



ASX Release: 18 August 2022

IRIS Now Largest Holder of Lithium Mining Claims in South Dakota, USA

Footprint Grows by 290% to 2,056 Claims

Highlights:

- **IRIS Metals grows South Dakota footprint by 290%** through newly staked claims under its control; securing highly mineralized corridors of spodumene bearing lithium-cesium-tantalum ("LCT") pegmatites.
- IRIS now controls **2,056 claims** (an increase of 1,531 new claims) covering approximately **42,287 acres** or **171km²** in the historic mining region of the Black Hills of South Dakota, USA.
- The Company now controls the **largest area of prospective lithium mining claims** in the Black Hills.
- The Black Hills is famous for its historic lithium producing mines containing some of the **largest spodumene crystals** on record.
- IRIS is **continuing to stake** additional claims over historic lithium mining areas.
- The newly staked claims cover numerous historic lithium spodumene mines representing **walk-up drill targets**.
- The Company is also in negotiation to access or purchase **patented claims over historic lithium mines** which provides freehold title to the minerals free of Federal obligations.
- Recent **signing of the US Inflation Reduction Act** provides a raft of positive outcomes for US based battery metal explorers and producers.
- Initial exploration, overseen by IRIS Technical Director Chris Connell currently on site has commenced with mapping, gridded soil and rock chip sampling programs underway with results expected in the coming months.

Executive Technical Director and Head of Exploration, Chris Connell, commented: *"IRIS has been fortunate in having the capability of mobilising multiple field teams working overtime to attain the largest land holding in the Black Hills prospective for Lithium. Perhaps more importantly, we have been able to secure most of the historic lithium producing mines and their strike extensions.*

The Company now has a great mix of drill-ready targets and extensive prospective corridors over known lithium bearing LCT pegmatites. I am currently on site, directing and supervising the staking and exploration activities over an area that is exhibiting regional scale lithium potential."

Non-Executive Chairman, Simon Lill, added: *"The decision to increase IRIS' footprint in the Black Hills of South Dakota at such a rapid rate was aided by access to suitable in country staff and the willingness of our Technical Director to commit to being in the region to manage the exercise. The recent activities of the US Government towards securing their own strategic metals supplies away from China should prove to be a significant boon to our plans."*

IRIS Metals Limited ("IRIS" or the "Company") (ASX:IR1) is pleased to announce it has moved expeditiously in increasing its footprint in the Black Hills of South Dakota, USA. The Company's exposure to the Black Hills has now increased through staking by **292% to 2,056 lode claims** covering approximately 42,287 acres over areas highly prospective lithium pegmatites. The magnitude of this tenure makes IRIS the largest holder of prospective lithium mining claims in South Dakota, providing the Company with a dominant landholding prospective for lithium bearing pegmatites in the Black Hills.

The Company is also currently in negotiation to either access or purchase **patented claims over historic lithium mines**. Successful conclusion of these negotiations will allow IRIS to access any contained minerals free of Federal obligations.

Directors

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Tal Paneth, Executive Director
Peter Marks, Executive Director
Chris Connell, Executive Director
David Franks, Company Secretary

Consultants

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The South Dakota Project

The Black Hills of South Dakota are famous for historic lithium mining dating back to 1898 when Li-bearing spodumene (contains up to 7% Li_2O), and amblygonite (contains up to 10% Li_2O) was first mined near the township of Custer.

Additional mining claims staked by IRIS in the Black Hills add **two new project areas** and **extend the existing two projects** previously announced:

- Dewy Project (extended)
- Custer Project (extended)
- Ruby Project (new)
- Helen Beryl Project (new)

These projects represent large areas of fertile lithium-cesium-tantalum ("LCT") pegmatites covering several historic lithium mines and numerous historical industrial mineral pegmatite mines.

