





# **ASX Release**

# 29 December 2023

# RareX strategic and corporate update

End-of-year update on Cummins Range, RareXploration and corporate developments

# **Corporate highlights**

- · Rare earth prices rebounding from recent low
- Phosphate prices remain strong reflecting growing demand from lithium iron phosphate (LFP) battery sector
- Well-funded with anticipated \$1.9m R&D rebate due in February 2024
- Strategic investment process scheduled to formally commence in February 2024
- Transparent and interactive shareholder engagement though the Investor Hub platform will continue

# **Cummins Range Project highlights**

- Mineral Resource Estimate (MRE) update with improved definition imminent to feed into DFS mine schedules
- Near-mine potential carbonatite swarm identified from geophysics with potential to add scale or mine life to Cummins Range
- Supply chain materially de-risked through 3rd party contracts in haulage, port, land and ship loading.
- **Port joint venture company** being assembled to develop port storage facilities for Cummins Range, potentially with government funding support
- Government ministerial discussions continue with State Ministers for Tanami Road connection funding
- Main product off-take process well underway with off-take discussions currently focused in Vietnam, Japan and Indonesia
- **Metallurgy continues to support our product approach** of leap-frogging the dual mineral concentrate through a phosphoric acid facility to extract the monazite rare earth value stream, whilst monetising the apatite hosted phosphate at the phosphoric acid plant itself
- Bulk product samples being generated for mine gate dual-mineral concentrate, and derivative products
- Overburden binding off-take contract being negotiated for the pre-strip with Nitron
- Cummins Range Project well supported with letters of support received from community leaders
- Longform Mining Heritage Agreement close to execution and anticipated in early-to-mid 2024
- Approval submission documents well advanced with submission planned for mid-2024

## **RareXploration highlights**

- Exploration targets being prepared across the priority exploration tenements
- New tenements applied for and analysis underway for synergistic inorganic growth
- Investment portfolio rationalised RareX now a major shareholder in Kincora Copper

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RareX Limited (ASX: REE – **RareX** or **the Company**) is pleased to provide a wide-ranging strategic update on the business including the Company's flagship 100%-owned Cummins Range Project, a Critical and Strategic Minerals Project capable of producing magnet grade rare earths and battery grade phosphates.

RareX CEO, James Durrant, commented: "Reflecting on the last six-months makes us realise how far we've come, how much progress we've made and how exciting the near-term future is. It's testimony to the small but highly proficient team in RareX and I'm very pleased to share this update with shareholders."

## Rare earth prices rebounding from recent low & Phosphate prices remain close to all-time highs

Rare earth prices have experienced recent and extended lows as supply outstrips demand, however, this is temporary in nature and a rebound is looming. Importantly, RareX considered these lows in its Scoping Study pricing scenarios<sup>1</sup> and the Project remains healthy.

Phosphate prices remain strong with growing demand from the lithium iron phosphate (**LFP**) battery sector which require high purity phosphoric acid as a pre-cursor material to cathode active materials (**CAM**) in LFP batteries. The apatite-hosted phosphate at Cummins Range is perfectly suited as a raw material feed for the higher purity acids due to lack of contamination.

Cummins Range can supply enough phosphate and rare earths to support 2.5 million LFP electric cars every year for 15 years<sup>2</sup> and, with phosphorous joining rare earths on the Critical and Strategic Minerals Lists for Australia, Cummins Range is well positioned as a highly strategic asset.

## **Well-Funded**

RareX is sufficiently funded through to the R&D rebate which has now been submitted with the lodgement of the Company's tax return. It is anticipated that RareX will receive \$1.9 million in rebates in February due to the extensive drilling and metallurgy conducted in FY2023 for the unique product pathway defined for Cummins Range.

## **Strategic Investment Process**

A strategic investment process is scheduled to commence in February 2024 with consideration for potential strategic cornerstone investors, existing shareholders, and new shareholders aligned to the business of evolving Cummins Range into development whilst advancing the exciting RareXploration portfolio.

