

INVESTOR PRESENTATION

July 2023

TSX-V: MNRL | FSE : BE5 | OTCQB : MNMRF



# MONUMENTAL MINERALS

Lithium Brine & Rare Earths in the Americas



# Investment opportunity – 3 critical elements projects

Monumental Minerals Corp is a mineral exploration company focused on the acquisition, exploration and development of mineral resource properties in the critical metals sector in the Americas

We are well positioned for the strong and growing global energy transition, and clearly recognize that a departure from fossil fuels is a move towards sustainably acquired critical metals.

## Salar de Turi

Salar de Turi located within the lithium triangle, Chile



## Salar de Laguna Blanca

Laguna Blanca lithium brine – cesium sediment salar project is located within the lithium triangle, Chile



## Jemi HREE

The Jemi heavy rare earth (HREE) project located in Coahuila, Mexico near the Texas, USA border





# Critical elements

## Lithium

Li

- This metal is primarily used for batteries. Lithium ion batteries are highly desirable for EVs and consumer electronics due to their light weight, high energy densities, large amounts of current, low maintenance, and no memory effect.
- Demand for lithium is expected to increase by a factor of 18-20 over the next 30 years.

## Cesium

Cs

- 5G and the Internet of Things (IoT): Cs is critical in atomic clocks that keep vast communication networks in sync.
- The largest consumer of cesium is the oil and gas exploration sector. Cesium formate is added to drilling fluids to lubricate drill bits, to bring rock cuttings to the surface, and to prevent blowouts in high pressure wells. It is the preferred drilling fluid as it is non-toxic.

## Terbium & Dysprosium

Tb

Dy

- Although neomagnets with LREEs are perfect for high-powered EVs, they lose magnetism over 60-80°C. The addition of HREEs terbium or dysprosium can mitigate this problem by providing optimal magnetism to 160°C.
- The addition of dysprosium with praseodymium increases a magnet's coercivity (the resistance of a magnetic material to change in magnetisation).

## Neodymium & Praseodymium

Nd

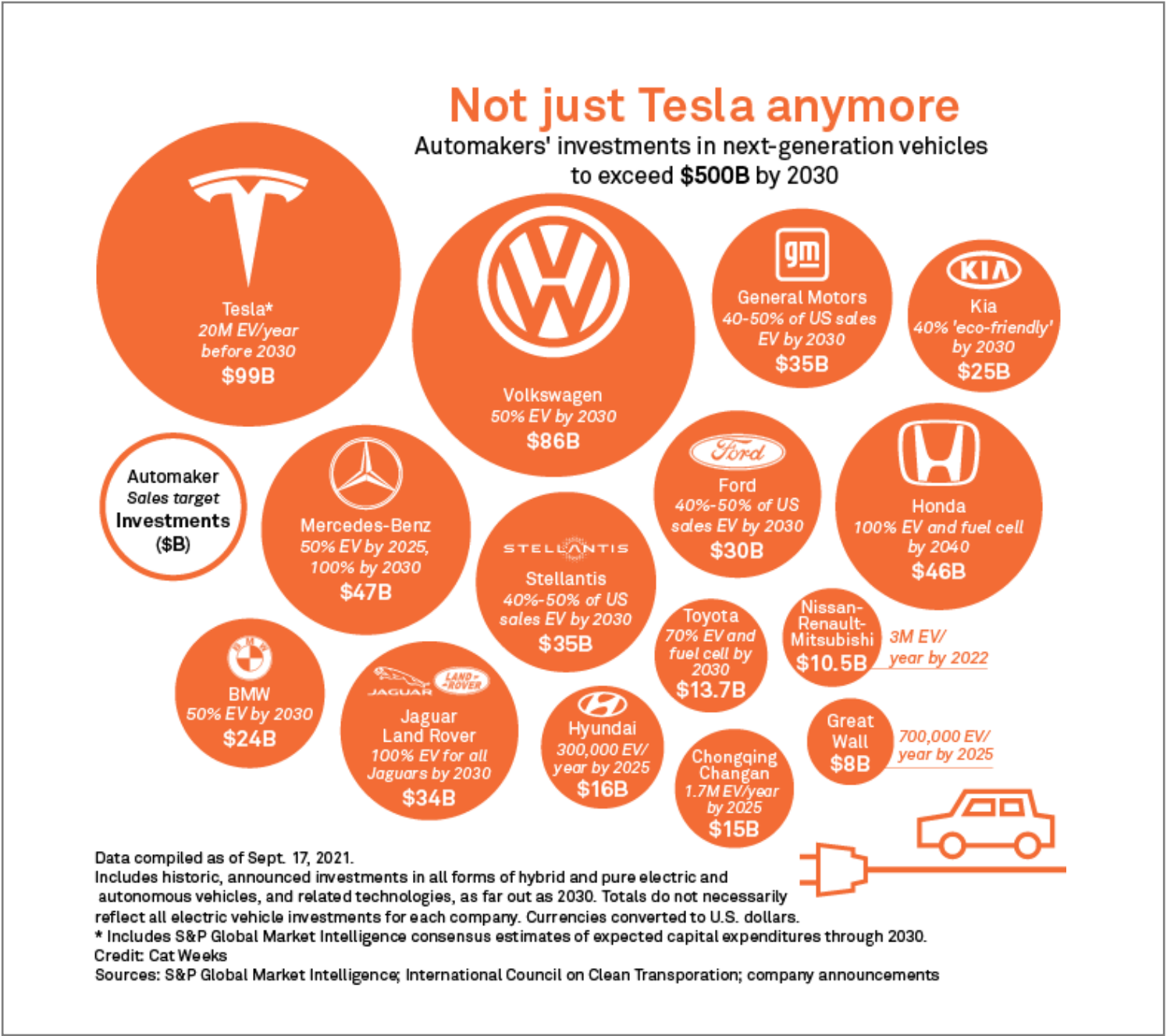
Pr

- LREEs are dominantly used to produce an alloy with iron and boron to make very strong  $\text{Nd}_2\text{Fe}_{14}\text{B}$  permanent magnets. These magnets are dominantly used for EV motors and in wind turbines.
- Other key drivers for these elements include conventional automotive parts, inverter air conditioners, electronic consumables.



## Statistics

- The average EV neomagnet contain 24% Nd, 7.5% Dy, and 6% Pr.
- Passenger vehicle uses up to 10 kg of REE magnets.
- The average EV battery uses 8-10 kg of lithium.



# Lithium

## Demand

- The demand for lithium could outstrip supply. It is a key element required in the global transition away from the internal combustion engine.
- The lithium market is in a deficit, which will widen significantly from 2027 onwards, and more new sources will be required to meet the shortfall.

## Value

- Lithium spot price has increased more than 500% over the past 2 years.
- Brine operations have higher economic performance and value compared to hardrock (pegmatite) lithium.
- Direct Lithium Extraction (DLE): The technology has lower CAPEX compared to conventional evaporation methods and provide an alternative to traditional evaporation ponds.

Lithium Carbonate



“Tesla may have to get into the lithium business because costs are so insane”

Elon Musk

Lithium has entered a new era of prices, which are here to stay”

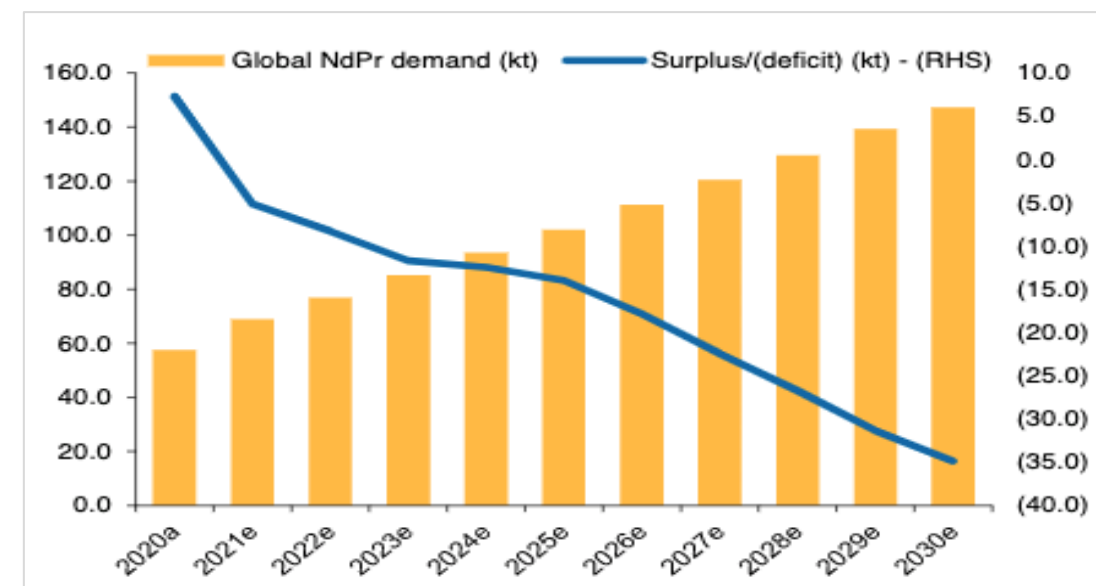
Wood Mackenzie



# Rare Earth Elements

## Demand

- Demand is expected to outstrip supply until at least 2030 due the increase in demand for neomagnets for EVs and other electric motors (e.g., wind turbines, water pumps).
- South China ionic clay deposits are the primary source of the world's HREE, but there are several geopolitical, supply chain, and ESG concerns.