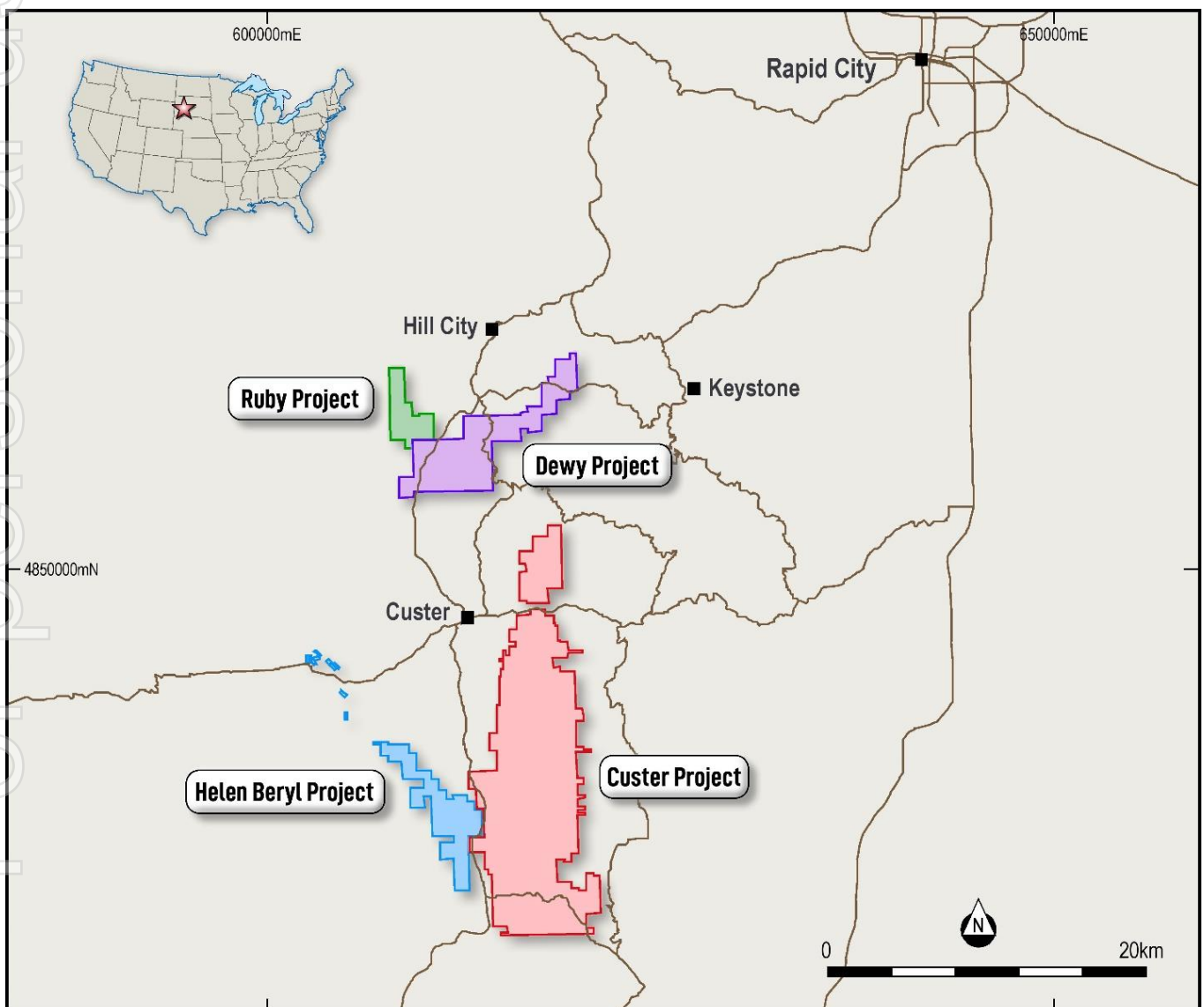


Figure 1: Regional location map of IRIS's projects in South Dakota.

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Staking

Multiple field teams have continued staking claims over fertile lithium trends. IRIS now controls most of the historic lithium mines south of Keystone in the Black Hills. Whilst competition for staking mining claims in the Black Hills has recently become fierce, IRIS has had the advantage of being the first mover in South Dakota. Currently IRIS has control of 2,056 claims covering an area of 42,287 acres (**Table 1**). The Company has established a large field team with the assistance of our local partner and continue to stake new claims over areas of LCT pegmatites.

Project	Number of Claims	Areas (Acres)
Custer	1,380	28,318
Helen Beryl	226	4,665
Dewey	358	7,401
Ruby	92	1,903
Total	2,056	42,287 or (171km²)

Table 1: Table detailing current claims staked in the Black Hills.

Helen Beryl Project

The Helen Beryl Project consists of **226 BLM Lode Claims** and covers an area of approximately **4,665 acres** of prospective LCT-pegmatites occurring in numerous discontinuous swarms trending north-south. This is a well-known trend with several famous lithium mines including the Tin Mountain, Helen Beryl and Eruption mines.

