

# Discovering Critical Metals for the Future

**Frisco Copper-Gold Project, Utah, USA**

**Minas Gerais Lithium Projects, Brazil**

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*“Alderan is preparing to drill the New Years copper-gold prospect at its Frisco Project in Utah, USA which has historical drill holes with intersections of +10m grading +1.5% Cu on the margin of a larger magnetic anomaly than the neighbouring historical Cactus mine. New Years has received no exploration since the 1960s.*

*In Brazil, initial lithium assay results for stream sediment sampling are expected this month”*

**Alderan Resources Managing Director Scott Caithness**

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**References to Previous ASX Announcements** – The information in this presentation that relates to historical exploration results were first reported by the Company in accordance with listing rule 5.7 on 28 June 2017, 21 August 2017, 12 September 2017, 28 September 2017, 30 October 2017, 15 December 2017, 17 January 2018, 5 March 2018, 29 March 2018, 12 March 2019, 18 November 2019, 25 March 2020, 16 April, 2020, 20 May 2020, 19 August 2020, 28 August 2020, 22 September 2020, 22 February 2021, 8 March 2021, 11 March 2021, 11 May 2021, 9 June 2021, 11 June 2021, 24 August 2021, 30 September 2021, 18 November 2021, 30 December 2021, 25 February 2022, 22 March 2022, 5 April 2022, 11 May 2022, 25 May 2022, 6 June 2022, 27 June 2022, 3 August 2022, 28 September, 2022, 30 September 2022, 2 November 2022, 14 December 2022, 30 December 2022, 14 February 2023, 20 September 2023, 3 October 2023, 26 October 2023, 13 November 2023, 5 December 2023, 23 January 2024, 22 February 2024, 13 March 2024, 8 April 2024 and 29 April 2024. Alderan confirms it is not aware of any new information or data that materially affects the information included in the original market announcements.

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# Projects Overview

## Focused on discovery of critical metals in the USA and Brazil



**Frisco project** in Utah, USA targeting Cactus district high grade copper-gold deposits  
Post mining (1957-) higher grade drill intersections at Cactus deposit include **4.9m @ 6.72% Cu, 22.9m @ 2.06% Cu, 41m @ 1.9% Cu, 0.62g/t Au, 22.9m @ 1.84% Cu**

New Years intersections include **13.7m @ 2.32% Cu, 10.7m @ 1.6% Cu and 10.7m @ 1.52% Cu** all within intervals up to 42m grading >0.80% Cu

**New data and new model has identified 12 new targets, including New Years**, with same magnetic signature as Cactus

**Next steps** – New Years soil sampling underway, drilling proposed for June 2024



**Seven lithium exploration projects** in Brazil's 'Lithium Valley' covering 472km<sup>2</sup> in mineral rich Minas Gerais State

Targeting margins of lithium-caesium-tantalum (LCT) granites (G4) with pegmatites, indicator minerals & artisanal mining within and peripheral to project areas

Artisanal mines and lithium indicator minerals, beryl and tourmaline identified

**Stream sediment sampling completed** with assays expected over next 2 months

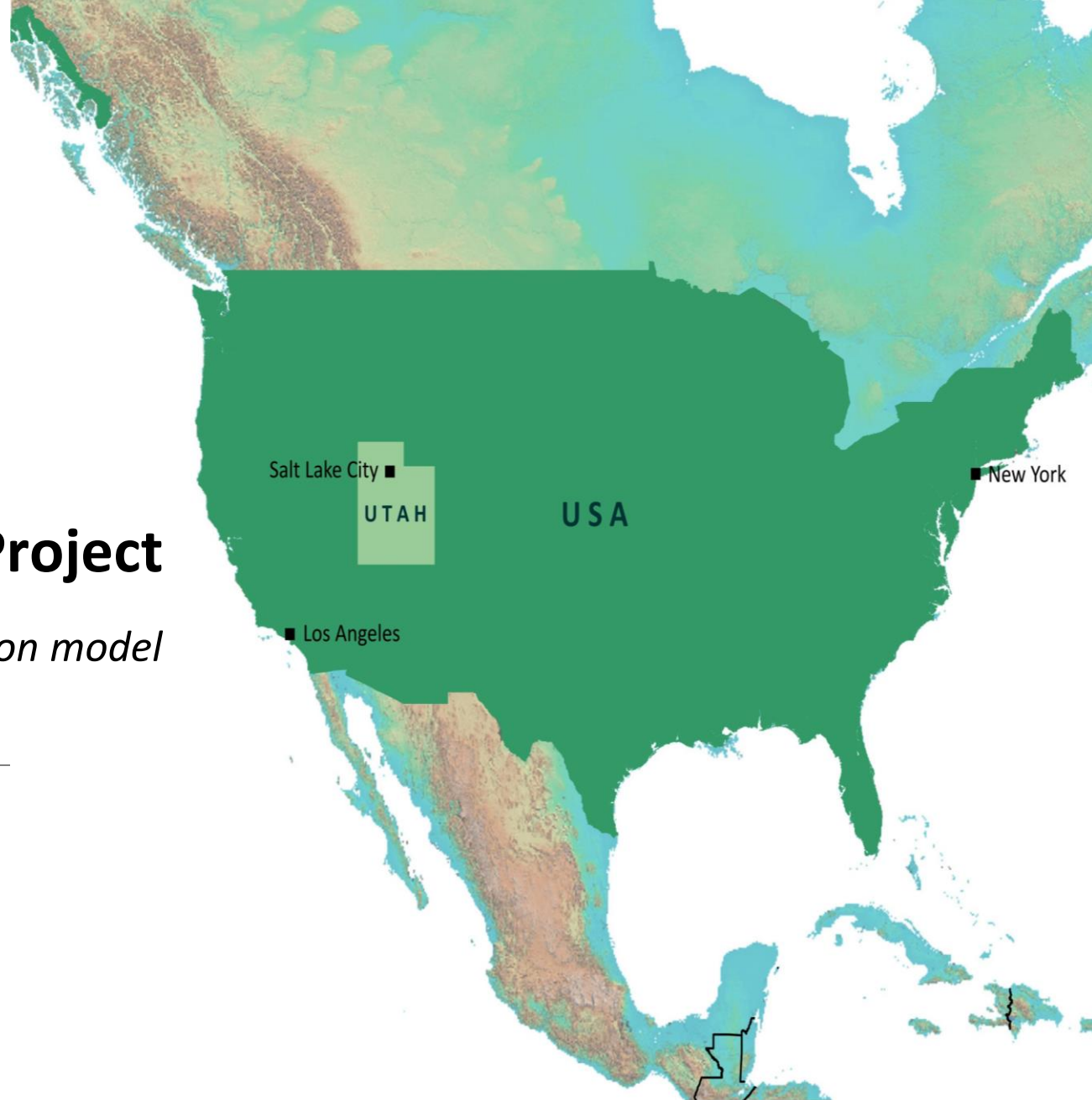
**Next steps** – review stream sediment assays and identify anomalies for followup