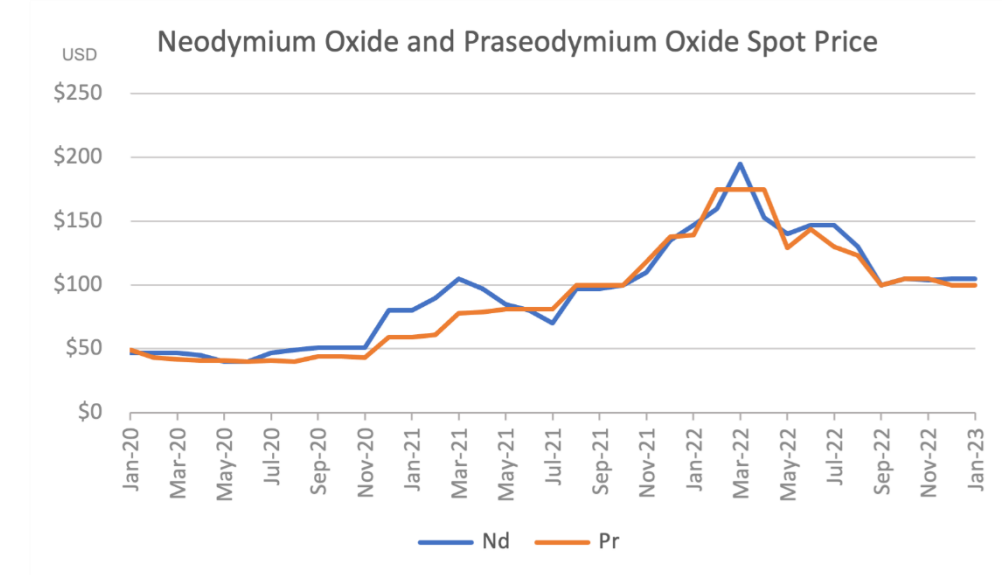
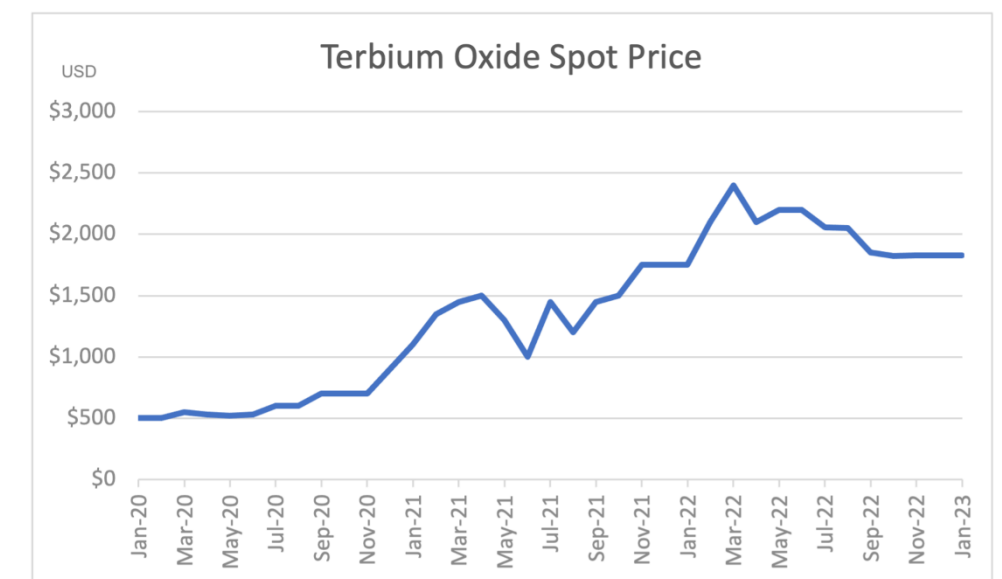
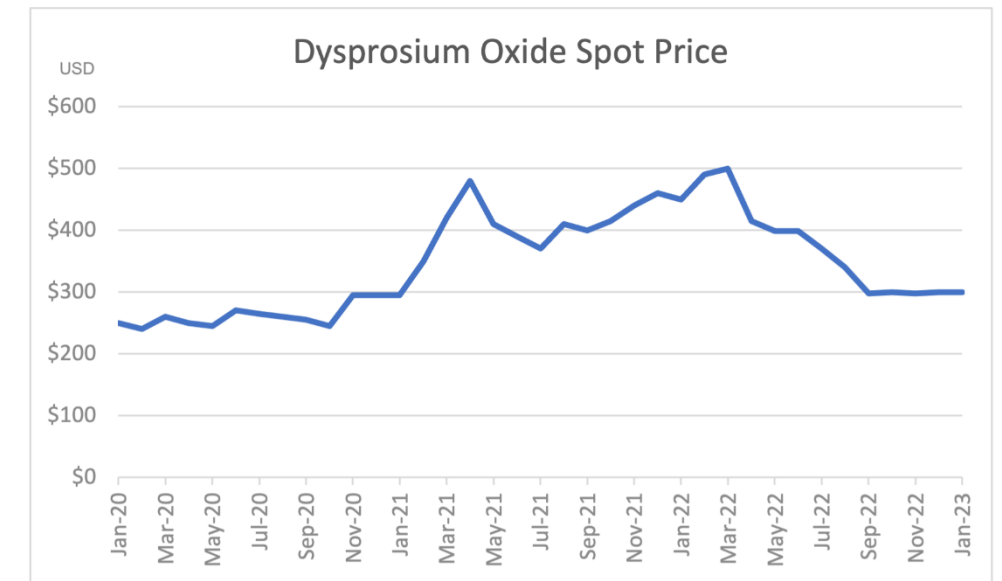


Source: Bloomberg, Macquarie Research, December 2021

## Value

- NdPr, Tb, and Dy spot prices have increased up to 430% over the past 2 years (as of July 1, 2022).
- Four key REEs represent 94% of the REE market by value, all of which are enriched at Jemi. They are used almost exclusively for the manufacture of magnets

- Dysprosium (HREE)
- Terbium (HREE)
- Neodymium (LREE)
- Praseodymium. (LREE)



Source: Ginger International Trade & Investment Pte.

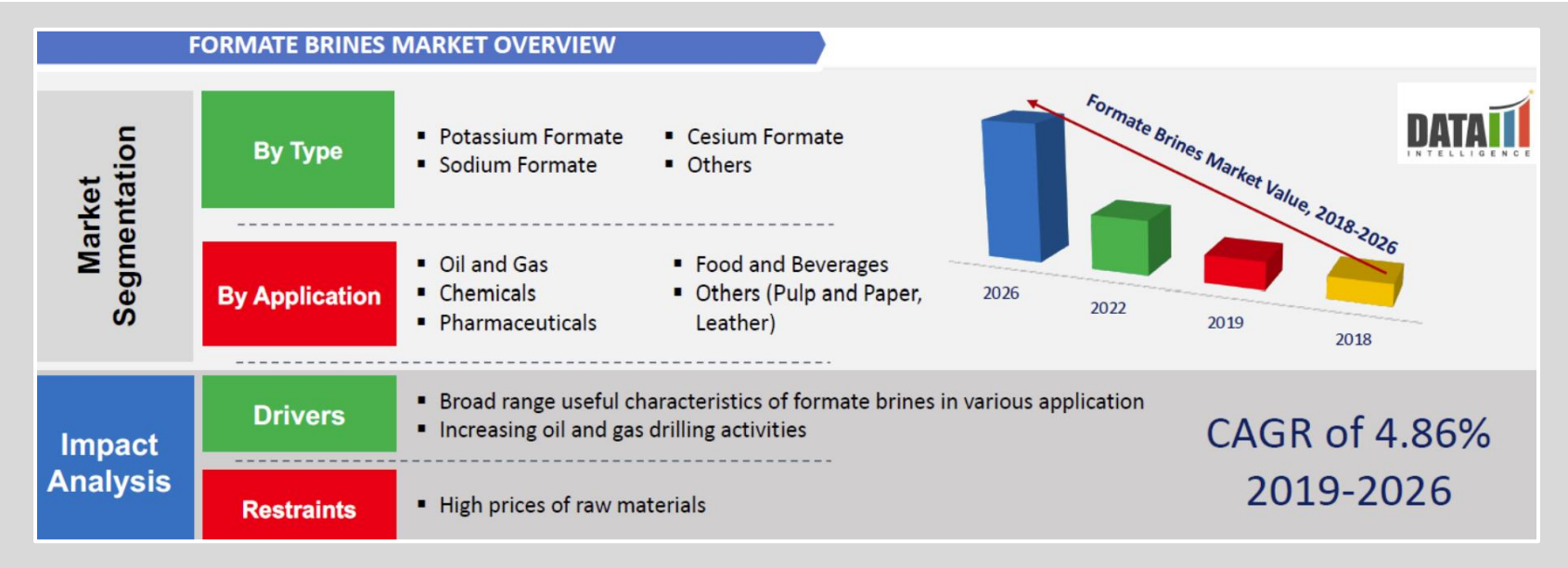
# Cesium

## Demand

- Cesium is a less understood rare mineral with high value.
- Scarce resource: oil companies commonly lease or rent cesium formate for drilling, as much of it can be recovered (about 85%).
- Currently, almost the entire global cesium supply comes from the Tanco mine, a hard rock deposit in Manitoba, Canada. The Chinese owners send 100% of the concentrate to China for refinement.

## Value

- Metal spot price is almost impossible to determine.
- From USGS (2019):
- The value of 1-gram ampoules of 99.8% cesium ranged from \$63 to \$81.
- The prices for 50 grams of 99.9% cesium acetate, cesium bromide, cesium carbonate, cesium chloride, and cesium iodide were \$118.20, \$71.90, \$101.80, \$103.60, and \$117.00 respectively.



Source: DataM Intelligence 4Market Research



# Key management and directors



## Dr. Jamil Sader, PhD

CEO and Director

Dr. Jamil Sader obtained his Ph.D. from the University of Ottawa. He has over 20 years of experience in the mineral resource industry and has held international senior technical and management positions including at MMG Resources, Bureau Veritas Minerals, and most recently with Anglo American. His extensive experience, from field geologist to senior management, has provided Dr. Sader a deep understanding across many facets of critical, base, and precious, metals, and an extensive global network of industry professionals. Dr. Sader is also a technical advisor for T2 Copper Corp.

## Maximilian Sali

VP Corp. Dev and Director

Maximilian Sali was corporate development and founding shareholder of Advantage Lithium Corp which was acquired by lithium producer Allkem for \$69 million in early 2020. Mr. Sali is the founder and former CEO of Defense Metals Corp. (TSXV: DEFN) a rare earth company that is currently in the PFS stage on its 100% owned Wicheeda LREE deposit in British Columbia. He was the founder and CEO of New Placer Dome Gold Corp which was acquired by Copaur Minerals in May of 2022.

## Kris Raffle

QP and Director

- Principal and partner and Apex Geoscience providing all geological services to venture companies
- Director of Defense Metals Corp
- 20 years as a P.Geo designation

## Michelle DeCecco, MBA

Audit Committee Chair, Director

- Vice President and Director of Lithium Chile Corp.
- Masters in Business Administration receiving honours in both accounting and finance.
- 20 years in business development

## Ryan Cheung

CFO & Director

- CPA and CA designations and principal and MCPA Accounting
- Provides accounting, management, securities regulatory compliance services to private and public-listed companies
- Bachelor of Commerce degree from the University of Victoria

# Advisory board and Chilean technical team

## Mark Saxon, FAusIMM, MAIG

### Senior Rare Earth Technical Advisor

- Thirty years of experience in the resources industry, representing junior and senior companies in Australia, Canada and Europe.
- Honours BSc graduate in Geology from the University of Melbourne
- Extensive experience in processing, marketing and the political context of critical raw materials and peralkaline REE deposits.

## Cal Everett, B.Sc

### Technical Advisor, Jemi

- Geologist with more than 20 years of surface and underground exploration experience with senior mining companies.
- 12 years with BMO Nesbitt Burns focused on resource equities, and seven years with PI Financial Corp. in senior resource institutional sales and capital markets.
- Founder of Axemen Capital

## Dan Harmening, PLS

### Technical Advisor, Jemi

- Professional Land Surveyor and prospector with over 25 years of experience in the mineral exploration and mining business.
- Vendor of many Mexican projects including Discovery Silver Corporation's assets which included the Jemi HREE project.
- Mr. Harmening holds a B.S. in Geomatics from Oregon Institute of Technology.

## Tyron Breytenbach

### Strategic Advisor, Capital Markets

- Former senior partner and managing director at Cormark Securities and Stifel Canada
- Current SVP Capital Markets for producing gold company Aris mining (550m market cap)
- BSc (Honours) Degree from Rand Afrikaans University in South Africa and is a designated P.Geo in Ontario.

## Frits Reidel, CPG

### Senior Lithium Technical Advisor, Chile

- Hydrogeologist and founder of Atacama Water SpA, a company specializing in lithium brine.
- 30 years working on water and infrastructure projects in South America.
- Former technical advisor for Orocobre (now Allkem), Lithium Americas, and Advantage Lithium.

## Scott Jobin-Bevans, Ph.D., P.Geo

### Project Manager, Chile

- Former president of PDAC.
- Owner of Caracle Creek SpA, a project management firm based in Santiago that specializes in exploration in Chile.



# Lithium portfolio, Lithium triangle, Chile

Salar de Turi

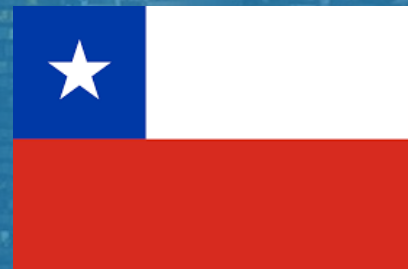
Salar de Laguna Blanca

Chile has the largest lithium reserves in the world.





On September 4, 2022, the citizens of Chile voted not to support the constitutional text proposed by the Constitutional Convention. Monumental Minerals will continue to engage and work with all stakeholders including governmental and indigenous groups in Chile.





