Inferred Niobium Mineral Resource from 2024 Exploration Drilling

Encounter Resources Limited (ASX: ENR) ('Encounter' or **'the Company')** is pleased to announce an initial Inferred Niobium Mineral Resource Estimate (MRE) at the Aileron project in the West Arunta region of Western Australia. This marks an important milestone towards unlocking the critical minerals potential of this emerging district as the next major phase of exploration ramps up.

Key Highlights:

- **Initial Inferred Niobium Mineral Resource defined at Aileron estimated from 2024 exploration drilling**
- **19.2 million tonnes @ 1.74% Nb_2O_5 (above a 1.0% Nb_2O_5 cut-off)**
- **Independent JORC 2012 compliant reported Mineral Resource Estimate (MRE) completed by Snowden Optiro**
- **Shallow (<150m depth), high-grade mineralisation open along strike and at depth**
- **RC drilling has commenced to extend and improve the definition of high-grade mineralisation**
- **High potential for near-term MRE growth from ongoing infill RC and extensional aircore drilling across its target-rich tenure**
- **Mineralogy indicates potential to produce high-grade Nb_2O_5 concentrate from conventional processing methods**

Executive Chairman, Will Robinson, comments:

"Our 2024 wide-spaced exploration drilling has outlined what may become one of the world's most significant undeveloped niobium resources. This early success highlights the exceptional geological potential of the Aileron project and the broader West Arunta region.

This is only the beginning. The strike-extensive carbonatite systems of the West Arunta represent an unusually mineralised suite of intrusions, and Encounter is committed to unlocking their full potential through a focused and systematic exploration program."

Aileron Mineral Resource Overview

Encounter is pleased to announce its maiden independent JORC 2012 compliant Mineral Resource Estimate for three deposits - **Green, Emily, and Crean** - within the Aileron Project in Western Australia.

The combined **Inferred Mineral Resource** is:

- **19.2 million tonnes @ 1.74% Nb_2O_5** (above a 1.0% Nb_2O_5 cut-off),
- Contained within **67.6 million tonnes @ 0.88% Nb_2O_5** (above a 0.25% Nb_2O_5 cut-off).

This significant Mineral Resource has been defined within just six months of drilling, following the initial high-grade discovery at Crean in June 2024, and subsequent discoveries at Green and Emily.

Encounter engaged Snowden Optiro Pty Ltd ("Snowden Optiro") to prepare the MRE which is reported in accordance with the JORC Code (2012 Edition). The original objective was to define an Exploration Target, however, the continuity of mineralisation intersected during drilling supported classification as an Inferred Resource. The estimate incorporates drilling completed to the end of 2024.

Mineralisation was modelled within multiple weathered carbonatite intrusions, defined using geological logging and a 0.25% Nb_2O_5 cut-off grade. A high-grade shell at Green Central was also modelled to reflect the continuity of niobium mineralisation across broad-spaced sections.

Deposit	1.0% Nb_2O_5 cut-off (subset of 0.25% Nb_2O_5 cut-off)		0.25% Nb_2O_5 cut-off	
	Tonnage (Mt)	Grade (% Nb_2O_5)	Tonnage (Mt)	Grade (% Nb_2O_5)
Green	12.1	1.63	48.0	0.81
Emily	3.7	1.94	13.9	0.93
Crean	3.5	1.92	5.7	1.38
Total	**19.2**	**1.74**	**67.6**	**0.88**

Table 1 – Aileron Project Mineral Resource Estimate

Notes:

- *The resource is constrained within optimised pit shells based on a price of US$45 per kilogram Nb (US$30/kg FeNb) and is reported above a 0.25% Nb_2O_5 cut-off grade.*
- *The resource reported above a 1% Nb_2O_5 cut-off grade is a subset of the 0.25% Nb_2O_5 cut-off grade.*
- *All figures are rounded to reflect appropriate levels of confidence. Apparent differences may occur due to rounding.*

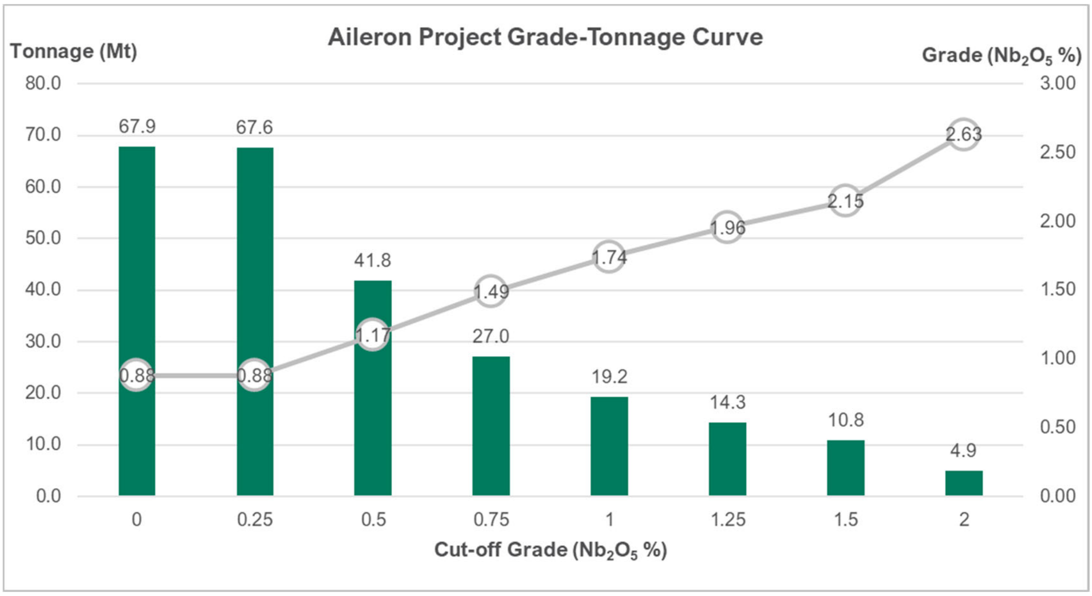


Figure 1 – Aileron Grade-Tonnage Curve

Niobium Market

Niobium is a critical element, and is a vital input into aerospace, defence, automotive, construction and health technologies. Niobium's applications in superconductors and energy storage also highlight its importance in emerging and future technologies.

The core market for niobium is the high-strength low-alloy ('HSLA') steel market where ferroniobium is a critical input into the steel alloying process, significantly improving steel's toughness and formability. In 2023, the total supply of niobium was estimated to be 83 kt Nb[1], of which approximately 73 kt Nb was ferroniobium (~65% Nb contained) demand from the steel industry.

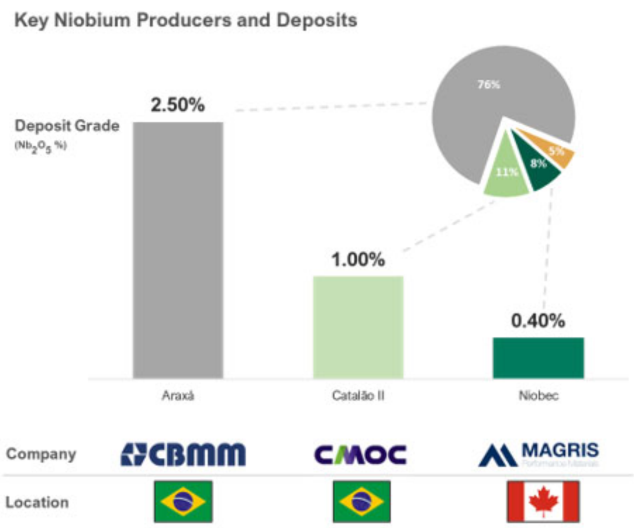


Figure 2 – Key Niobium Producers and Deposits[2,3,4]

Niobium pentoxide and high-purity niobium metal alloys represent important growth markets. These include niobium-titanium (Nb-Ti) as a superconductor in MRI machines, niobium C103 (Nb-Hf-Ti) in various aerospace applications and niobium anodes being trialled in the battery industry for their fast charging and cycle life capabilities.

Supply is concentrated from Brazil, where approximately 87% of niobium is produced, with CBMM's Araxá mine responsible for 76% of global production. Other supply comes from CMOC's Catalão II mine in Brazil (11%), Magris Performance Material's Niobec mine in Canada (8%), and minor quantities as a by-product from predominantly tantalum concentrate processing (5%).

The West Arunta represents an exciting new potential source of supply for the niobium industry, with multiple deposits demonstrating grades between 1.5 – 2.5% Nb_2O_5, similar to the world-class Araxá deposit.

