

Ausenco Awarded Caldeira REE Project Scoping Study Contract

Highlights

- Leading Australian Engineering firm Ausenco Services Pty Ltd (**Ausenco**) has been awarded the Caldeira Project Scoping Study which is formally underway.
- The Class 5 estimate is intended to be complete by Q1 2024 and will be managed by Ausenco's Perth office with support from Ausenco's Brazil office.
- The Study will be based on the existing JORC compliant Inferred Resource of 409Mt at 2,626PPM TREO¹ and focus on the 3 Southern Mining licenses of Figuera, Capoa de Mel and Soberbo
- The Study will generate required process and non-process related engineering data to feed into multiple parallel work fronts including:
 - EIS studies being undertaken by Brazilian Environmental consultant Alger Consultoria (Alger)
 - Capital and operating costs to inform financial modelling and impending reserve update (expected Q3 2024)
 - Mechanical Equipment lists, Mass Balance and the Metallurgical Flow sheet currently being optimised with inputs from the ongoing ANSTO test work programme²
- Ausenco's Study team in Perth and Latin America are highly experienced with recent REE study and project engagements in Latin America and Australia

Meteoric Resources NL (**ASX: MEI**) (**Meteoric** or the **Company**) is pleased to announce that Ausenco Services Pty Ltd has been awarded the Engineering Scoping Study package being undertaken on its 100%-owned Caldeira Rare Earth Ionic Clay Project, in the state of Minas Gerais, Brazil.

Meteoric has engaged highly respected engineering group Ausenco, a multi-discipline Engineering, Procurement, Construction and Management consulting group to undertake a Scoping Study on its flagship Caldeira Rare Earths Project to a Class 5 Engineering cost estimate standard.

Chief Executive Officer, Nick Holthouse said,

"It is excellent to see this important package of work now underway under the guidance of a world-class engineering group such as Ausenco.

The Ausenco team have a strong track record in the REE space and will deliver exactly the right level of expertise and detail required to ensure the World-Class Caldeira Project progresses at the best possible speed.

Ausenco are well recognised as industry leaders in their field. We are pleased to have them as part of our team at Caldeira and look forward to building on the strong relationship we already have with them. The Study will provide economic, engineering and environmental data and deliverables for the Project, whilst help to refine parameters and next steps for the development pathway for this high-grade, high-recovery and strategically located asset."

¹ 30 April 2023 "Caldeira REE Project Maiden Mineral Resource"

² 26 June 2023 "ANSTO Commences Metallurgical Test Work on Caldeira"

Ausenco President, APAC/Africa Reuben Joseph said,

“We appreciate the opportunity offered by Meteoric Resources to lead the Scoping Study for the Caldeira Project in Brazil.

Ausenco looks forward to working with Meteoric to develop the Caldeira Project, which was recently announced as a Tier 1 Ionic Clay Rare Earth Element (REE) Project with the world’s highest-grade deposit of this type. Ausenco brings a proven ability to drive superior and optimised shareholder value outcomes from our studies, and in doing so creates a solid foundation for the subsequent development of the Project.

Ausenco are ideally placed to work closely with Meteoric’s head office in Perth, delivering the study from our Perth office with local knowledge provided from our Brazil office.”

Caldeira Project Scoping Study

The Caldeira Project Scoping Study (Class 5 Engineering cost estimate) has been awarded to the highly regarded international engineering group, Ausenco.

Working in concert with teams in Australia and Brazil, the Scoping study is scheduled for completion in Q1 2024 and will comprise the review and assessment of:

- Plant location options
- Infrastructure and logistics options
- Mining options (base case being conventional Excavator and Truck)
 - Fleet and equipment sizing
 - Capital and Operating costs
 - Mining and backfilling Schedules
 - Backfilling options
 - Water management
- Processing options (With Base case being Agitated tank leach)
 - Throughput and equipment sizing and sensitivity analysis
 - Capital and operating costs
- Project implementation schedule
- Project Risk register and assessment
- Financial modeling.

The Ausenco study will focus only on the three Southern licenses of Figuera, Capao de Mel and Soberbo. This follows the Meteoric development strategy of the initial MREC facility being sited to process IAC ore types from these three licenses only.

This Southern license only strategy also aligns with:

- Alger consulting EIA scope of work focusing on 3 Southern licenses.
- The 200Mt resource infill drilling program to a Measured and Indicated status.
- The ANSTO metallurgical testwork package, which will ultimately provide an optimised flowsheet for the three Southern licenses.

Caldeira Project Next Steps

ANSTO Metallurgical Testwork

Diagnostic leach tests will continue throughout September and October on the remaining metallurgical holes, with particular focus on the CDM and Soberbo tenements. A master composite of the CDM tenement will be constructed from all of the metallurgical drill holes that return satisfactory metallurgical performance. The leaching program will aim to optimise the extractions by evaluating different lixiviants, lixiviant concentration, % solids and pH.