# Salar de Laguna Blanca

## Laguna Blanca Lithium-Cesium Salar, Region II, Chile

The Project is located within the prolific lithium triangle, a zone within the central Andes high desert that includes Chile, Argentina, and Bolivia.

- project is 20 km on a truck track off a major highway and less than 2 hours from the town of San Pedro de Atacama.
- consists of 51 exploration concessions totaling 12,425 hectares, 100% owned by Lithium Chile through its wholly owned Chilean subsidiary Minera Kairos Chile Limitada.
- Groundwaters leached elements (including lithium and cesium) from the thick sequences of volcanic ash and transported them to the Laguna Blanca Salar where they were subsequently concentrated through intense evaporation.

► EARNING 75%

► CAD \$1.5M exploration spend by April 2025

► CAD \$1.5M in cash by April 2025



# Exploration

## 1. Completed

### Sediment

- Values including 0.069% cesium and 0.145% lithium.

### Near-Surface Brine

- Shallow impact gas powered hand auger holes 0.5 – 1.3 m deep
- 20 – 40 mg/l cesium and 190– 1,230 mg/l lithium.
- Li:Mg ratios are very favorable (2.5). Higher ratios of Li:Mg ratios are more favorable for brine-type developments of LCE, as the geochemical behavior of Mg ions can interfere with the Li purification process.

### TEM Geophysical Survey

- Identified a 10 km<sup>2</sup> high conductivity anomaly having 100-200 m modelled thickness that underlies the SW flank of the lithium – cesium anomaly.

## 2. In Progress

- Cesium sediment 20 Kg samples collected and sent to the University of British Columbia (UBC) for metallurgical testing
- Bulk sampling to follow and processing avenues locally TBD.

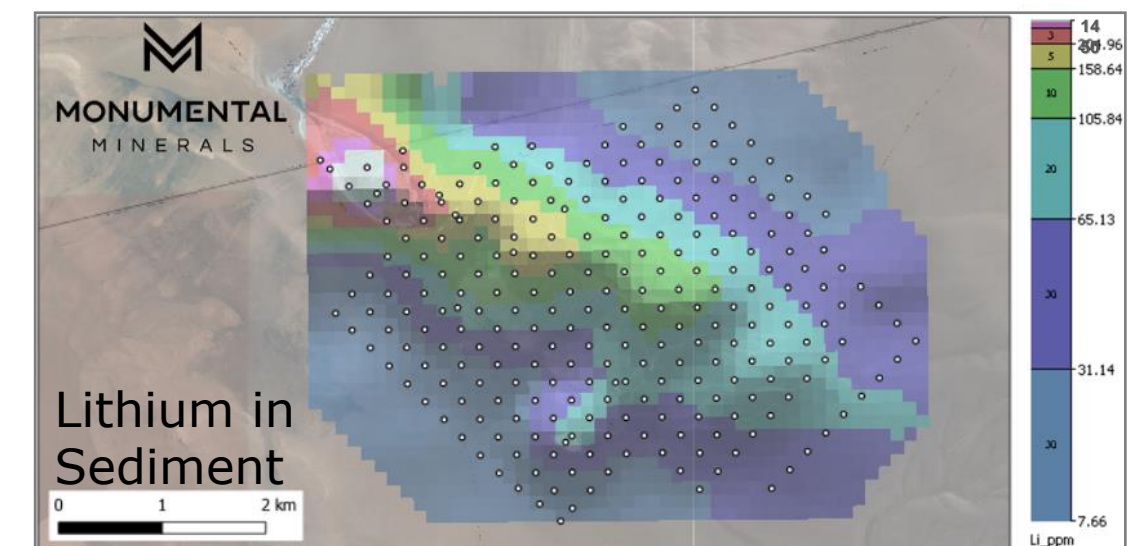
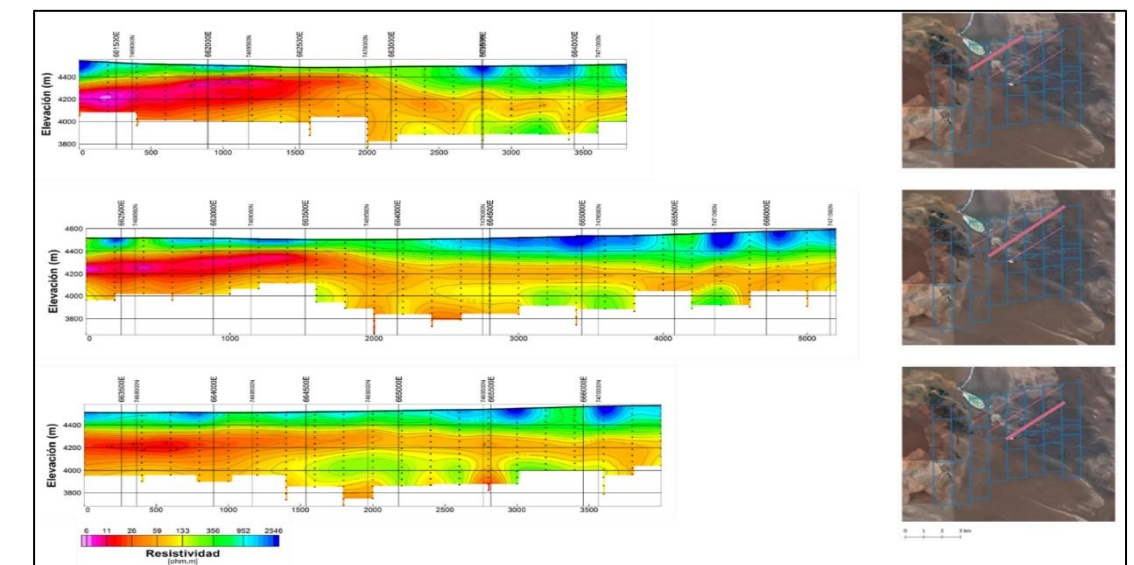
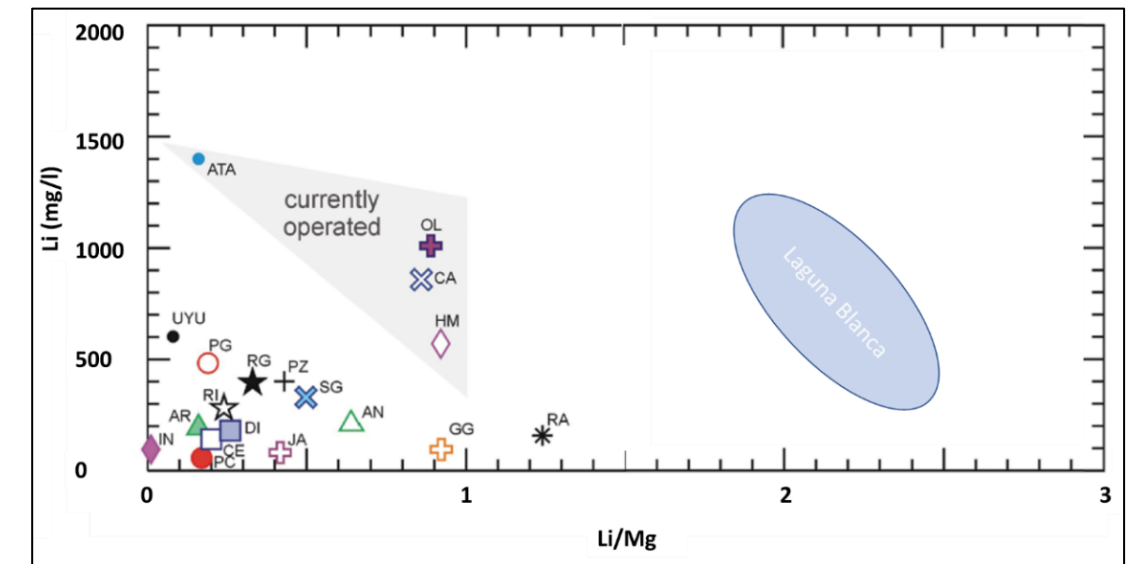
## 3. Planned for Q3

### Further exploration work will include drilling:

- Three core holes up to 400m deep
- Solid sediments – core recovery for porosity determination (extractable brine)
- Vertical and lateral variations
- Correlate brine intervals and porosity/lithology –downhole geophysics

### Direct Lithium Extraction (DLE) Technology:

- Lithium Chile is assessing Direct Lithium Extraction (DLE) technologies, including adsorption, ion exchange, and enhanced evaporation methods.





# Salar de Turi

## Turi Lithium Salar, Region II, Chile

This project is located within the prolific lithium triangle, a zone within the central Andes high desert that includes Chile, Argentina, and Bolivia.

- Turi is accessible from the City of Calama (60 km to the southwest) via the paved roads 21CH, and B-165 and is close to infrastructure.
- Consists of 31 exploration concessions totaling 8,500 hectares, 100% owned by Lithium Chile through its wholly owned Chilean subsidiary Minera Kairos Chile Limitada.
- Is along strike with Salar de Atacama and is in the same geological setting.

- ▶ EARNING 50.01% / Control
- ▶ CAD \$1.4M exploration spend by October 2024
- ▶ CAD \$700k in cash by October 2024

Salar de Atacama is operated by SQM and Albemarle and is the largest producing and most profitable salar in the world, six month revenue YOY up 940% - SQM PR Aug 17/22





# Exploration

## 1. Completed

### Near-Surface Brine

- samples taken from the surface laguna and subsurface samples from shallow 0.5 – 1.3 m deep hand auger holes.
- Samples returned value to 590 mg/l lithium.
- Li:Mg ratios and brine chemistry is consistent with Salar de Atacama.

### TEM Geophysical Survey

- Identified an 18 km<sup>2</sup> high conductivity anomaly having up to 200 m or more modelled thickness that may be associated with a deeper saline unit, potentially hosting lithium enriched brine.



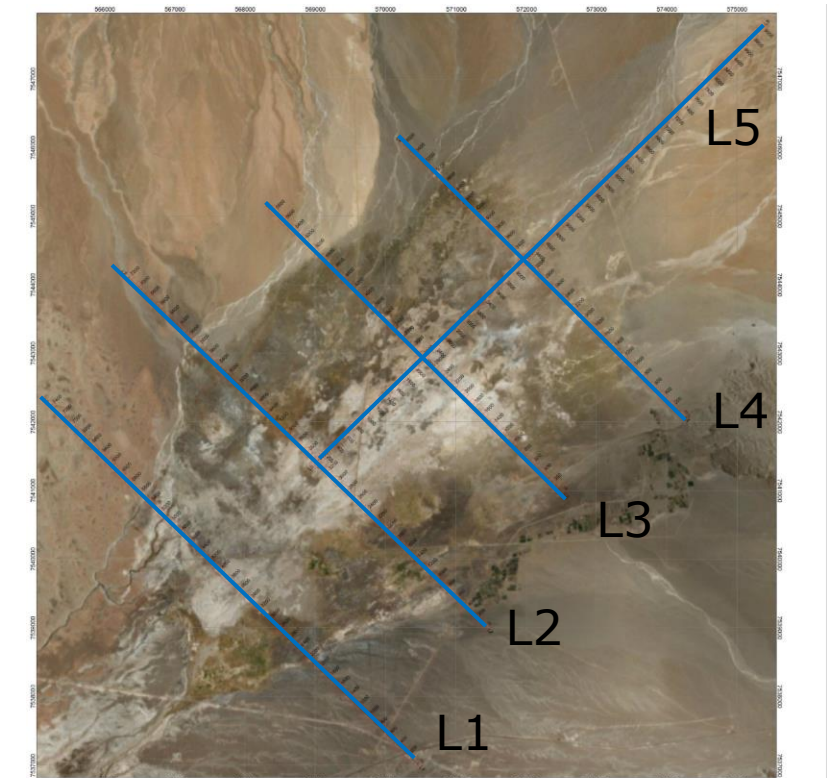
## 2. Planned for 2023

### Drilling

- Up to four core holes or 1500 meters ( up to 500m deep)
- Brine chemistry
- Solid sediments – core recovery for porosity determination (extractable brine)
- Brine flows
- Vertical and lateral variations
- Changes with time (season and extraction) due to recharge
- Correlate brine intervals and porosity/lithology –downhole geophysics

### Direct Lithium Extraction (DLE) Technology:

- Assessment of Direct Lithium Extraction (DLE) technologies, including adsorption, ion exchange, and enhanced evaporation methods.



