

## Pegmatites and Artisanal Mines Identified During Field Visits to Minas Gerais Lithium Projects, Brazil

### HIGHLIGHTS

- Field inspections by Alderan's Managing Director of the Parabolic Lithium Projects located in the 'Lithium Valley' district of Minas Gerais state completed
- Pegmatite identified in five project areas - Governador Valadares, Itambacuri, Carai, Itaipe and Curral de Dentro
- Potential indicator minerals for lithium bearing pegmatites identified at Governador Valadares, Itambacuri, Carai and Itaipe
- Artisanal mine workings for gemstones which can be associated with lithium bearing pegmatite is present at Carai and Itaipe
- Acquisition legal due diligence on Parabolic Lithium Pty Ltd in Australia completed
- Shareholder meeting to approve Acquisition scheduled for 8 November 2023

**Alderan Resources Limited (ASX: AL8) (Alderan or the Company)** is pleased to provide an update on field inspections carried out by Alderan's Managing Director, Scott Caithness of seven lithium project areas in Brazil's mineral resource rich state of Minas Gerais. The field inspections were carried out as part of due diligence following the execution of a binding share sale agreement to acquire 100% of the issued capital in Parabolic Lithium Pty Ltd (**Parabolic**) which has the right to acquire a 100% interest in the seven lithium exploration projects (together, the **Projects**) as announced on 20 September 2023 (**Acquisition**).

**Managing Director of Alderan, Scott Caithness, commented on the project field visits:**

*"The due diligence field inspections of the Parabolic lithium projects successfully confirmed the presence of pegmatite in five of the seven areas<sup>1</sup>.*

*An outcropping eight metre thick pegmatite dyke was observed at Itambacuri, pegmatite subcrop and float was seen in road cuts at Governador Valadares, Carai, Itaipe and Curral de Dentro and artisanal mine workings is evident at Itaipe and at Carai where the property owner indicated emeralds and green tourmaline were recovered. Potential indicator minerals for lithium bearing pegmatites such as tourmaline, white mica, garnet and rose quartz were seen at Governador Valadares, Itambacuri, Carai and Itaipe.*

*"The areas are all suitable for regional geochemical based exploration and all property owners met during the trip were supportive of Alderan's activities. Assuming shareholder approval for the Acquisition, Alderan's next step is to work with Parabolic on design and execution of a first pass stream sampling programme which may commence in 2023."*

<sup>1</sup> The presence of pegmatite or pegmatite granite does not equate to economic lithium mineralisation. The Company is encouraged by the geology, but no quantitative or qualitative mineralisation assessment is possible at this stage. The Company will undertake fieldwork to test for potential lithium mineralisation, and laboratory analysis of samples will be required to determine if the identified pegmatites or pegmatite granite have the potential to host mineralisation.

### Key Outcomes Following Project Field Inspections

Alderan's Managing Director was accompanied by a geologist from the Parabolic team on reconnaissance field inspections to all seven lithium project areas. The key objectives of the field inspections were to inspect areas of artisanal mining, identify pegmatites and potential lithium and lithium indicator mineralisation, confirm the regional geology and assess the suitability of the areas for mineral exploration. The inspections consisted of road traverses through the project areas and visits to possible artisanal mines and key outcrops.

Key outcomes include:

- **Artisanal mine adits and trenches are located at Carai and Itaipé.** The Carai project artisanal workings consist of trenching and pitting in an area immediately uphill of an 80m long highly weathered quartz rich road cut. The area of the workings contains weathered coarse grained pegmatite, coarse white mica and tourmaline plus rose quartz float (see Figures 2-5), all of which can be indicators of lithium bearing pegmatite. The owner of the property indicated that emeralds and green tourmaline is recovered from the workings (this could not be verified by Alderan).
- **Pegmatites were observed at Governador Valadares, Itambacuri, Carai, Itaipé and Curral de Dentro.** The most significant outcrop is located in Itambacuri where an 8m wide pegmatite dyke occurs within fine grained metasediment host rock in a creek bed (see Figure 6). Associated minerals include coarse white feldspar, quartz, black tourmaline and red garnet. Narrow pegmatite dykes (10-20cm wide) were observed in a second creek 250m along strike. The Governador Valadares pegmatite is highly weathered and occurs over approximately 50m in a road cut (see Figure 7).
- **Minerals commonly associated with lithium bearing pegmatites were observed at Governador Valadares, Itambacuri, Carai and Itaipé.** These included coarse tourmaline, biotite and muscovite, rose quartz plus coarse quartz and feldspar. At Itambacuri, fist sized clusters of black to amber tourmaline occur associated with pegmatite in a road cutting (see Figure 8) while at Carai the artisanal workings float of black tourmaline and white mica crystals range in size up to 3cm and 5cm respectively.
- **The geology of the project areas is consistent with the regional mapping** carried out by the Geological Survey of Brazil (CPRM) with the pegmatites observed commonly hosted within fine grained metasediments or fine-medium grained G3 granites.
- **All project areas are amenable for exploration.** The topography is suitable for geochemical programmes consisting of stream, soil and rock sampling followed by drilling. The road network is good throughout the areas and the landowners met were consistently supportive of Alderan's activities.

