

# EMC Secures CSIRO Support for Advanced Rubidium, Lithium & Caesium Studies at Mt Edon Project, WA

## Highlights

- Everest Metals has signed agreement with Australia's national science agency, CSIRO, to conduct advanced geochemical and mineralogical studies at Mt Edon, WA
- CSIRO Kick-Start Program voucher awarded to support analysis of rubidium, lithium, and caesium distribution in pegmatitic minerals, aiming to enhance recovery processes
- Program leverages advanced CSIRO facilities and will commence immediately, with sample collection to start in May 2025
- Project expected to take approximately 9 months to complete
- Detailed scientific data will equip Everest with new insights to target high-potential exploration areas and advance resource discovery at Mt Edon

**Everest Metals Corporation Ltd** (ASX: EMC) ("Everest" or "the Company") is pleased to advise it has signed an agreement with Australia's national science agency, CSIRO, to utilise the Kick-Start Program for geochemical & mineralogical studies of rubidium, lithium and caesium distribution in pegmatitic minerals at Everest's Mt Edon Critical Minerals Project in WA ("Mt Edon").

The Company has secured a \$50,000 Kick-Start Program voucher from CSIRO. The project aims to enhance geological knowledge of rubidium and lithium mineralisation and their distribution, enabling improvements in recovery processes.

### *Executive Chairman and CEO Mark Caruso commented:*

*"This is an excellent opportunity for the Company to strengthen its collaboration with renowned research institutes, following our successful partnership with ECU's Mineral Research Recovery Centre and the recent submission of patent flowsheet. Advancing the Mt Edon Critical Minerals Project through Australian Government R&D initiatives, with access to world-class researchers and modern facilities at CSIRO, will enhance our understanding of rubidium and lithium characterisation, support improvements in rubidium recovery and advance the exploration program at the Mt Edon Project."*

## DETAILS OF THE COLLABORATION STUDY

CSIRO's Kick-Start Program is an initiative designed to support innovative Australian start-ups and businesses by providing matched funding and access to CSIRO's research expertise and capabilities. Everest has been approved for a \$50,000 Kick-Start voucher. Sample collection will commence in May 2025, with the project expected to take 9 months to complete.

CSIRO will collaborate with Everest to study the nature, characterisation, and distribution of rubidium, lithium, and caesium mineralisation, with the goal of enhancing potential recovery processes. The study will also explore the correlation between rubidium and lithium in different mineral phases.

The project will equip Everest with a robust, data-driven approach to enhance rubidium and lithium recovery and prioritise exploration areas with higher potential for economically viable mica-rich rubidium and lithium pegmatite deposits. This enhanced targeting strategy will be instrumental in advancing the Mt Edon project and uncovering new resource opportunities.

Detailed laboratory analyses – including Hylogger, LA-ICP-MS, quantitative XRD and Micro-XRF and SEM – will provide insights into the geochemical signatures and mineral department of rubidium and its pathfinder elements (e.g. lithium and caesium).

## MT EDON PROJECT BACKGROUND

Mt Edon Critical Mineral Project is located 5km southwest of Paynes Find, in the Mid-West region of Western Australia, approximately 420km northeast of Perth (Figure 1).

Mt Edon has an initial Inferred Mineral Resource (“MRE”) of 3.6 million tonnes grading 0.22% Rb<sub>2</sub>O, and 0.07% Li<sub>2</sub>O (at 0.10% Rb<sub>2</sub>O cut-off), contains more than 7,900 tonnes of Rb<sub>2</sub>O (Table 1)<sup>1</sup>. The maiden Inferred MRE includes a high-grade subset of 1.3Mt at 0.33% Rb<sub>2</sub>O and 0.07% Li<sub>2</sub>O (at 0.25% Rb<sub>2</sub>O cut-off) which is nearly 56% of the total contained Rb<sub>2</sub>O tonnes.

This verifies the tier-1 scale and grade of the Mt Edon deposit. The MRE is limited to a strike length of only ~400m within a 1.2km lithium-caesium-tantalum (“LCT”) pegmatite corridor and a vertical depth of ~140m below surface.