Green Deposit

- The Green deposit has an Inferred Mineral Resource of **12.1Mt @ 1.63% Nb_2O_5** (above a 1.0% Nb_2O_5 cut-off) contained within **48.0Mt @ 0.81% Nb_2O_5** (above a 0.25% Nb_2O_5 cut-off).
- Mineralisation is hosted within wide, strike-extensive weathered carbonatite intrusions, along a major fault. A coherent high-grade core sits within a larger mineralised halo.
- The deposit occurs across an approximate **strike of 2,500m**, and is located beneath **20 to 60 metres of cover**, with mineralisation extending from approximately **80 to 180 metres below surface.**
- Due to the broad-spaced nature of current drilling, minimal estimation constraints were applied. As a result, blocks estimated further from drill holes incorporate a larger number of composited intervals, which introduces a conservative grade bias in high-grade zones. This is expected to be resolved through infill resource drilling.
- Initial mineralogical analysis on a metallurgical composite from Green has demonstrated **positive characteristics for beneficiation to a high-grade Nb_2O_5 concentrate.**
- **Infill drilling at Green has commenced,** with results expected from early Q3 2025.
- **Flotation test work has commenced** at Green with results expected from Q3 2025.

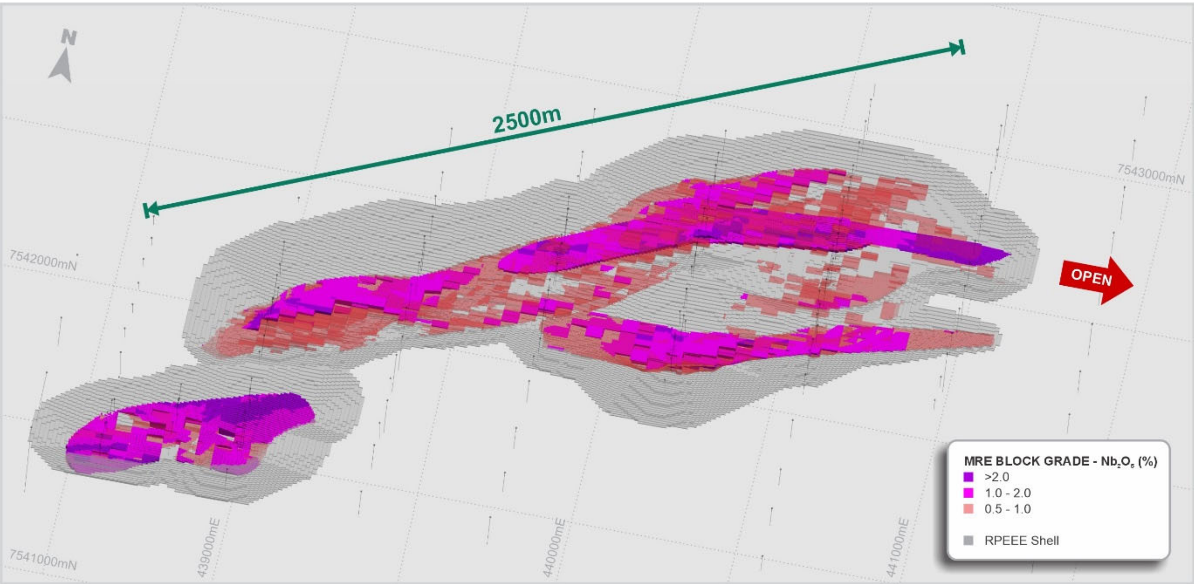


Figure 3 – Green Block Model in isometric view

Emily Deposit

- The Emily deposit hosts an Inferred Mineral Resource of **3.7 million tonnes @ 1.94% Nb_2O_5** (above a 1.0% Nb_2O_5 cut-off), contained within **13.9 million tonnes @ 0.93% Nb_2O_5** (above a 0.25% Nb_2O_5 cut-off).
- Mineralisation is hosted within a laterally extensive weathered carbonatite, with a strike extent of approximately 1,900m. Mineralisation thickness is interpreted to range from 20 to 40 metres, under 20 to 60 metres of cover.
- Drilling to date has been limited to **broad-spaced, shallow drill holes**, resulting in **minimal geological constraints** along strike and at depth.
- Encounter plans to follow up with **infill RC drilling** to test **depth extensions** of the known high-grade zones and evaluate **lateral continuity** to the east and west.

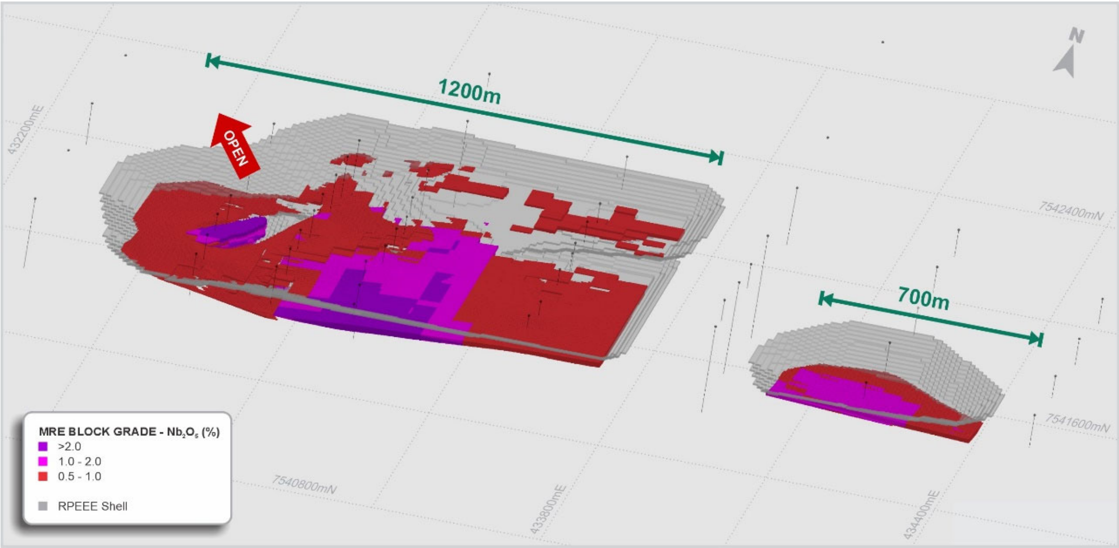


Figure 4 – Emily Block Model in isometric view

Crean Deposit

- The Crean deposit is located **~10km north-west of Green and Emily**, hosted within a **separate carbonatite intrusion** along a major structure.
- The deposit hosts an Inferred Mineral Resource of **3.5 million tonnes @ 1.92% Nb_2O_5** (above a 1.0% Nb_2O_5 cut-off), contained within **5.7 million tonnes @ 1.38% Nb_2O_5** (above a 0.25% Nb_2O_5 cut-off).
- Drilling at Crean has been completed on **200m-spaced sections**, with **drill holes spaced at 40m along the section**, providing good resolution of mineralisation geometry within a broadly defined footprint.
- Mineralisation is hosted within a weathered carbonatite along a strike length of 1,800m, with true widths ranging from 50 to 120 metres. It lies beneath 30 to 60 metres of cover and extends from 80 to 120 metres below surface.
- Follow-up RC drilling is planned to test for depth extensions of high-grade mineralisation, as well as assess continuity to the east, where the deposit remains open along strike.

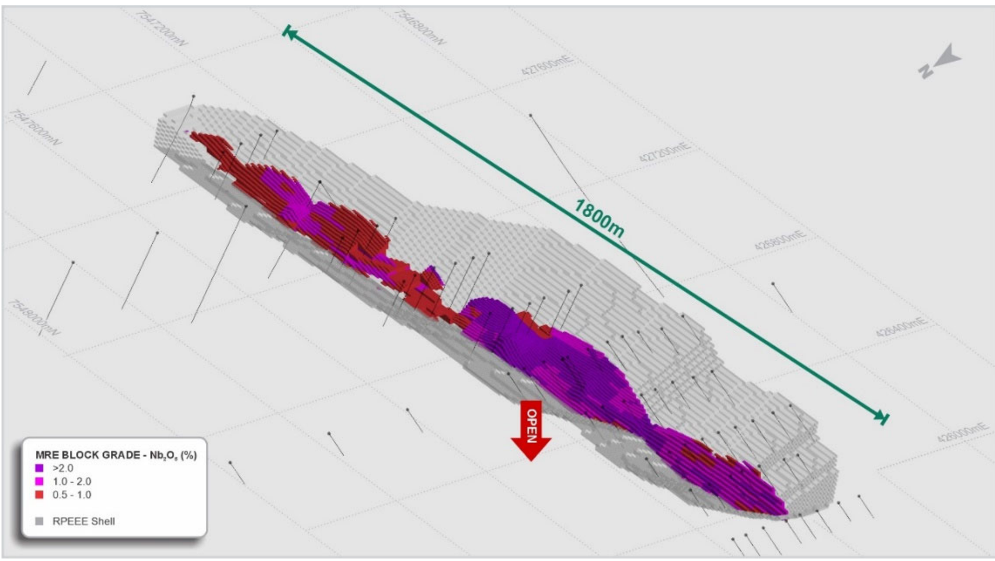


Figure 5 – Crean Block Model in isometric view

Mineralogy and Metallurgical Test work

The Company has completed the first phase of metallurgical evaluation on a composite sample from the Green deposit, marking a key step in advancing the project's development. This initial analysis focused on understanding the mineralogical characteristics of the niobium-bearing material and assessing its amenability to conventional beneficiation techniques.