#### Transparent and interactive shareholder engagement

During 2023, RareX has actively engaged with shareholders on the Investor Hub platform, which facilitates transparent and interactive engagement. The platform is consistent with RareX's vision of providing ongoing transparent engagement with shareholders to ensure clarity over the use of investment funds.

We continue to encourage constructive feedback on the Investor Hub and thank the participation in the sign-up prize draw. Congratulations again to Tomako, who won the sign-on prize.

# **Mineral Resource Estimate update**

The 2023 RC drilling was an infill drill program to increase the confidence of phosphate mineralisation on the Phos Dyke, and also assess for mineralisation on the designed north-eastern pit walls. Diamond drill holes were completed to gain further metallurgical and geotechnical samples. These drill holes, along with an updated

 $<sup>^{2}</sup>$  ASX Announcement 12 October 2023: Cummins Range Product Strategy Update







<sup>&</sup>lt;sup>1</sup> ASX Announcement 22 August 2023: Enhanced Scoping Study for Cummins Range







geological model, are being used to update the mineral resource estimate for DFS work. ERM are being used to complete this work and an update will be provided in the new year.

#### Near-mine potential carbonatite swarm identified

The recent aerial magnetic and ground gravity surveys have mapped several anomalies on the RareX tenements surrounding the Cummins Range pipe<sup>3</sup>. Carbonatite intrusions often occur as swarms and the areas surrounding Cummins Range have had limited exploration. Any discoveries close to the Cummins Range deposit will have favourable economics being close to proposed mining and processing operations.

The high definition geophysics surveys will allow the exploration team to focus surface geochemical surveys and drilling. Two larger bodies to the north have been defined including a pipe like body, and numerous smaller targets have also been identified throughout the RareX tenure. Over the next few months, the exploration team will be identifying areas to target the field work for 2024.

# Supply chain de-risked

RareX will produce a bulk product at all project stages, commencing with overburden mining into the rock phosphate market before quickly moving into a dual mineral concentrate of monazite (rare earths) and apatite (phosphate)<sup>4</sup>. In order to de-risk the supply chain, binding term sheets have been established with:

- The Kimberley Metals Group<sup>5</sup> to share their bulk loading facility (**BLF**) at Wyndham Port for a greater volume than currently planned by the project. Further, RareX retrains first rights for additional capacity, and first rights to buy the facility.
- A land option was placed on a 4 Ha strategic industrially allocated plot<sup>6</sup> adjacent to the bulk loading facility for the development of bulk storage and handling facilities.
- Additionally, a joint venture term sheet is being executed with NewHaul to provide haulage services with
  the option for RareX to buy into the company to become a 50/50 JV partner at the election of RareX, after
  a production milestone has been reached.

These steps have materially de-risked the supply chain and longform contracts will now be negotiated.

# Port joint venture company

A tripartite joint venture initiative is being pursued to establish a port storage and handling facility on the optioned land at Wyndham Port, adjacent to the BLF. The initiative is designed to bring operational and logistics experience into the company to own and operate truck receivals, product storage and reclaim.

The initiative is considering a relevant government grant as a condition precedent on the formation of the JV. Although a key enabler for the bulk critical and strategic mineral products of Cummins Range, the facility being proposed by the JV is being designed for co-use and modular expansion, potentially providing other regional critical mineral projects incentives for development.