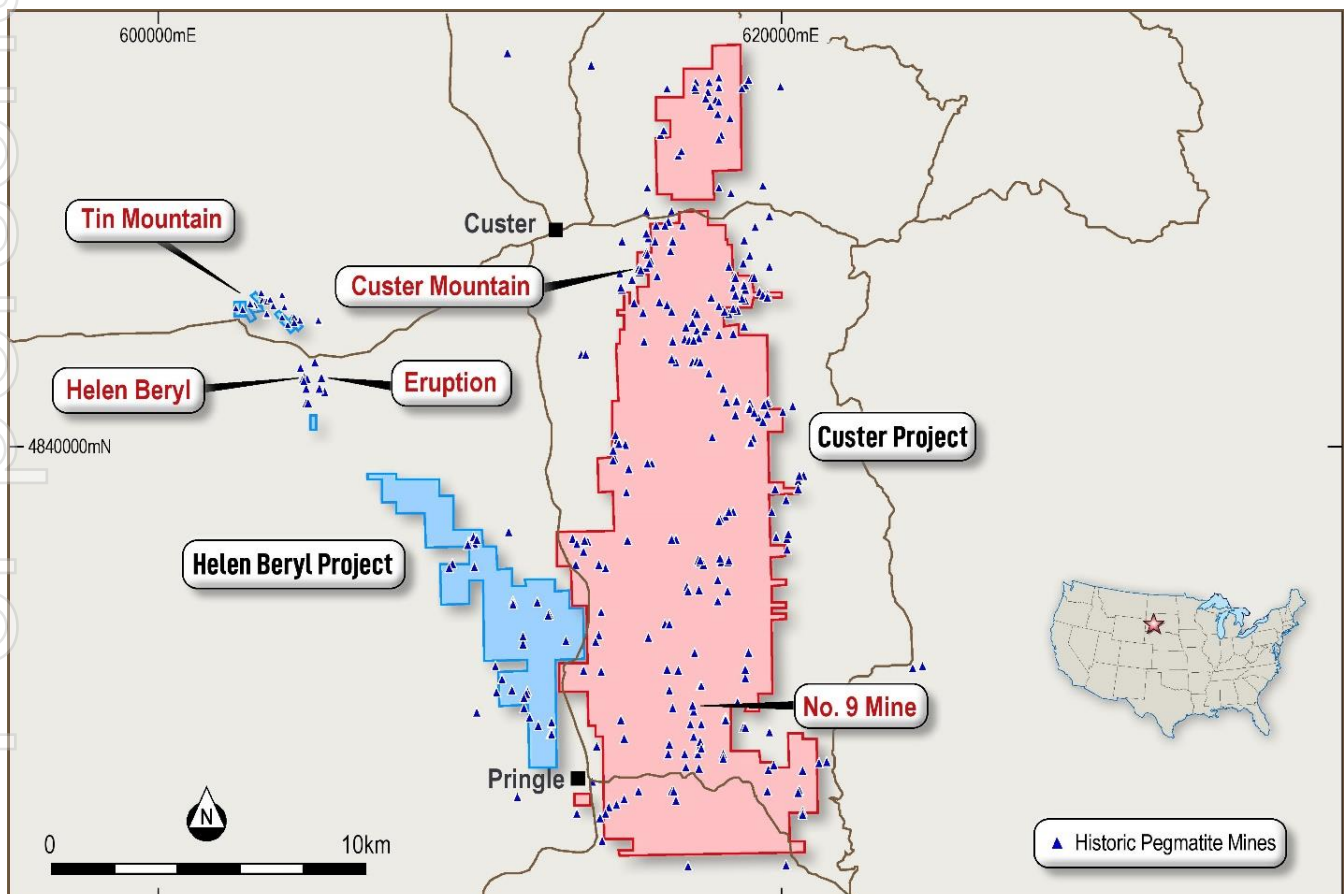


Figure 2: Lithium project map showing locations of historic mines in LCT pegmatites.

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The IRIS Helen Beryl Project contains the **historic Helen Beryl Mine** and the **Eruption Lode**. The Helen Beryl Mine was famous for having a zone of extremely high concentrated spodumene (**Figure 3**). The Eruption Lode is also known for its high concentration of spodumene. IRIS was able to secure claims over both these mines that represent high priority early drill targets.



