
Gold Mountain Limited
(ASX: GMN)

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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

ASX Announcement/Press Release | 23 February 2024

Gold Mountain Limited (ASX:GMN)

GMN secures ground near world's largest Niobium producer

GMN is pleased to announce that it has secured 20 new tenements with a total area of 388.18 km² for niobium and REE in the Araxá region of Minas Gerais, located about 450 km north of Sao Paulo. The tenements are located among a group of carbonatites, including one which hosts the world's largest niobium mine.

GMN has secured tenements over and surrounding four radiometric and magnetic anomalies that have signatures similar to the carbonatite mined for niobium at Araxá.

Highlights

- 388 km² of tenements
- Intense magnetic and radiometric anomalies similar to those over the Araxá mine carbonatite.
- Tenements cover the carbonatite type magnetic and radiometric signatures as well as parts of the outer hydrothermally altered wall rocks zone of the carbonatites
- The Araxá region contains the largest niobium mine in the world hosted by a carbonatite complex near Araxá. The mine contains 94% of the world niobium reserves and Brazil has 82% of the world market for niobium.
- There is a need for diversity of supply and growth rates for niobium consumption are driven by high technology applications including electrification and weight reductions in steel structures.
- REE potential is also present within the carbonatite complex

Geology and mineralisation of the Araxá carbonatite

The Araxá apatite-niobium deposit, that is hosted by the Barreiro carbonatite-alkaline igneous complex, is situated about 6 km south of the city of Araxá, approximately 300 km west of Belo Horizonte in Minas Gerais.

A series of five mapped carbonatite intrusives, ranging from about 70-85 million years old occur in the region, with niobium mines on two of the known carbonatites. Geophysical indications of further carbonatites are present in several locations.

The carbonatites are intruded into metasediments of the Brasilia fold belt to the west of the São Francisco craton. The carbonatites intrude a sequence of quartzites and schists of the Mesoproterozoic Araxá Group that were deposited within a rift basin to the west of and the edge of the São Francisco craton and lie on a major crustal boundary that can be traced for over 2000 km in a WNW trending direction.

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Extensive hydrothermally altered zones up to 2.5 km wide surround the carbonatites and typically these hydrothermal zones can have enrichment in elements such as Th, REE and F hosted by REE fluorocarbonates, fluorite and other fluoride phases.

Araxá has total REE contents in the soil horizon between 0.3% and 1.3% with an average of 0.9%, in the laterite horizon between 0.5% and 4.4% with an average of 1.8%, and in the saprolite horizon between 0.4% and 7% with an average of 1.7%. Patches of the carbonatite have high grade niobium up to 7% Nb₂O₅. Some of the high-grade areas are magmatic mineralisation while others are hydrothermal in origin. Additional resources of P₂O₅ are also present that are processed to make concentrates at 33-35% P₂O₅.

Other carbonatites belonging to the same magmatic association in the Araxá area may also have similar economic potential. However, for any given element of economic interest there is a large variation in values from one carbonatite complex to another.

