IRA-24-AD0277	0	10	402993	8541398	770
DU-IRA-24-AD0279	0	10	402995	8541700	736
DU-IRA-24-AD0283	0	9	402928	8542059	674
DU-IRA-24-AD0288	0	10	404160	8540255	775
DU-IRA-24-AD0289	0	10	404251	8540320	756
DU-IRA-24-AD0290	0	11	404368	8540303	740
DU-IRA-24-AD0291	0	10	404425	8540406	730
DU-IRA-24-AD0292	0	9	404518	8540531	712
DU-IRA-24-AD0293	0	11	404618	8540582	702
DU-IRA-24-AD0294	0	9	404794	8540648	682
DU-IRA-24-AD0318	0	7	404825	8538874	683
DU-IRA-24-AD0320	0	10	404863	8538424	746
IR-AD240217	0	9	404479	8539557	765
DU-IRA-24-AD0352	0	4	390477	8542465	712
DU-IRA-24-AD0141	0	6	397224	8530536	680
DU-IRA-24-AD0353	0	7	390725	8542303	702
DU-IRA-24-AD0142	0	7	397393	8530481	687
DU-IRA-24-AD0152	0	12	395424	8524361	820
DU-IRA-24-AD0023	0	5	397231	8543325	814
DU-IRA-24-AD0150	0	9	395101	8524268	828
DU-IRA-24-AD0022	0	3	397031	8543301	771
DU-IRA-24-AD0024	0	4	397455	8543367	843
DU-IRA-24-AD0003	0	5	397687	8541025	664
DU-IRA-24-AD0001	0	3	397305	8540969	791

Table 2. Collar locations and hole depths for current results received. Note: all holes are vertical.

Table 3. Summary of Drill Hole Data, Irajuba Prospect, Down Under REE Project of >400 ppm TREO intersections