# **Government ministerial discussions continue**

RareX have been making representation to relevant State Ministerial offices for general company and project awareness and for the purposes of proposing government support in the development of the road linking Cummins Range to the Tanami. RareX sees this as an opportunity to leverage off the Tanami Road project for project efficiencies. The road will open up the project to the disadvantaged desert community of Billiluna, in

<sup>&</sup>lt;sup>6</sup> ASX Announcement 27 November 2023 RareX Secures Land at Wyndham Port for Product Storage and Transfer





<sup>&</sup>lt;sup>3</sup> ASX announcement 13 November 2023: Geophysical Surveys Identify Potential New Ultramafic Pipes

<sup>&</sup>lt;sup>4</sup> ASX Announcement 22 August 2023: Enhanced Scoping Study for Cummins Range

<sup>&</sup>lt;sup>5</sup> ASX Announcement 08 November 2023: Infrastructure sharing term sheet signed for bulk loading facility at Wyndham







particular, and will also open up the central land portions of the three local pastural stations allowing for greater productivity of these properties. Billiluna has an airfield which, with the installation of the road, will become the FIFO hub for the project.

# Main product offtake process well underway

Extensive research has been undertaken to identify strategically located potential offtake partner(s) for the Cummins Range dual mineral concentrate. Monazite facilities in the Asia-Pacific are highly suited for Cummins Range monazite offtake and there are many options in the region for intermediate processing at a phosphoric acid facility. Phosphoric acid facilities proximate to monazite facilities are being prioritised. Current operational facilities are all offshore but there is emerging capability in Australia which RareX can potentially utilise over time.

# Metallurgy continues to support our product approach

Metallurgy continues to support RareX's product approach of leap-frogging the dual mineral concentrate through a phosphoric acid facility to sell the apatite before moving the monazite-rich residue into a rare earth refinery. Key outcomes during the year have included:

- Favourable beneficiation of the dual minerals from ROM ore<sup>7</sup>;
- Favourable leaching results for LFP pre-cursor products with no impact to monazite mineral in the residue8,9; and
- Favourable rare earth concentration (up to 20 times upgrade)<sup>10</sup>.

Metallurgical testwork are currently in progress to further support the process development and optimise process parameters.

## **Bulk product samples being generated**

Bulk flotation of a 90 kg sample was completed and generated ~18 kg dual mineral concentrate samples. A 10 kg sample of the concentrate was leached with dilute phosphoric acid to generate product derivatives to better support the offtake discussions.

In addition to the above, samples from the 2022-2023 drilling programs have been delivered to RareX Perth based warehouse for preparation of bulk composites for future testwork and product sample generation.

#### Overburden binding off-take contract

RareX has an MOU in place with Nitron for the rock phosphate overburden, pre-strip material with the potential to provide material revenue for the project although the pricing formula has not yet been finalised. Danny Goeman, Non-Executive Director, is consulting part time into the executive as Chief Commercial Officer to lead the binding off-take contract with Nitron.

In parallel, alternative offtake contracts are in progress with our agricultural off-take consultant in line with the RareX offtake and marketing strategy.

Product development with Ordco<sup>11</sup> has slowed during the planting season, however crop trials at a glasshouse scale are underway in collaboration with Agronomy Solutions out of South Australia. Cummins Range rock phosphate will be tested in three different soil types (including Kununurra clays and WA wheatbelt analogues) against incumbent fertilisers such as MAP and commercial rock phosphate. The program also tests enhancers

<sup>10</sup> ASX Announcement 28 October 2023: Rare Earths Beneficiation Work Delivers Strong TREO Upgrades









<sup>&</sup>lt;sup>7</sup> ASX Announcement 22 August 2023: Enhanced Scoping Study for Cummins Range

<sup>8</sup> ASX Announcement 11 July 2023: Phosphoric Acid Leach Test Supports RareX Stage-3 Operations

<sup>&</sup>lt;sup>9</sup> ASX Announcement 28 November 2023: Rare Earths Beneficiation Favourable Mineralogy Confirmed







that increase bioavailability of Cummins Range rock phosphate yet further. The results of this trial are expected towards the end of January and will provide critical data to help value our product in the market.