A composite from Green was crushed and subjected to staged grinding down to P100 1000µm. The sample was then screened into four size fractions and analysed using a Tescan Integrated Mineral Analyser (TIMA). This advanced system provides quantitative data on mineral abundance, grain size, liberation characteristics, and mineral associations. The analysis confirmed that pyrochlore is the dominant niobium-bearing mineral in the composite, with columbite present in lesser quantities. Importantly, pyrochlore showed excellent liberation potential in the –150µm / +38µm fraction, with 88% of the mineral volume classified as either well liberated (>90%) or high-grade middlings (60–90%).

The main gangue minerals identified in the composite include apatite, goethite, and a suite of carbonate and silicate phases. The planned beneficiation strategy will focus on rejecting these gangue minerals using a combination of physical separation techniques such as gravity separation, desliming, magnetic separation, and pre-flotation or leaching. The objective is to reduce losses of niobium-bearing minerals early in the process. Following gangue rejection, both pyrochlore and columbite are expected to respond to the same flotation conditions, allowing for production of a high-grade Nb_2O_5 concentrate.

This work is being undertaken in collaboration with SGS Lakefield in Canada, a global leader in mineral processing with deep expertise in niobium beneficiation. Encounter's test work program is based on a conventional flowsheet approach, similar to those employed by the world's three primary niobium producers. The early phases of the program will focus on producing intermediate concentrates through physical separation and flotation methods. Subsequent stages will evaluate the recovery of final niobium end-products.

Forward Plan

Alongside active exploration, the Company is advancing metallurgical test work and technical studies to de-risk its discoveries and assess the economic potential of the Aileron Project.

Key workstreams for the 2025 field season include:

- **Infill drilling at Green, Emily and Crean** – Further infill RC drilling is planned to confirm high-grade continuity at depth and along strike. At Green, tighter spacing may improve grades within the current MRE. At Emily, shallow aircore holes that ended in mineralisation will be followed up with RC drilling to test depth potential.
- **Extensional drilling at Green, Emily and Crean** – Follow-up drilling east of Green will test continuity of anomalous niobium intersected in broad-spaced aircore. Drilling will also assess whether this mineralisation extends ~8km towards Joyce along the Weddell Fault. At Emily, extensional drilling will target east–west continuity, while Crean remains open to the east and will be tested for strike extensions.
- **Diamond drilling** – EIS co-funded diamond drilling will be used to test new targets at depth once new airborne EM data is integrated. Further metallurgical drilling will also occur later in the 2025 field season.

- **Regional drilling** – The Company has defined a set of high-priority targets for 2025 aircore drilling, focused on structurally complex zones along more than 60km of key mineralised faults within its tenure.
- **Ground gravity and passive seismic** – Weathered, niobium-enriched carbonatites near surface have a lower density than the surrounding fresh rock. The Company is trialling the use of ground gravity and passive seismic to map areas of deeper weathering indicative of potential niobium enrichment processes.
- **Airborne Electromagnetics (AEM)** – An EIS grant will co-fund a 1,000km^2 helicopter-borne electromagnetic survey that will assist with carbonatite targeting, identify conductive features associated with possible copper sulphide mineralisation, and define potential water resources for future operations.
- **Metallurgical test work** - Beneficiation test work is underway using a composite from Green diamond drilling, supported by niobium specialists at SGS Lakefield (Canada) and Australian labs. The initial focus is on producing a high-grade Nb_2O_5 concentrate, with downstream product test work to follow.

Summary

This MRE is an initial estimate, released ahead of a major 2025 drilling campaign targeting infill, extensional, and new discovery drilling. The Company holds a commanding land position across the region's key mineralised structures but has so far tested only a small portion of its tenure.

The 2025 field season is designed to upgrade the maiden MRE through infill RC drilling while aggressively advancing regional exploration. RC drilling has commenced at Green, with regional aircore drilling expected to begin in June 2025.

Niobium-bearing carbonatites discovered to date in the West Arunta are structurally controlled, with high-grade zones typically forming at structural intersections and flexures along major faults. These areas are the targets for our regional aircore drilling.

Following the discovery of four mineralised carbonatites in 2024—Crean, Emily, Green, and Joyce—three have progressed to resource status. Encounter plans to build on this momentum in 2025, aiming to rapidly and systematically unlock the full mineral potential of the province.

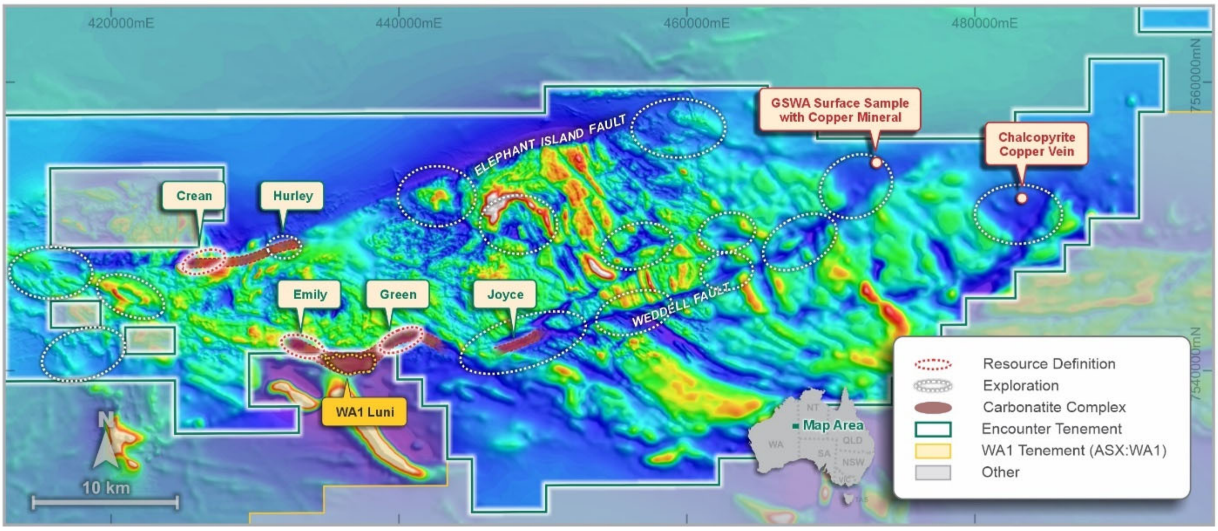


Figure 6 – Aileron Project Magnetics (RTP) – showing identified carbonatite complexes with targeted areas for resource infill drilling, regional exploration and the major controlling ENE trending faults (Elephant Island and Weddell Faults)[5]

Table 2: Aileron Mineral Resource Estimate (JORC Code 2012)

Deposit	0.25% Nb_2O_5 cut-off						
	Tonnage (Mt)	Nb_2O_5 (%)	Nb_2O_5 (kt)	TREO (%)	TREO (kt)	P_2O_5 (%)	P_2O_5 (kt)
Green	48.0	0.81	387	0.36	172	6.04	2,899
Emily	13.9	0.93	130	0.32	45	7.44	1,035
Crean	5.7	1.38	78	0.84	48	7.42	423
Total	**67.6**	**0.88**	**595**	**0.39**	**265**	**6.44**	**4,357**
Deposit	1.0% Nb_2O_5 cut-off (subset of 0.25% Nb_2O_5 cut-off)						
	Tonnage (Mt)	Nb_2O_5 (%)	Nb_2O_5 (kt)	TREO (%)	TREO (kt)	P_2O_5 (%)	P_2O_5 (kt)
Green	12.1	1.63	196	0.55	66	9.23	1,112
Emily	3.7	1.94	71	0.61	22	11.24	414
Crean	3.5	1.92	67	1.05	36	8.15	283
Total	**19.2**	**1.74**	**334**	**0.65**	**125**	**9.42**	**1,809**

Notes:

- *The resource is constrained within optimised pit shells based on a price of US$45 per kilogram Nb (US$30/kg FeNb) and is reported above a 0.25% Nb_2O_5 cut-off grade.*
- *The resource reported above a 1% Nb_2O_5 cut-off grade is a subset of the 0.25% Nb_2O_5 cut-off grade.*
- *All figures are rounded to reflect appropriate levels of confidence. Apparent differences may occur due to rounding.*

Technical Overview

The following is a material information summary relating to the Green, Emily and Crean Mineral Resource estimates consistent with ASX Listing Rule 5.8.1 requirements. Further details are provided in the JORC Code Table 1.

Geology and Geological Interpretation

The Aileron Project is situated within the Proterozoic West Arunta Province of Western Australia, a geologically underexplored region due to limited outcrop and historical activity. Recent work, including the 2024 GSWA report based on 2023 Encounter EIS drill cores, has identified Paleoproterozoic gneisses, metasedimentary rocks, and younger Mesoproterozoic garnet-bearing granitic gneiss, all affected by granulite facies metamorphism. These basement rocks were later intruded in the Neoproterozoic by carbonatite, lamprophyre, and aillikite-type intrusions.

The Aileron Project hosts three carbonatite-related niobium deposits—Green, Crean, and Emily—interpreted to have intruded along major structural corridors, including the Elephant Island Fault

(Crean) and Weddell Fault (Emily and Green). These structures have focused intrusions and associated fenitisation of the gneissic and metasedimentary host rocks.