---

<sup>1</sup> ASX: EMC announcement; [EMC Delivers World-Class Rubidium Resource At Mt Edon Project, WA](#), dated 21 August 2024

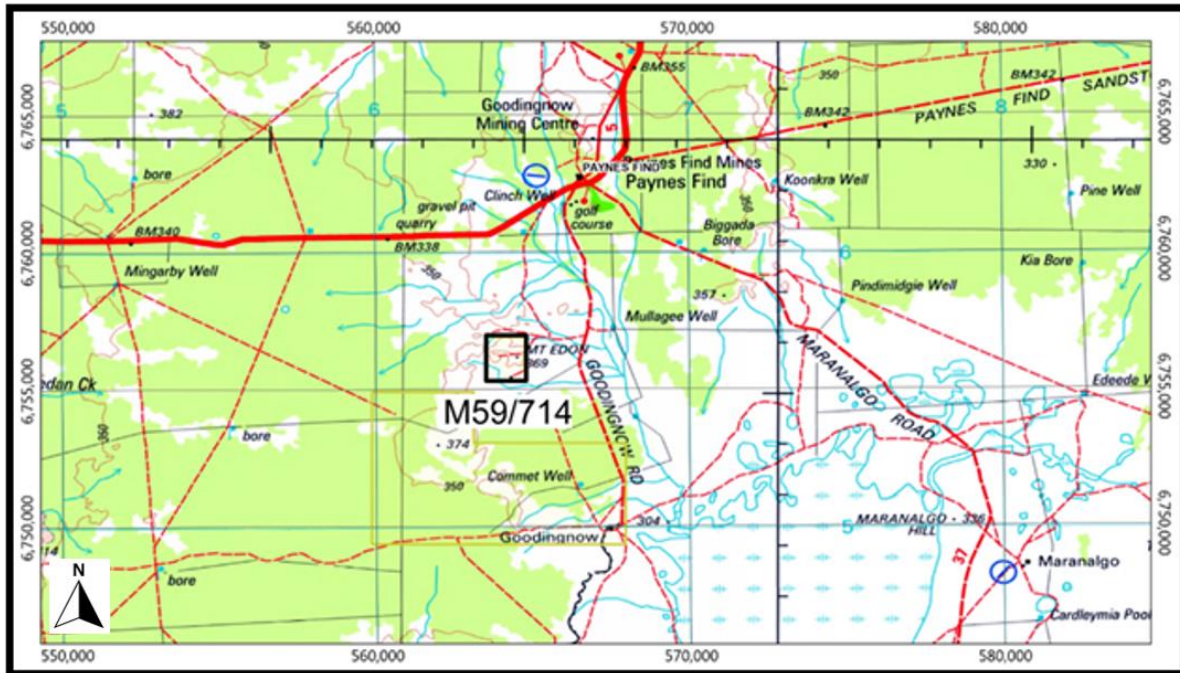


Figure 1: Mt Edon mining lease location map, southwest of Paynes Find, Western Australia

Table 1: Mt Edon Maiden Mineral Resource Estimate (JORC Code 2012)

Category	Tonnes (Mt)	Rb <sub>2</sub> O (%)	Contained Rb <sub>2</sub> O (t)	Li <sub>2</sub> O (%)	Contained Li <sub>2</sub> O (t)
Inferred	3.6	0.22	7,900	0.07	2,500
<b>Total</b>	<b>3.6</b>	<b>0.22</b>	<b>7,900</b>	<b>0.07</b>	<b>2,500</b>

- Mineral Resources are classified and reported in accordance with JORC Code (2012).
- Mineral Resource estimated at a 0.10% Rb<sub>2</sub>O cut-off.
- Mineral Resource is contained within mining licence M59/714.
- All tabulated data have been rounded.

Multiple geological and geophysical targets exist across the project, which along with the resource modelling that underpins the MRE, form the basis for further exploration and anticipated resource growth. Modelling has shown the mineralisation remains open along strike to the northeast and southwest, providing immediate potential to significantly increase the MRE with follow-up drilling. The Mt Edon resource has outcrop or occurs close to surface and will be amenable to opencut mining, with the information suggesting a low stripping ratio.

In February 2024, Edith Cowan University (“ECU”) and Everest formalised a partnership by executing a Research Agreement to advance studies on the extraction of rubidium from Mt Edon ore. The research was conducted at ECU’s Mineral Recovery Research Centre (“MRRC”).

The initial phase of the collaboration involved a small-scale laboratory demonstration of the complete process for rubidium recover. The Direct Rubidium Extraction (“DRE”) test work and studies used cutting-edge methods, including ion exchange, to explore the potential to commercialising Mt Edon’s ore. The DRE process yielded Rubidium Chloride (“RbCl”) as the primary product, eliminating the need

for additional conversion steps. Parallel investigations of acid leaching were conducted, exploring temperature influences, and the effects of different acid types and concentrations.