The rock phosphate project can continue for up to 1mtpa<sup>12</sup> before the main product's beneficiation plant needs to be installed to extract the value of the rare earth elements. Once the beneficiation plant is installed, directapplication rock phosphate products can continue to be produced if commercially optimal; alternatively, this material will be processed through the beneficiation plant and be upgraded and sold at benchmark price levels (i.e. nominal 32% P<sub>2</sub>O<sub>5</sub>).

## **Cummins Range well supported**

RareX has continued to engage with local and regional stakeholders over the last few months, including a workshop run by Main Roads that brought together members of the Halls Creek, Billiluna and Mulan communities, all three of which are key to Cummins Range ongoing success.

RareX also receives valuable support and interest from businesses and councils in the region and have developed strong working relationships with Cambridge Gulf Limited (port operator), Newhaul Transport, Gelganyem Corporation and its subsidiaries, MDM Civil and Mining, as well as the Ngarrangarni Foundation. The councils of the Shire of Wyndham and Eastern Kimberley as well as Halls Creek remain highly supportive of the project, as do the Kimberley Development Commission and the Kimberley Ports Authority, as evidenced by letters of support and access to industrial land developments in their respective areas.

Learning from some of the successes the Main Roads department had through early engagement with the local communities to upskill local labour in support of the Tanami Road project, RareX can not only leverage a developing skill base in the region, but also provide early guidance on its skill requirements for an operational mine. The entrepreneurial spirit seen in the local communities in support of the Tanami Rd and other projects in the region is uplifting and exciting at the same time.

To further support this spirit and include community members in the potential opportunity to build this mine. RareX is working with the Eastern Kimberley Jobs Pathway, the Ngarrangarni Foundation and potential indigenous owned, principal future mining contractors to target the development of a local mining skill base ahead of project commencement, but also provide clear commitments during the operation to transfer and develop skills into the three key communities to this project.

## **Longform Mining Heritage Agreement close to execution**

Negotiations with the Jaru PBC have been productive and meaningful. Unfortunately, the nominated lawyer acting on behalf of the Jaru has been unable to continue and required replacement by the legal department within the KLC.

Apart from a few months delay, there has been relatively little impact and we thank the KLC for picking up the negotiation process mid-way through. All the clauses of the contract are materially agreed upon and we are now awaiting the resumption of the Jaru PBC board meeting calendar in February to finalise the longform agreement.

This, along with the environmental baseline results, provides the pre-requisites for key regulatory approvals, for which submissions will be made in mid-2024.

<sup>&</sup>lt;sup>12</sup> ASX Announcement 22 August 2023: Enhanced Scoping Study for Cummins Range



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# **Approval submissions well advanced**

Baseline studies conducted and commenced throughout 2022 and 2023 are being finalised by the consultants with material results being expected mid-January to mid-February. Onerous test work requirements by the regulator including genetic testing of plants and animals drives extended timelines after completion of the field component of these environmental surveys as well as certain levels of ambiguity when determining plant and animal species based on mapping activities.

The ground water baseline data collection is also well progressed and to finalise needs to cover the current wet season to provide a holistic picture of aguifer conditions.

On the basis of the data collected so far and expected draft reports by the environmental consultants RareX is looking to conduct a pre-engagement with DWER<sup>13</sup> and DMIRS<sub>14</sub> in mid to late February 2024 and then on basis of their initial advice submit for referral to DECCEEW<sub>15</sub> around March to April 2024. The DECCEEW referral outcome will provide further guidance on required steps towards project approvals. The current assumption is that approvals will be managed at state level for the initial overburden rock phosphate project, given the compact nature of the project when compared to larger projects. Submissions for the main rare earth and phosphate beneficiation plant upgrade will follow 6 months later.

Key engineering studies to finalise required infrastructure footprints will be developed through Q1 CY24 once offtake arrangements are in place. This will then inform supporting surveys for cultural heritage on the Mining Lease, which is currently dependent on finalising the Mining Heritage Agreement discussed above.