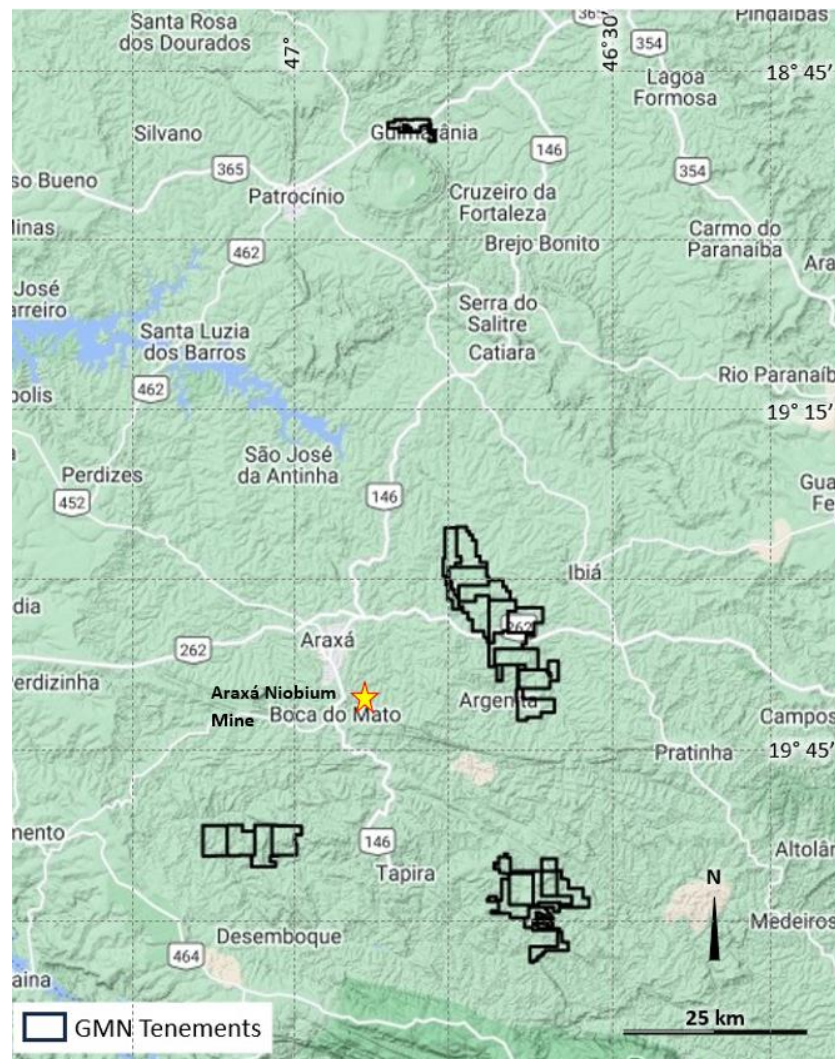


Figure 1. location of the tenements in Minas Gerais in Brazil

Figure 2 shows the tenements in relation to mapped geology, with the carbonatite complexes shown in bright blue.