# Frisco Copper-Gold Project

*New Data and a new exploration model*

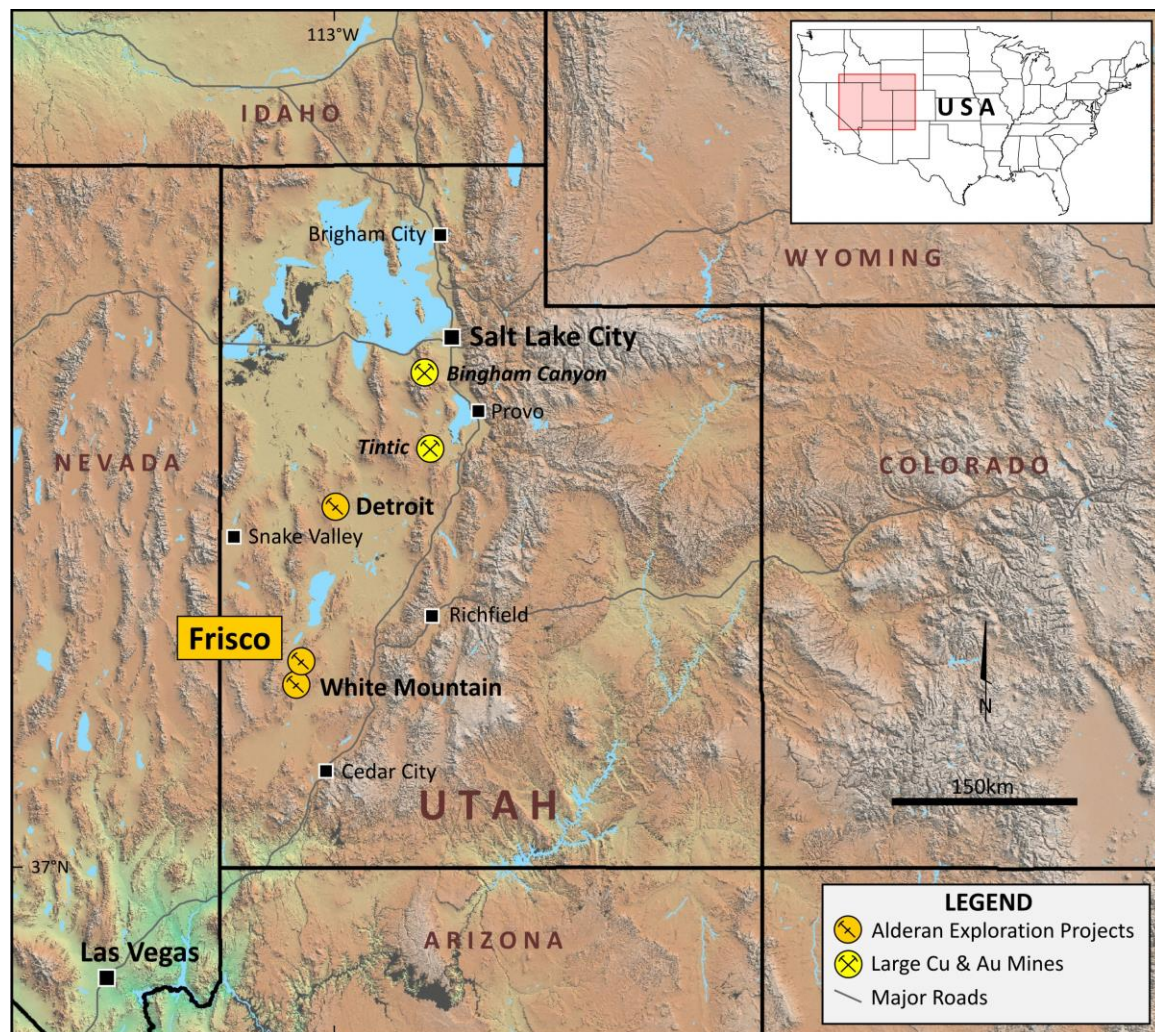
*Utah, USA*

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# Frisco – High Grade Cu-Au Deposit Potential



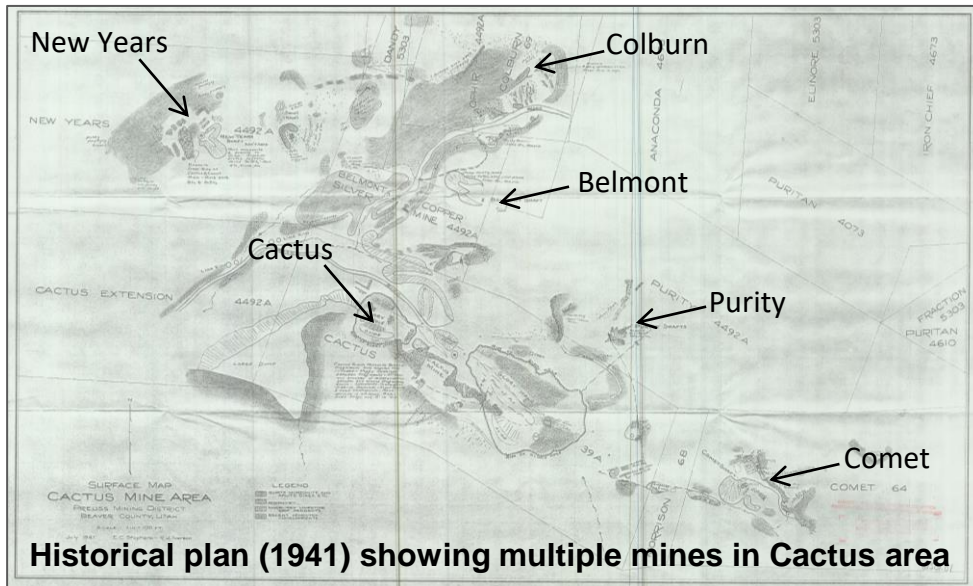
- Utah - a Tier 1 mining jurisdiction
- 17<sup>th</sup> on Fraser Institute 2022 ranking of investment attractiveness
- Excellent access to infrastructure – road, rail & power
- World ranked copper and gold mining districts in Utah and neighbouring Nevada
- **Frisco** is an historical copper-gold and silver-lead-zinc mining district
- Multiple historical copper-gold mines associated with breccias in Frisco's Cactus district
- Alderan has new data and a new exploration model