- Green: Carbonatites strike ENE–WSW, curving toward E–W. The dip is poorly constrained due to limited deep drilling. Sub-horizontal oxide-enriched niobium mineralisation is derived from weathered and deflated primary carbonatite.
- Emily: The intrusion's geometry is less defined due to limited drilling. However, sub-horizontal oxide enrichment is consistent with weathering of primary carbonatite.
- Crean: Carbonatite strikes ENE–WSW and dips steeply north to sub-vertical. The northern extent of mineralisation remains poorly defined. Weathered oxide mineralisation is again interpreted to originate from primary carbonatite.

The nearby Luni Deposit (WA1 Resources), along strike from Green and Emily, is an analogous carbonatite-hosted, oxide-enriched niobium system. The broader West Arunta belt remains prospective for carbonatite-hosted critical minerals, IOCG-style copper, and orogenic gold.

Drilling Techniques

Drilling at Aileron has been carried out using a combination of drilling techniques. A total of 293 drillholes for 30,602 meters, comprising aircore (AC), reverse circulation (RC), and diamond drill (DD) holes have been completed. Drilling was undertaken between 2023 and 2024 and managed entirely by Encounter using contractors.

RC holes were drilled at diameter of 146mm or at 143mm (using an AC/RC combination rig). AC holes were drilled at diameter of 90mm or at 143mm (using an AC/RC combination rig). Diamond holes were drilled using HQ3 (61mm), PQ3 (85mm) or NQ2 (51mm) equipment. Drill core was oriented using the industry standard Reflex orientation tool.

Sampling techniques

Sampling at Aileron utilised standard procedures employed across all drilling methods, with samples considered representative for the purposes of reporting.

- RC: Samples were collected in 1–2 metre intervals directly from a rig-mounted cone splitter.
- AC: Samples were collected at 1 metre intervals. For assay purposes, 2 metre composite samples were formed using a scoop from individual 1 metre samples. Where AC drilling was conducted using a combination AC/RC rig, samples were collected at 1 metre intervals via a cone splitter mounted on the rig.
- DD: Drill core was logged and marked up for sampling at nominal 1 metre intervals. Sampling intervals were adjusted to geological boundaries where appropriate. Entire core intervals were submitted for analysis to ensure representativity. Core was crushed and a sub-sample split was taken at the laboratory for assay.

These sampling approaches are consistent with current industry best practice for geochemical analysis and are appropriate for the style of mineralisation targeted.

Sample Preparation and Assay

All samples were submitted to ALS Laboratories in Adelaide or Perth where they were crushed and pulverised for analyses.

All samples were analysed in Perth using ALS method ME-MS81hD with overlimit determination via ME-XRF30 or ME-XRF15b, ME-MS81hD reports high grade REE elements by lithium meta-borate fusion and ICP-MS. This method produces quantitative results of all elements, including those encapsulated in resistive minerals.

Bulk Density

A total of 105 bulk density values were collected using the Volume Bulk Density Method, an advanced variation of the Caliper method, utilising a 3D-model obtained through digital scanning to determine sample volume. Primarily applied to core trays but adaptable to other containers, the process begins by weighing the tray containing the sample, ensuring all artifacts are removed, and subtracting the weight of an empty tray to isolate the sample's mass. A reference geometry is then defined, either through approximation or by scanning with the Minalyzer CS. The sample volume is calculated by comparing average heights across a raster grid between the reference and sample geometries, with the differences at each point representing localized volume contributions. Summing these values yields the total sample volume, which, combined with the measured weight, allows for accurate bulk density calculation.

Estimation Methodology

Mineral Resource estimates across all deposits were prepared using industry-standard software including Leapfrog Geo for geological and mineralisation modelling, Snowden Supervisor for geostatistical analysis, and Datamine Studio RM for drillhole validation, block modelling, grade estimation, classification, and reporting.

The mineralised zones at the Green, Emily, and Crean prospects were modelled using a nominal cut-off grade of 0.25% Nb_2O_5, reflecting consistent niobium mineralisation across the project areas. At the Green prospect, an additional internal layer exhibiting higher-grade mineralisation was identified and modelled separately using a 1% Nb_2O_5 cut-off grade, highlighting a zone of localised enrichment. No such internal high-grade zones were modelled at the Emily and Crean prospects.

The estimation process employed Ordinary Kriging (OK) based on 2 metre downhole composites, with top cuts applied to selected domains to reduce the influence of outlier grades. This approach was deemed appropriate given the spatial continuity of mineralisation observed through detailed variogram analysis.

Grade estimation was conducted into parent blocks measuring 50 metres east-west by 20 metres north-south by 5 metres vertically (RL), oriented to match the strike of mineralisation. To better honour geological volumes, sub-celling was applied down to a minimum of 5 m × 5 m × 1 m. Drill spacing was approximately 400 m × 40 m at the Green deposit, and 200 m × 40 m at both the Emily and Crean deposits. For domains where block grades could not be interpolated due to limited data, the average domain grade was assigned.

A three-pass estimation strategy was adopted. The first pass utilised variogram ranges and required a minimum of 6 and maximum of 12 samples. The second and third passes expanded the search distances to 1.5 and 3 times the variogram range respectively, while reducing the minimum required samples to 4. A constraint of no more than four composites per drillhole was applied to ensure spatial representation. Dynamic anisotropy was used throughout to accommodate the undulating geometry of the mineralised layers.

Hard boundaries were applied between distinct mineralisation domains for all analytes. For Nb_2O_5% and TREO%, soft boundaries were used between weathering zones, while P_2O_5% estimations applied hard boundaries throughout. Variogram analysis determined the spatial continuity of mineralisation, with major ranges of up to 800 m for Green, 300 m for Emily, and 600 m for Crean (Nb_2O_5).

All models were validated using visual checks, swath plots, statistical comparison of composites vs block model, and domain-by-domain volume checks.

Classification

The Mineral Resource has been classified following the guidelines of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 (the JORC Code). The Mineral Resource has been classified as Inferred on the basis of confidence in geological, grade continuity and by taking into account the quality of the sampling and assay data, and confidence in estimation of niobium, based on the robustness of the grade estimate as determined from the drillhole spacing, geological confidence and grade continuity.

Cut-off Grade

A cut-off grade of 0.25% Nb_2O_5 was adopted for reporting the Mineral Resource within the constraints of an optimised pit shell. This decision was based on a high-level preliminary evaluation of potential modifying factors.

Reasonable Prospects for Eventual Economic Extraction

The Mineral Resources for Green, Emily and Crean have been assessed for reasonable prospects of eventual economic extraction (RPEEE) in accordance with the JORC Code. Green, Emily and Crean have been reported as open pit resources.

For this early-stage evaluation, the following indicative parameters were considered: a ferro-niobium (FeNb) market price of approximately US$30/kg (based on a contained niobium price of US$45/kg), a metallurgical recovery to concentrate of 50%, mining costs of US$3.25 per tonne, processing costs of US$20 per tonne, and general and administrative (G&A) costs of US$3 per tonne. Based on these assumptions, a cut-off grade of 0.25% Nb_2O_5 is considered to offer a reasonable basis for defining a head grade that supports the potential for economic extraction.

Mineralogy and Metallurgical Factors or Assumptions

The main niobium minerals in the Aileron deposits have been identified by thin section petrography and TIMA examination as pyrochlore and columbite. Most of the mineralogy work has been at the Green deposit. Mineralogy work completed on a metallurgical composite made from hole EAL940 demonstrates pyrochlore is the dominant niobium-bearing mineral, with columbite present in lesser quantities. This work was completed on a composite sample which had been subjected to stage grinding down to P100 1,000µm and screened into four size fractions. Pyrochlore shows excellent liberation properties in the -150µm / +38 µm fraction, with 88% of the mineral volume classified as either well liberated (>90%) or high-grade middlings (60-90%). Columbite also showed acceptable liberation at this size fraction.

Based on the identified niobium and gangue mineralogy it is anticipated that the ‘ore’ should process similarly to other niobium deposits. Metallurgical assumptions were based on publicly available data for existing niobium mines and process flowsheets, backed up with mineralogical examination of drill cores and RC samples.

Niobium production generally involves the initial concentration of niobium minerals such as pyrochlore to produce concentrates grading around 50% Nb2O5 which is then converted to ferroniobium with approximately 65% Nb. The initial concentration is typically by a combination of physical beneficiation such as magnetic separation and desliming, followed by flotation. The initial concentrate may then be treated hydrometallurgically for example by leaching to remove impurities such as phosphates. The final ferroniobium product is produced by conversion in a furnace.