The purification phase employed two approaches: ion exchange-based extraction and precipitation-based selective precipitation. The results demonstrated exceptional efficiency with 91% overall recovery of rubidium for synthesised brine. Of note, 92 g/t lithium was produced as the by-product<sup>2</sup>.

In February 2025, the Company submitted a provisional patent application to IP Australia for its proprietary rubidium extraction process, which utilises ore from the Mt Edon Critical Minerals Project<sup>3</sup>. This filing establishes intellectual property protection for EMC's rubidium recovery method.

Advanced work on the Engineering Scoping Study ("ESS") is ongoing, alongside continuous refinement of the purification process to improve cost efficiency. The Company is also exploring grant funding opportunities for scaling up to a pilot plant, as rubidium is a critical material used in high-tech applications, including defence, military, aerospace, and communications.

## RUBIDIUM OVERVIEW

### Applications and Importance

Rubidium (Rb) is a critical raw material for various high-tech applications, including the development of new energy conversion technologies and new communication technologies. Key applications include:

- **Defence and Military:** Night vision imaging, special glass, radiation detectors, photoelectric tubes, radio electronic tubes and military infrared signal lights.
- **Aerospace:** ion propulsion engines and atomic clocks.
- **Communications:** Ion cloud communications and fibre optic communications.
- **Emerging Energy Power Generation:** Materials for magnetohydrodynamic power generation and thermionic power conversion.
- **Medical:** Sedatives, tranquilisers and medications for treating epilepsy and synthetic alkaline solvents.
- **Special Glass:** Enhancing glass conductivity, increasing lifespan and stability.
- **Industrial Catalysts:** Widely used in ammonia synthesis, sulfuric acid synthesis, hydrogenation, oxidation and polymerisation reactions.
- **Electronic Devices:** Important materials for photovoltaic cells, photoemission tubes, TV camera tubes and photomultiplier tubes.

Researchers have also recently proposed the use of rubidium for chemical storage within hydrogen batteries, expanding the potential market for this critical mineral<sup>4</sup>.

<sup>2</sup> EMC ASX announcement; [Everest Metals Achieves Up To 91% Rubidium Recovery from Mt Edon](#), dated 18 December 2024

<sup>3</sup> EMC ASX announcement; [Rubidium Extraction Patent Application Filed](#), dated 27 February 2025

<sup>4</sup> S. Matalucci, May 2024, Researchers propose use of caesium, rubidium for hydrogen batteries, pv-magazine.

## Production and Market Trends

Despite the breadth of applications and demand for rubidium and caesium and their hydrides, global production of caesium and rubidium is significantly lower than that of other alkali metals, and the cost per kilogramme is substantially higher than lithium, sodium or potassium.

Due to the gradual depletion of caesium resources, but the continued demand of these industries, a replacement is required, with Rubidium being a suitable candidate. The downstream application fields of Rubidium salts are rapidly growing, enhancing the Company's market advantage in this sector. As a result, rubidium has been listed as one of the 35 critical minerals by several countries around the globe including USA and Japan.

According to the U.S. Geological Survey (2024)<sup>5</sup>, global rubidium resources are relatively scarce, with most resources containing limited Rubidium content. The Rubidium Industry is expected to grow from 4.46(USD Billion) in 2023 to 7.2 (USD Billion) by 2032. The rubidium Market CAGR (growth rate) is expected to be around 5.48% during the forecast period (2024 - 2032)<sup>6</sup>.

Several market factors support growth in demand for rubidium and underpin the current price of ~USD1,1700/kg<sup>7</sup>. Among these, there is significant global demand for newer and faster electronic products due to the rapid pace of innovation, technology advancement and R&D activities in the electronics industry. This increasing demand for rubidium, coupled with the fact that Rubidium is difficult to source due to extremely limited global production, underpins the extremely high price of rubidium products.

North America holds a significant share of the rubidium market in terms of both market share and revenue. However, like most critical minerals, China maintains control of the market. Commodity analysts believe if more rubidium was produced, the market could grow rapidly and therefore its very small market size can be partially attributed to supply constraints, rather than a lack of demand.

## ENDS

This Announcement has been authorised for market release by the Board of Everest Metals Corporation Ltd.