# Frisko – A Brief History



Cactus adit entrance

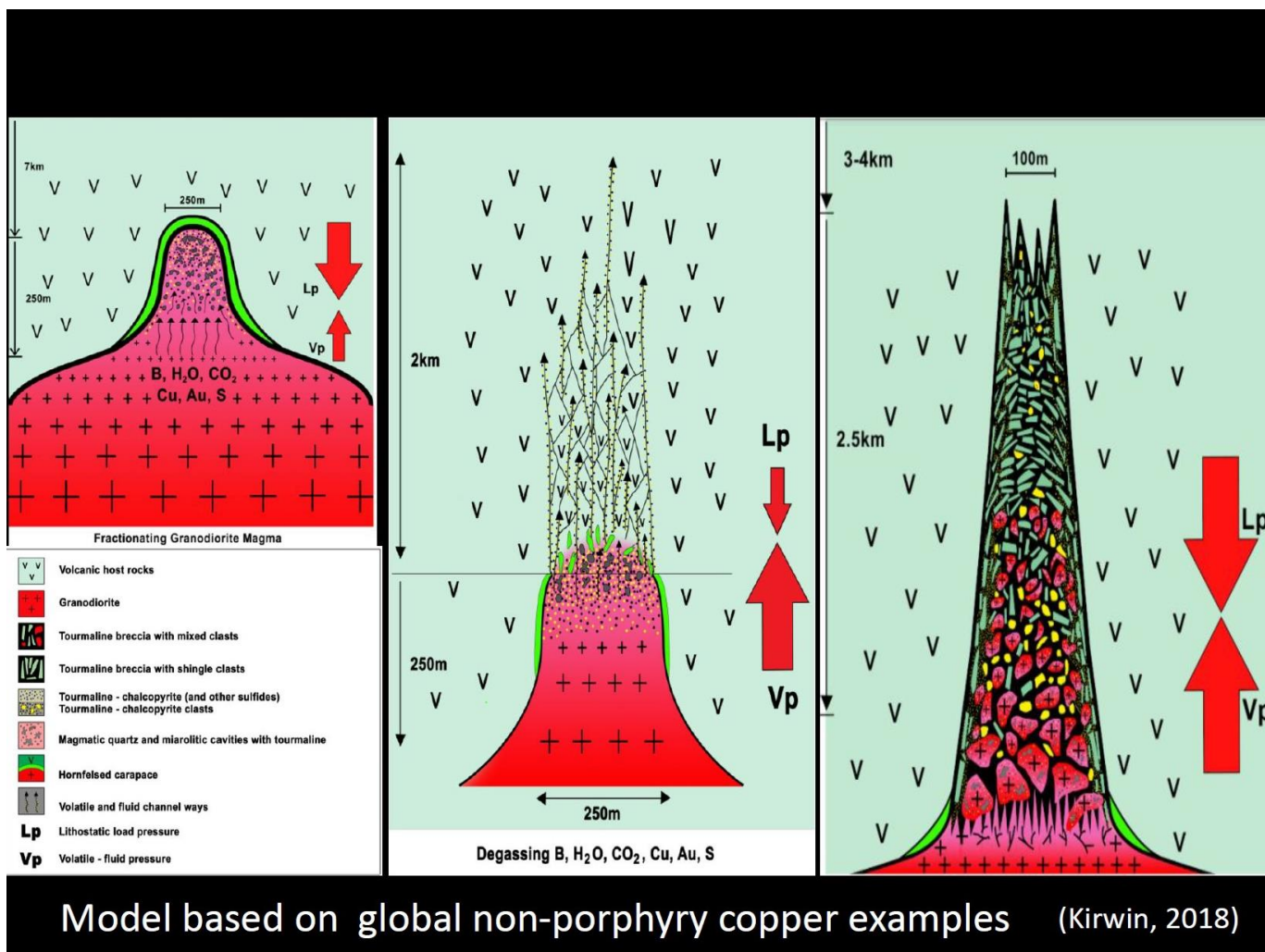


Historical plan (1941) showing multiple mines in Cactus area

**Alderan's Cactus district remains under explored for high grade breccia hosted copper-gold deposits**

- An historical Cu-Au mining district with multiple mine owners from late 1800s
- **Cactus mine** operations closed by 1920 with minor intermittent production to 1957
- Cactus reportedly produced 1.27Mt grading 2.07% Cu, 7.4g/t Ag and 0.33g/t Au from breccias
- Post mining high grade intersections at Cactus include:
  - 4.9m @ 6.72% Cu within 43.6m @ 1.69% Au
  - 12.2m @ 3.31% Cu within 22.9m @ 2.06% Cu
  - 8.0m @ 3.11% Cu, 0.98g/t Au within 32.5m @ 1.24% Cu, 0.31g/t Au
  - 12.2m @ 2.77% Cu within 25.9m @ 1.62% Cu
  - 41m @ 1.9% Cu, 0.62g/t Au within 74m @ 1.1% Cu, 0.35g/t Au

# Frisko – A New Exploration Model



Copper rich tourmaline breccias associated with intrusion related copper deposits

Deposit characteristics typically include:

- ✓ high Cu-Au grades with Cu-Au-Mo element signature
- ✓ occur in clusters
- ✓ elliptical shape with long axis following structural trend
- ? highest grades on margins of breccias
- ? flare at depth
- ? Vertical extents of >1km

Examples include:

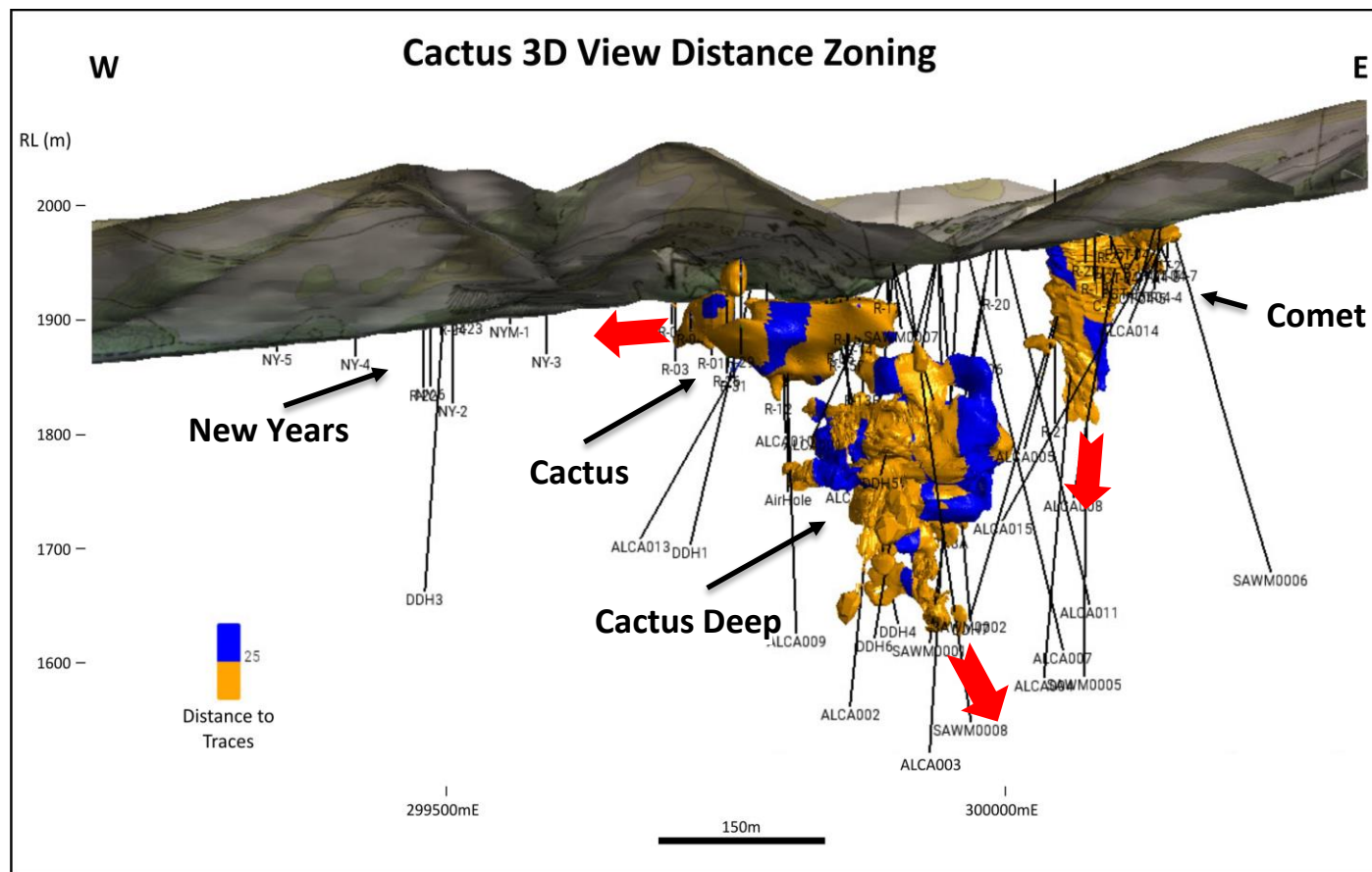
- Pilares Mine, Mexico
- Ilkwang, South Korea
- Soledad, Peru



# New Data - 3D Deposit Modelling

*New Years lies 400m from Cactus along the Cactus Canyon fault trend, has outcropping copper mineralised breccia plus high grade drill intersections and has received no exploration since 1964*

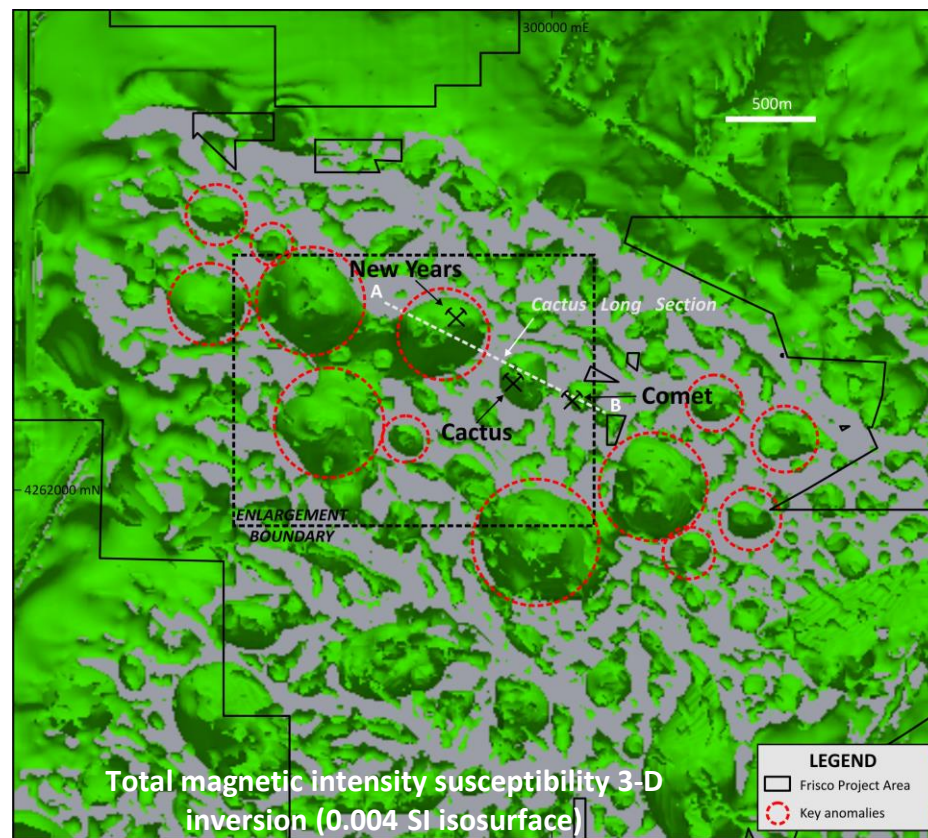
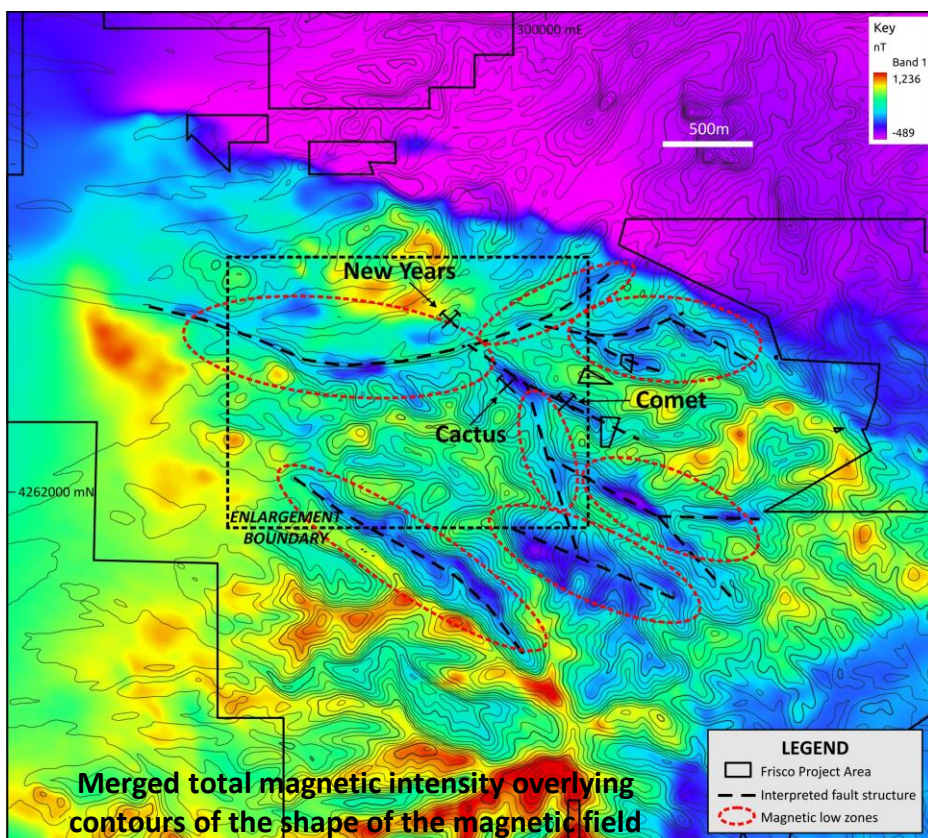
- Cactus and Comet are open at depth and to the NW along Cactus Canyon Fault and have potential for additional mineralisation on margins of deposits (blue areas)
- New Years is key target** where higher grade historical drill intersections include:
  - **13.7m @ 2.32% Cu within 19.8m @ 1.67% Cu from 22.9m**
  - **10.7m @ 1.52% Cu within 27.4m @ 0.85% Cu from surface**
  - **10.7m @ 1.60% Cu and 4.6m @ 1.3% Cu within 42.7m @ 0.80% Cu from surface**