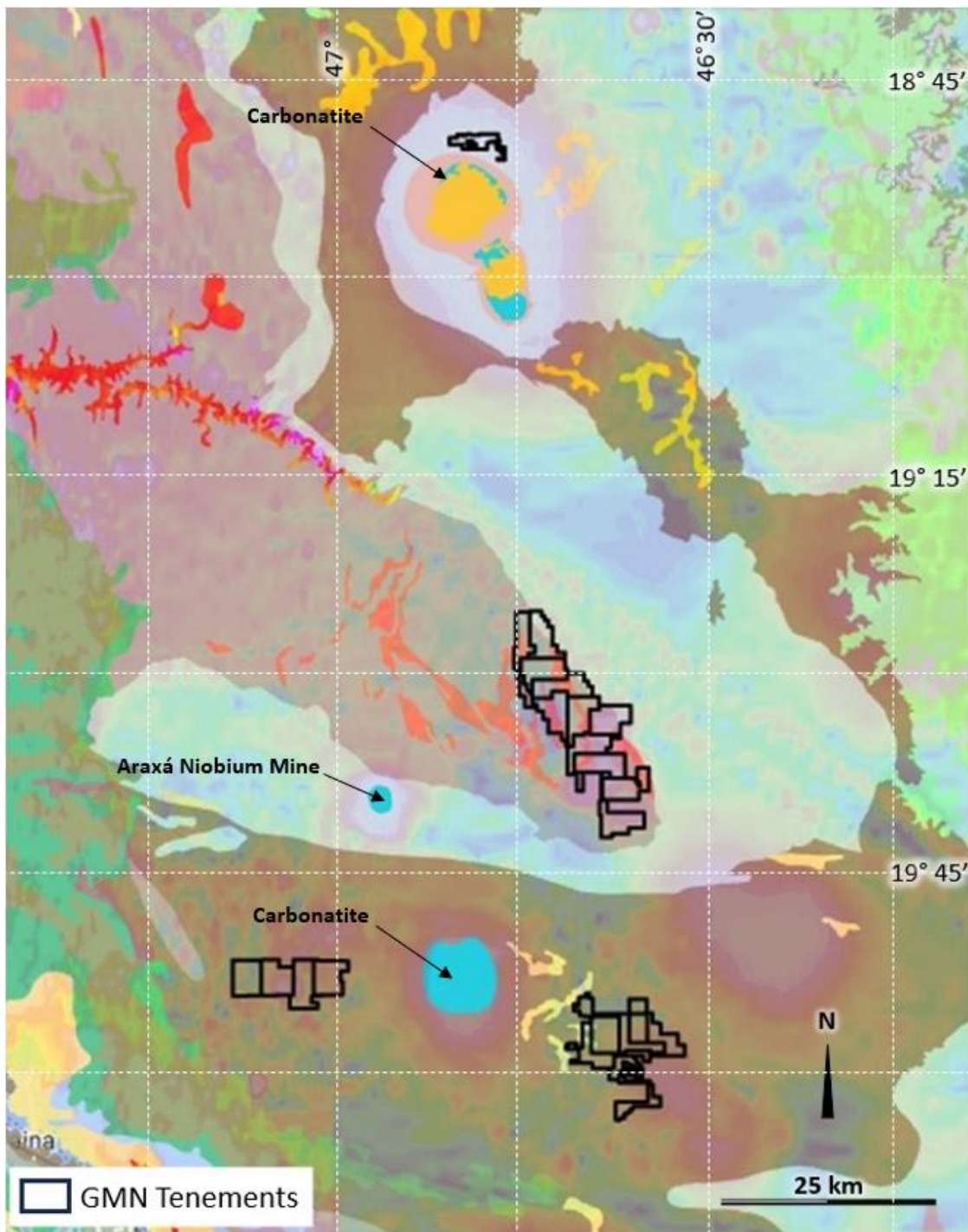


Figure 2. Mapped mid Proterozoic sedimentary sequence with the Late Cretaceous carbonatite complexes shown in bright blue. The geology is overlaid on the magnetic gradient image.

Figure 3 shows the location of the tenements in relation to magnetic and radiometric anomalies similar to those that are associated with the carbonatite hosting the Araxá mine.

Magnetic responses on the carbonatites in the Araxá region are strong, with a paired high and low responses with the mapped carbonatites plotting over the magnetic low-high boundary on total magnetic anomaly and on magnetic gradient maps the carbonatites plot over the magnetic highs. Similar responses are present on the inferred carbonatites over which GMN has applied for tenements.

Figure 3. Location of the tenements in relation to magnetic anomalies.