Hole No	Intersection cut off 400 ppm TREO			TREO	TREO-Ce2O3	MREO	MREO/TREO-CeO2	HREO	HREO/TREO-CeO2	Nd2O3+Pr6O11	Dy2O3+Tb4O7	CIA	End of Hole
	Interval												
	from	to	metres	ppm	ppm	ppm	%	ppm	%	ppm	ppm		metres
DU-IRA-24-AD0001	2	3	1	489.4	242.5	127.4	52.5	45.5	18.8	87.0	5.4	98.1	3
DU-IRA-24-AD0003	0	5	5	519.5	291.1	184.3	63.0	79.8	28.3	113.2	9.1	97.5	5
DU-IRA-24-AD0003	3	5	2	672.3	392.2	251.8	64.2	96.0	24.5	166.1	11.3	96.2	5
DU-IRA-24-AD0006	6	6	1	607.5	341.0	221.9	65.1	92.6	27.1	139.1	10.2	95.4	7
DU-IRA-24-AD0022	0	3	3	788.8	448.5	297.0	66.7	146.4	33.4	166.8	15.9	98.4	3
DU-IRA-24-AD0022	2	3	1	1060.3	648.8	423.9	65.3	203.6	31.4	241.6	21.6	96.9	3
DU-IRA-24-AD0024	3	4	1	597.1	349.0	227.2	65.1	105.8	30.3	133.2	11.9	96.6	4
DU-IRA-24-AD0061	6	7	1	402.1	212.9	134.4	63.1	59.9	28.1	81.7	7.0	98.1	9
DU-IRA-24-AD0061	7	9	2	1202.8	688.7	454.6	66.0	212.2	30.8	266.1	25.4	94.4	9
DU-IRA-24-AD0068	0	5	5	485.8	250.3	165.3	66.0	90.2	35.9	85.7	9.9	99.3	7
DU-IRA-24-AD0068	5	7	2	1091.4	761.6	543.6	71.2	302.0	39.4	280.4	34.0	91.7	7
DU-IRA-24-AD0069	0	2	2	452.0	229.1	153.9	66.8	89.1	38.8	75.1	10.7	98.8	5
DU-IRA-24-AD0069	4	5	1	431.7	190.9	129.3	67.7	91.7	48.0	49.7	11.1	93.6	5
DU-IRA-24-AD0110	0	8	8	602.4	359.5	240.5	66.5	125.9	34.7	129.4	14.3	96.0	8
DU-IRA-24-AD0110	5	8	3	741.6	465.0	319.7	68.7	169.3	36.3	169.9	19.2	93.4	8
DU-IRA-24-AD0117A	6	9	3	418.4	182.8	64.7	35.9	22.4	12.5	45.3	2.6	98.0	10
DU-IRA-24-AD0117A	9	10	1	752.9	268.9	172.2	64.0	75.6	28.1	105.3	9.2	97.7	10
DU-IRA-24-AD0142	5	7	2	547.3	303.8	206.2	67.9	111.1	36.8	108.0	11.8	89.9	7
DU-IRA-24-AD0185	8	10	2	639.7	357.2	209.8	58.9	106.0	30.7	117.4	12.5	98.9	10
DU-IRA-24-AD0191	11	12	1	542.8	246.7	149.4	60.6	61.6	25.0	94.5	7.2	98.6	12
DU-IRA-24-AD0193	7	8	1	572.7	258.3	163.2	63.2	85.0	32.9	89.0	9.5	94.8	8
DU-IRA-24-AD0203	4	5	1	532.5	301.6	192.5	63.8	93.4	31.0	110.6	11.8	95.5	5
DU-IRA-24-AD0214	10	12	2	835.4	265.4	161.7	60.6	71.0	26.8	99.3	8.6	96.1	12
DU-IRA-24-AD0215	7	10	3	1444.1	924.9	382.8	44.4	126.2	15.5	270.3	16.2	95.1	10
DU-IRA-24-AD0215	8	9	1	2232.2	1618.0	557.9	34.5	153.8	9.5	420.4	19.4	92.5	10
IR-AD240217	7	9	2	439.6	249.5	141.4	57.0	64.5	26.1	84.8	7.7	95.4	9
DU-IRA-24-AD0225	0	7	7	584.8	309.4	197.4	63.2	80.5	26.0	126.1	9.4	97.1	7
DU-IRA-24-AD0225	6	7	1	882.2	526.0	359.5	68.3	146.5	27.8	227.6	16.8	94.0	7
DU-IRA-24-AD0227	4	8	4	533.4	307.7	199.3	64.5	105.3	34.1	105.7	11.5	93.0	8
DU-IRA-24-AD0227	7	8	1	695.1	399.1	263.8	66.1	129.1	32.4	148.6	14.1	92.9	8
DU-IRA-24-AD0289	9	10	1	499.0	226.3	146.8	64.9	69.8	30.8	85.9	8.1	97.7	10
DU-IRA-24-AD0292	5	9	4	646.9	317.3	199.0	62.0	75.3	23.3	132.6	10.1	96.2	9
DU-IRA-24-AD0292	8	9	1	910.1	485.1	313.2	64.6	123.7	25.5	204.2	16.3	94.0	9
DU-IRA-24-AD0293	10	11	1	505.3	258.4	163.4	63.2	71.6	27.7	100.0	8.3	97.3	11
DU-IRA-24-AD0318	5	7	2	809.1	456.6	314.4	68.9	136.9	30.0	194.2	17.7	94.9	7
DU-IRA-24-AD0320	8	10	2	403.5	176.8	106.3	60.1	39.4	22.2	71.4	5.3	98.6	10
DU-IRA-24-AD0352	0	4	4	458.0	225.8	145.4	64.3	71.1	31.9	82.2	8.1	98.4	4
DU-IRA-24-AD0352	3	4	1	619.0	346.3	221.3	63.9	100.9	29.1	131.0	11.0	95.4	4
DU-IRA-24-AD0353	5	7	2	1677.0	200.0	851.1	33.6	402.5	16.0	494.9	49.5	92.1	7
DU-IRA-24-AD0353	6	7	1	2688.8		1433.5		677.0	0.0	834.6	84.0	91.0	7
# Minimum value as Ce >500 ppm limit of detection													
* not calculated as Ce>500 ppm limit of detection													