# New Data – Multiple Untested Magnetic Anomalies

Alderan's 3-D inversion modelling of Rio Tinto's high quality drone magnetics survey highlights:

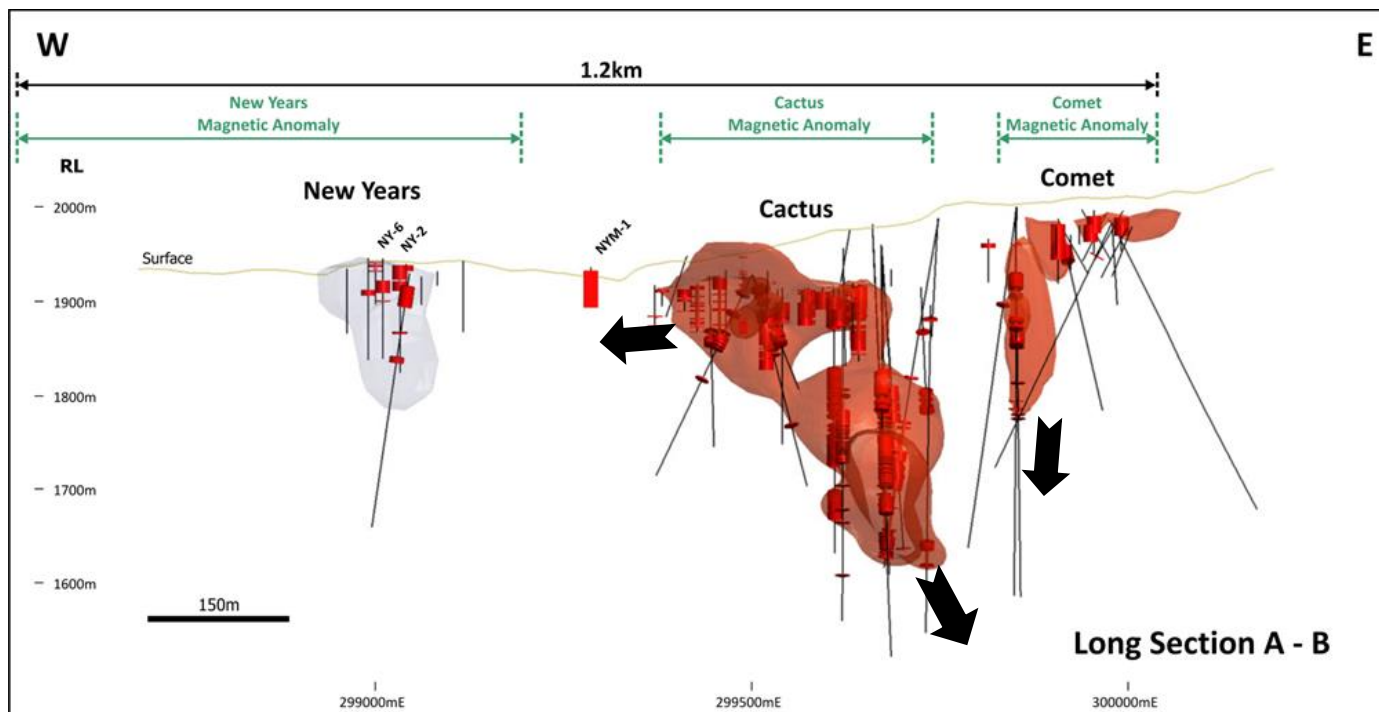
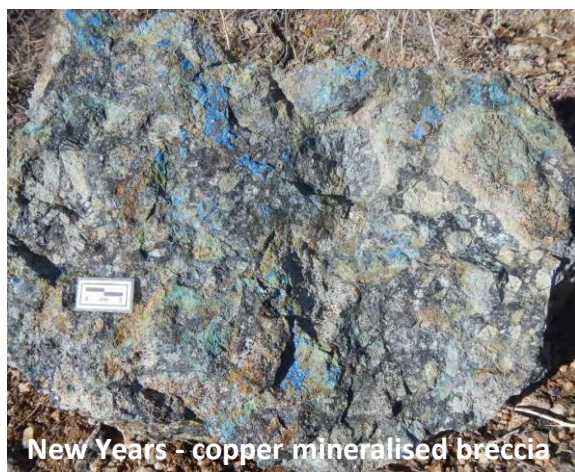
- Magnetic low zones define structures - Cactus and Comet sit within the NW-SE Cactus Canyon Fault structure
- Cactus and Comet have coincident discrete low anomalies in the 3D-magnetic inversion modelling
- Twelve new anomalies associated with structures including New Years on the NW-SE Cactus Canyon Fault trend