### Enquiries:

**Simon Phillips** | Chief Operating Officer  
Phone: +61 (08) 9468 9855  
Email: [enquiries@everestmetals.au](mailto:enquiries@everestmetals.au)

**Melissa Tempra** | NWR Communications  
Investor & Media  
Email: [melissa@nwrcommunications.com.au](mailto:melissa@nwrcommunications.com.au)

<sup>5</sup> U.S. Geological Survey, January 2024, Mineral Commodity Summaries 2024

<sup>6</sup> [www.marketresearchfuture.com/reports/rubidium-market-27298](http://www.marketresearchfuture.com/reports/rubidium-market-27298)

<sup>7</sup> [www.metal.com/Other-Minor-Metals/202012250004](http://www.metal.com/Other-Minor-Metals/202012250004)

## JORC and Previous Disclosure

The information in this announcement that relates to Exploration Results and the Mt Edon Mineral Resource is based on information previously disclosed under the JORC Code (2012) in the following Company ASX announcements that are all available on the Company's website ([www.everestmetals.au](http://www.everestmetals.au)) and the ASX website ([www.asx.com.au](http://www.asx.com.au)) under the Company's ticker code "EMC":

- 21 August 2024, *EMC Delivers World-Class Rubidium Resource at Mt Edon Project, WA.*
- 18 December 2024, *Everest Metals Achieves Up To 91% Rubidium Recovery from Mt Edon.*
- 27 February 2025, *Rubidium Extraction Patent Application Filed.*

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the relevant market announcements continue to apply and have not materially changed.

## Competent Person Statement

The information in this report related to Mineral Resource is based on information compiled and approved for release by Mr Bahman Rashidi, who is a member of the Australasian Institute of Mining and Metallurgy (AusIMM) and the Australian Institute of Geoscientists (AIG). Mr Rashidi is chief geologist and a full-time employee of the Company and has over 25 years of exploration and mining experience in a variety of mineral deposits and styles. He is also a shareholder of Everest Metals Corporation. He has sufficient experience which is relevant to the style of mineralisation and types of deposit under consideration and to the activity, he is undertaking to qualify as a Competent Person in accordance with the JORC Code (2012). The information from Mr Rashidi was prepared under the JORC Code (2012). Mr Rashidi consents to the inclusion in this ASX release in the form and context in which it appears.

## Forward Looking and Cautionary Statement

This report may contain forward-looking statements. Any forward-looking statements reflect management's current beliefs based on information currently available to management and are based on what management believes to be reasonable assumptions. It should be noted that a number of factors could cause actual results, or expectations to differ materially from the results expressed or implied in the forward-looking statements.

The interpretations and conclusions reached in this report are based on current geological theory and the best evidence available to the authors at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however high these probabilities might be, they make no claim for complete certainty. Any economic decisions that might be taken based on interpretations or conclusions contained in this report will therefore carry an element of risk. This report contains forward-looking statements that involve several risks and uncertainties. These risks include but are not limited to, economic conditions, stock market fluctuations, commodity demand and price movements, access to infrastructure, timing of approvals, regulatory risks, operational risks, reliance on key personnel, Ore Reserve and Mineral Resource estimates, native title, foreign currency fluctuations, exploration risks, mining development, construction, and commissioning risk. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information.

Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this report. No obligation is assumed to update forward-looking statements if these beliefs, opinions, and estimates should change or to reflect other future developments.

## ASX Listing Rule 5.23.2

Everest Metals Corporation Limited confirms that it is not aware of any new information or data that materially affects the information included in this market announcement and that all material assumptions and technical parameters underpinning the estimates in this market announcement continue to apply and have not materially changed.

## ABOUT EVEREST METALS

Everest Metals Corporation Ltd (EMC) is an ASX listed Western Australian resource company focused on discoveries of Gold, Silver, Base Metals and Critical Minerals in Tier-1 jurisdictions. The Company has high quality Precious Metal, Battery Metal, Critical Mineral Projects in Australia and the experienced management team with strong track record of success are dedicated to the mineral discoveries and advancement of these company's highly rated projects.

EMC's key projects include:

**REVERE GOLD AND BASE METAL PROJECT:** located in a proven prolific gold producing region of Western Australia along an inferred extension of the Andy Well Greenstone Shear System with known gold occurrences and strong Copper/Gold potential at depth.

**MT EDON CRITICAL MINERAL PROJECT:** located in the Southern portion of the Paynes Find Greenstone Belt – area known to host swarms of Pegmatites and highly prospective for Critical Metals. The project sits on granted Mining Lease.

**MT DIMER TAIPAN GOLD PROJECT:** located around 125km north-east of Southern Cross, the Mt Dimer Gold & Silver Project comprises a mining lease, with historic production and known mineralisation, and adjacent exploration license.

For more information about the EMC's projects, please visit the Company website at:

[www.everestmetals.au](http://www.everestmetals.au)