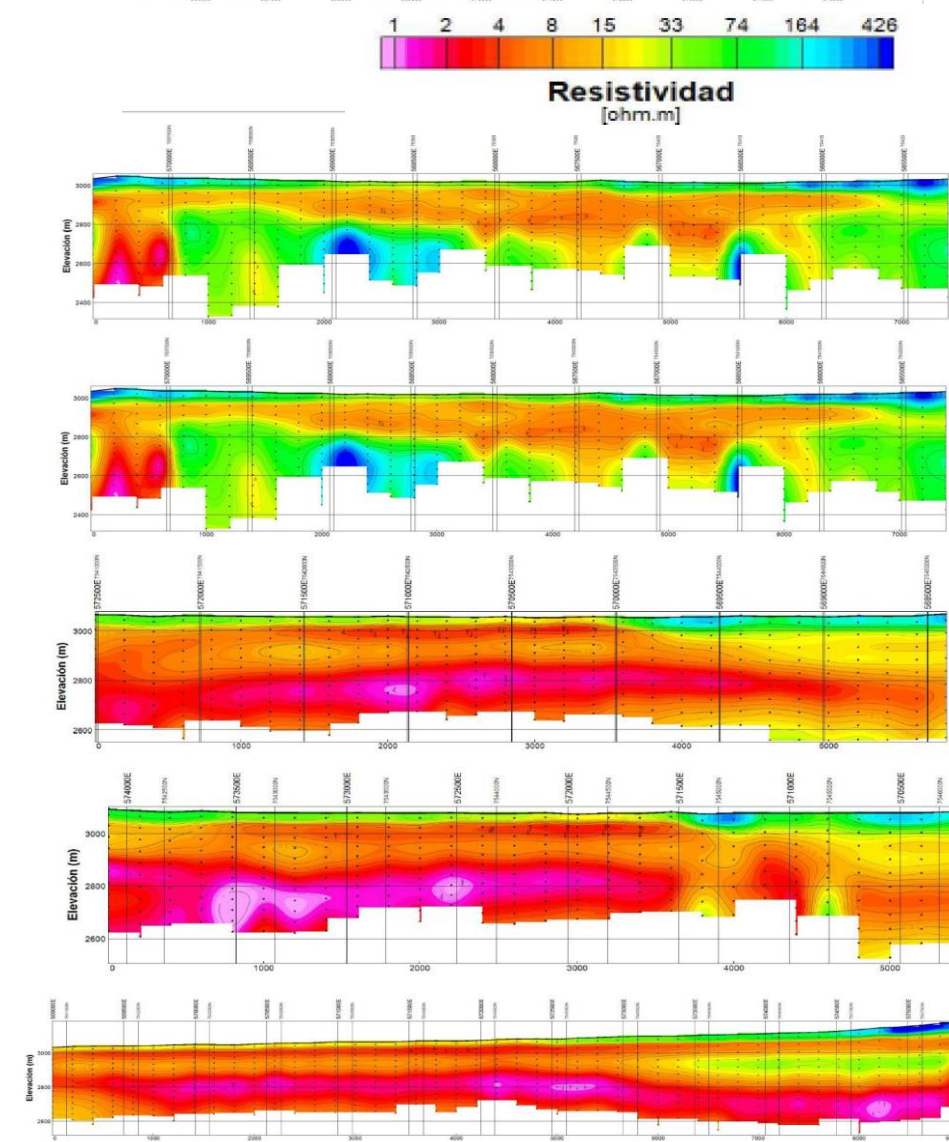
L1

L2

L3

L4

L5





# Rare Earth Elements portfolio, Mexico

Jemi





# Portfolio Overview – Jemi

## Jemi Peralkaline HREE Project, Coahuila, Mexico

The Project is within the North American Alkaline Igneous Belt, which hosts several REE deposits and showings.

- Jemi is at the exploration-stage and is drill-permitted.
- Access to the 3,560-hectares Project is by road, and there are operating silver and fluorite mines near by.
- Jemi is the only HREE project in North America.

► EARNING **100%**

► **\$2M** exploration spend by March 2024

► **\$500k** in stock issued by March 2024

► Discovery Silver has a **1.5% NSR**



# Jemi HREE project

## Overview

- ✓ Situated very close to Texas, a fast-developing North American hub for the REE industry.
  - Processing of REE ore from Mt Weld (Lynas Corp) at
  - Blue Line Corp in Hondo, TX.
  - Deal between MP Materials and GM in Ft Worth, TX.
  - Newly constructed Tesla Giga Factory, Austin, TX.
- ✓ Stable mining jurisdiction.
- ✓ Skilled work force.
- ✓ Lack of great HREE deposits in North America based on grade, jurisdiction, and remoteness.
- ✓ Grade is 5 times better than Chinese ionic REEs.

▶ A **fast-developing** North American hub for the REE industry



### MP Materials enters rare earth magnet supply deal with GM, to build factory in Texas

MINING.COM Staff Writer | December 9, 2021 | 9:35 am [Battery Metals](#) [Intelligence Markets USA](#) [Rare Earth](#)

### Tesla Is Now Officially Headquartered In Austin, Texas

As of December 1, 2021, Tesla's new corporate headquarters is located on the massive Gigafactory Texas site.



# Exploration and discovery

There is 15 km of underexplored HREE-prospective strike length along the margin of Sierra La Vasca intrusive complex.

## 1. Completed

**Geophysics:** Airborne radiometric and magnetic geophysics survey.

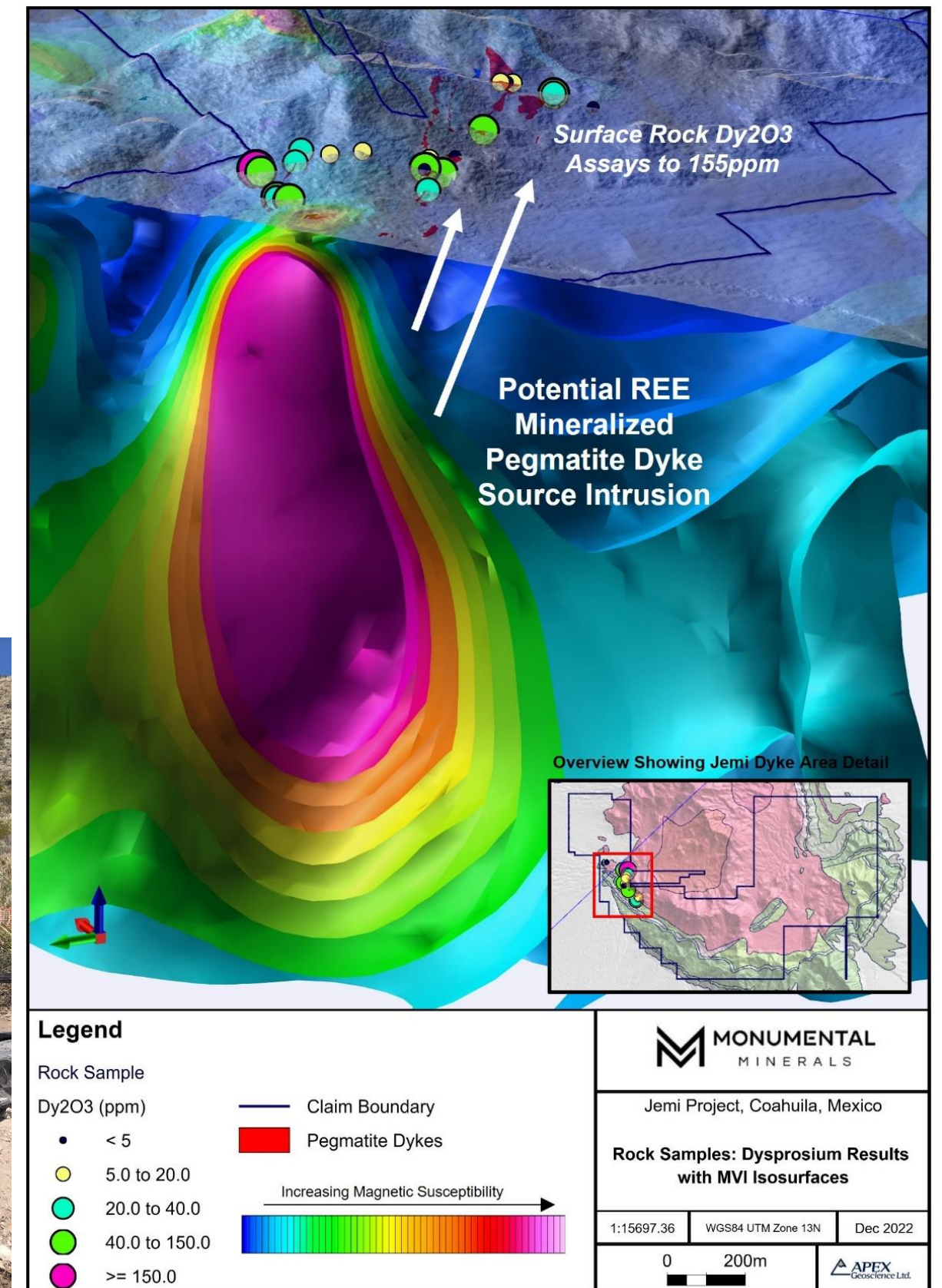
Airborne radiometric results define two parallel 8 km arcuate anomalies that occur along the south and west margin of the Sierra La Vasca intrusion complex

**Geology:** Mapping and structural interpretation of the intrusive complex and mineralized dykes.

**Surface geochemical sampling:** Several areas are undercover and might be hiding significant REE-enriched dykes.

## 2. In Progress

Exploration diamond drilling.