Figure 3: A) The historic Helen Beryl Mine known for its incredible concentration of spodumene.
B) Spodumene rich samples found throughout the waste dumps.

The Tin Mountain Mine (**Figure 4**) is a privately owned mine that is famous for having very large spodumene crystals and large colloidal amblygonite minerals. IRIS was able to stake claims adjacent to and along strike from this mine, incorporating the Lithia Mines that also contain zoned pegmatites with spodumene.

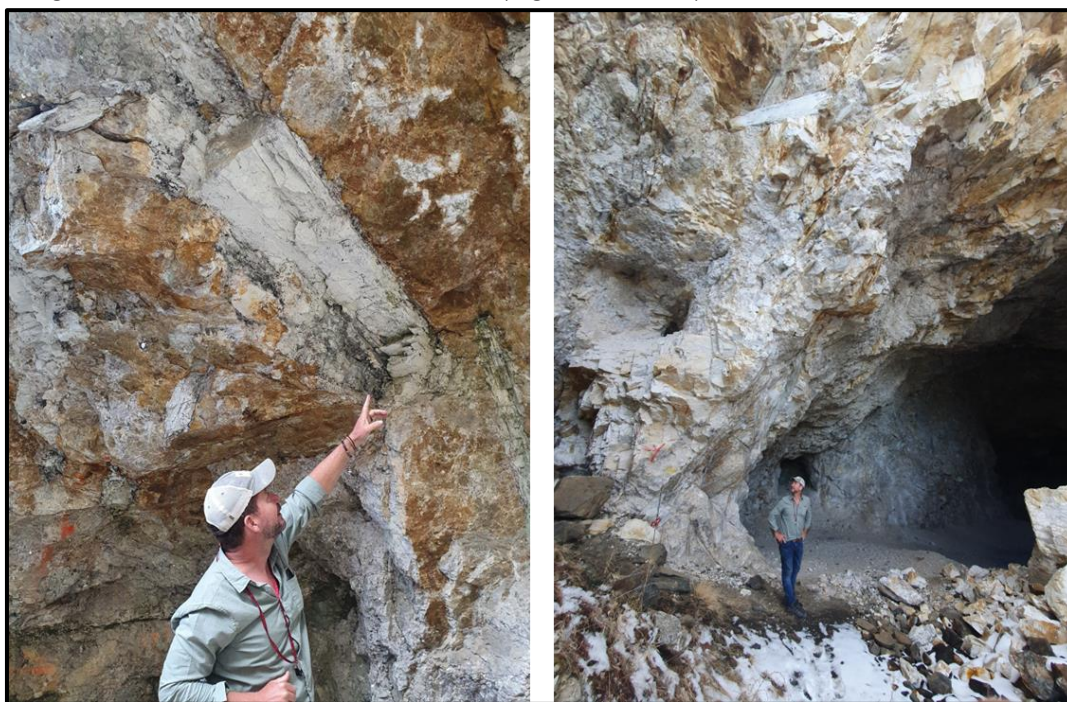


Figure 4: Large spodumene logs in the Tin Mountain Mine (private land – borders the Helen Beryl project).

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Ruby Project

The Ruby Project consists of **92 BLM Lode Claims** and covers an area of approximately **1,903 acres** of prospective LCT-pegmatites occurring in numerous discontinuous swarms trending north-south. This area has historically been prospected for gold, but field investigations have identified outcropping spodumene in pegmatites.