Table 3. Drill Hole Data, Irajuba Prospect, Down Under REE Project of >400 ppm TREO intersections

Appendix 1 JORC Code, 2012 Edition – Table 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 (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*	▪ *Drilling results reported are from a shallow auger drilling program designed to give broad areal coverage.* ▪ *Auger drilling was carried out to a maximum depth of approximately 10-12 metres, geology dependent.* ▪ *All samples in a drill hole were submitted for analysis to give continuous geochemical profiles.* ▪ *Auger samples were collected on a one metre interval basis and deposited into labelled plastic sample bags for delivery to the GMN sample preparation laboratory.* ▪ *At the laboratory the samples were entered into the database, weighed and riffle split to approximately 0.7-1.3 kg and dispatched for rock sample preparation by ALS using Prep code PREP31 and analysis by ME-MS 41L + REE* ▪ *Grab samples were collected from outcrop and a representative sample taken with a geological hammer. Grab samples were dispatched for rock sample preparation by ALS using Prep code PREP31 and analysis by ME-MS 41L + REE* ▪ *Style of mineralisation sought is Ion Adsorbed Clay type REE mineralisation as well as lag deposits of REE mineralisation derived from hard rock sources in the weathering profile.* ▪ *High grade hard rock deposits of REE hosted by mafic to ultramafic host rocks are also a style of mineralisation being sought.* .
Drilling techniques	▪ *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-*	▪ *Hand held power auger rigs with a 75 mm sampling tube and collar of 100 mm for approximately 400 mm.*

Criteria	JORC Code Explanation	Commentary
	sampling bit or other type, whether core is oriented and if so, by what method, etc).	
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.*	▪ *All auger samples are weighed in as received then split in a 22mm x 32 riffle splitter to approximately 0.7-1.3 kg.* ▪ *Sample recovery is considered to usually be 100% despite variable weights due to changes in the degree of weathering in the strongly weathered profile.* ▪ *Any contamination by fall in from higher in the hole is removed by hand as the sample is deposited into the sample bag on site.* ▪ *No assessment of sample bias due to loss or gain of fine or coarse material has been undertaken and there is no loss of coarse or fine material, except in the first metre of the hole.*
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.*	▪ *Samples are logged to an acceptable standard but will not be used for resource estimation.* ▪ *Logging is qualitative, all cored material from surface to end of hole is collected and logged, photographed and entered into the database.*
Sub-sampling techniques and sample preparation	▪ *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.*	▪ *All samples riffle split in a 22mm x 32 riffle splitter when dry. Wet sampled are air dried to a sufficient degree to allow effective splitting of the sample.* ▪ *Hard dry samples are broken sufficiently to pass readily through the sample splitter.* ▪ *Samples are considered representative for the fine grained nature of a clayey strongly weathered profile.* .

Criteria	JORC Code Explanation	Commentary
	▪ *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.*	
Quality of assay data and laboratory tests	▪ *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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	▪ *The analytical techniques used are aqua regia (2 acid) digest and ICP-MS, the 2 acid digest method is a partial digest technique, ALS codes used are MS41L-REE.* ▪ *No standards duplicates or blanks accompany these auger drill samples that will not be used other than to indicate potentially interesting REE and REE pathfinder element contents of the variably weathered samples* ▪ *Checks of the analytical values of CRM's used by the laboratory against the CRM specification sheets were made to assess whether analyses were within acceptable limits* ▪ *Laboratory blanks were checked to ensure sample preparation by ALS was acceptable which it was for these sample analyses.*
Verification of sampling and assaying	▪ *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.*	▪ *Two qualified and experienced geologists check all data received and check all interpretations made.* ▪ *No adjustments were made to any data.* ▪ *No duplicate holes will be undertaken for these auger drill samples, which will not be used in any resource estimate. The samples are to determine the levels of REE and other valuable elements in weathered profile sampling to determine areas for resource estimation.* ▪ *All drill hole data is entered into Avenza, an interface program for data storage and verification prior to being entered into a relational database.*