We are committed to sustainable development in harmony with its surroundings, business ethics, and the promotion of human rights in conformity with applicable national and international standards and adhering to the highest standards of corporate governance, social accountability, and environmental stewardship



# Our mission



To acquire, define, and develop monumental assets  
to unlock tremendous value for our shareholders



# Share Structure

57,587,237

Issued & Outstanding

275,000

Stock Options (\$0.50)

\$3,320,305

As of March 31, 2023

5,555,555

Warrants (\$0.65)

1,500,000

Stock Options (\$0.45)

18,258,571

Warrants (\$0.30)

337,875

Stock Options (\$0.25)

455,258

Broker Warrants (\$0.65)

694,600

Stock Options (\$0.20)

## Significant Shareholders

4,451,874 | Lithium Chile Corp  
2,308,810 | Discovery Silver Corp

CUSIP

615327103

ISIN

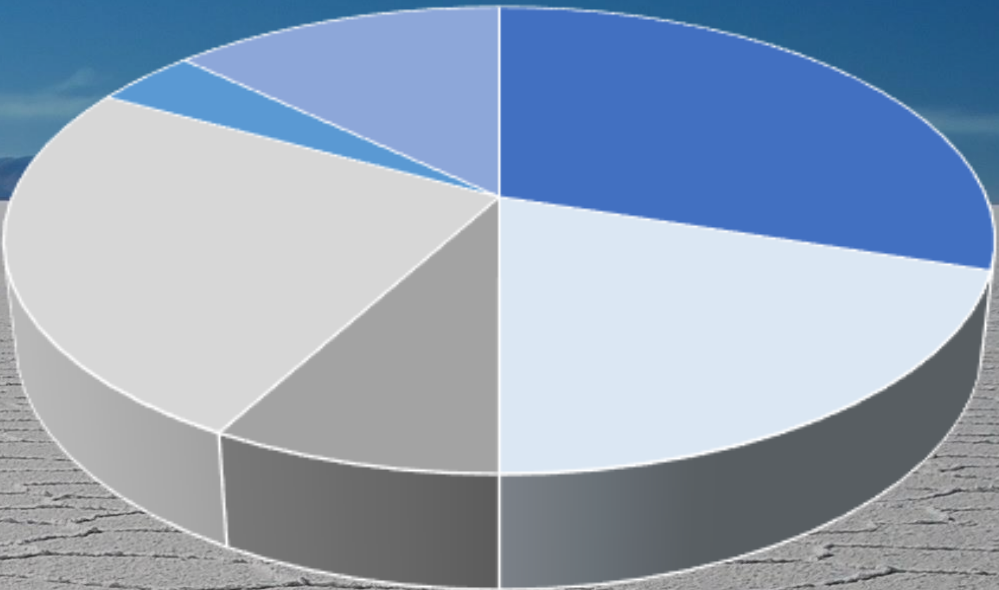
CA6153271037

Transfer agent

Computershare

Legal

AFG LAW LLP



- Insitutional
- High Net Worth
- Lithium Chile
- Insiders, Family & Friends
- Discovery Silver
- Retail





# Highlights of Monumental Minerals

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1

## Share Structure

57.6 M shares

outstanding with significant management and associate's ownership and significant insider buying

2

## Experienced Technical Team

**Jamil Sader, Ph.D.**

Extensive experience in rare earth mineral exploration and mineralogy.

**Frits Reidel**

Founder of Atacama Waters, specializing in lithium brine in SA.

**Kris Raffle, B.Sc., P.Geo.**

20 years of experience in mineral exploration.

**Mark Saxon, FAusIMM, MAIG**

Proven track record of REE exploration and project development.

3

## Favorable economics

The value of lithium and Rare Earth metals for the global trend to decarbonization continue to rise due to increasing demand, lack of supply, and geopolitical concerns.

4

## Option for 100% ownership on Jemi, 75% on Laguna Blanca and 50.01% on Turi

Exposure to drill ready and near-term drillable assets in safe jurisdictions.



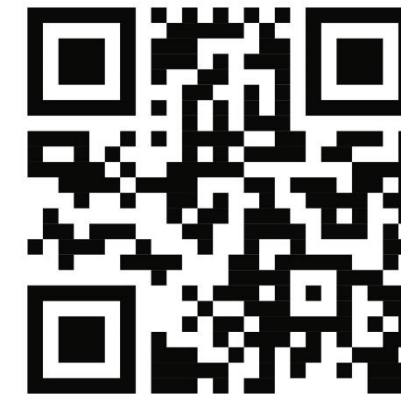
# Contact us

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604-363-4785

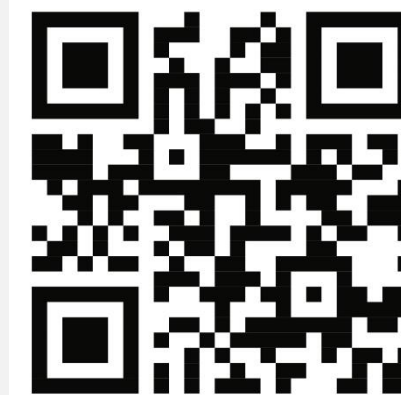
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# Forward looking statement

## Cautionary Note Regarding Forward Looking Statements

This presentation includes certain statements that constitute “forward-looking information or statements” within the meaning of applicable securities law, including without limitation, the Company’s plans for its properties/projects, other statements relating to the technical, financial and business prospects of the Company, completing additional work on the projects, timelines, completion of the option terms to acquire the projects, the Company’s mission statement and other matters.

Forward-looking statements address future events and conditions and are necessarily based upon a number of estimates and assumptions. These statements relate to analyses and other information that are based on forecasts of future results, estimates of amounts not yet determinable and assumptions of management. Forward-looking statements are necessarily based upon a number of factors that, if untrue, could cause the actual results, performances or achievements of the Company to be materially different from future results, performances or achievements express or implied by such statements. Such statements and information are based on numerous assumptions regarding present and future business strategies and the environment in which the Company will operate in the future, including the price of metals and minerals, anticipated costs and the ability to achieve goals, that general business and economic conditions will not change in a material adverse manner, that financing will be available if and when needed and on reasonable terms, and that third party contractors, equipment and supplies and governmental and other approvals required to conduct the Company’s planned exploration activities will be available on reasonable terms and in a timely manner.

Such forward-looking information reflects the Company’s views with respect to future events and is subject to risks, uncertainties and assumptions, including the risks and uncertainties relating to the interpretation of exploration results, risks related to the inherent uncertainty of exploration and cost estimates and the potential for unexpected costs and expenses and those other risks filed under the Company’s profile on SEDAR at [www.sedar.com](http://www.sedar.com). Relating to exploration, the identification of exploration targets and any implied future investigation of such targets on the basis of specific geological, geochemical and geophysical evidence or trends are future-looking and subject to a variety of possible outcomes which may or may not include the discovery, or extension, or termination of mineralization. The key risks related to exploration in general are that chances of identifying economical reserves are extremely small.

For further scientific and technical information with respect to the Jemi Rare Earth Property refer to the Company’s NI 43-101 Technical Report titled: Geology of the JEMI Rare Earth Property, Municipality of Ocampo, Coahuila State, Mexico, with an effective date of October 20, 2021. The scientific and technical information contained in this presentation has been reviewed and approved by Kris Raffle, P.Geo., a Director of the Company and a Qualified Person as defined by National Instrument 43-101 – Standards of Disclosure for Mineral Projects.

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## Market & Industry Data

The information contained herein includes market and industry data that has been obtained from third party sources, including industry publications. The Company believes that its industry data is accurate and that its estimates and assumptions are reasonable, but there is no assurance as to the accuracy or completeness of this data. Third party sources generally state that the information contained therein has been obtained from sources believed to be reliable, but there is no assurance as to the accuracy or completeness of included information. Although the data is believed to be reliable, the Company has not independently verified any of the data from third party sources referred to in this presentation or ascertained the underlying economic assumptions relied upon by such sources.



# Appendix





# Lithium Projects Technical

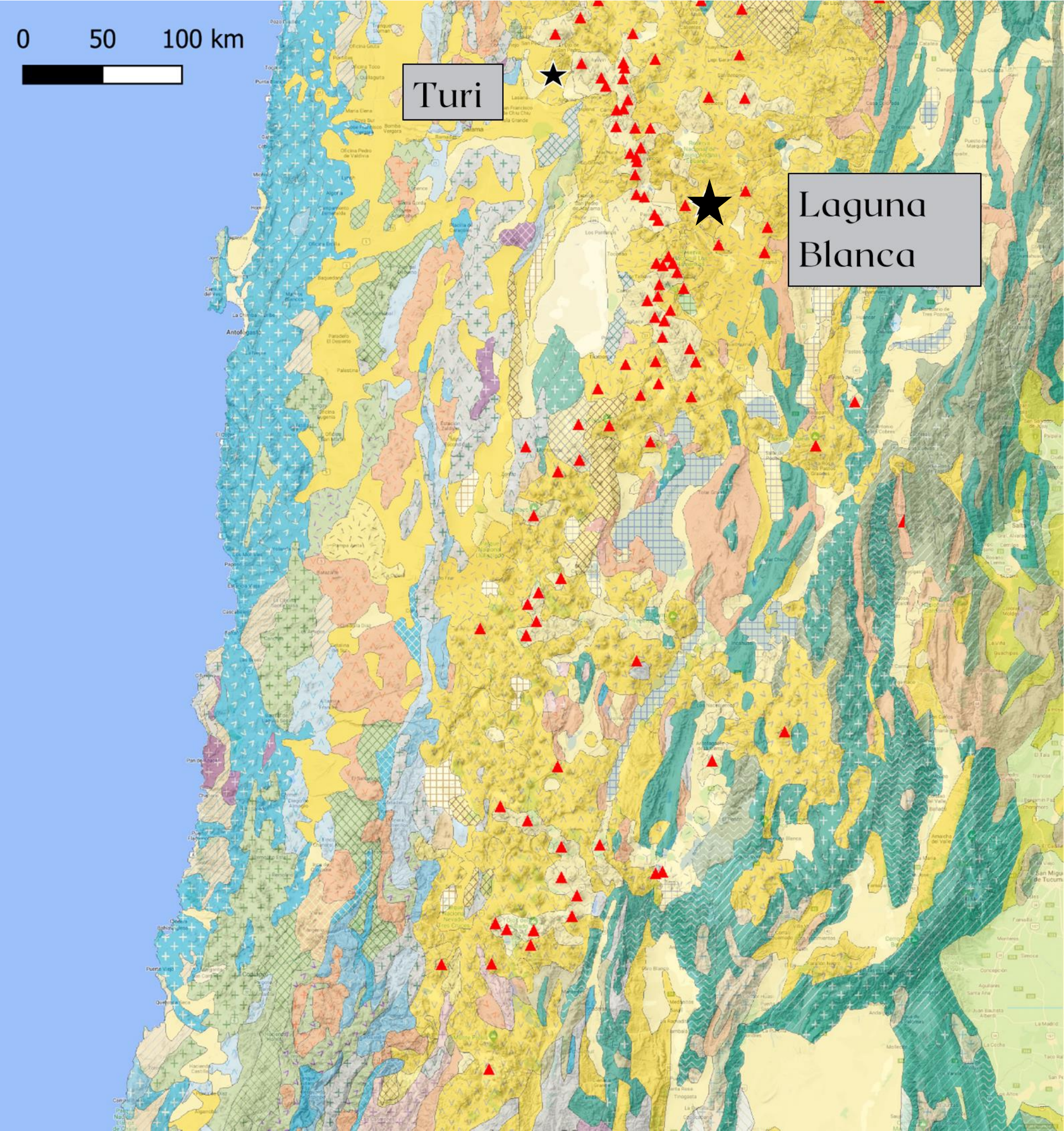
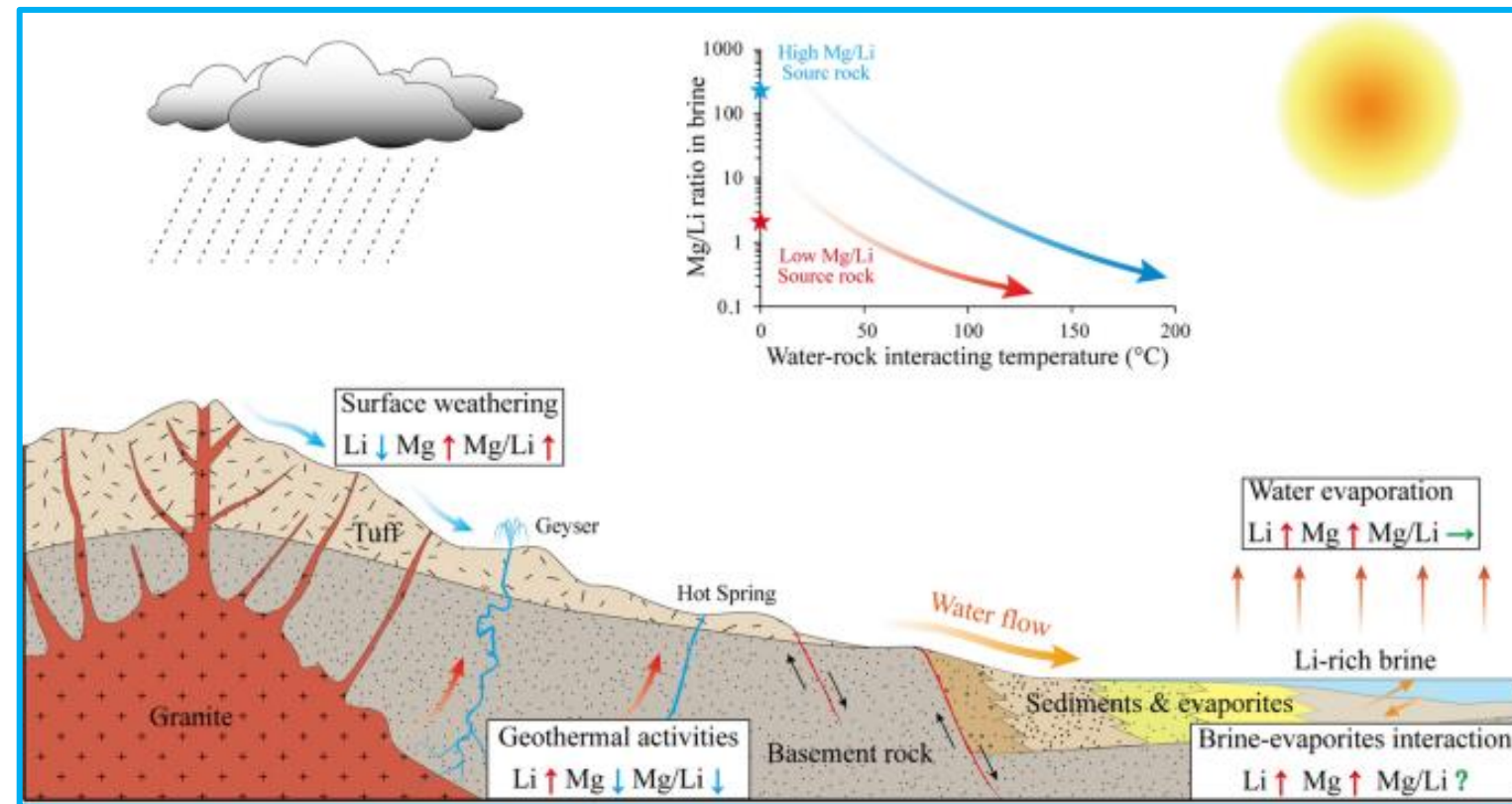