Following the leaching program, impurity removal optimisations will be performed to improve the rejection of deleterious elements such as aluminium, iron, silica, calcium, thorium and uranium, whilst maximising the recovery of the rare earths. The test work will aim to evaluate impurity removal conditions including pH, alkali type, temperature, residence time, % solids and solid liquid separation performance.

Following the impurity removal program, rare earth precipitation tests will be performed to generate a saleable rare earth product. The test work will evaluate the type of precipitation agent, pH, temperature, residence time, % solids and solid liquid separation performance.

The metallurgical scope is comprehensive and will run for approximately seven more months to enable adequate characterisation of each of the prospects. As milestone results come to hand, they will be reported to the market with remaining leach results due in October 2023 and impurity removal and precipitation to MREC results due in late Q4.

200Mt Measured and Indicated Infill Drilling

The 200Mt Measured and Indicated resource estimate infill drilling program continues with the remaining focus on the 3 Southern tenements of Soberbo, Capo De Mel and Figuera. Resource updates will be delivered sequentially with all 3 resource updates expected by early Q3 2024.

EIA Permitting Process - Alger Consultoria

Alger Consultoria is continuing the EIA permitting process with a timeline to deliver the important EIA permit by Q1 2025 and the permit to construct by Q4 2025.

Background Information on Ionic Clay REE Deposits

Geologically, the Caldeira REE Project is classified as an Ionic Adsorption Clay REE Deposit, which is characterised by the following key criteria:

- Formed in the saprolite (clay) zone of the weathering profile
- The majority of REEs are **adsorbed** onto clay minerals and accumulate in the clay zone of the regolith profile
- Adsorbed REEs are ionically attached to the clay minerals and can be liberated by washing in a weak solution of ammonium sulphate (or other metal salt) at near neutral pH
- Ionic Adsorption Clay REE deposits are typically found near surface, often at depths of less than 10m
- The U and Th levels in Ionic Clay REE deposits are typically very low, as these elements are less soluble in ground waters and are not preferentially adsorbed by clays during the weathering and leaching processes.

Mineral Resource Statement – Caldeira Project (ASX:MEI 1/5/2023)

Table 3: Caldeira REE Project 2023 Mineral Resource Estimate– by licence at 1,000ppm TREO cut-off

| Licence | JORC Category | Tonnes Mt | TREO ppm | Pr ₆ O ₁₁ ppm | Nd ₂ O ₃ ppm | Tb ₄ O ₇ ppm | Dy ₂ O ₃ ppm | MREO ppm | MREO/TREO % |
|----------------------|-----------------|------------|--------------|-------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------|--------------|
| Capão do Mel | Inferred | 68 | 2,692 | 148 | 399 | 4 | 22 | 572 | 21.3% |
| Cupim Vermelho Notre | Inferred | 104 | 2,485 | 152 | 472 | 5 | 26 | 655 | 26.4% |
| Dona Maria 1 & 2 | Inferred | 94 | 2,320 | 135 | 404 | 5 | 25 | 569 | 24.5% |
| Figueira | Inferred | 50 | 2,811 | 135 | 377 | 5 | 26 | 542 | 19.3% |
| Soberbo | Inferred | 92 | 2,948 | 190 | 537 | 6 | 27 | 759 | 25.8% |
| Total | Inferred | 409 | 2,626 | 154 | 447 | 5 | 25 | 631 | 24.0% |

TREO = La₂O₃ + CeO₂ + Pr₆O₁₁ + Nd₂O₃ + Sm₂O₃ + Eu₂O₃ + Gd₂O₃ + Tb₄O₇ + Dy₂O₃ + Ho₂O₃ + Er₂O₃ + Tm₂O₃ + Yb₂O₃ + Lu₂O₃ + Y₂O₃

MREO = Pr₆O₁₁ + Nd₂O₃ + Tb₄O₇ + Dy₂O₃

About Ausenco

Formed in Brisbane 1991, Ausenco are a leading multinational engineering, procurement, construction management, and operations service provider to the energy and resources sectors. Ausenco have built a solid industry wide reputation and more specifically to the Caldeira Project offer experience in both clay and hard rock hosted REE projects ranging from Australia to Latin America.

This release has been approved by the Board of Meteoric Resources NL.

For further information, please contact:

Dr Andrew Tunks

Executive Chairman

Meteoric Resources NL

E ajtunks@meteoric.com.au

T +61 400 205 555

Ben Creagh

Investor and Media Relations

NWR Communications

E benc@nwrcommunications.com.au

T +61 417 464 233

The information in this announcement that relates to Mineral Resource Estimates was prepared by BNA Mining Solutions and released on the ASX platform on 1 May 2023. The Company confirms that it is not aware of any new information or data that materially affects the Minerals Resources in this publication. The Company confirms that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. The Company confirms that the form and context in which the BNA Mining Solutions' findings are presented have not been materially modified.