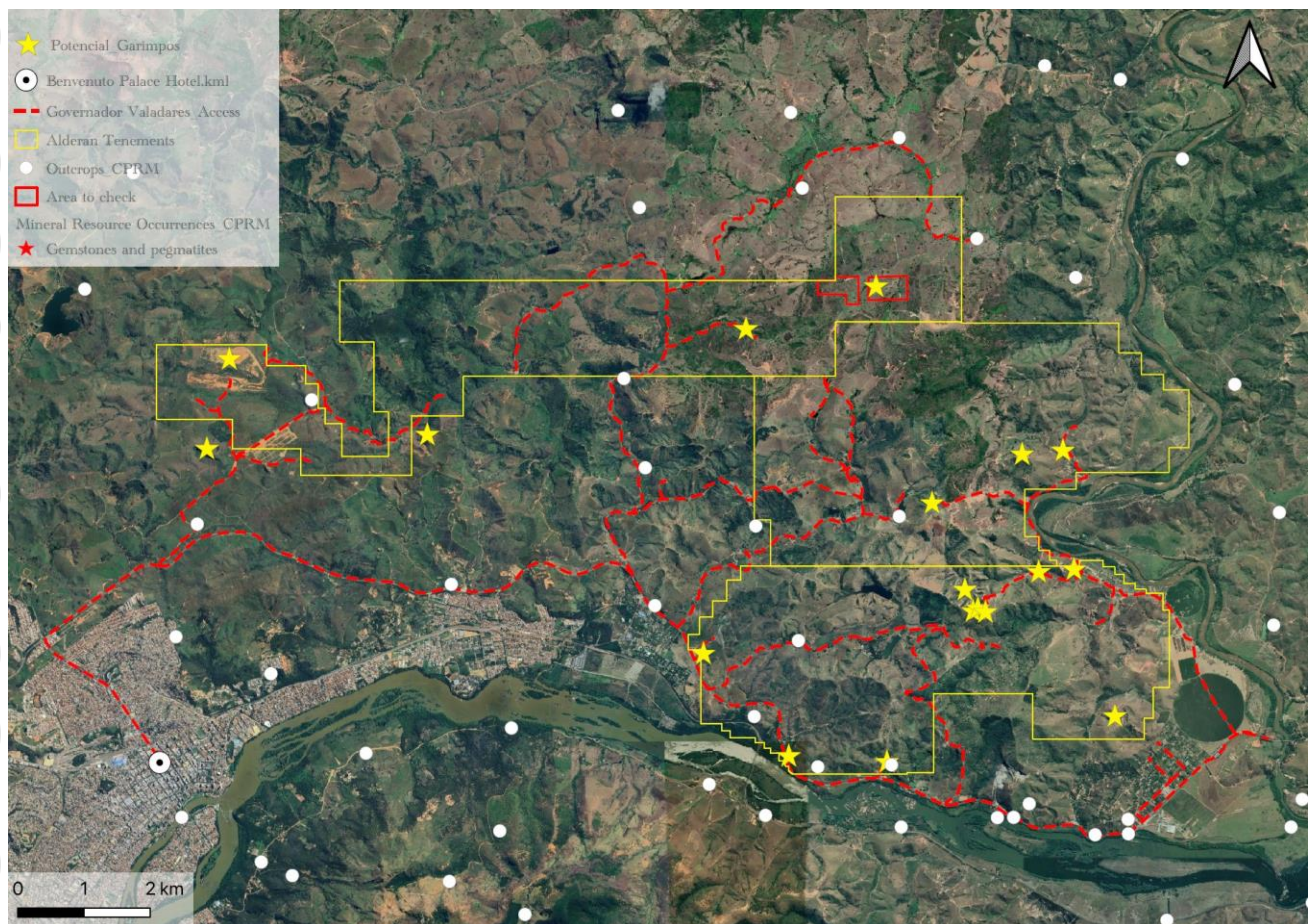
While the project field inspections were underway, due diligence was successfully completed on Parabolic Lithium Pty Ltd in Australia and Alderan is expecting the outcome of legal due diligence on the tenements in Brazil before the end of October.