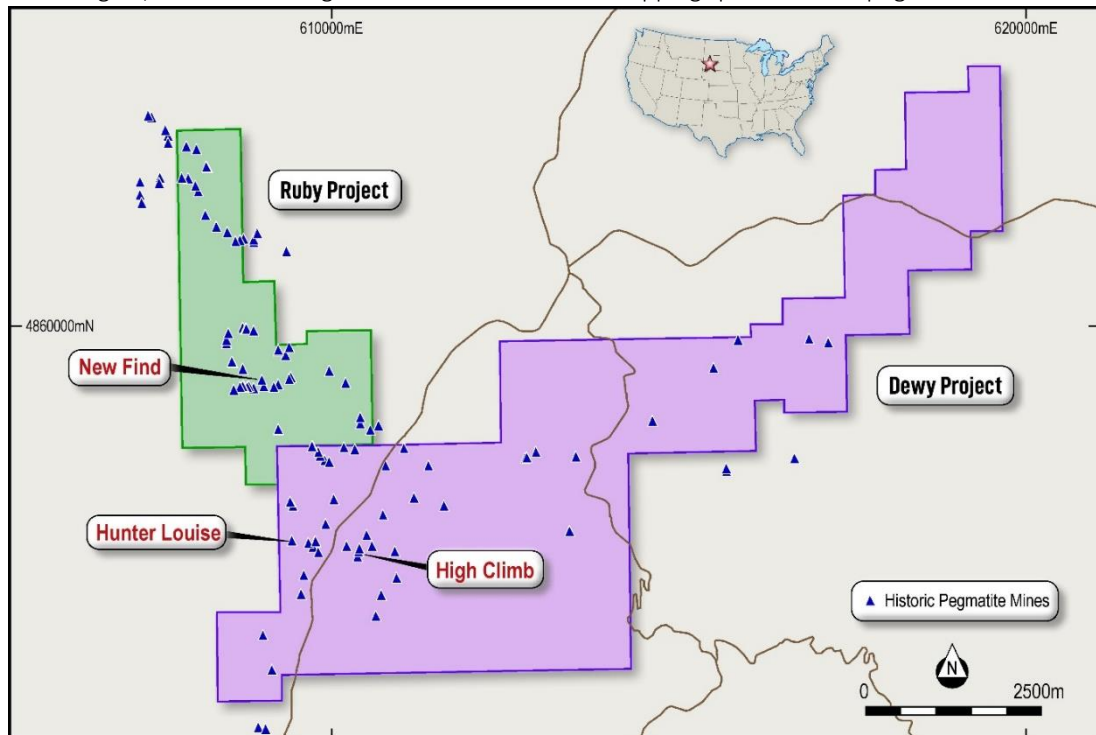


Figure 5: Map showing the Ruby Project highlighting the historical lithium bearing mines.

Teams are continuing to stake additional claims in this area to expand IRIS' footprint on this highly prospective new find. Examples of the spodumene found in this area are shown in **Figure 6**.



Figure 6: Large spodumene crystals discovered outcropping in the new Ruby Project located in a previously unrecognized lithium pegmatite trend.

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Custer Project

Recent staking by the company has extended the Custer Project. It now consists of **1,380 BLM Lode Claims** and covers an area of approximately **28,318 acres** of prospective LCT-pegmatites occurring in a north-south corridor and containing many historic lithium mines (**Figure 7**).