# The Lithium Model

## Province Scale Factors

- Geological
  - Felsic volcanics
  - Ignimbrites
- Geographical
  - Hyper Arid
  - Closed Basin

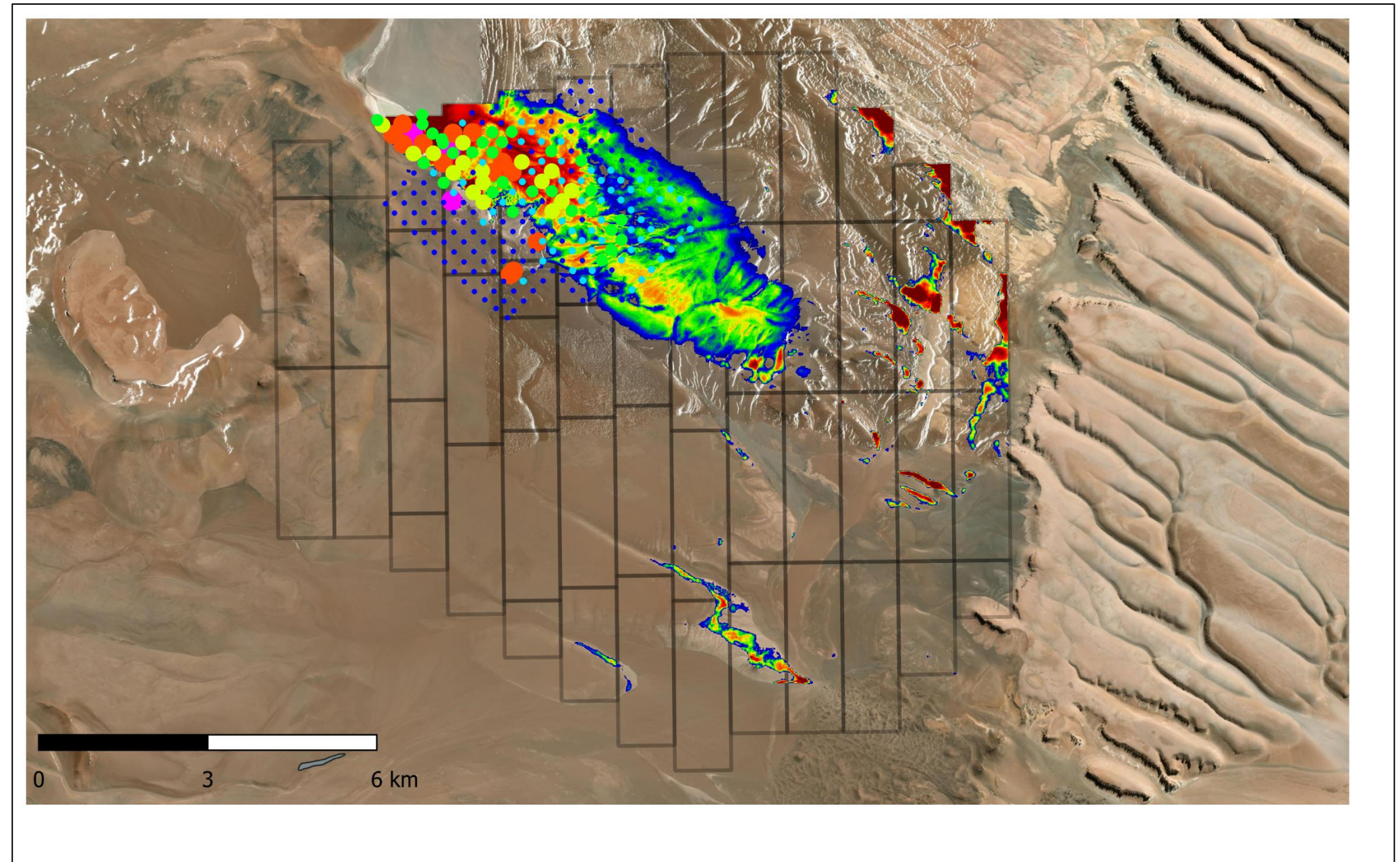
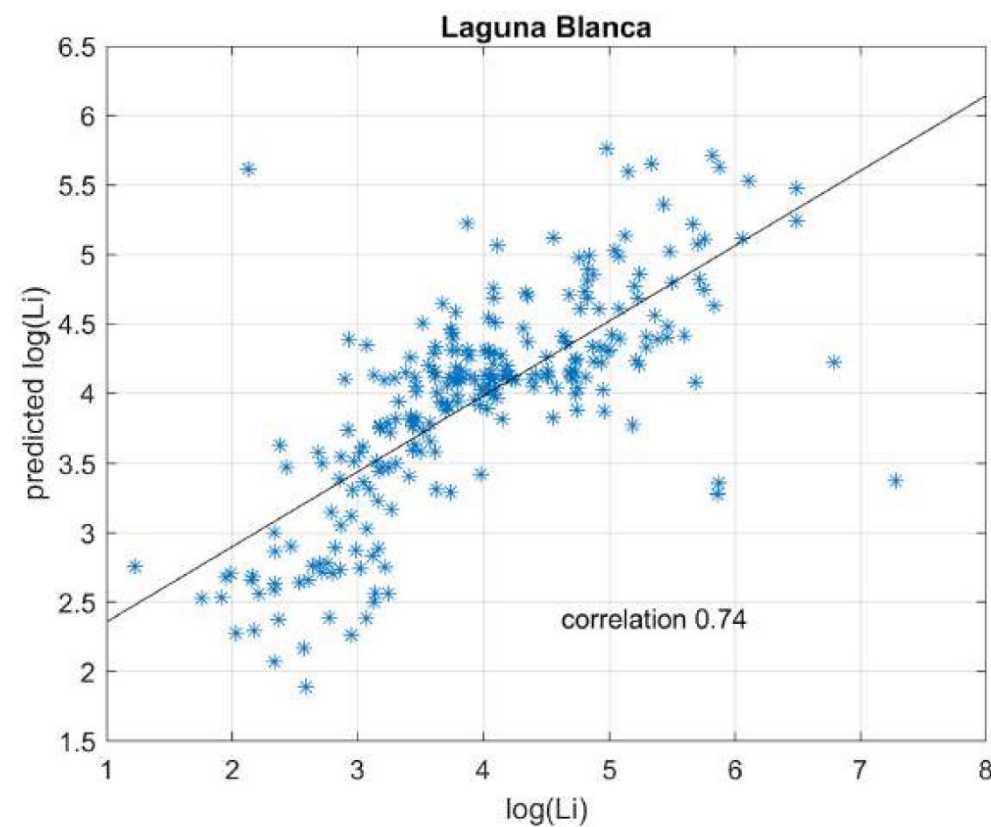




# District Scale Exploration – Laguna Blanca

## District Scale - Satellite Multi-spectral and AI

- Using real data to produce a predictive model for an unknown area.
- We use a specialized and modified AI algorithm to explain what multi-spectral bands, and combinations of them, best explain the known lithium.
- Then, apply to other areas to predict lithium.