The presence of pegmatite or pegmatite granite does not equate to economic lithium mineralisation. The Company is encouraged by the geology, but no quantitative or qualitative mineralisation assessment is possible at this stage. The Company will undertake fieldwork to test for potential lithium mineralisation, and laboratory analysis of samples will be required to determine if the identified pegmatites or pegmatite granite have the potential to host mineralisation.

## Next Steps

The Annual General Meeting to seek shareholder approval for the acquisition of Parabolic is scheduled for 8 November 2023. Assuming shareholder approval is received, the next steps on the Projects will include designing and executing a first pass stream sediment sampling programme over all the Project areas to commence in Q4, 2023 subject to weather, in conjunction with the Parabolic team.

Following that, sampling and assaying is expected to be undertaken on the identified pegmatites to determine their lithium content.



**Figure 1:** Governador Valadares reconnaissance field inspection road traverses plus potential artisanal mine and key outcrop locations. This is an example of the reconnaissance field inspections carried out on each project area.





**Figure 2:** Carai artisanal mine workings for emeralds and green tourmaline. The workings consist of a 7m x 1m trench with crosscuts either side. There are also a number of shallow pits on the uphill side of the trench.





**Figure 3:** Coarse pegmatite float at Carai artisanal mine workings.



**Figure 4:** Coarse black tourmaline, white mica and quartz scree at Carai artisanal mine workings.





**Figure 5:** Highly weathered coarse quartz rich road cut at Carai which extends for 80m and sits below artisanal mine workings.