# Frisco – Oxide & Primary Copper-Gold

1. Comet, Cactus and New Years sit in the same NW trending fault zone
2. Deposits have coincident magnetic anomalies over +1.2km of strike length
3. High grade copper drill hole intersections including at New Years - mineralisation from surface

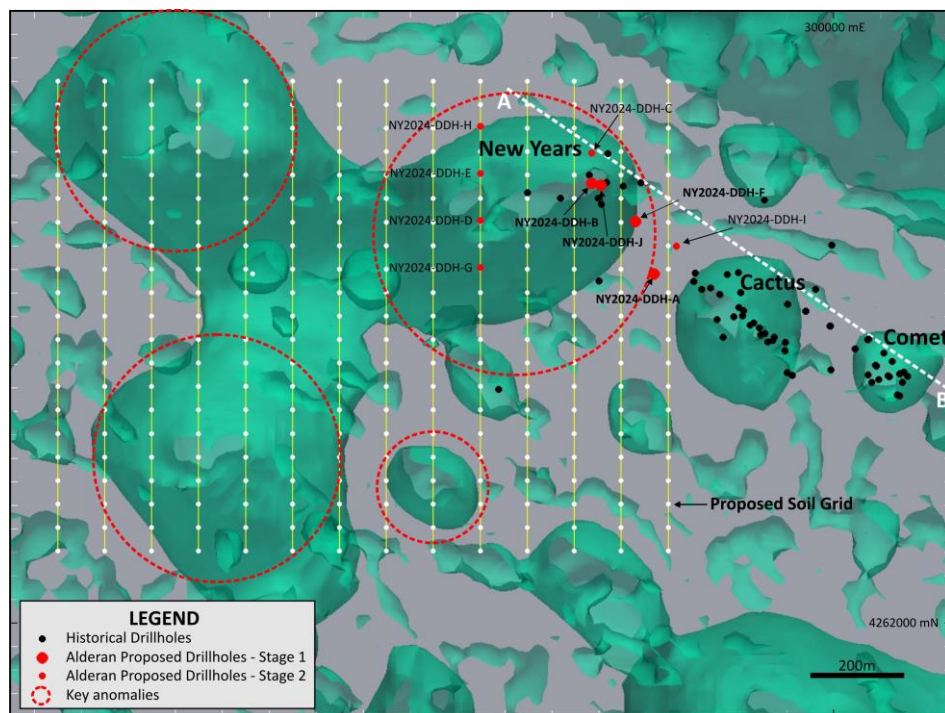
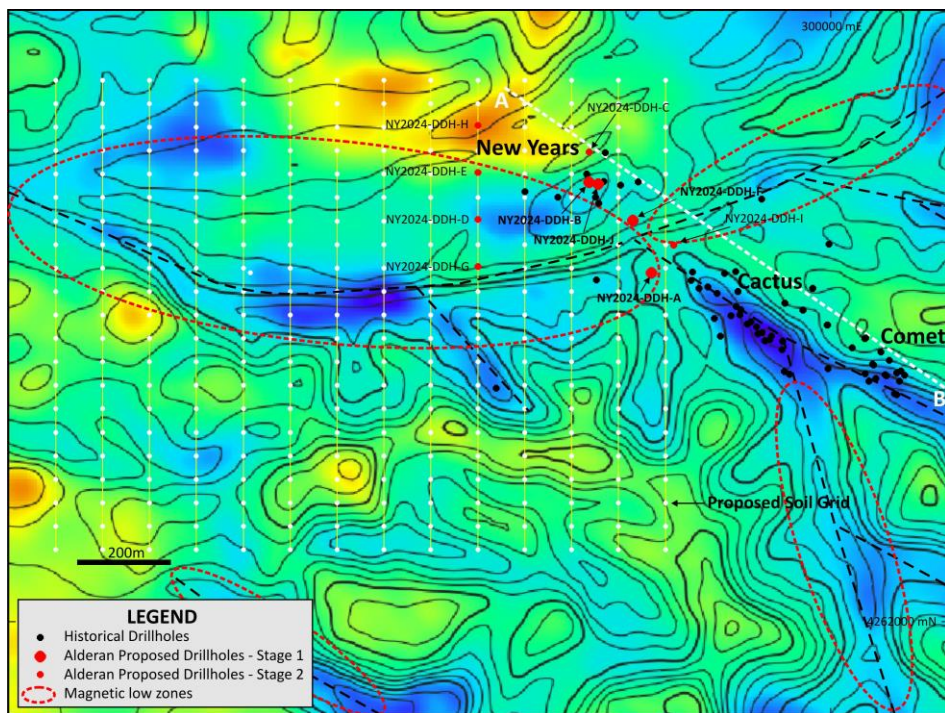


4. Historical hole between Cactus and New Years intersected 10.7m @ 1.6% Cu & 4.6m @ 1.3% Cu within 42.7m @ 0.8% Cu (all oxide) from surface
5. Copper rich breccia on surface at New Years
6. New Years – unexplored since 1964 plus another 12 new untested Cactus and Comet 'look-a-like' magnetic anomalies identified

# Frisco Next Steps – New Years Soils and Drilling

The Q2-Q3, 2024 programme

- Soil sample grid will be completed over New Years magnetic anomaly in May
- Two stage drilling programme over New Years
  - Stage 1: 4 holes (540m) to verify historical drilling & test Cactus Canyon fault zone
  - Stage 2: 5 deeper and step out holes (1,000m) to commence testing size of target