Criteria	JORC Code Explanation	Commentary
Location of data points	▪ *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.*	▪ *Drill hole collars are measured by hand held Garmin 65 Multiband instruments with accuracy to 3 metres* ▪ *Grid system used is SIRGAS 2000 which is equivalent to WGS84 for hand held GPS instruments* ▪ *Elevations are measured by hand held GPS and are sufficiently accurate for this stage of exploration.* ▪
Data spacing and distribution	▪ *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.*	▪ *Auger drill collars are sited where permits allow and where access is practical and is designed to give a degree of geological continuity required to design a Sonic or RC drilling program.* ▪ *Drill hole spacing is not designed to demonstrate continuity but designed to find initial high grade REE areas.* ▪ *No sample compositing has taken place*
Orientation of data in relation to geological structure	▪ *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.*	▪ *Main target is expected to be flat lying or gently dipping, reflecting pre laterite surfaces with the high grade targets being 5-10 metres wide, steeply dipping and with unknown orientation.* ▪ *The wide spacing of drill collars, selected based on stream sediment results and geomorphology combined, is thought to have removed much of the potential bias present.*
Sample security	▪ *The measures taken to ensure sample security.*	▪ *Drill hole samples are taken to the GMN sample preparation laboratory daily and kept under secure conditions. Prepared samples are securely packed and dispatched to ALS by reliable couriers or hand delivered by GMN personnel.*
Audits or reviews	▪ *The results of any audits or reviews of sampling techniques and data.*	▪ *Sampling techniques are reviewed regularly in house and data collected is under constant in house review. . No external review is required at present.*

Section 2 - Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

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.*	▪ *GMN holds 136 tenements in the Down Under Project in eastern Bahia. GMN has 100% ownership of the 129 granted tenements and 7 tenement applications. The tenements are in good standing* ▪ *All mining permits in Brazil are subject to state and landowner royalties, pursuant to article 20, § 1, of the Constitution and article 11, "b", of the Mining Code. In Brazil, the Financial Compensation for the Exploration of Mineral Resources (Compensação Financeira por Exploração Mineral - CFEM) is a royalty to be paid to the Federal Government at rates that can vary from 1% up to 3.5%, depending on the substance. It is worth noting that CFEM rates for mining rare earth elements are 2%.* ▪ *There are no known serious impediments to obtaining a licence to operate in the area.* ▪ *Some tenements cover a State Nature Reserve (APA Caminhos Ecológicos da Boa Esperança), in which mining activities are allowed if authorized by the local environmental agency. Mining activities within sustainable use areas are not explicitly prohibited at federal, state, or municipal levels, despite that, the zone's management authority may prohibit mining, if it deems necessary, in the zone's management plan. Activities in these areas must reconcile economic development with environmental preservation. Mining operations impacting these areas require licensing approval from the respective zone's management authority. This authorization is contingent upon conducting thorough Environmental Impact Assessment (EIA) studies.*

Criteria	JORC Code Explanation	Commentary
Exploration done by other parties	▪ *Acknowledgment and appraisal of exploration by other parties.*	▪ *No known exploration for REE has been carried out on the exploration licence application areas. No known exploration for other minerals is known over the licence areas except for one underground excavation for muscovite.*
Geology	▪ *Deposit type, geological setting and style of mineralisation.*	▪ *The mineralisation in the region consists of Ionic adsorbed clay and residual heavy mineral concentrations of REE elements associated with deeply weathered regolith profiles over Middle Archean ortho and para granulite facies rocks and Late Archean high K ferroan A type granitoid sequences. The Archean sequences were metamorphosed to granulite facies in the Transamazonian orogeny and then intruded by Paleoproterozoic post tectonic charnockitic granites. Post tectonic potassium rich pegmatites that crosscut regional gneissic foliation are also present.* ▪ *Concentrations of REE minerals are present in the Later Archean A type granitoids and in small mafic intrusive bodies which can host very high grade monazite hosted REE-Nb-U-Sc mineralisation. Mineralisation is predominantly Ionic Adsorbed Clay type characterised by a REE enriched lateritic zone at surface underlain by a depleted mottled zone grading into a zone of REE-accumulation in the saprolite part of the profile. A broad halo of higher grade REE mineralisation is reported by other companies to surround ultra-high grade hard rock REE-Nb-U mineralisation which is a preferred target for the Company. The current strategy is to find the broad dispersion halo's in reconnaissance drilling, drill out the IAC mineralisation and locate Post tectonic intrusive bodies are known to carry REE mineralisation so the age of mineralisation and the host rocks may be very different.*
Drill hole Information	▪ *A summary of all information material to the understanding of the exploration results including a tabulation of the following*	▪ *Locations of all auger hole samples are shown on maps in this report and in appendix 1 together with collar elevation, depth, dip and azimuth. All Auger holes were vertical.*