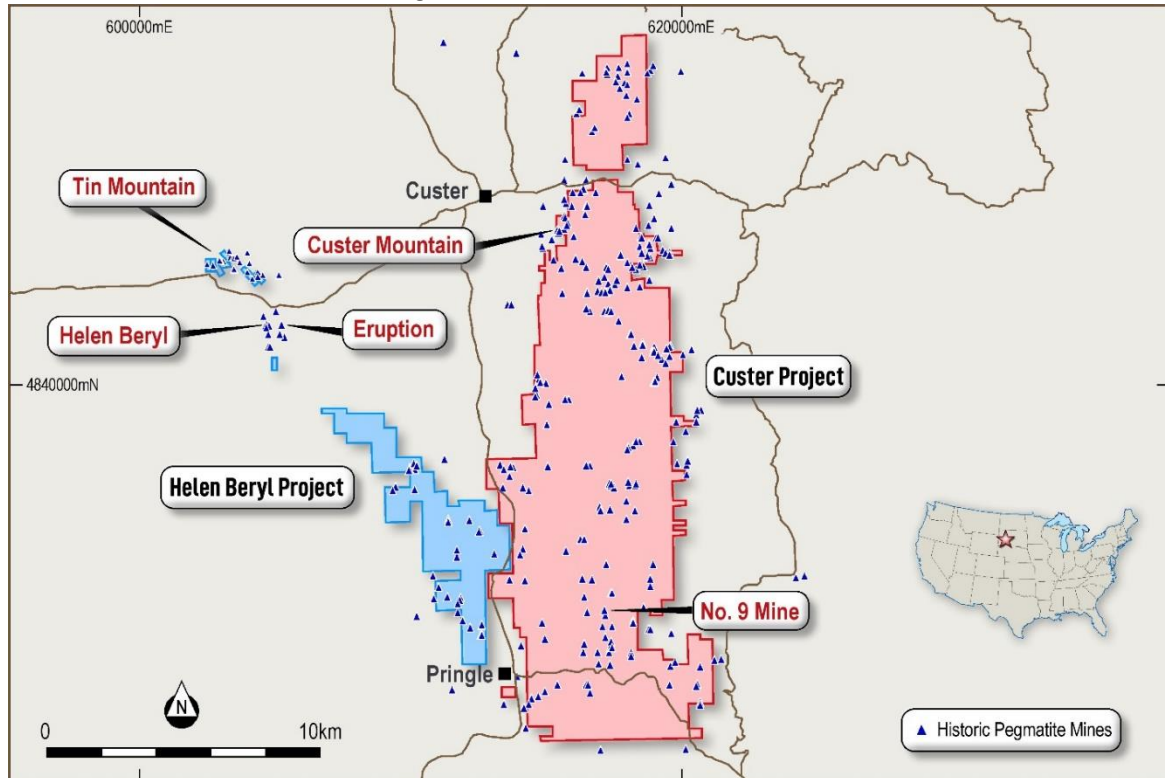


Figure 7: Map showing the Custer Project highlighting the historical lithium bearing mines.



Figure 8: Tunnel entrance to the No. 9 Mine that contains a spodumene rich zonation.

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The No. 9 Mine historically is reported to have been rich in spodumene. It has large tunnels cutting through the pegmatite that are not accessible today due to safety gates. Spodumene was seen on the waste dumps and near the access to the tunnels (Figure 8 above).

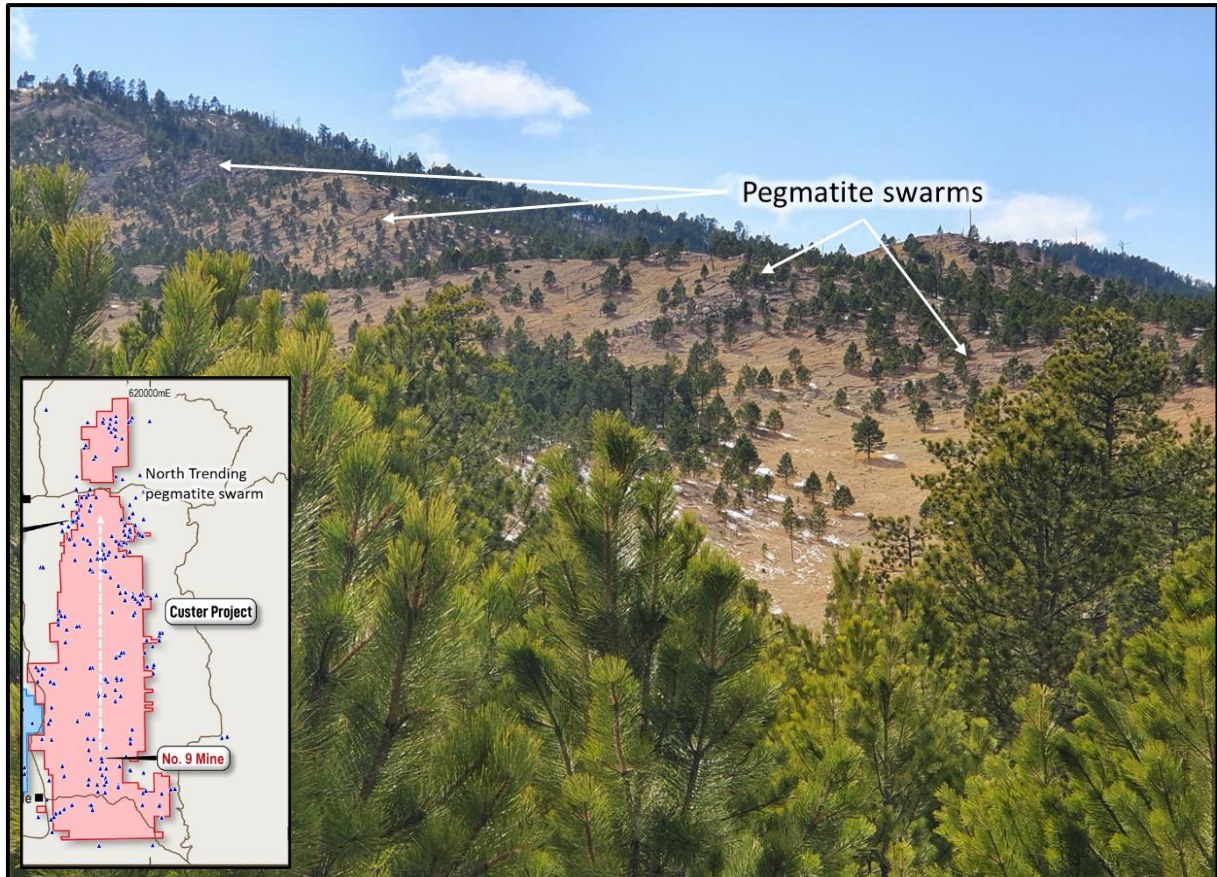


Figure 9: View to the north (IRIS controlled Tenure) from No. 9 Mine, hills are rich with prospective LCT pegmatites.



