MARQUEE RESOURCES LIMITED

Redlings REE Project

& ORNL NEAREST Technology Partnership

Combining a World-Class Australian REE Deposit with DOE-Backed Processing Technology

11Mt
Inferred Resource
1,130 ppm TREO

REE Tech
NEAREST* REE separation technology

ORNL
Department of Energy (DOE) National Lab Partner

Marquee Resources Limited
(ASX:MQR)

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Transaction Overview

Marquee Resources executes landmark patent licence agreement with Oak Ridge National Laboratory.

Marquee Resources Limited (ASX: MQR) has executed a Non-exclusive Research and Development Patent License and Option Agreement (PLA-2166) with UT-Battelle, LLC — the managing entity of Oak Ridge National Laboratory (ORNL) — operating under its Prime Contract with the U.S. Department of Energy (DOE).

R&D Licence

Non-exclusive Research & Development licence to ORNL NEAREST patent portfolio within defined Field of Use.

Option to Commercialise

Option during the term to negotiate a nonexclusive commercial licence - a clear pathway to commercial-scale deployment.

U.S. Manufacture Preference

DOE commercialisation policy requires Licensed Products to be substantially manufactured in the United States (waiver mechanism available).

DOE Oversight

Agreement operates under ORNL Prime Contract with DOE (DE-AC05-00OR22725). DOE retains march-in rights under the Bayh-Dole Act.

"This Agreement marks a truly transformative moment for Marquee Resources." — Charles Thomas, Executive Chairman

About Oak Ridge National Laboratory

The U.S. Department of Energy's largest science and energy national laboratory

ORNL AT A GLANCE

US$2B+
Annual Research Budget

6,000+
Staff & Researchers

110,000 ft^2
Manufacturing Demo Facility

#1
DOE Science & Energy National Lab

Why ORNL Matters

A select group of organisations globally hold formal patent licence agreements with this flagship DOE institution.

- World leader in materials science, neutron science, energy & advanced manufacturing.
- Central institution in DOE-funded critical minerals & rare earth research programs.
- NEAREST technology developed under DOE Critical Materials Institute & Office of Energy Efficiency and Renewable Energy (EERE) .
- Prior commercial collaborations include NASA, Boeing and Volkswagen.
- NEAREST directly supports U.S. government REE supply chain resilience objectives.
- Marquee joins a select group with formal patent licence from this DOE institution.

Oak Ridge National Laboratory

U.S. DEPARTMENT of ENERGY

NEAREST Technology

Nonaqueous Extraction and Recovery of Elements by Aqueous-free Separation Technology

NEAREST[1] is a breakthrough DOE-funded REE separation technology — unlike conventional aqueous solvent extraction, NEAREST uses a non-aqueous approach to selectively extract and separate individual rare earth elements from mixed feedstocks.

NEAREST vs. Conventional Processing

Feature	Conventional SX	NEAREST
Separation Factor	~1.2× (PC88A)	Up to 6.7×
Process Medium	Aqueous / water-based	Non-aqueous
Reagent Consumption	High	Significantly Reduced
Liquid Waste Streams	Complex / large volume	Lower waste generation
Clay-rich Feedstock	Challenging	Designed to address
Environmental Profile	Intensive	Lower impact

1 – NEAREST Technology - https://www.energy.gov/articles/energy-department-announces-134-million-funding-strengthen-rare-earth-element-supply

Key Advantages

- Reduced chemical reagent consumption.
- Lower environmental footprint & process waste.
- Applicable to wide range of REE feedstocks including MQR's Redlings REE Project.
- Aligned with growing demand for sustainable, low-carbon critical minerals.
- Directly supports U.S. government REE supply chain resilience agenda.

Redlings REE Project

100%-owned by Marquee Resources | ~40km west of Leonora, Western Australia

11Mt
Inferred Resource
@ 800ppm TREO cut-off

1,130 ppm
TREO Grade

12,430t
Contained REO

204 – 306Mt at 950 – 1,130 ppm TREO
Global Exploration Target*

Significant Maiden Resource

- 11Mt at 1,130 ppm TREO for 12,430t REO.
- 2,316t high-value Magnetic REO at 211 ppm.
- Reported under JORC 2012 – Inferred Mineral Resource Estimate.