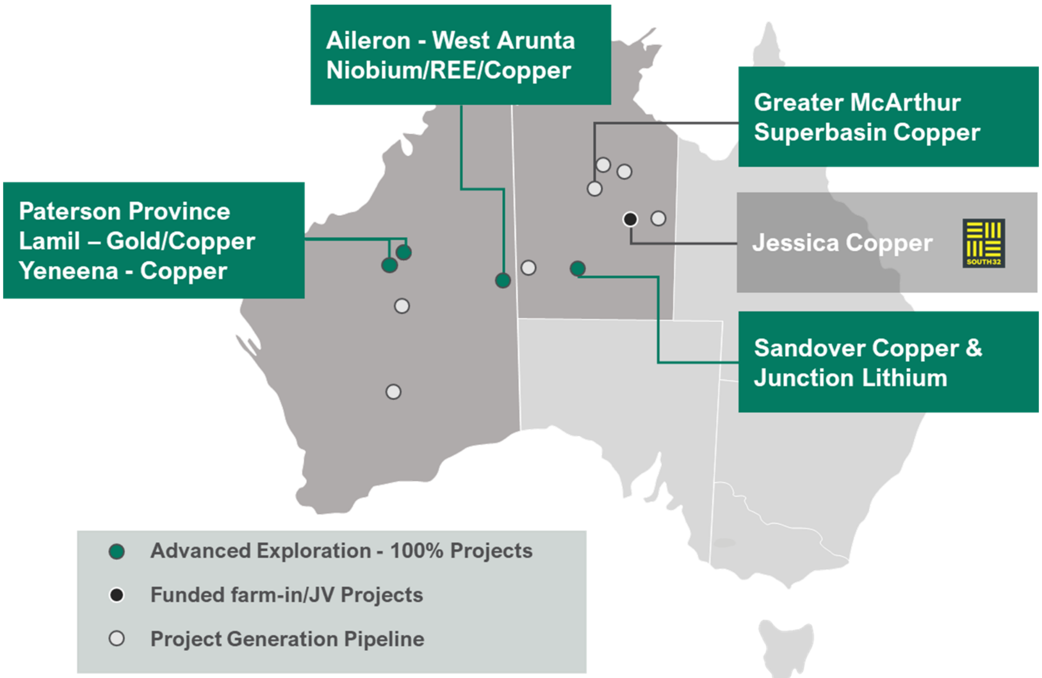
[1] **CBMM: The Niobium Swing Producer, SFA Oxford (3 April 2025)**
[2] **Shikik. A: 'A review on extractive metallurgy of tantalum and niobium' Journal of Metallurgy. (2020)**
[3] **China Molybdenum Co., Ltd. 'Major Transaction Acquisition of Angle America PLC's Niobium and Phosphates Businesses'. (2016)**
[4] **IAMGOLD Corporation, NI 43-101 Technical Report, Update on Niobec Expansion. (2013)**
[5] **ENR ASX announcement 14 October 2024**

About Encounter

Encounter Resources (ASX:ENR) is a leading Australian mineral exploration company focused on the discovery of major copper and niobium/rare earth element (REE) deposits.

The Company holds a commanding portfolio of 100%-owned projects located in some of Australia's most prospective mineral belts, targeting copper and critical minerals. Key among these is the Aileron Project in the highly endowed West Arunta region of Western Australia—emerging as a significant frontier for critical mineral exploration.

Encounter's strategy is centred on high-impact discovery in Tier 1 jurisdictions, leveraging strong technical capability and a proven track record of attracting leading industry partners.



For further information, please contact:

Will Robinson
Executive Chairman
+61 8 9486 9455
contact@enrl.com.au

Stephen Moloney
Investor Relations - Corporate Storytime
+61 403 222 052
stephen@corporatestorytime.com

The information in this report that relates to Exploration Results is based on information compiled by Mr Mark Brodie, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Brodie holds shares and options in and is a full time employee of Encounter Resources Ltd and has sufficient experience which is relevant to the style of mineralisation under consideration 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'. Mr Brodie consents to the inclusion in the report of the matters based on the information compiled by him, in the form and context in which it appears.

The information in this report which relates to Mineral Resources for Green, Emily and Crean deposits at the Aileron Project was prepared by Ms Susan Havlin and reviewed by Dr Andrew Scogings, both employees of Snowden Optiro. Ms Havlin is a Member and Chartered Professional of the Australasian Institute of Mining and Metallurgy and Dr Scogings is a Member of the Australian Institute of Geoscientists (RPGeo Industrial Minerals) and they have sufficient experience relevant to the style of mineralisation, the type of deposit under consideration and to the activity undertaken to qualify as Competent Persons as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Ms Havlin and Dr Scogings consent to the inclusion of the information in the release in the form and context in which it appears.

The information in this document that relates to metallurgical test work is based on, and fairly represents, information and supporting documentation reviewed by Mr Peter Adamini, BSc (Mineral Science and Chemistry), who is a Member of The Australasian Institute of

Mining and Metallurgy. Mr Adamini is a full-time employee of SGS Australia owned Independent Metallurgical Operations Pty Ltd, a wholly owned subsidiary of SGS Australia Holdings Pty Ltd, who has been engaged by Encounter Resources Ltd to provide metallurgical consulting services. Mr Adamini has approved and consented to the inclusion in this document of the matters based on his information in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the information in the relevant ASX releases and the form and context of the announcement has not materially changed. The Company confirms that the form and context in which the Competent Persons findings are presented have not been materially modified from the original market announcements.

This announcement has been approved for release by the Board of Encounter Resources Limited.

SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Commentary
Sampling techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sounds, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	Assay data used in mineral resource estimation are from RC, AC and DD drilling at Green, Emily and Crean. All samples underwent routine pXRF analysis in the field using a Bruker S1 TITAN to aid in logging and identifying zones of interest. No pXRF data has been used in mineral resource estimation.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	All samples are considered to be representative. Industry standard workflows for RC, AC and DD drilling have been followed. RC samples at Green were collected every 1 meter from the drill rig cone splitter into pre numbered calico bags approximately 2-3kg sample weight. Remaining downhole RC material from the 1m interval was captured in a green mining bag or a 450mm x 750mm calico bag if wet. When splitting by cone splitter was not suitable the entire 1m interval was sent to the lab for splitting and crushing. RC drilling at Emily was used to obtain 2m interval samples via a rig-mounted cone splitter, each sample captured approximately 3kg of material in a calico bag which was sent to the lab. At Green, Emily and Crean Aircore drilling was used to obtain samples at 1 metre intervals. 2 metre composite samples were created using a scoop to collect a composite sample in a pre-numbered calico. This composite sample was sent for lab analysis. 15 AC holes at Emily were drilled and sampled at 1m intervals via a rig-mounted cone splitter. Each sample captured approximately 3kg of material in a calico bag which was sent to the lab. Samples from diamond drillholes were marked up at nominal 1m intervals and samples were constrained to within geological boundaries. To ensure representivity drillcore was sampled as whole core, which was crushed and a representative split was taken at the lab for analysis.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information	All samples were submitted to ALS Laboratories in Adelaide or Perth where they were crushed and pulverised for analyses. All samples were analysed in Perth using ALS method ME-MS81hD with overlimit determination via ME-XRF30 or ME-XRF15b. (ME-MS81hD reports high grade REE elements by lithium meta-borate fusion and ICP-MS. This method produces quantitative results of all elements, including those encapsulated in resistive minerals.)

Drilling techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	RC holes were drilled at diameter of 146mm by Strike drilling or 143mm by Stark Drilling (using an AC/RC combination rig). AC holes were drilled at diameter of 90mm by Bullion Drilling or 143mm by Stark Drilling (using an AC/RC combination rig) DD holes were drilled by DDH1 using HQ3 (61mm), PQ3 (85mm) or NQ2 (51mm) equipment. Drillcore was oriented using industry standard Reflex ori tool.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed*	All sample recoveries were estimated as a percentage and recorded in the database by Encounter field staff. At Green each RC split and dry bulk sample was weighed on site and recorded by Encounter field staff to monitor split performance and sample recovery. Analysis of the bulk weights revealed good recovery, with an average weight of around 19.5 kg. It would be expected that the weights should be around 20 kg based on the hole diameter and an average assumed density of 1.6 g/cm. Bulk sample weight analysis revealed some bulk cyclical weight fluctuations linked to rod changes during drilling. Diamond core recoveries were recorded each drill run by drill crews and validated by Encounter Geologists. Core recovery averaged 97.4%.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	Driller's used appropriate measures to minimise down-hole and/or cross-hole contamination in RC and AC drilling. Subsequent drilling procedures have been amended to address bulk weight fluctuation. During RC drilling blow-down valves are used to keep the hole dry and dust suppression applied. Shroud tolerance was minimised to prevent excessive loss to outside return. Where isolated occurrences of contamination of the sample was suspected this was noted by Encounter field staff as a percentage. This was noted in 15 samples and represents a negligible percentage of samples at Green. HQ and PQ diamond core were drilled using triple tube to ensure maximum core recovery.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Two diamond drill holes were completed as twins to verify RC and AC drilling results at Green and Crean. A review of sample recoveries, grade, sampling methods and twinned drillholes has determined that there is no relationship between sample recovery and grade.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	Encounter geologists have completed geological logs on all holes. All reported holes have been logged in full with lithology, alteration and mineralisation recorded. Geological logging has been reviewed using multi element geochemistry to verify geological observations.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Geological logging is qualitative in nature and records interpreted lithology, alteration, mineralisation and other geological features of the samples.