Pump testing, geotechnical data collection and some additional environmental surveys along the proposed haulage road will be conducted around April-May 2024 and results will be included in initial Stage 1 mining proposals to ensure that by mid-2024 submissions can be made to DMIRS and DWER to begin the project assessment process.

#### **Exploration targets being prepared**

Exploration targets are being prepared for release within the first few months of 2024 for:

- Cummins Range near-mine targets potential for carbonatite mineralisation away from the Cummins Range pipe, with several geophysical targets showing similar anomalism to the current mineralised
- Mounts Mansbridge (Heavy Rare Earths Project)- HRE anomalism within siliceous alteration similar to Browns Range; and
- Red Dragon East Yilgarn Project highly anomalous rare earths soil geochemistry over large magnetic anomalies.

In addition, the RareXploration team continues to apply for and acquire regional exploration assets with synergistic signatures.

#### **New tenements**

RareX continues to seek and evaluate relevantly thematically aligned inorganic growth options to form a pipeline of projects on the tailcoats of Cummins Range. In recent months, RareX has pegged tenements in three project areas.

<sup>&</sup>lt;sup>15</sup> Federal Government Department of Climate Change, Energy, the Environment and Water





<sup>&</sup>lt;sup>13</sup> Western Australian Department of Water and Environmental Regulations

<sup>&</sup>lt;sup>14</sup> Western Australian Department of Mines, Industry Regulation and Safety







- A single tenement on the southern boundary of the Cummins Range Project;
- The remaining formation at Mount Mansbridge resulting in the entire heavy rare earths project at Mount Mansbridge project now under application; and
- A 5km wide bulls eye magnetic anomaly in the Tanami Region in Northern Territory.

All of these applications have potential to host rare earths mineralisation in northern Australia and updates will be provided when closer to grant dates.

# **Investment portfolio rationalised**

RareX maintains material investments in Canadian Rare Earth Company, Cosmos Exploration and Kincora Copper.

Our investment in Kincora Copper has transitioned from project level to the corporate <sup>16</sup> allowing the projects to attract joint venture partners suitable for advancing these exciting copper porphyry projects.

Cosmos continues to seek appropriate Canadian projects to vend into the business and RareX plans to review its CREC investment in the first half of 2024. All these investments are being appropriately curated for maximum value-accretion.

This announcement has been authorised for release by the Board of RareX Limited.

<sup>&</sup>lt;sup>16</sup> ASX Announcement 15 December 2023: RareX completes transaction to become major shareholder in copper-leveraged Kincora Copper











#### **About RareX Limited - ASX: REE**

RareX Limited (ASX: REE), a Perth based project development and exploration Company, was founded on the fundamental belief of the electronics revolution and the electric vehicle mega-trend. Our focus is rare earths and associated battery and electronic metals.

Cummins Range, in the East Kimberley region of Western Australia, is our flagship project which aims to produce a sustainable, ethical, transparent and secure low carbon rare earth and phosphate supply chain solution for its products which satisfy the two global mega-trends of population growth and electrification.

RareX maintains exploration upside programs in the immediate vicinity of the Cummins Range Project and also more broadly to identify targets and progress projects complementary to the founding beliefs and expertise of the core team.

Rare earths and in particular, NdPr, are core enablers of decarbonisation and electrification of our society. NdPr supports high strength magnets which enables low carbon technologies, especially in the electric mobility sector, robotics solutions and renewable energy, particularly the wind energy sector.

Phosphate is the feedstock for the emerging dominant battery technology; lithium-ferro-phosphate (LFP). The global LFP battery market is projected to grow from \$10 billion in 2021 to \$50 billion by 2028 as more EVs adopt the safer and longer life technology and grid stabilization batteries expand to balance intermittent renewable generation.

RareX maintains material investments in Kincora Copper (ASX:KCC), Cosmos Exploration (ASX:C1X) and Canada Rare Earth Corporation (LL.V).

For further information on the Company and its projects visit www.rarex.com.au