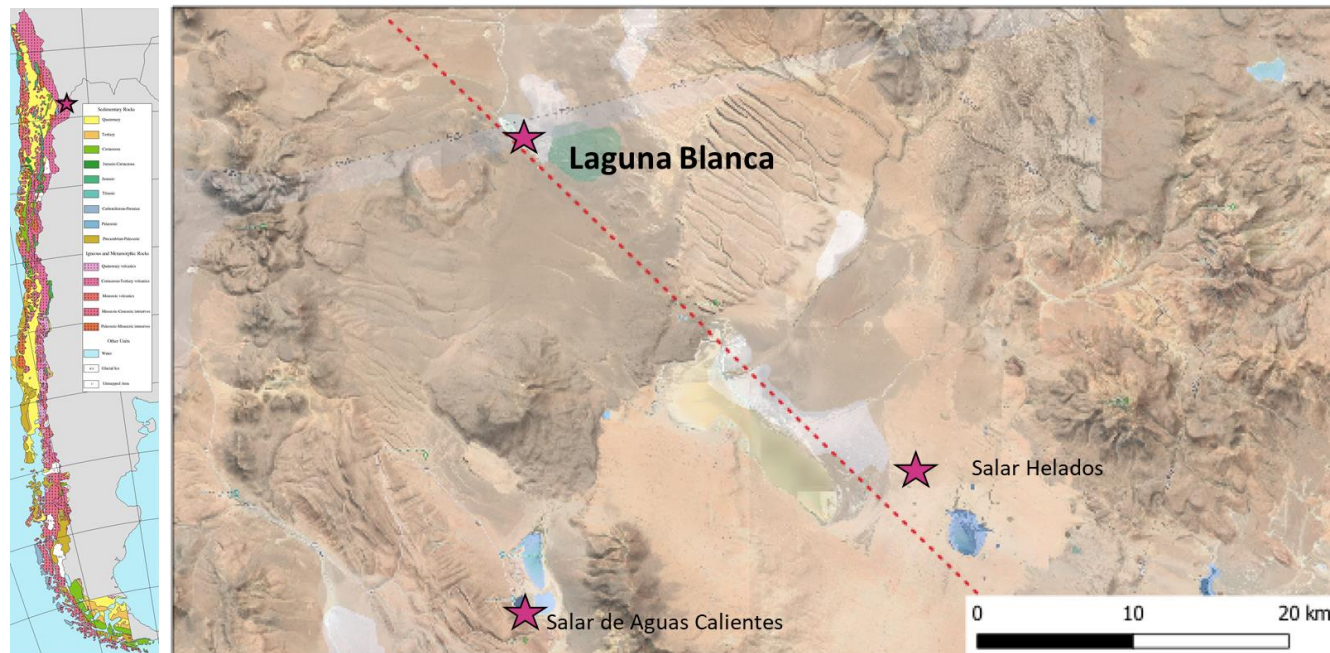




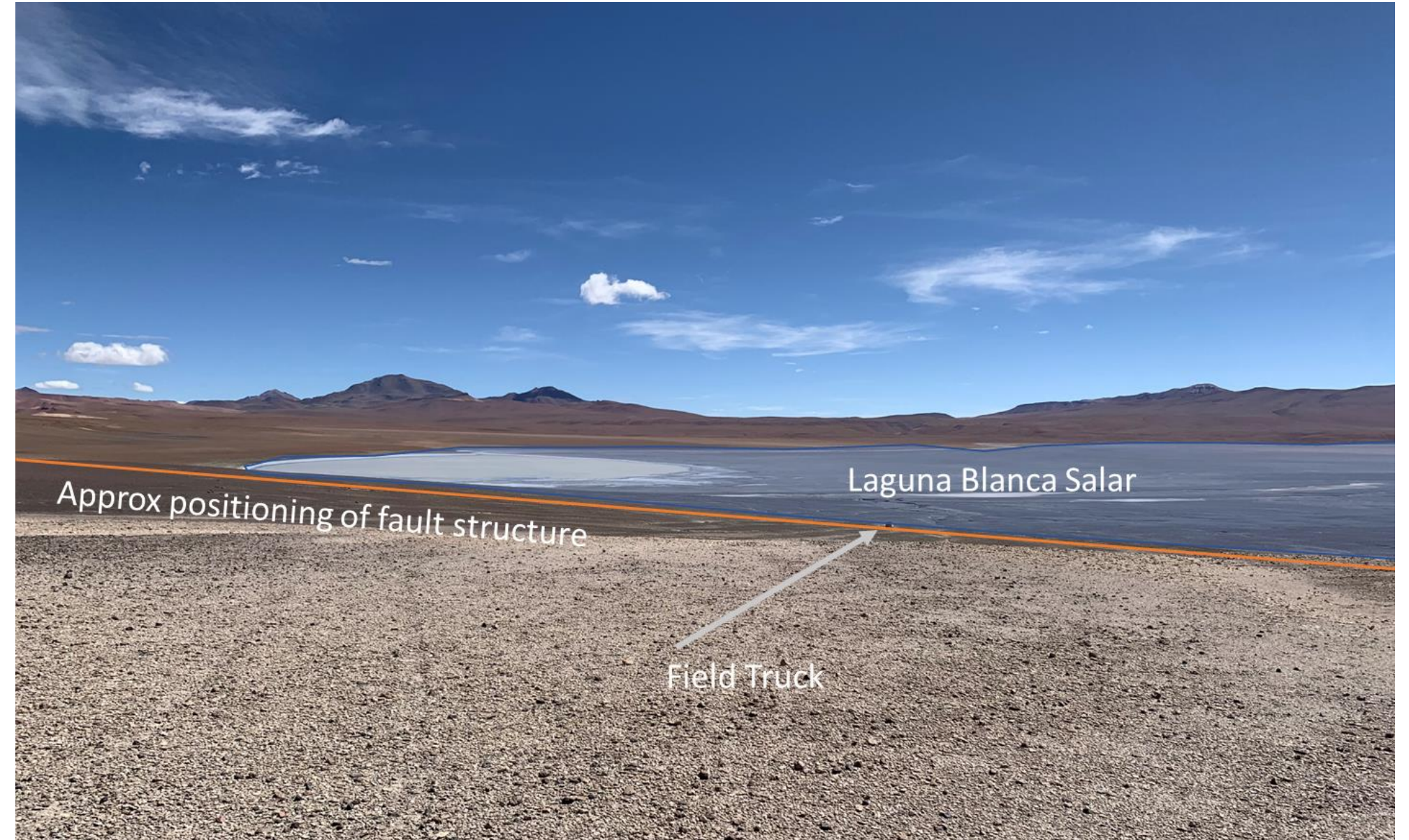
# Project Scale Geological Setting – Laguna Blanca

The long axis of the Laguna Blanca Salar is controlled by a major northwest-southeast trending fault, interpreted to provide a structural conduit promoting brine interaction with felsic volcanics, including thick sequences of ignimbrites (volcanic ash), from which lithium and cesium were leached, transported, and subsequently concentrated in brines and sediments within the Laguna Blanca Salar.

Red dotted line represents the fault



Positioning of fault structure





# HREE technical

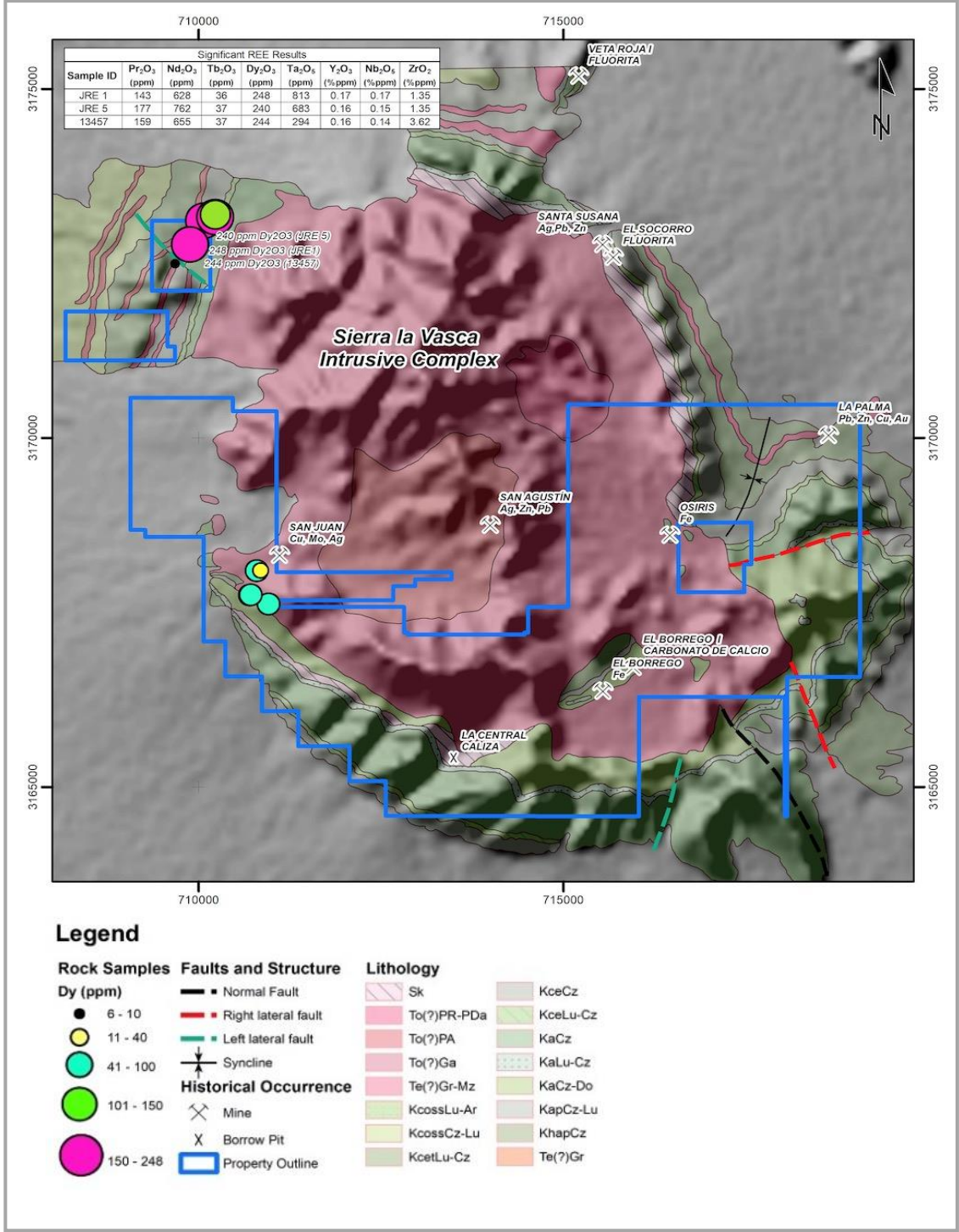
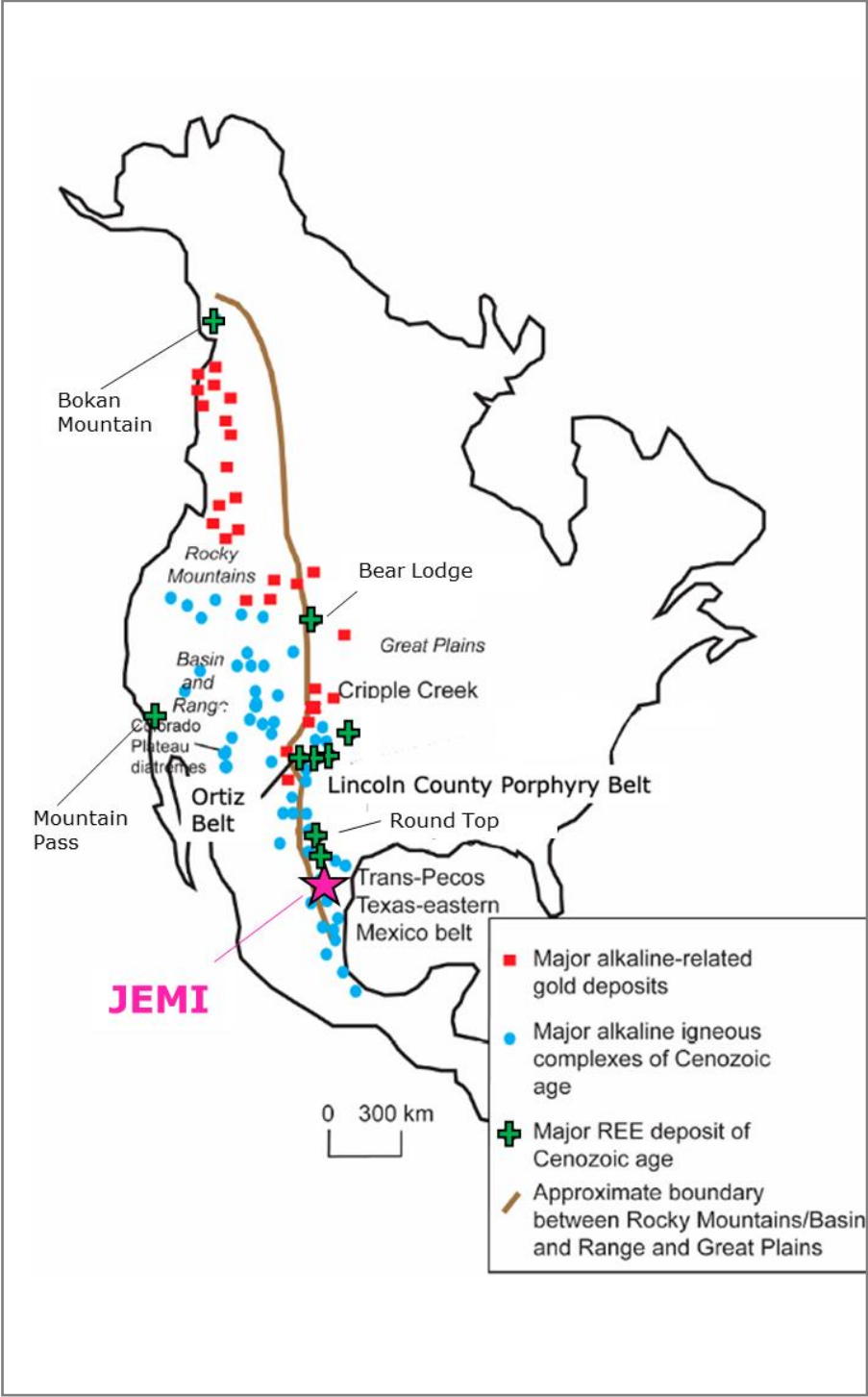




# Geological Setting

## Features

- The JEMI project is situated within a northwest trending belt of alkaline rocks referred to as the Eastern Mexican Alkaline Province, which is part of a larger belt of diverse alkaline igneous rocks that extend from Alaska and British Columbia through to central-eastern Mexico.
- The geology of the Project area consists of an igneous intrusion complex forming an ellipsoidal core, ranging felsic to mafic in nature.
- Dykes at the margin are alkaline with nepheline syenite locally and are elevated in REE.
- Igneous bodies intruded into host sedimentary Cretaceous limestone and shales during the Laramide Orogeny (either subduction or rift related). Skarn, carbonate replacement, and fluorite occurrences/deposits are common in the region.