Exceptional Growth Potential

- Exploration Target: 204–306Mt at 950–1,130 ppm TREO.
- Potential 13 × growth via 693 planned drill holes.
- Infill program planned on shallow 160×160m grid.

High-Value Magnetic REE Focus

- Strong magnetic REE weighting across the Redlings REE assemblage.
- Positioned to key rare earth materials used in electrification supply chains.
- Supported by demand from permanent magnet end uses, including EVs and wind turbines.

Near-Surface, Open-Pit Amenable

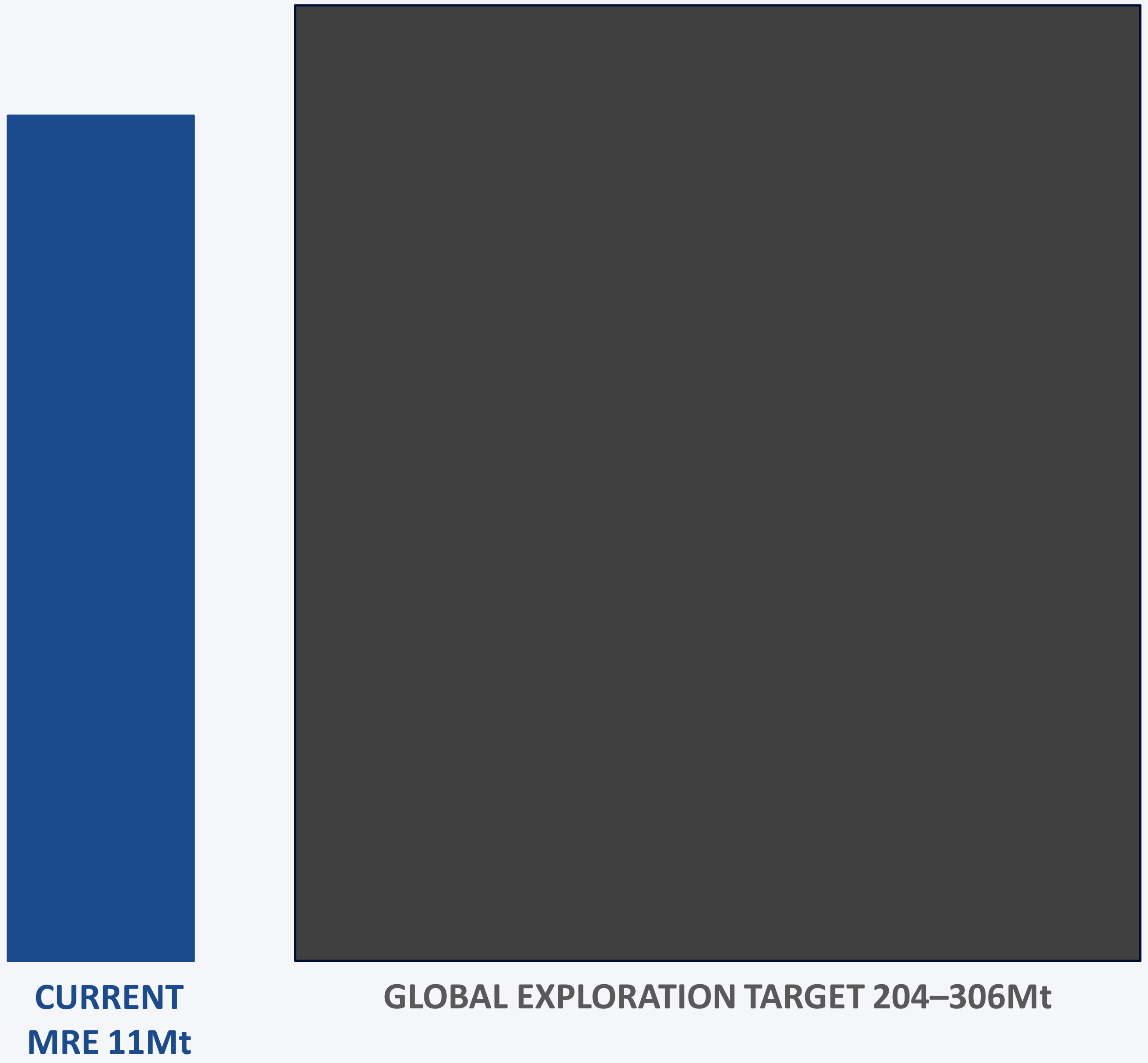
- Flat-lying lateritic mineralisation from surface.
- Average 9.3m thickness across 5 prospects.
- 2.6km × 3.6km mineralised footprint.