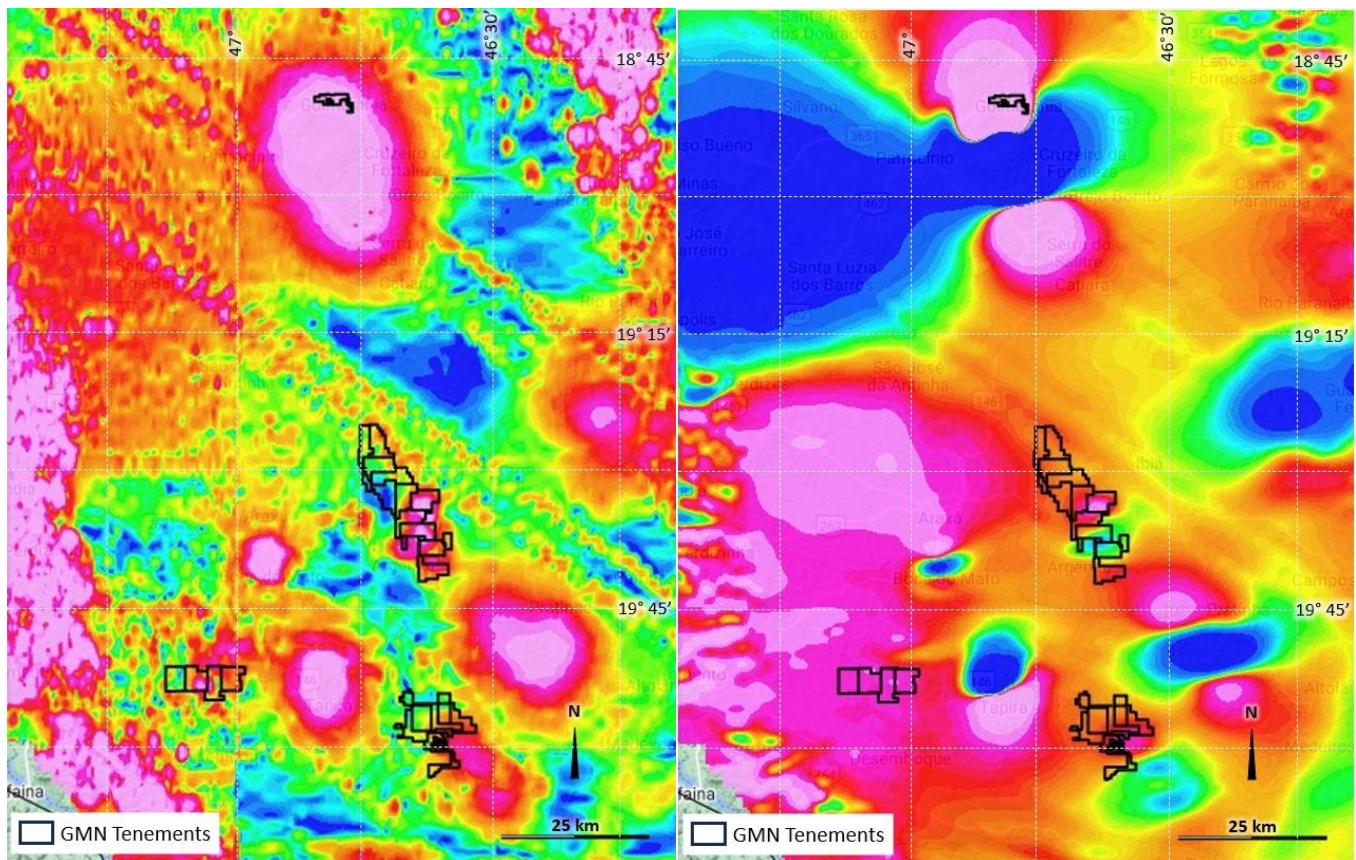


Figure 3. Tenements in relation to total gradient field (left) and to anomalous magnetic field (right).

Radiometric responses on the carbonatites vary, often however, with high total count responses, probably due to high thorium contents. Similar responses are present on the inferred carbonatites over which GMN has applied for tenements.

Circular features, possibly due to ring dykes or underlying larger magma chambers, are present associated with some of the carbonatites in the Araxá region. Some of the features covered by GMN licences cover or partly cover similar circular features to those around known mapped carbonatites.

Figure 4 shows the tenements in relation to the KUT radiometric imagery for the Araxá region.