Figure 10: Photos of historic lithium producing mines in the Custer Project.

A: The Custer Mountain open cut mine that produced spodumene, amblygonite and lepidolite.

B: The Elkhorn open cut mine that produced lithiophilite.

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The Custer Mountain mine has been mined for feldspar and beryl sporadically since 1942 (**Figure 10**). Mapping of the mine in 1945 by the United States Geological Survey (“**USGS**”) described pegmatite zones rich in spodumene, amblygonite and lepidolite. Spodumene crystals were documented up to 1.5m long and 0.5m thick. The Climax Mine was one of the largest producers of mica in the Black Hills and has been intermittently operated since 1880. The pegmatite contains zones rich in lithium bearing minerals amblygonite and lithiophilite-triphyllite.

Initial Exploration Program

Initial exploration has started with mapping, gridded soil and rock chip sampling programs underway, with results expected in the coming months. This will help determine priority targets for drill testing. To assist initial evaluation of the prospects, IRIS has acquired a Laser-Induced Breakdown Spectroscopy (“**LIBS**”) analyzer, a technology that measures “light elements” (such as Li, Be, Al & Mg) and provides real time and in-field analysis as to the presence of lithium (and other minerals) within the host medium. The acquisition and use of the LIBS analyzer will assist the Company in rapidly identifying the highest priority target areas, prior to an in-depth geochemical and subsequent drill program.

US Inflation Reduction Act

The Inflation Reduction Act was signed into law on 16 August 2022, resulting in a raft of highly positive outcomes for US based battery metal explorers and producers. The Act provides grants to US owners of new EVs of \$7,500. However, eligibility for this tax credit is contingent upon using key components made and sourced in North America. The bill stipulates that 50% of the battery parts and 40% of the minerals must come from US shores or a country with which the United States have a free trade agreement.

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This release is approved by the Board of IRIS Metals Limited.

About IRIS Metals Limited:

IRIS Metals (ASX:IR1) is an Australian-based explorer with an extensive suite of assets prospective for gold, nickel and lithium in Western Australia and South Dakota, USA. Its wholly-owned WA tenement portfolio includes a compelling landholding in central Kookynie - a gold camp renowned for its historical high grade gold production and bonanza gold grades, and strategic tenure in the highly prospective Tier-1 mining jurisdiction of Leonora. The hard rock lithium South Dakota Project provides the Company and its shareholders with exposure to the battery metals space in a mining friendly jurisdiction with a history of past production. IRIS is pursuing a strategy of rapid prospect evaluation in recognised mineral fields, with a view to making economic discoveries, thereby enhancing shareholder value.

Forward looking Statements:

This announcement may contain certain forward-looking statements that have been based on current expectations about future acts, events and circumstances. These forward-looking statements are, however, subject to risks, uncertainties and assumptions that could cause those acts, events and circumstances to differ materially from the expectations described in such forward-looking statements. These factors include, among other things, commercial and other risks associated with exploration, estimation of resources, the meeting of objectives and other investment considerations, as well as other matters not yet known to IRIS Metals or not currently considered material by the company. IRIS Metals accepts no responsibility to update any person regarding any error or omission or change in the information in this presentation or any other information made available to a person or any obligation to furnish the person with further information.

Competent Persons Statement:

The information in this announcement that relates to exploration results is based on information reviewed by Chris Connell a Competent Person who is a member of Australian Institute of Geologists and a Non-Executive Director to IRIS Metals Limited. Chris Connell is an exploration geologist with over 25 years' experience in gold and base metal exploration including gold exploration and resource definition in the Eastern Goldfields and has sufficient experience in the styles of mineralisation and type of deposit under consideration and to the activity undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Chris Connell has consented to the inclusion in this Public Report of the matters based on his information in the form and context in which it appears.

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