*The Exploration Target is conceptual in nature. Insufficient exploration has been conducted to define a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. Refer ASX release 22 January 2025 for further details..

Redlings REE Project

100%-owned by Marquee Resources | ~40km west of Leonora, Western Australia

Scale of Opportunity



13× growth potential

194,000 – 346,000t Contained REO at 950 – 1,130 ppm | MREO: 35,700 – 64,600t at 175 – 211 ppm

The Future for the Redlings REE Project

1

Infill Drilling
- 160×160m shallow drill grid program to 'link' existing prospects.
- 693 SLRC holes / ~13,860m.
- Links all 5 existing prospects.

2

Resource Upgrade
- Inferred → Indicated classification.
- Convert Exploration Target tonnes.

3

Satellite Targets
- 5 additional targets identified.
- Coincident high-mag & auger anomalies located over prospective monzogranite terrain with prospective lateritic geomorphology.
- Prospective for new REE enriched carbonatite dyke discoveries.

4

Scoping Study
- Open pit + flotation pathway.
- Critical mineral supply chain.
- Proximity to Leonora mining infrastructure.

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Project Geology & Location

Northern Eastern Goldfields, Western Australia | Tier 1 Mining Jurisdiction

LOCATION DETAILS

Location

~40km west of Leonora
77km north of Menzies, WA

Tenure
E37/1311 & E37/1376, 108 km² | +513 km² pending contiguous ground | 100% Marquee