Criteria	JORC Code Explanation	Commentary
	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 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 (eg 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.*	*Weighted length intersection analyses are reported in summary form as well as the CIA (Chemical Index of Alteration CIA=Al2O3*100/(Al2O3+CaO+K2O+Na2O)) and reporting groups for the REE elements* ***TREO (Total Rare Earth Oxide)** = La2O3 + CeO2 + Pr6O11 + Nd2O3 + Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Y2O3 + Lu2O3.* ***HREO (Heavy Rare Earth Oxide)** = Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3, + Y2O3 + Lu2O3* ***MREO (Magnet Rare Earth Oxide)** = Nd2O3 + Pr6O11 + Tb4O7 + Dy2O3 + Gd2O3 + Ho2O3 + Sm2O3 + Y2O3 .* ***NdPr** = Nd2O3 + Pr6O11 .* ***NdPr% of TREO** = Nd2O3 + Pr6O11/TREO x 100.* ***HREO% of TREO**= HREO/TREO x 100.* *Element to oxide conversions were made using the James Cook University*

Criteria	JORC Code Explanation	Commentary

conversion factors; https://www.jcu.edu.au/advanced-analytical centre/services-and-resources/resources-and-extras/element-to-stoichiometric-oxide-conversion-factors)

Element	Factor	Oxide
La	1.1728	La_2O_3
Ce	1.2284	Ce_2O_3
Pr	1.2082	Pr_6O_{11}
Nd	1.1664	Nd_2O_3
Sm	1.1596	Sm_2O_3
Eu	1.1579	Eu_2O_3
Gd	1.1526	Gd_2O_3
Tb	1.1762	Tb_4O_7
Dy	1.1477	Dy_2O_3
Ho	1.1455	Ho_2O_3
Er	1.1435	Er_2O_3
Tm	1.1421	Tm_2O_3
Yb	1.1387	Yb_2O_3
Lu	1.1372	Lu_2O_3
Y	1.2699	Y_2O_3

Samples below detection limit were converted to half detection limit

Sample over the maximum limit of detection were converted to the detection limit.

>500 Ce converted to 500 Ce

Criteria	JORC Code Explanation	Commentary
		>1000 Nd converted to 1000 Nd ▪ *All grades reported are considered to be of potential economic interest in context of the CIA*
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 (eg 'down hole length, true width not known').*	▪ *Drilling is vertical into assumed sub-horizontal laterite profiles or draped profiles, down hole length reported, true widths are not known.*
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.*	▪ *Plan views of tenement auger drill hole collar locations are provided and a table of all drill hole collar data.*
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.*	▪ *Reporting of the drilling and sample submission is comprehensive with details of relevant analyses for all holes reported*
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*	▪ *Artisanal mining for muscovite in underground workings has been carried out at one location recorded by the CPRM.* ▪ *Area selection was based on thorium anomalies interpreted from regional scale surveys, ground radiometric surveys has shown that leaching appears to reduce or remove significant radiometric responses since the top 30-40 cm only is assessed in a radiometric survey. Transported alluvium totally masks anomalous radiometric*

Criteria	JORC Code Explanation	Commentary
	deleterious or contaminating substances.	*responses as well as road base that is not anomalous in gamma emitting elements.*
Further work	▪ *The nature and scale of planned further work (eg 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.*	▪ *Additional work is continuing regional stream sediment sampling, radiometric mapping, channel sampling and full time auger reconnaissance drilling and mapping of outcrop to define areas for resource drilling using sonic or RC and diamond drilling as appropriate .*