	The total length and percentage of the relevant intersections logged	Encounter geologists have completed geological logs on all holes reported in this announcement
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Diamond drillcore was sampled by ALS laboratories as whole core, which was crushed and a representative split was taken for multi element analysis
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	All samples were recorded as being dry, moist or wet in the database by Encounter field staff. RC samples were collected from the drill rig cone splitter into pre numbered calico bag. At Green remaining downhole RC material from the 1m interval was captured in a green mining bag or a 450mm x 750mm calico bag if wet. When wet, the entire 1m interval was sent to the lab where it was dried, crushed (-2mm) and split. When splitting by cone splitter was not suitable the entire 1m interval was sent to the lab for splitting and crushing At Green, Emily and Crean aircore drilling was used to obtain samples at 1 metre intervals. 2 metre composite samples were created using a scoop to collect a composite sample in a pre-numbered calico. This composite sample was sent for lab analysis. 15 AC holes at Emily were drilled and sampled at 1m intervals via a rig-mounted cone splitter. Each sample captured approximately 3kg of material in a calico bag which was sent to the lab.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Sample preparation was completed at ALS Laboratories in Adelaide and analysed in the Perth laboratory. Samples were crushed and pulverised to a nominal 85% passing 75 microns to enable a subsample for analyses. This is considered appropriate for the analysis undertaken.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Field duplicates were taken during RC and AC drilling.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	RC field duplicates were collected on the rig via cone splitter at a rate of 1:20. Additional duplicates were collected through the mineralized zone at Green at a rate of approximately 1:5 Field duplicates were taken during AC drilling and were collected using the same sampling method as the primary sample at a rate of 1:50. No coarse split duplicates were taken from the diamond drillcore.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes, sub -sampling techniques and sample preparation are considered to be appropriate for the material being sampled.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	All samples were submitted to ALS Laboratories in Perth for analysis. Assays have been reported from ALS ME-MS81hD (package of methods ME-MS81h + MEICP06). ALS method ME-MS81h reports high grade rare earth elements

		via fusion with lithium borate flux followed by acid dissolution of the fused bead coupled with ICP-MS analysis. It provides a quantitative analytical approach for a broad suite of trace elements. This method is considered a complete digestion allowing resistive mineral phases to be liberated. Elements reported: Ba, Ce Cr, Cs, Dy, Er, Eu, Ga, Gd, Hf, Ho, La, Lu, Nb, Nd, Pr, Rb, Sc, Sm, Sn, Sr, Ta, Tb, Th, Ti, Tm, U, V, W, Y, Yb, Zr. Additionally whole rock oxides are reported by method ME-ICP06 by analysing the same digested solution by ICP-AES and include LOI. Oxides reported: Al2O3, BaO, CaO, Cr2O3, Fe2O3, K2O, MgO, MnO, Na2O, P2O5, SiO2, SrO, TiO2, LOI Niobium overlimit determination (>50,000ppm Nb) completed via ALS method ME-XRF30 or ME-XRF15b. Assays have been reported from MEXRF30 or ME-XRF15b when completed.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	Samples underwent routine pXRF analysis at 1 metre intervals using a Bruker S1 TITAN to aid in logging and identifying zones of interest. All pXRF readings were taken in GeoExploration mode with a 30 second 3 beam reading. OREAS supplied standard reference materials were used to calibrate the pXRF instrument. No pXRF results are being reported.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Standard field and laboratory QAQC was undertaken and monitored. Encounter submits an independent suite of certified reference materials and blanks at average ratio of 1:30. In RC drilling at Green blank samples were inserted within and at the end of mineralised zones as determined by the site geologist based on geological observations and pXRF readings. Snowden Optiro managing consultant Susan Havlin completed a QAQC review on Aileron data The QAQC review identified that assay results for CRMs were generally accurate, though there was limited grade coverage above 0.67% Nb_2O_5. Several CRM swaps were detected and corrected, while two CRM failures (EX259370A and EX250690A) require further investigation. Precision analysis showed that cone splitter duplicates provided more reliable results than scoop duplicates, with only minor bias observed in high-grade samples. Contamination control analysis indicated that while most blank samples fell within acceptable limits, some showed elevated niobium levels, suggesting potential contamination issues that need to be addressed. Quartz flushes are being inserted into the high-grade zones to minimise any potential contamination from laboratory preparation processes Sample weight analysis revealed variability, with cyclic weight fluctuations linked to rod changes during drilling, as well as inconsistencies in duplicate sample weights. Subsequent drilling procedures have been amended to address bulk and sample weight fluctuation. ALS Laboratory QAQC involves the use of internal lab standards using certified reference material and blanks as part of in-house laboratory procedures. Quality control procedures and review have shown that acceptable levels of accuracy and precision have been

		established fit for purpose for the estimation and reporting of mineral resource classification.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Sampling and assay data have been verified and reviewed by Encounter Principal Geologist Sarah James and Snowden Optiro managing consultant Susan Havlin.
	The use of twinned holes.	Diamond drillholes have been completed at Green and Crean for the purpose of twinning and verifying RC and AC drill results and to provide additional material for mineralogical and metallurgical work.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary logging and sampling data is collected for drillholes on toughbook computers using Maxwell Geoservice's LogChief software and using excel templates (physical and electronic). Data is sent offsite by email to be loaded or direct synced to Encounter's SQL Database (Datashed software), which is backed up daily.
	Discuss any adjustment to assay data.	Standard stoichiometric calculations have been applied to convert element ppm data to relevant oxides. Industry standard calculation for TREO as follows La_2O_3 + CeO_2 + Pr_2O_3 + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_2O_3 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Y_2O_3 + Lu_2O_3 Conversion factors La_2O_3 1.1728 CeO_2 1.2284 Pr_2O_3 1.1703 Nd_2O_3 1.1664 Sm_2O_3 1.1596 Eu_2O_3 1.1579 Gd_2O_3 1.1526 Tb_2O_3 1.151 Dy_2O_3 1.1477 Ho_2O_3 1.1455 Er_2O_3 1.1435 Tm_2O_3 1.1421 Yb_2O_3 1.1387 Y_2O_3 1.2699 Lu_2O_3 1.1371 Nb_2O_5 1.4305
Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Drill hole collar locations are recorded using a handheld GPS which has an estimated accuracy of ± 5m. Down hole surveys were collected during RC drilling at Green at approximately 30m intervals downhole. No downhole surveys were collected during AC drilling.
	Specification of the grid system used.	Horizontal Datum: Geocentric Datum of Australia1994 (GDA94) Map Grid of Australia 1994 (MGA94) Zone 52
	Quality and adequacy of topographic control.	RLs were assigned using a DTM created during the detailed aeromagnetic survey.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	The drill hole spacing at Green is nominally 40-80m spaced on section with drill traverses between 200m and 400m apart. The drill hole spacing at Crean is nominally 40m spaced on section with drill traverses 200m apart.

		The drill hole spacing at Emily is nominally 80m spaced on section with drill traverses 200m and 400m apart.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	Drill data spacing has been determined by the Competent Person to be sufficient in both geological and grade continuity appropriate for the Mineral Resource estimation classification applied.
	Whether sample compositing has been applied.	2 metre composite samples were created from Aircore drilling using a scoop to collect a composite sample in the field. The MS Access database supplied to Snowden Optiro for resource estimation did not have any further sample compositing applied.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	Carbonatite intrusions have exploited interpreted structural corridors including the Elephant Island and the Weddell Faults. The orientation of oxide-enriched mineralisation is sub-horizontal and derives from primary fresh carbonatites by deflationary and regolith processes. The orientation of carbonatite intrusions at Green follow approximate ENE-WSW strike with a gentle curve towards E-W. The dip of the primary carbonatites below the top of fresh rock at Green is poorly constrained due to the limited number of drillholes that have sufficiently tested at depth. The orientation of the carbonatite intrusion at Crean is ENE-WSW strike. The orientation of the primary carbonatite at Crean is steep northerly to sub- vertical in dip. The orientation of the northern boundary of Crean mineralisation is less constrained due to the limited number of drillholes that have sufficiently tested this position. The orientation of Carbonatite at Emily is poorly constrained due to the limited number of drillholes that have sufficiently tested at depth or at the edges of the carbonatite.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	The relationship between drilling orientation and the orientation of oxide-enriched mineralisation is not considered to have introduce any sampling bias.
Sample security	*The measures taken to ensure sample security.*	The chain of custody is managed by Encounter. Samples were transported by Encounter personnel and reputable freight contractors to the assay laboratory.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	Sampling techniques and procedures are regularly reviewed internally, as is data. A QAQC audit has been completed by Snowden Optiro on Aileron drilling data. Multi element geochemistry and geological domaining methodology has been reviewed by Senior Encounter geologists and by Snowden Optiro Competent Person Andrew Scogins.