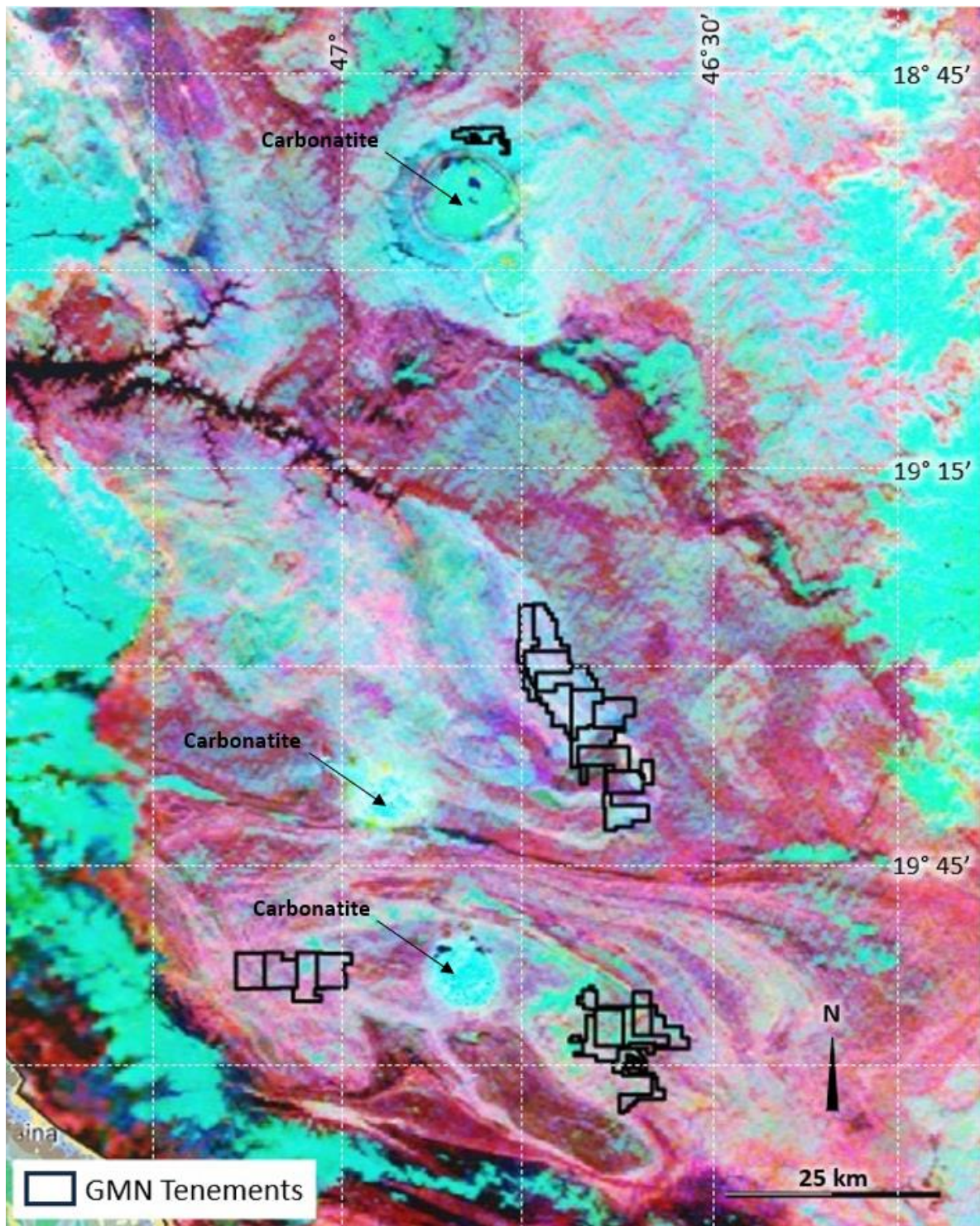


Figure 4. KUT radiometric image showing the tenements and high total count (thorium -uranium dominated) over the known and inferred carbonatite complexes.

The carbonatite at Araxá is surrounded by a hydrothermally affected zone 2.5 km wide. These hydrothermally altered zones are common around magmatic carbonatites world-wide. This alteration zone can have mineral potential for REE and Nb as well as the actual carbonatite itself.

The laterite cover over the Araxá carbonatite is up to 230 metres thick and the weathered magmatic and hydrothermal mineralisation is the principal source of ore for the mine. The niobium orebody is totally contained within the weathered zone. If IAC type REE is present, it would also be present in the weathered zone.

Uses and Demand for Niobium

Approximately 90% of niobium ore mined at Araxá is processed into ferroniobium, and the remainder is processed into products for special applications.

Adding minimal amounts of ferroniobium, approximately 0.05%, increases the mechanical strength of steel without reducing its ductility or ability to deform plastically without breaking. These steels, known as micro-alloyed steels, are used to make oil and gas pipelines, train tracks, cars, truck bodies, ships hulls, and bridges.

Niobium oxides are used in the manufacture of camera lenses, electric vehicle batteries, and telescope lenses. High purity, vacuum grade niobium alloys are particularly resistant to heat, making them ideally suited for jet engines, rocket engines, and gas turbines used for power generation and in the nuclear energy industry for radiation resistant pressure vessels.

Metallic niobium is used in the production of superconducting wires for computerized tomography scanners, magnetic resonance imaging equipment, and particle accelerators.

The compound annual growth rates (CAGR) for niobium are though to range from 6-9% to 2030 and additional diversity of supply is desirable.



Figure 5. Anticipate growth of the niobium market to 2030.