**Figure 6:** Pegmatite dyke (8m wide) in stream bed at Itambacuri.





**Figure 7:** Weathered pegmatite extends for ~50m in a road cut at Governador Valadares.



**Figure 8:** Fist sized cluster of black and amber coloured tourmaline in road cut at Itambacuri.

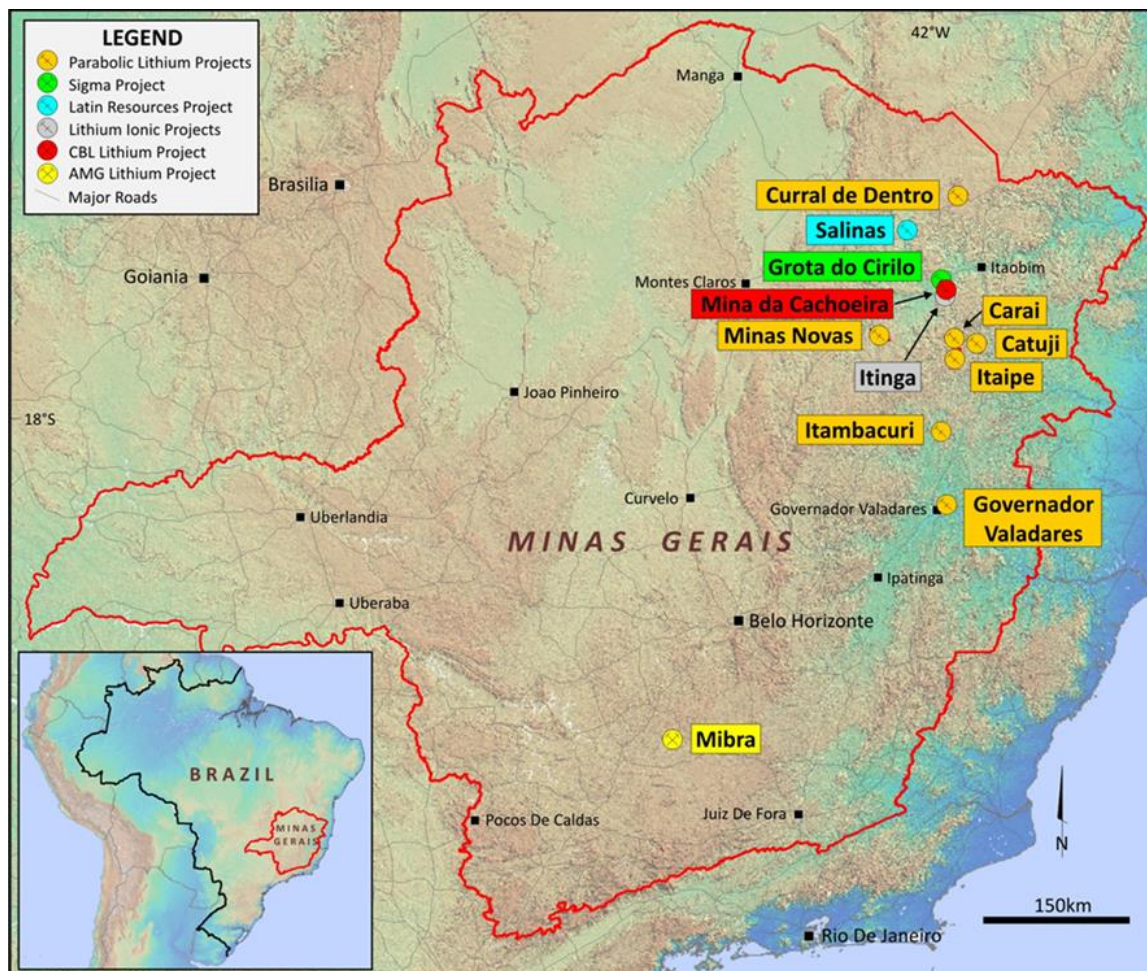


## Brazil Projects Background

The Projects consist of 24 granted exploration licences (472km<sup>2</sup>) in seven project areas - Curral de Dentro, Minas Novas, Carai, Catuji, Itaipe, Itambacuri and Governador Valadares (see Figure 1). The Projects are all located in and immediately to the south of the district known as 'Lithium Valley' in the Eastern Lithium Belt of Eastern Brazil.

Lithium deposits currently being mined in Minas Gerais include Companhia Brasileira De Lítio's (CBL) Mina da Cachoeira underground mine which has stated production capacity of 42,000t per annum of 5.5% Li<sub>2</sub>O spodumene concentrate, AMG Brazil's Mibra lithium-tantalum-niobium-tin mine which has capacity to produce 130,000t lithium concentrate per annum and Sigma Lithium Corporation's recently commissioned Grota do Cirilo operation which is ramping up 270,000t per annum of lithium concentrate.<sup>2,3</sup>

Recent lithium discoveries in Lithium Valley include Sigma Lithium Corporation's (NASDAQ: SGML; TSX: SGML) Grota do Cirilo project, Latin Resources Ltd's (ASX: LRS) Salinas Project and Lithium Ionic Corporation's Itinga. Other companies actively exploring in the district include Atlas Lithium Corporation (NASDAQ: ATXL) which has the Neves project and OzAurum Resources Ltd (ASX: OZM) which is exploring the Linopolis Jaime project.