SECTION 2 REPORTING OF EXPLORATION RESULTS

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties including joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	The Aileron project is located within the tenements E80/5169, E80/5469, E80/5470 and E80/5522 which are held 100% by Encounter Resources The tenements are contained within Aboriginal Reserve land where native title rights are held by the Parna Ngururrpa and the Tjamu Tjamu. Mineral Resources are defined at Green (E80/5469), Crean (E80/5169) and Emily (E80/5469) wholly within Parna Ngururrpa native title determination area.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	Prior to Encounter Resources, no previous on ground exploration has been conducted on the tenement other than government precompetitive data.
Geology	*Deposit type, geological setting and style of mineralisation*	The Aileron project is situated in the Proterozoic West Arunta Province of Western Australia. The geology of the area is poorly studied due to the lack of outcrop and previous exploration. A 2024 GSWA report (using 2023 Encounter EIS drill cores) has documented Paleoproterozoic gneisses and metasedimentary rocks in the region. A younger, Mesoproterozoic garnet-bearing granitic gneiss has now been documented in the belt. Granulite facies metamorphism occurred soon after this Mesoproterozoic magmatic emplacement. In the Neoproterozoic gneissic rocks were intruded by post metamorphic, cogenetic carbonatite, lamprophyre and aillikite-type lamprophyres. The extensive geological history in the belt is still being unravelled by ongoing research studies. The belt is prospective for carbonatite-hosted critical mineral deposits, IOCG style copper deposits and orogenic gold. Green, Crean and Emily are carbonatite related niobium deposits. Oxide-enriched mineralisation has derived from primary niobium enriched carbonatites through deflationary and regolith weathering processes. The Aileron carbonatites have intruded into gneisses and metasedimentary basement rocks along interpreted structural corridors including the Elephant Island (at Crean) and the Weddell Fault (at Emily and Green). Carbonatite intrusions have intensely fenitised (altered) surrounding basement rocks. Lamprophyre intrusions interpreted as cogenetic with carbonatites are present, particularly near the margins of carbonatite intrusions. Preferential weathering of carbonatites has accelerated oxidation and resulted in niobium enrichment at Green, Crean and Emily. The Luni deposit (WA1 Resources), along strike from Green and Emily is an analogous oxide enriched carbonatite related niobium deposit in the belt.

Drill hole information	*A summary of all information material to the understanding of the exploration results including tabulation of the following information for all Material drill holes:* • *Easting and northing of the drill hole collar* • *Elevation or RL (Reduced Level – elevation above sea level in meters) of the drill hole collar* • *Dip and azimuth of the hole* • *Down hole length and interception depth* • *Hole length*	No new drillholes are being reported. Refer to tabulation from previous announcements.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	All previously reported assays have been length weighted, with a nominal 0.2% Nb_2O_5 lower limit and a maximum of 3m of internal dilution. Intervals greater than 1% Nb_2O_5 cutoff have been reported as including. Selected intervals greater than 2% Nb_2O_5 cut off have been reported. No upper cutoffs have been applied.
	Where aggregated intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	All previously reported assays have been length weighted, with a nominal 0.2% Nb_2O_5 lower limit and a maximum of 3m of internal dilution. Intervals greater than 1% Nb_2O_5 cutoff have been reported as including. Selected intervals greater than 2% Nb_2O_5 cut off have been reported. No upper cutoffs have been applied.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents have been reported.
Relationship between mineralization widths and intercept lengths	*These relationships are particularly important in the reporting of exploration results.* *If the geometry of the mineralization with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	All previously reported results are downhole length. True width geometry of the mineralisation is not yet known.
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plane view of drill hole collar locations and appropriate sectional views.*	Refer to body of this announcement
Balanced Reporting	*Where comprehensive reporting of all Exploration Results is not practical, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	All previously reported results have been balanced and transparently reported as exploration results.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observation; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	All meaningful and material information has been included in the body of the text.
Further Work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large – scale step – out drilling).*	

	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	Snowden Optiro received the final drillhole database from Encounter Resources (Encounter) on 1st April 2025. A MS Access database was supplied.
	Data validation procedures used.	Prior to undertaking resource estimation, a high-level data review and referential checks were conducted, including topo to collar checks, overlapping and duplicate records. All data was found to be appropriate for Mineral Resource Estimation. The drillholes and all data used in the MRE is in MGA. Collars appear to be measured with high-level of accuracy and have decimal places. Snowden Optiro is of the opinion that the drillhole data is suitable for resource estimation for all of the deposits, given the level of classification applied.
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* *If no site visits have been undertaken indicate why this is the case.*	The Encounter CP, responsible for the data and geological interpretation has visited site and observed collars, drill pads and general site layout. The Snowden Optiro CP's have not conducted a site visit due to the remote location of the deposit and lack of activity during the estimation period.
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	**Green** The Green deposit comprises four sub-horizontal lodes trending ENE-WSW with a gentle curve towards E-W. The mineralisation horizons are restricted to the oxide material. **Emily** The Emily deposit comprises six sub-horizontal lodes trending E-W. Emily has niobium enrichment in both the oxide and transported material. **Crean** The Crean deposit comprises two-sub horizontal lodes trending E-W. The mineralisation horizons are restricted to the oxide material. **All deposits** The geological interpretation is based on logging of drillholes and grade. The confidence in geological interpretation is reflected by the assigned Mineral Resource classification

Nature of the data used and of any assumptions made.	**All deposits** Both assay and geological data were used for the mineralisation interpretation, with holes for each area listed below;

Area	Type	Year	No Holes	Meters
Green	AC	2024	148	13,682.0
	RC	2023	3	500.0
		2024	35	4,832.0
	DDH	2024	1	124.8
	Subtotal		**187**	**19,138.8**
Emily	AC	2024	25	2,046.0
	RC	2023	11	1,594.0
	Subtotal		**36**	**3,640.0**
Crean	AC	2024	63	5,810.0
	RC	2023	2	404.0
	DDH	2023	3	1,201.4
		2024	2	407.5
	Subtotal		**70**	**7,822.9**

	Aircore drilling was used to inform the estimation and interpretation. Geological and mineralisation continuity between drillholes and sections is adequate. Some of the mineralised lodes have limited drillholes. The modelling of these domains assumes reasonable continuity; however, additional drilling is required to confirm. **Green** The mineralised volumes were modelled at a nominal 0.25% Nb_2O_5 cut-off grade. One internal lode was modelled at a nominal 1% Nb_2O_5 cut-off grade. **Emily and Crean** The mineralised volumes were modelled at a nominal 0.25% Nb_2O_5 cut-off grade.
The effect, if any, of alternative interpretations on Mineral Resource estimation.	**All deposits** Alternative interpretations may be possible with further understanding from additional drilling and may affect the grade and continuity of the deposit.
The use of geology in guiding and controlling Mineral Resource estimation.	**All deposits** Green, Crean and Emily are carbonatite hosted niobium deposits. Oxide-enriched mineralisation has derived from primary niobium mineral rich carbonatites through deflationary and regolith weathering processes. Preferential weathering of carbonatites has accelerated the oxidation and enrichment process at Green, Crean and Emily. The weathering boundaries have strongly influenced the modelling of mineralisation.

	The factors affecting continuity both of grade and geology.	**All deposits** All geological observations were used to guide the interpretation and further control the mineralisation trends for the Mineral Resource estimate. The confidence in the grade and geological continuity is reflected by the assigned Mineral Resource classification. **Green and Emily** Green is truncated to the west along strike by current drilling and is still open to the east. Emily partially truncated by broad spaced drilling to the north-west and remains open to the east. **Crean** The mineralisation is truncated to the west along strike by current drilling however is still open to the east.
Dimensions	*The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	**Green** The mineralised sub horizontal domains strike ENE-SWS with a gentle curve to E-W. Each of the domain layers ranges in thickness from 1 m to 74 m with the average thickness around 22 m. The strike length is 2.9 km within a 1.4 km wide corridor. **Emily** The mineralised sub horizontal domains strike E-W. Each of the domain layers range in thickness from 2 m to 32 m with the average thickness around 11 m. The strike length is 2.4 km within a 700 m wide corridor. **Crean** The mineralised sub horizontal domains strike E-W. Each of the domain layers ranges in thickness from 4 m to 64 m with the average thickness around 33 m. The strike length is 1.8 km within a 200 m wide corridor.
Estimation and modelling techniques	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	**All deposits** Software used: • Leapfrog Geo – wireframe modelling of geological and mineralisation units • Snowden Supervisor – geostatistics, variography, kriging neighbourhood analysis (KNA) and block model validation • Datamine Studio RM – drillhole validation, compositing, block modelling, grade estimation, classification and reporting. The Mineral Resource estimates were completed employing ordinary block kriged (OK) grade estimation of 2 m length, topcut composites. The mineralised interpretations defined zones of material as determined by assay data.

Block model and estimation parameters:

- Nb_2O_5%, P_2O_5% and TREO% grades were estimated using ordinary kriging (OK), No other analytes were estimated. OK is considered the most appropriate method with respect to the observed continuity of mineralisation, spatial analysis (variography) and dimensions of the domains that had sufficient data. For domains with blocks that did not estimate, the average domain grade was applied to the unestimated blocks. For all estimates, dynamic anisotropy (DA) was utilised to account for the undulating nature of the mineralised layers.
- Two meter downhole composited, top-cut data were estimated into parent blocks using OK.
- Top cuts were applied to selected domains to reduce the impact of outlier values.
- Normal scores variogram analysis was undertaken on combined mineralised domains to determine the kriging estimation parameters used for OK estimation for the different analytes.
- The number of samples used for block grade estimation was determined by Kriging Neighbourhood analysis (KNA)
- Three estimation passes were used for the estimate. The first search was based upon the variogram ranges; the second search was 1.5 times the initial search and the third search was 3 times the initial search. The second and third search had reduced sample numbers required for estimation. First pass had a minimum of 6 and maximum of 12 samples. The second and third pass had a minimum of 4 and maximum of 12 samples.
- A maximum composites per drillhole constraint of four samples was applied.
- Hard boundaries were applied between the different mineralisation domains for all analytes. Soft boundaries were applied between weathering boundaries for Nb_2O_5% and TREO%.
- Boundary conditions for the weathering boundaries for P_2O_5% are hard.