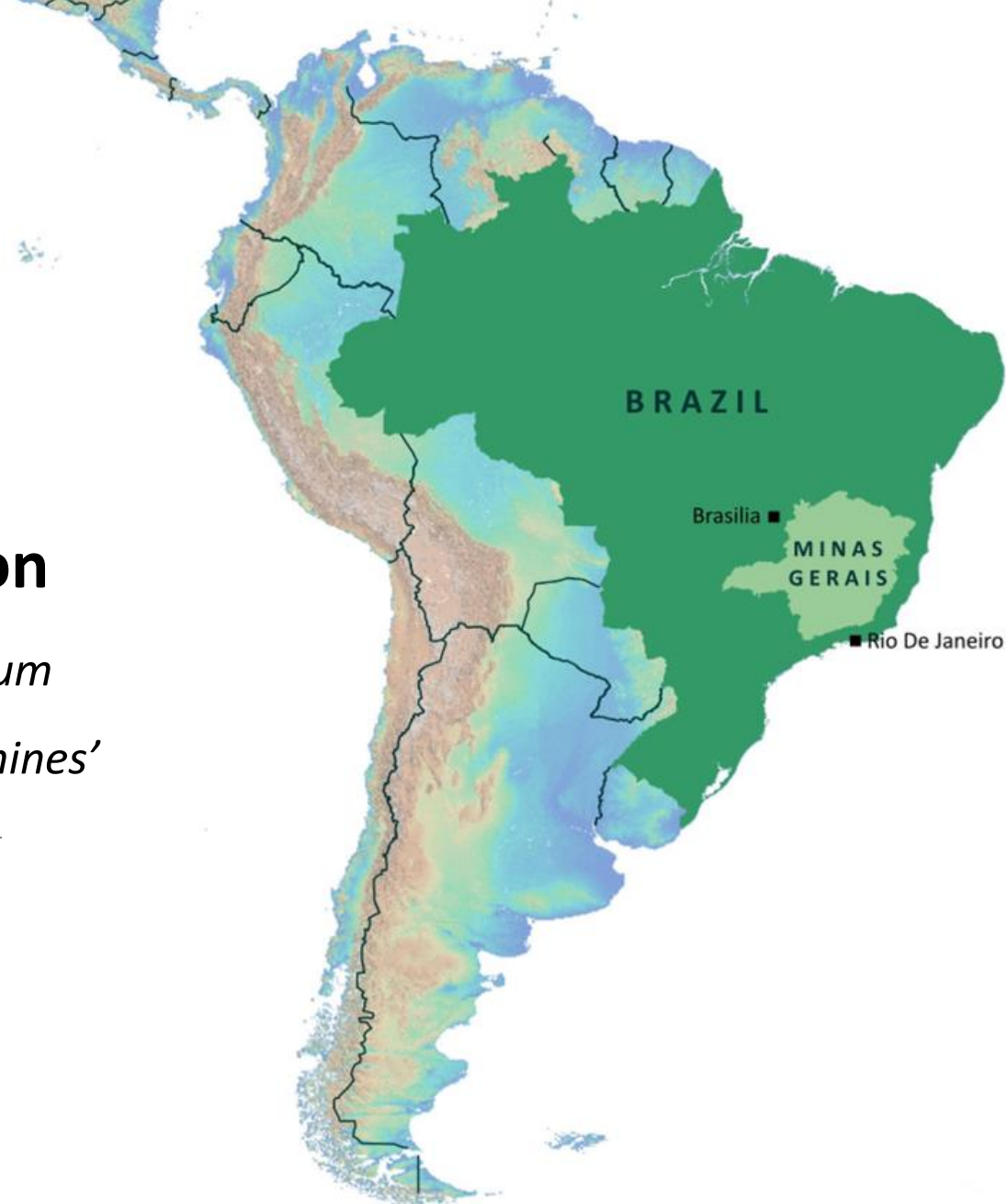




## Brazil Lithium Acquisition

*Minas Gerais State – ‘home to lithium producers and 40 of Brazil’s top 100 mines’*

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# Brazil Lithium Project Highlights

## Projects

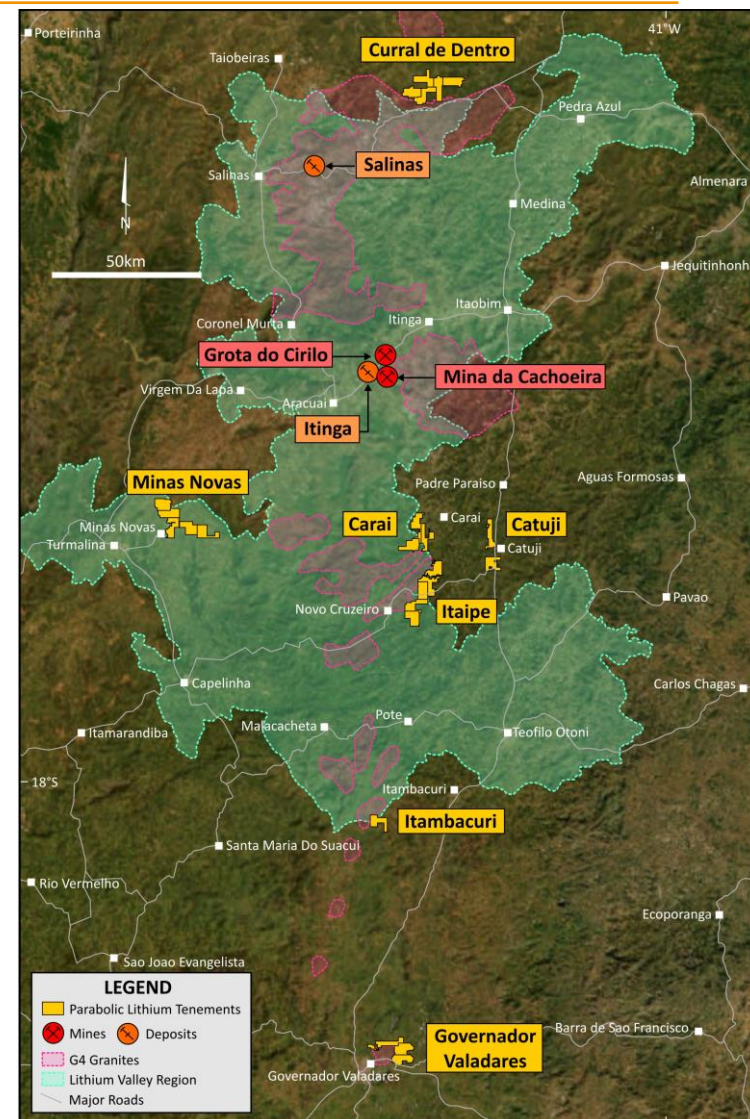
- Alderan acquired 100% ownership of 7 lithium projects (472km<sup>2</sup>) in Brazil's Eastern Lithium Belt in Nov 2023
- Projects targeting margins of LCT (G4) granites - pegmatites, indicator minerals & artisanal mining within and peripheral to licences
- Pegmatites, indicator minerals & garimpo mining activity in five projects – identified during Alderan's field reconnaissance