Nearest Major

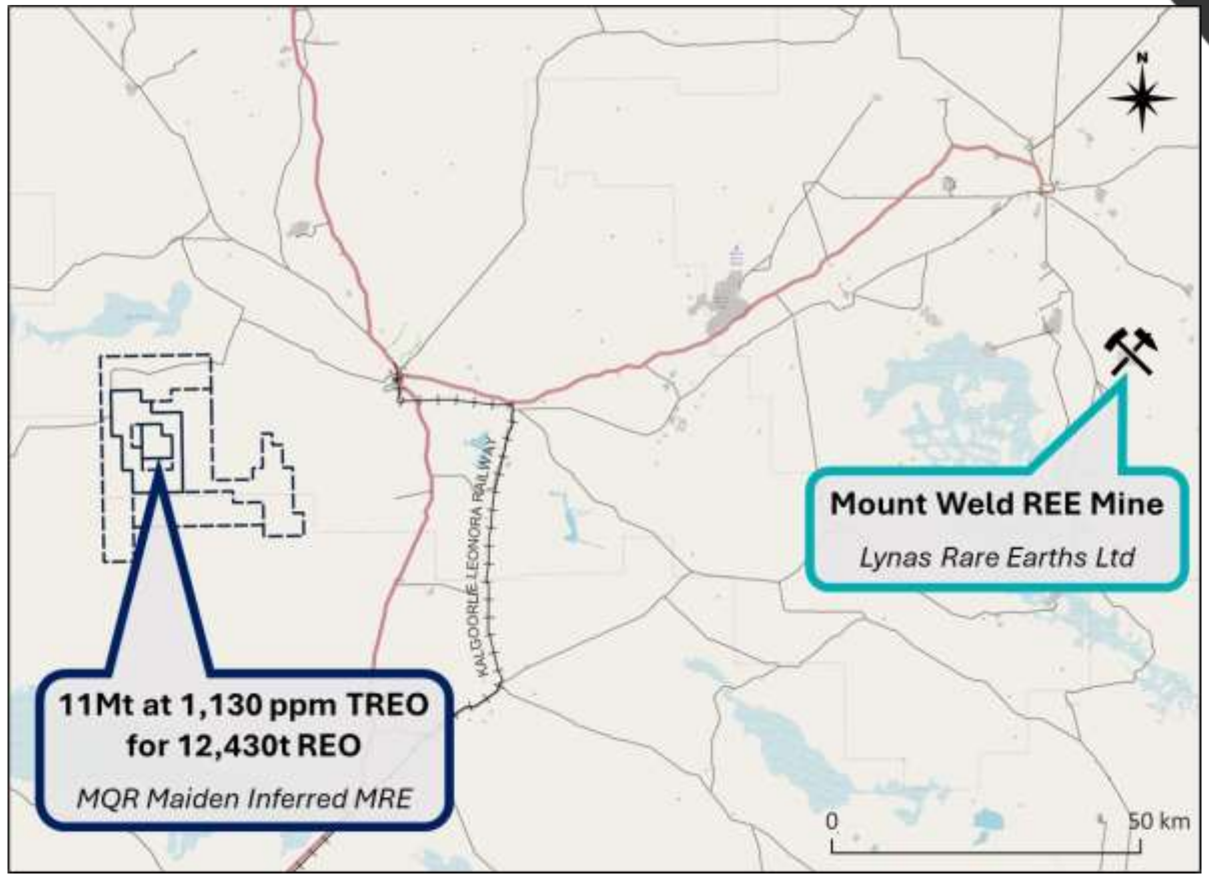
Lynas Mt Weld ~150km east (Australia's largest REE mine)

Prospects

Big Red 1 & 2, Red Baron
Redlings 1 & 2

Geological Setting

- Northern Eastern Goldfields, WA — granitic rocks between Mt Ida and Norseman-Wiluna Greenstone Belts.
- REE hosted in carbonatite dykes within an NNW-trending, high-magnetic biotite-hornblende monzogranite.
- NW-trending fault systems control REE dyke emplacement — multiple parallel structures offer discovery potential.
- Near-surface lateritic enrichment — flat-lying mineralisation delineated from surface, 2–23m thick (avg 9.3m).
- Five mineralised domains spanning 2.6km E-W × 3.6km N-S.
- Open mineralisation at prospect margins — high-grade REE at current Resource boundaries.
- 100% of mineralisation drilled dry — no groundwater issues encountered.



Why Redlings Geology Suits NEAREST

Clay-rich laterite profile breaks down primary silicate carbonate gangue — resulting in friable material with loosely bound REEs that are more amenable to NEAREST's non-aqueous selective separation approach. Conventional aqueous SX circuits struggle with fine-grained clay-rich material; NEAREST is designed precisely for this challenge.

Why Rare Earths – Why Now

100%-owned by Marquee Resources | ~40km west of Leonora, Western Australia

EV Revolution

- Permanent magnet motors require Nd-Pr alloys.
- Global EV fleet projected to grow from ~30M to 350M+ vehicles by 2040 — requiring massive REE supply growth.

Wind Energy

- Direct-drive wind turbines use ~600kg of REE magnets per MW.
- 3,000+ GW of new wind capacity needed by 2030 to meet Paris Agreement targets.

Supply Chain Diversification

- China controls ~85% of global REE processing.
- Western governments are actively seeking trusted, non-Chinese supply chains — Australia is a preferred partner.

Australian Advantage

- Australia has the 3rd largest REE reserves globally.
- AUKUS and IRA frameworks create strong incentives for allied-nation REE projects to attract strategic investment.

Critical Mineral Demand

- IEA forecasts REE demand to grow 3–7× by 2040 in a net-zero scenario.
- Magnetic REOs (Nd, Pr, Dy, Tb) face the most severe supply deficits.