Green

- Continuity was interpreted from variogram analysis to have a major direction range of between 350 to 800 m and a semi major range of 55 to 110 m and a minor range of 35 to

	50m for Nb_2O_5. For P_2O_5 the major range is 350 to 850 m, a semi major range of 60 to 125 m and a minor range of 40 to 65 m. TREO has a major direction range of 400 to 600 m, semi major range of 65 to 100 m and a minor range of 50 to 60 m. **Emily** • Continuity was interpreted from variogram analysis to have a major direction range of 250 m and a semi major range of 300 m and a minor range of 23 m for Nb_2O_5. For P_2O_5 the major range is 200 m, a semi major range of 500 m and a minor range of 25 m. TREO has a major direction range of 200 m, semi major range of 350 m and a minor range of 35 m. **Crean** • Continuity was interpreted from variogram analysis to have a major direction range of 600 m and a semi major range of 125 m and a minor range of 45 m for Nb_2O_5. For P_2O_5 the major range is 450 m, a semi major range of 65 m and a minor range of 35 m. TREO has a major direction range of 500 m, semi major range of 100 m and a minor range of 50 m.
The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	**All deposits** All domains were estimated using OK with DA. Inverse distance squared (ID^2) for Nb_2O_5% was used as a check estimate. No previous MRE has been undertaken.
The assumptions made regarding recovery of by-products.	**All deposits** No assumptions have been applied for recovery of by products.
Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).	**All deposits** P_2O_5% has been estimated as a deleterious element, however metallurgical testwork will also assess the potential for a P_2O_5 by-product.
In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	**All deposits** Grade estimation was into parent block size of 50 mE by 20 mN by 5 mRL oriented in line with the strike of the mineralisation. The nominal drill spacing of the drillholes is approximately 400 m by 40 m (Green) to 200 m by 40 m (Emily and Crean) Sub-cells to a minimum of 5 mE by 5 mN by 1 mRL were used to represent the

		volume.
	Any assumptions behind modelling of selective mining units.	**All deposits** Selective mining units were not modelled.
	Any assumptions about correlation between variables.	**All deposits** Correlation coefficients indicate a strong positive relationship between Nb_2O_5 and TREO and a poor positive relationship between Nb_2O_5 and P_2O_5.
	Description of how the geological interpretation was used to control the resource estimates.	**All deposits** The modelled mineralisation domains were used to control the search ellipse direction and the major controls on the distribution of grade.
	Discussion of basis for using or not using grade cutting or capping.	**All deposits** The coded and composited sample data was used to assess whether the grade distribution required top-cutting to mitigate the impact of outlier grades. The grade distribution was assessed for each individual domain reviewing histograms, log probability plots, statistics and CVs. Top cuts were applied to two domains for Nb_2O_5, one for P_2O_5 and one for TREO.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	**All deposits** Validation checks of the estimate occurred by way of global and local statistical comparison, comparison of volumes of wireframe versus the volume of the block model, comparison of the model average grade (and general statistics) and the declustered sample grade by domain, swath plots by northing, easting and elevation, visual check of drill data versus model data and comparison of global statistics for check estimates.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	**All deposits** The tonnage was estimated on a dry basis
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	**All deposits** Grade and tonnes have been reported within USD45/kg niobium pit shells for open pit. The cut-off grade has been selected by Encounter in consultation with Snowden Optiro based on current experience and in line with cut-off grades for reporting of Mineral Resources elsewhere in Australia. Given the stage of the Project and

		classification applied to the Mineral Resource and the current niobium price, the cut-off grade is considered reasonable. The Mineral Resource has been reported above a cut-off grade of 0.25% Nb_2O_5 for open pit resources.
Mining factors or assumptions	*Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	**All deposits** The cover thickness of material above mineralisation averages 49 to 70 m of waste and mineralisation extends down a further 25m. This geometry is expected to be suitable for potential open pit mining. Based on these assumptions, it is considered that there are no mining factors which are likely to affect the assumption that the deposit has reasonable prospects for eventual economic extraction. The Mineral Resource has been reported using a cut-off grade of 0.25% Nb_2O_5, which is considered a reasonable cut-off grade for reporting potential open pit Mineral Resources.
Metallurgical factors or assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	**All deposits** The main niobium minerals in the Aileron deposits have been identified by thin section petrography and TIMA examination as pyrochlore and columbite. Most of the mineralogy work has been at the Green deposit. Mineralogy work completed on a metallurgical composite made from hole EAL940 demonstrates pyrochlore is the dominant niobium-bearing mineral, with columbite present in lesser quantities. This work was completed on a composite sample which had been subjected to stage grinding down to P100 1,000µm and screened into four size fractions. Pyrochlore shows excellent liberation properties in the -150µm / +38 µm fraction, with 88% of the mineral volume classified as either well liberated (>90%) or high-grade middlings (60-90%). Columbite also showed acceptable liberation at this size fraction. Drill composites from Aileron were submitted in early 2025 to SGS Lakefield Canada for beneficiation test work and the results are expected in Q3 2025. Based on the identified niobium and gangue mineralogy it is anticipated that the 'ore' should process similarly to other niobium deposits. Metallurgical assumptions were based on publicly available data for existing niobium mines and process flowsheets, backed up with mineralogical examination of drill

		cores and RC samples. Niobium production generally involves the initial concentration of niobium minerals such as pyrochlore to produce concentrates grading around 50% Nb_2O_5 which is then converted to ferroniobium with approximately 65% Nb. The initial concentration is typically by a combination of physical beneficiation such as magnetic separation and desliming, followed by flotation. The initial concentrate may then be treated hydrometallurgically for example by leaching to remove impurities such as phosphates. The final ferroniobium product is produced by conversion in a furnace.
Environmental factors or assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	**All deposits** The Company has completed an initial scoping assessment on relevant environmental factors for the region in the context of a potential future project development. This includes the requirements to gain all requisite project approvals. Initial environmental baseline surveys have commenced and are ongoing in order to provide data inputs to inform future environmental impact assessments of potential future project development. There have been no environmental characteristics which would materially negatively impact potential future project development. Heritage surveys have also been completed across various zones within the project area and no significant heritage sites or exclusion zones have been identified which would negatively impact potential future project development.
Bulk density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	**All deposits** The Volume Bulk Density Method uses 3D scanning to calculate a sample's volume and density, replacing manual measurements. The sample is weighed (excluding tray weight), and its volume is determined by comparing the scanned tray surface to a reference geometry. The difference in surface heights gives the volume, which, combined with the sample's weight, allows for density calculation. 102 measurements were taken over the project area.

	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.	The method accounts for surface-level voids such as vugs and rough porosity through high-resolution surface mapping. However, internal porosity and moisture content are not directly measured in this method.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	**All deposits** Bulk density has been assigned to the block model by lithology/weathering. Assigned values are summarised below. • Transported – 1.5 t/m^3 • Moderately weathered zone – 1.6 t/m^3 • Weakly weathered zone – 1.7 t/m^3 • Fresh – 2.1 t/m^3
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.*	**All deposits** The Green, Emily and Crean Mineral Resource has been classified as Inferred based on drillhole spacing, drill data quality, geological continuity and estimation quality parameters Inferred Mineral Resources were defined where there was a moderate level of geological confidence in geometry and where the drill spacing was 200 m or greater.
	Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	**All deposits** The Mineral Resource has been classified on the basis of confidence in geological and grade continuity and taking into account the quality of the sampling and assay data, the lack of data density and density measurements and confidence in estimation of Nb_2O_5 (from the kriging metrics).
	Whether the result appropriately reflects the Competent Person's view of the deposit.	**All deposits** The assigned classification of Inferred reflects the Competent Persons' assessment of the accuracy and confidence level in the Mineral Resource estimate.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	**All deposits** No external audits have been conducted on the Mineral Resource estimates. Snowden Optiro undertakes rigorous internal peer reviews during the compilation of the Mineral Resource model and reporting
	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within	**All deposits** With further drilling it is expected that there will be variances to the tonnage, grade, and metal of the deposit. The Competent Person expects that these variances will not impact on the economic

	stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	extraction of the deposit. The assigned classification of Inferred reflects the Competent Persons' assessment of the accuracy and confidence levels in the Mineral Resource estimate. It is the Competent Persons' view that this Mineral Resource estimate is appropriate to the type of deposit and proposed mining style.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	**All deposits** The Mineral Resource classification is appropriate at the global scale.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	**All deposits** No production data was available for review.