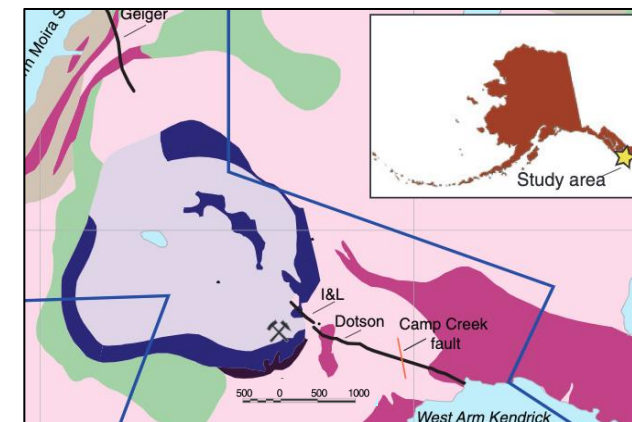


The JEMI project is situated within a northwest trending belt of alkaline rocks referred to as the Eastern Mexican Alkaline Province

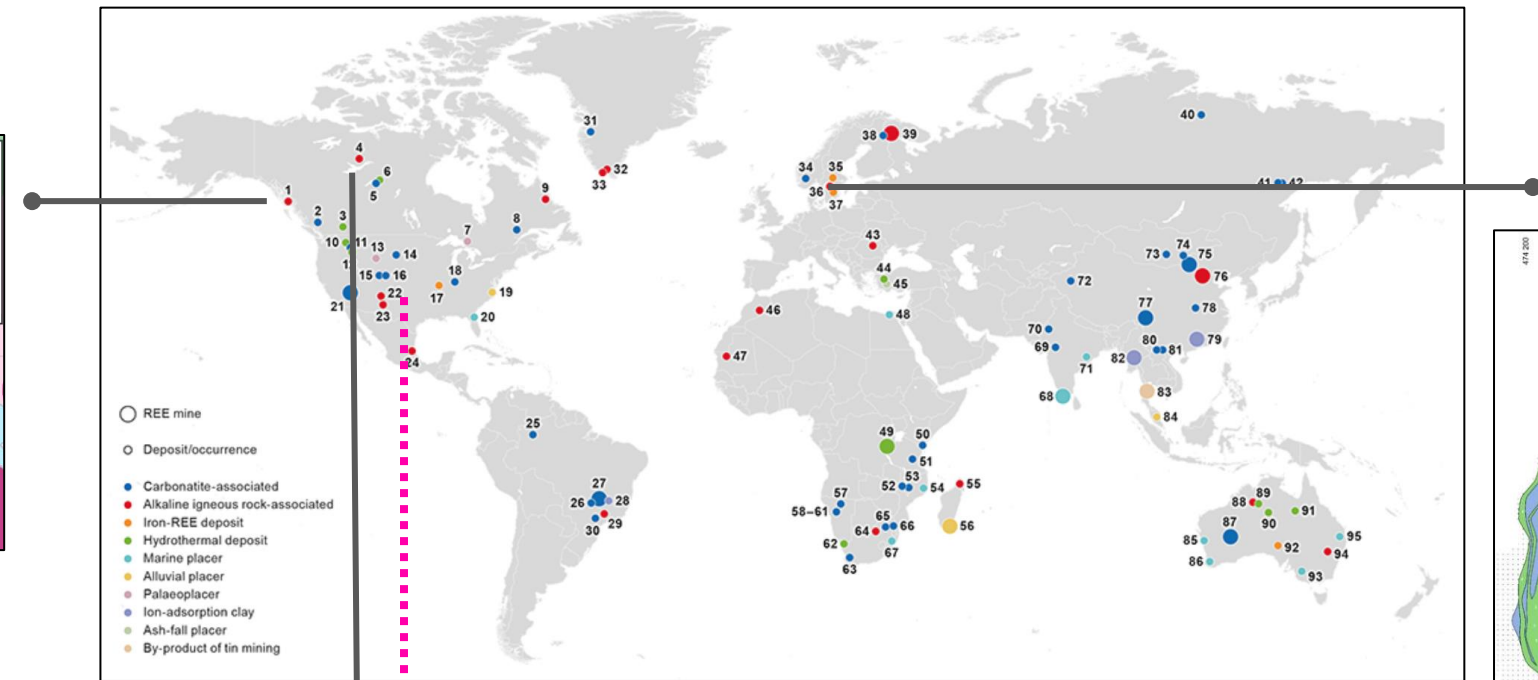


# Peralkaline Deposit Comparables<sup>1</sup>

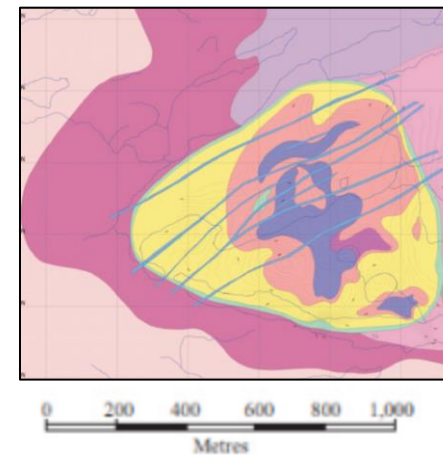
- Rare earth mineralization at JEMI exhibits characteristics of other peralkaline intrusion-related HREE deposits globally, including
  - Norra Karr in Sweden,
  - Nechalacho in NWT,
  - Bokan Mountain in Alaska, deposits on the
  - Kola Peninsula in Russia and
  - Dubbo in Australia.
- In North America, JEMI stands out as prospective to become the premier high-grade source of HREE.
- It is also attractive based on assessments of grade, jurisdiction, and remoteness.



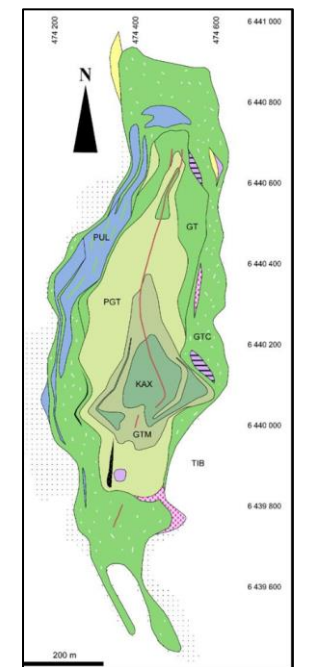
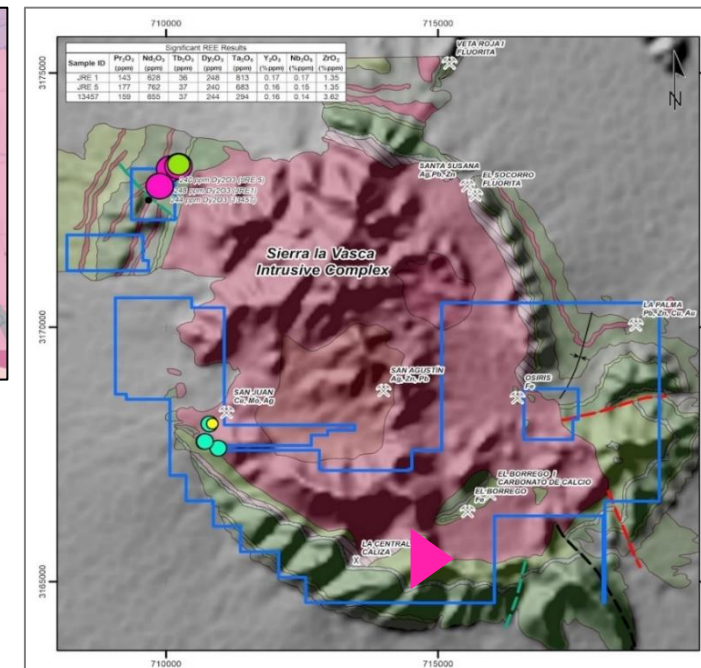
Bokan Mountain, AK



Nechalacho, NWT



Jemi Project



Norra Karr  
Sweden

<sup>1</sup> Comparables represent resource and feasibility-stage projects and mineralization is not necessarily indicative of mineralization at JEMI.



# Mineralization

## Features

- The HREEs at JEMI are hosted in the mineral eudialyte as dykes, dyklets, veins, and disseminations extending outward into the host carbonate rocks from the intrusion core.
- Mineralized zones and dykes are several hundred meters in strike length and range from a few to as much as 10 meters in width.
- Rock chip samples have total rare earth oxides\* (TREO) of up to 0.5%, and heavy rare earth oxides\*\* (HREO) of up to 0.25%, consistent with grades from other peralkaline deposits such as Norra Karr Sweden.

\* Total Rare Earth Oxides (TREO) includes: La<sub>2</sub>O<sub>3</sub>, Ce<sub>2</sub>O<sub>3</sub>, Pr<sub>2</sub>O<sub>3</sub>, Nd<sub>2</sub>O<sub>3</sub>, Sm<sub>2</sub>O<sub>3</sub>, Eu<sub>2</sub>O<sub>3</sub>, Gd<sub>2</sub>O<sub>3</sub>, Tb<sub>2</sub>O<sub>3</sub>, Dy<sub>2</sub>O<sub>3</sub>, Ho<sub>2</sub>O<sub>3</sub>, Er<sub>2</sub>O<sub>3</sub>, Tm<sub>2</sub>O<sub>3</sub>, Yb<sub>2</sub>O<sub>3</sub>, Lu<sub>2</sub>O<sub>3</sub>, Y<sub>2</sub>O<sub>3</sub>.

\*\* Heavy Rare Earth Oxides (HREO) includes: Eu<sub>2</sub>O<sub>3</sub>, Gd<sub>2</sub>O<sub>3</sub>, Tb<sub>2</sub>O<sub>3</sub>, Dy<sub>2</sub>O<sub>3</sub>, Ho<sub>2</sub>O<sub>3</sub>, Er<sub>2</sub>O<sub>3</sub>, Tm<sub>2</sub>O<sub>3</sub>, Yb<sub>2</sub>O<sub>3</sub>, Lu<sub>2</sub>O<sub>3</sub>, Y<sub>2</sub>O<sub>3</sub>.

Jemi mineralization – The brilliant pink mineral is the HREE hosting mineral eudialyte



HREE bearing dike outcrop



# Thank you



**MONUMENTAL**  
MINERALS