CAGR of 6 % predicted, some analysts expect CAGR of up to 9% to 2029.

Proposed Exploration Program

Proposed exploration will consist of initial stream sediment sampling and channel sampling of exposures of the weathering horizons. That would be followed up with detailed geophysics and soil sampling to define areas of specific interest for niobium and REE. Any significant anomalies would then be followed up with a drilling program, including both RC and diamond drilling to define resources.

- END -

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

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Competent Persons Statement

The information in this ASX release does not include Exploration Results and is based on public information compiled by Peter Temby, a Competent Person who is a Member of Australian Institute of Geoscientists. Peter Temby is an independent consultant working currently for Mars Mines 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.

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, lithium, nickel, copper and gold, are now actively being explored.

Gold Mountain has gradually diversified its project portfolio. The Company has a 75% holding in a package of highly prospective rare earth element, copper and lithium licenses located within the eastern Brazilian lithium belt, spread over parts of the Borborema Province and São Francisco craton in north-eastern Brazil including in Salinas, Mines Gerais.

In PNG, Gold Mountain is exploring the Wabag Project, which covers approximately 950km² of highly prospective exploration ground in the Papuan Mobile belt. This project contains three targets, Mt Wipi, Monoyal and Sak Creek, all lying within a northwest-southeast striking structural corridor. The three prospects have significant potential to host a porphyry copper-gold-molybdenum system and, or a copper-gold skarn system. Gold Mountain's current focus

is Mt Wipi, which has been subjected to several phases of exploration, and the potential to host a significant copper-gold deposit is high. The current secondary targets are, in order of priority, Monoyal and Sak Creek.

Gold Mountain has also applied for a 491 km² exploration licence at Green River 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.

Appendix 1. List of Tenements and Current Status

Licence No	Area_ha	Status	Holders Name	Commodity	State
830326/2024	1986.08	Application	Mars GMN Brazil Ltda	Niobium - REE	Minas Gerais
830327/2024	1989.02	Application	Mars GMN Brazil Ltda	Niobium - REE	Minas Gerais
830328/2024	1979.62	Application	Mars GMN Brazil Ltda	Niobium - REE	Minas Gerais
830329/2024	1951.68	Application	Mars GMN Brazil Ltda	Niobium - REE	Minas Gerais
830330/2024	1986.98	Application	Mars GMN Brazil Ltda	Niobium - REE	Minas Gerais
830331/2024	1986.33	Application	Mars GMN Brazil Ltda	Niobium - REE	Minas Gerais
830332/2024	1985.46	Application	Mars GMN Brazil Ltda	Niobium - REE	Minas Gerais
830333/2024	1988.98	Application	Mars GMN Brazil Ltda	Niobium - REE	Minas Gerais
830336/2024	1989.19	Application	Mars GMN Brazil Ltda	Niobium - REE	Minas Gerais
830334/2024	1984.15	Application	Mars GMN Brazil Ltda	Niobium - REE	Minas Gerais
830338/2024	1988.15	Application	Mars GMN Brazil Ltda	Niobium - REE	Minas Gerais
830339/2024	1988.63	Application	Mars GMN Brazil Ltda	Niobium - REE	Minas Gerais
830340/2024	1986.79	Application	Mars GMN Brazil Ltda	Niobium - REE	Minas Gerais
830341/2024	1988.91	Application	Mars GMN Brazil Ltda	Niobium - REE	Minas Gerais
830343/2024	1988.50	Application	Mars GMN Brazil Ltda	Niobium - REE	Minas Gerais
830377/2024	1986.41	Application	Quantum Litio Brasil Ltda	Niobium - REE	Minas Gerais
830380/2024	1987.88	Application	Quantum Litio Brasil Ltda	Niobium - REE	Minas Gerais
830383/2024	1975.63	Application	Quantum Litio Brasil Ltda	Niobium - REE	Minas Gerais
830384/2024	1988.45	Application	Quantum Litio Brasil Ltda	Niobium - REE	Minas Gerais
830402/2024	1110.69	Application	Quantum Litio Brasil Ltda	Niobium - REE	Minas Gerais
ha	38817.53				
Total area km2	388.18				