Redlings Fits Perfectly

- High magnetic REE content in the Redlings assemblage.
- Strategically linked to global electrification supply chains.
- Driven by demand for EV and wind turbine magnets.

Project + Technology: A Compelling Alignment

NEAREST addresses the specific processing challenges posed by Redlings' clay-rich laterite mineralisation

REDLINGS PROJECT

MRE: 11Mt @ 1,130 ppm TREO – JORC Inferred.

Exploration Target: 204–306Mt @ 950–1,130 ppm TREO.

Mineralogy: Carbonatite-hosted, laterite-associated REE deposit.

Processing Challenge: Fine-grained, clay-rich material that generates high reagent consumption and complex liquid waste in conventional aqueous SX circuits.

Geometry: Flat-lying, near-surface (avg 9.3m depth) — amenable to low-cost open-pit mining.

REE Mix: **MREO Rich** – ideal for critical minerals supply chains.

✓

Perfect Match

NEAREST TECHNOLOGY

Developer: Oak Ridge National Laboratory (ORNL) / DOE

Approach: Non-aqueous solvent extraction — designed for clay-rich, laterite-associated feedstocks.

Separation Factor: Up to 6.7× vs ~1.2× for conventional PC88A.

Key Benefit: Reduced reagent consumption, lower waste streams, more sustainable processing.

Agreement: PLA-2166 R&D licence with option to commercialise executed March 2026.

Strategic Value: Access to DOE-funded IP, scientific expertise, and aligned U.S. government supply chain objectives.

Development Roadmap & Next Steps

Advancing Redlings toward production with NE ARE S T technology integration

NOW April 2026
- Maiden MRE Declared: 11Mt @ 1,130ppm TREO
- PLA-2166 Executed with ORNL
- R&D Licence – NEAREST technology access

Q2–Q3 2026
- Commence R&D with ORNL scientists
- Plan & execute infill drilling program
- 693 holes / ~13,860m SLRC

Q4 2026
- Updated Mineral Resource Estimate
- Targeting Indicated classification
- Preliminary metallurgical testwork

2026–27
- Full metallurgical test programme
- Nd-Pr concentrate specification
- Strategic partner & offtake engagement

2027+
- Scoping / Pre-Feasibility Study
- Mine design, CAPEX/OPEX modelling
- NEAREST commercial licence negotiation

Strategic Priorities: Engage U.S. & Australian government funding bodies | Strategic investors & offtake partners | NEAREST commercial licence pathway

The Investment Case

- 11Mt JORC 2012 Inferred Resource with 13× growth potential (306Mt Upper Exploration Target).
- Magnetic REE dominant— aligned with EV, wind & defence demand.
- Executed patent licence with ORNL — DOE-backed NEAREST technology access.
- NEAREST designed for clay-rich laterite deposits — a direct fit for Redlings mineralogy.
- Option to negotiate commercial licence provides a defined path to production-scale deployment.
- Tier 1 Western Australian jurisdiction — AUKUS aligned for strategic investment.
- 100% owned — Clean acquisition, no legacy encumbrances.
- Low-cost, near-surface, open-pit geometry with strong infrastructure proximity.

Appendix A - Mineral Resource Estimate

JORC 2012 – Inferred | Independent Estimation: Matrix Resource Consultants

Resource by Cut-Off Grade

Cut-off (ppm TREO)	Tonnes (Mt)	TREO (ppm)	MREO (ppm)	Contained TREO (t)	Contained MREO (t)
500	33	780	143	25,740	4,719
600	22	900	169	19,800	3,716
700	15	1,040	196	15,600	2,937
800 ★	11	1,130	211	12,430	2,316
900	8.1	1,230	225	9,963	1,823
1,000	5.8	1,350	252	7,830	1,460

★ Reported resource cut-off grade (refer MQR ASX announcement 22 January 2025)

Data Quality: 225 RC holes for 2,082m | Rigorous QAQC with duplicates, standards & blanks at 1:30 rate | Independent Competent Person estimation

THANK YOU

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