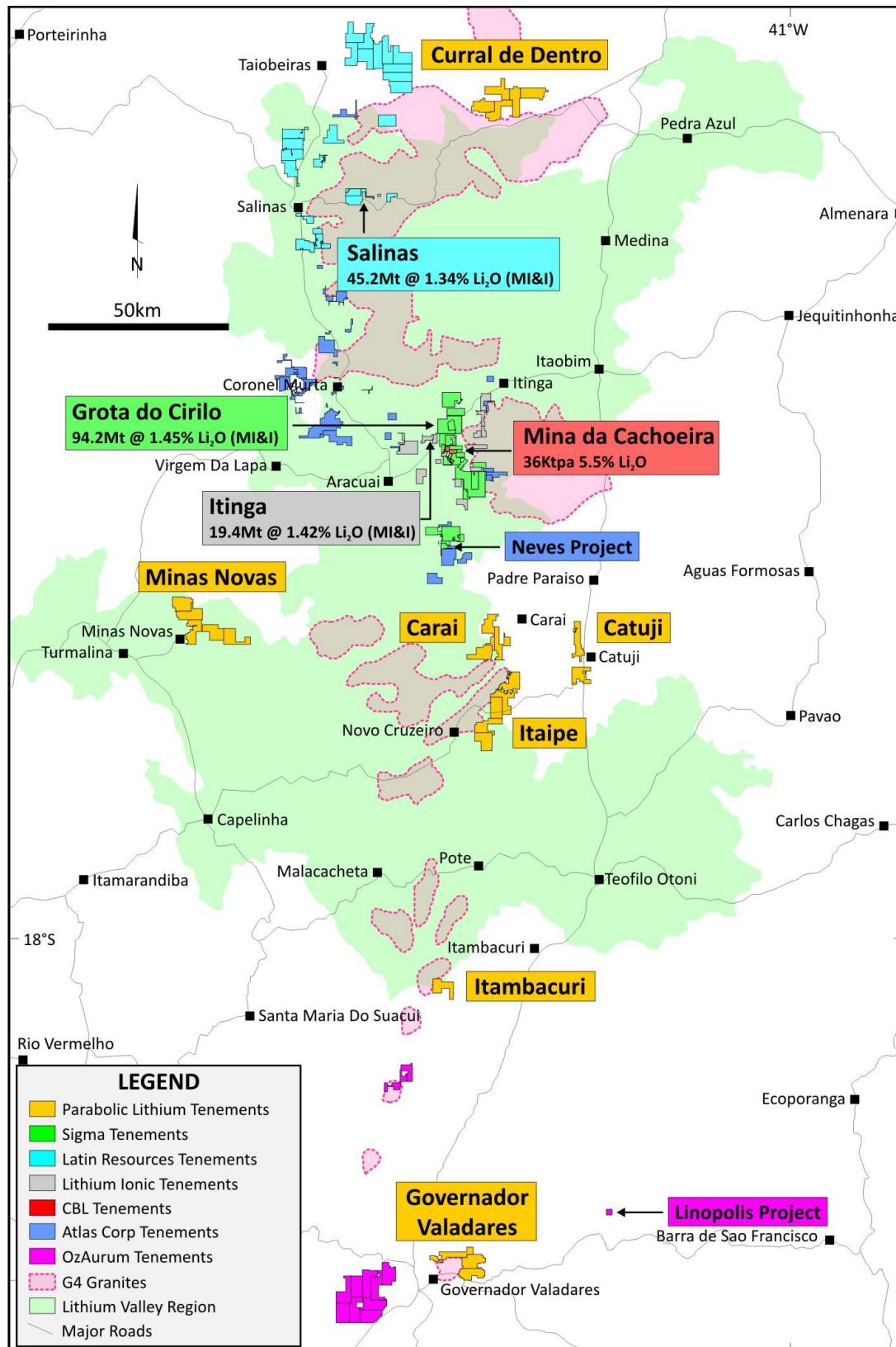


**Figure 9:** Parabolic Lithium's project locations in Minas Gerais State plus lithium mines and deposits within Brazil's Eastern Lithium Belt.

<sup>2</sup> [Mining Unit – CBL Companhia Brasileira de Lítio \(cblitio.com.br\)](http://Mining Unit – CBL Companhia Brasileira de Lítio (cblitio.com.br))

<sup>3</sup> [Resources \(amqlithium.com\)](http://Resources (amqlithium.com))





**Figure 10:** Location plan of Parabolic's projects plus the Grota do Cirilo, Salinas, Itinga and Mina da Cachoeira lithium projects and G4 granites in the Lithium Valley region of Minas Gerais<sup>4</sup>.

<sup>4</sup> Refer to NI43-101 technical report on page 37, dated 12 June 2023 ([Sigma-Lithium-Amended-and-Restated-Technical-Report-June-2023-JUNE-12-FINAL-pre-market.pdf](#) ([sigmalithiumresources.com](#)))

<sup>4</sup> Refer ASX announcement dated 20 June 2023 at <https://www.investi.com.au/api/announcements/lrs/deefd35a-3b8.pdf>

<sup>4</sup> Refer to Lithium Ionic announcement dated 27 June 2023 ([Lithium Ionic - News](#))



This announcement was authorised for release by the Board of Alderan Resources Limited.

**ALDERAN RESOURCES LIMITED**

ABN: 55 165 079 201

Suite 23, 513 Hay Street, Subiaco, 6008, WA

[www.alderanresources.com.au](http://www.alderanresources.com.au)