## Location

- Projects in 'Lithium Valley' district of Minas Gerais state – 'home to 40 of Brazil's top 100 largest mines'
- 'Lithium Valley' lithium mines - Mina da Cachoeira and Grota do Cirilo mines
- Lithium feasibility/resource delineation stage projects in 'Lithium Valley' - Salinas and Itinga projects

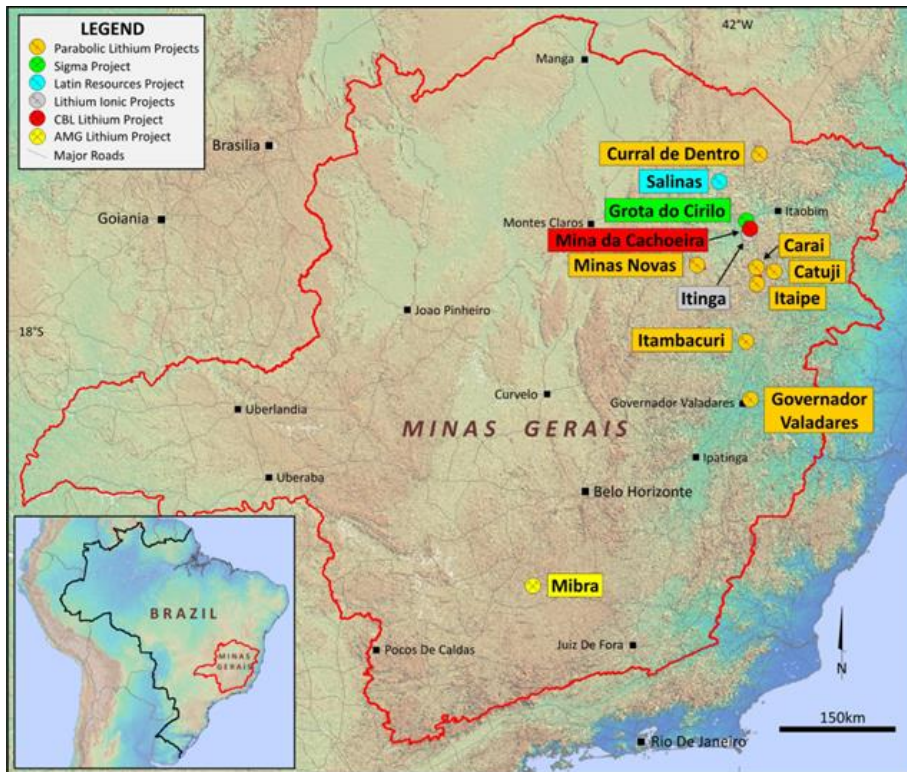
## Exploration

- Stream sediment sampling completed over all project areas - assay results expected over May-July period



# Why Brazil for Lithium

Minas Gerais launched the 'Lithium Valley Brazil' initiative in May 2023 to attract investors and accelerate development of lithium projects. Provides expedited permits, a stable legal and simpler regulatory environment plus government support for the supply of infrastructure, energy and labour



- **Resource rich state in mining country with +300 operational mines** - produces 75% of world niobium, 53% of Brazilian iron ore and is also a large producer of gold, zinc and phosphate
- **Hosts 'Lithium Valley'** in Brazil's Eastern Lithium Belt with lithium mines and recent discoveries
- **Operating lithium mines:**
  - CBL's Mina da Cachoeira (42Ktpa 5.5%  $\text{Li}_2\text{O}$  production capacity)
  - AMG's Mibra (130Ktpa  $\text{Li}_2\text{O}$  concentrate)
  - Sigma Lithium Corporation's Grotto do Cirilo which is in Stage 1 production of 270Ktpa of 5.5%  $\text{Li}_2\text{O}$  concentrate
- **Recent lithium discoveries:**
  - Latin Resources' Colina deposit: MI&I Resource 63.5Mt @ 1.31%  $\text{Li}_2\text{O}$
  - Lithium Ionic's Bandiera deposit: MI&I Resources 41.9Mt @ 1.35%  $\text{Li}_2\text{O}$



# Brazil Lithium – Next Steps

1. Review stream sediment sample assay results & identify lithium anomalies (Q3, 2024)
2. Relinquish areas with no lithium anomalies (Q3, 2024)
3. Detailed followup stream sampling, field inspections and geological mapping of lithium anomalous areas (Q3, 2024) to identify prospects
4. Soil sampling and sample analysis of prospects (Q4, 2024)
5. Drill test soil anomalies (H1, 2025)

An ongoing programme of reviewing and securing more advanced lithium opportunities





# Exploration Programme

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## USA copper & gold projects

### Frisco

1. Soil sampling over the New Years magnetic anomaly (Q2, 2024)
2. Stage 1 drilling into the New Years prospect (Q2-Q3, 2024)
3. Stage 2 drilling into the New Years prospect (Q3, 2024)

## Brazil lithium projects

1. Identify and prioritise lithium target areas from completed stream sampling programme (Q2-Q3, 2024)
2. Followup stream sampling, geological mapping, soil sampling and geophysical surveying over anomaly areas (Q3-4, 2024)
3. Initial drilling of priority targets (Q1, 2025)

**Plus reviewing and securing new project opportunities to upgrade the portfolio (ongoing)**

# Investment Highlights

## USA Copper

- **High grade copper intersections at New Years prospect** in 1960s drill holes - no exploration since
- **New Years soil sampling underway**
- **New Years drilling** planned to commence in June 2024
- **Cactus and Comet copper-gold deposits** are open
- **Multiple untested geophysical targets** analogous to Cactus and Comet



## Brazil Lithium

- **Stream and rock sampling** completed over seven lithium projects covering 472km<sup>2</sup> – assays expected in Q2-Q3, 2024
- **Projects located in 'Lithium Valley'** district of Minas Gerais state which hosts lithium mines, recent resources and has a supportive government
- **Right geological setting confirmed** - Projects lie at the margins of known and interpreted G4 granites with pegmatites, lithium indicators and garimpo activity observed



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