**For further information:**

**Scott Caithness**, Managing Director

**Alderan Resources**

**M:** +61 8 6143 6711

**E:** [scott@alderanresources.com.au](mailto:scott@alderanresources.com.au)

**Rod North**, Managing Director

**Bourse Communications Pty Ltd**

**M:** +61 408 670 706

**E:** [rod@boursecommunications.com.au](mailto:rod@boursecommunications.com.au)

**About Alderan Resources Limited**

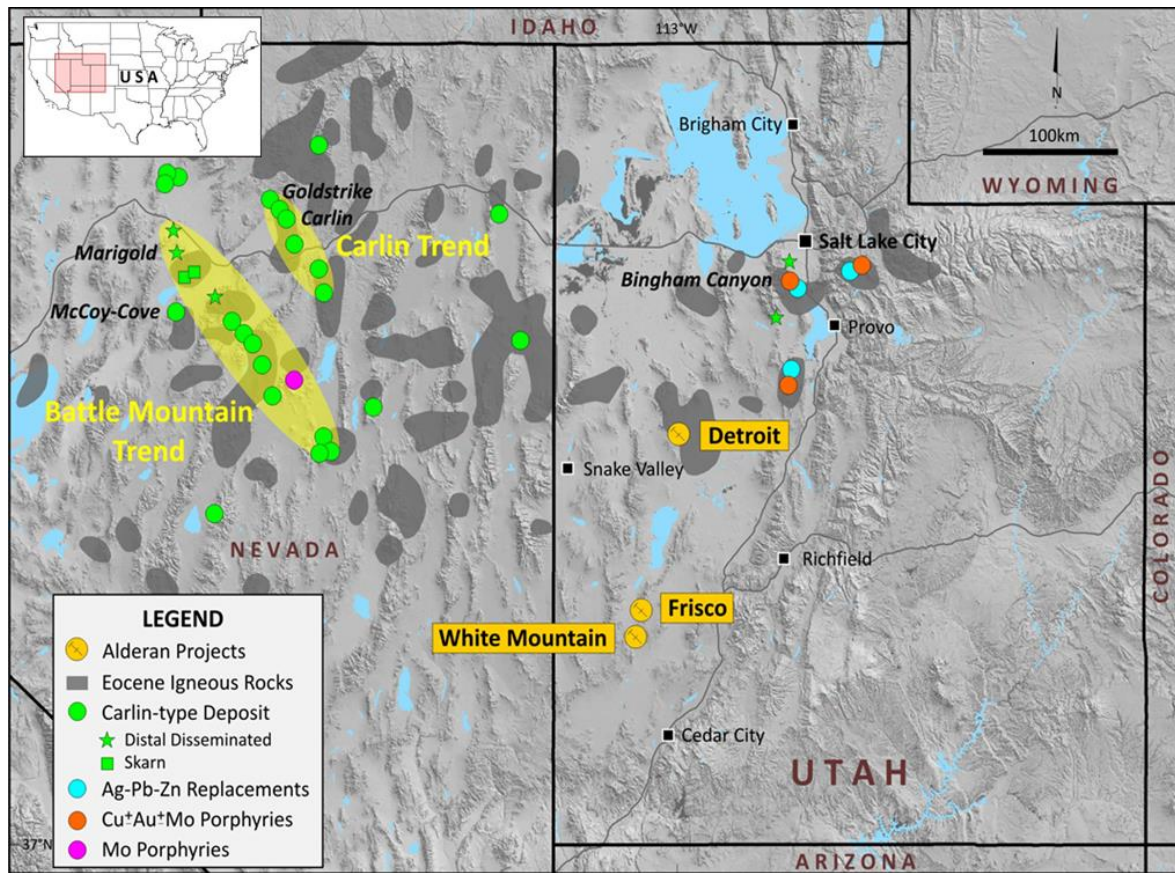
Alderan Resources specialises in critical and precious metal exploration. In addition to the acquisition of seven (7) lithium projects in Minas Gerais, Brazil (AL8 ASX announcement dated 20 September 2023) the Company has projects in Utah, USA (Frisco, Detroit, White Mountain), with tenements held either directly or through option agreements via Alderan's USA subsidiaries, Volantis Resources Corp and Valyrian Resources Corp (see Figure 11). Alderan's objective is to rapidly discover, delineate and develop critical metal and gold deposits for mining. The Company's project portfolio has high potential for discovery as it lies in under-explored geological belts with similar geology to neighbouring mining districts. Our exploration plans also include reviewing new opportunities to secure and upgrade our pipeline of projects.

For more information please visit: <https://alderanresources.com.au/>

**Competent Persons Statement**

The information contained in this announcement that relates to geology is based on, and fairly reflects, information compiled by Mr Scott Caithness, who is a Member of the Australian Institute of Mining and Metallurgy. Mr Caithness is the Managing Director of Alderan and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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'. Mr Caithness consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears. Mr Caithness holds securities in the Company.





**Figure 11:** Alderan Resources project locations in Utah, USA.