

ASX Release / 17 September 2026

Selectro™ Process Delivers Best Scandium & Rare Earth Recoveries to Date Utilising Half the Reagent Dosage

Selectro™ Test 3 lifts scandium recovery to 91.8% and average HREE recovery to 84.0%

Highlights

- **Selectro™ leach Test 3 achieved the strongest REE and scandium recoveries** of the initial testwork program to date, **with HREE recoveries up to 86%, averaging approximately 84%**, and LREE recoveries of up to 81%, averaging approximately 77%,
- **Scandium recovery reached a new high of 91.8%**, up from 80% in the previous Selectro™ test
- **Improved recoveries were achieved using half the reagent applied in Tests 1 and 2**, demonstrating a more reagent-efficient leach profile and pointing to a lower reagent cost pathway
- **Selectro™ Test 3 was conducted on unbeneficiated Grass Patch feed with no process optimisation applied**, providing a foundation for the optimisation priorities ahead
- **The Company has not yet established the lower limit of reagent concentration** for the Selectro™ Process, and further recovery improvements may be achievable at an even lower dose
- **Flotation testwork is underway**, with results to inform beneficiation ahead of bulk sample testing of the Selectro™ Process
- **Gallium recovery approximately 41.5%** in Selectro™ Test 3, down from 55.8% in Test 2 at the reduced reagent dose, remaining a marked improvement over zero recovery using HCl
- **Selectro™ is Mount Ridley's wholly-owned and patent-pending leach process**

Mount Ridley Mines Limited (ASX: **MRD** OTC: **MRDMF**) ("**Mount Ridley**" or "**the Company**") is pleased to announce further results from its initial Selectro™ Process metallurgical testwork program, with the final leach test in this round of testing delivering materially improved rare earth and scandium recoveries on the Grass Patch composite using a reduced reagent dose.

Selectro™ Test 3 achieved HREE recoveries of up to 86%, averaging approximately 84%, LREE recoveries of up to 81%, averaging approximately 77%, and scandium recovery of 91.8%. These improvements were achieved using half the reagent dose applied in Tests 1 and 2, while testing the same unbeneficiated Grass Patch composite and without process optimisation.

The result builds on the initial Selectro™ Process results announced on 12 August 2026, which demonstrated the ability of the Company's proprietary leach process to recover heavy rare earth elements, light rare earth elements, scandium and gallium from unbeneficiated Grass Patch material. Selectro™ Test 3 was designed to assess the effect of a reduced reagent dose on recovery performance.

Mount Ridley Managing Director & CEO, Mr Allister Caird commented:

"Our wholly-owned and patent-pending Selectro™ process results continue to impress, with scandium recovery increasing to 91.8% and REE recoveries improving across the board, HREE averaging 84% and up to 86%. Importantly, these improvements were achieved while halving the

reagent dose used in the previously reported Selectro Tests, indicating the potential for further cost benefits, over and above the current closed loop system design.

We haven't yet established where the reagent concentration breaks for the process, providing further opportunity to optimise the reagent dose and recovery of targeted individual minerals.

These results are particularly encouraging given they have been achieved on unbeneficiated Grass Patch material at this early stage of the testwork program. Combined with the scale of the existing mineral resources at Grass Patch, including the world's largest scandium resource, they give us confidence as we advance Selectro™ into flotation concentrate and bulk sample testing."

Selectro™ Leach Test 3 Result

In Selectro™ Test 3, the quantity of leaching agent added to the process was halved relative to Tests 1 and 2. Despite the reduced reagent dose, HREE recoveries increased to as high as 86%, averaging approximately 84%, and LREE recoveries increased to as high as 81%, averaging approximately 77%, both exceeding the results achieved in Test 2. The improvement points to a more reagent efficient leach profile for the Selectro™ Process, with a corresponding reduction in the volume of reagent requiring recycling.

The improvement in scandium and rare earth recovery reflects molecular tuning of the Selectro™ leaching chemistry whereby the composition of the leaching molecule can be adjusted to optimize recovery of targeted metals. In Test 3, the leaching was tuned to improve scandium recovery, which increased from 80.0% to 91.8%, while HREE recoveries increased from an average of 78.5% to 84.0%.

Scandium recovery reached a program high of 91.8%, against a backdrop of growing global interest in the commodity as aerospace, defence and automotive manufacturers increase their use of aluminium-scandium alloys. The result reinforces the Company's position to benefit directly from scandium extraction at Grass Patch, while also highlighting the potential to extend the Selectro™ Process to other scandium projects and companies through licensing or technical collaboration.

Gallium recovery for Selectro™ Test 3 is approximately 41.5% down from 55.8% in Test 2 at the reduced reagent dose, a further sign that individual elements respond differently to reagent concentration. The Company expects that this result may be improved through both beneficiation and optimization processes.

The Company has not yet established the lower limit of reagent concentration achievable in the Selectro™ Process, and further recovery improvements may be possible at an even lower dose.

The Company views these results as a foundation rather than a ceiling, with the non-optimised, unbeneficiated basis of the testwork to date directly informing the optimisation priorities being carried into the flotation and bulk sample programs. A full elemental breakdown is set out in Table 1 and Figures 1 to 3.

Table 1: Comparative Selectro™ Test 2 and Test 3 results.

Metric	Test 2 (12 August 2026)	Test 3 (this release)
Reagent addition	Baseline dose	Approximately half the Test 2 dose
HREE recovery range	Up to 83.1%, averaging 78.5%	Up to 86%, averaging 84.0%
LREE recovery range	Up to 77%, averaging 72.5%	Up to 81%, averaging 77%
Scandium recovery	80.0%	91.8%
Gallium recovery	55.8%	41.5%
Sample	8 sample composite, five drillholes	Same 8 sample composite

HEAVY RARE EARTH RECOVERY

Recovery by processing method (%)

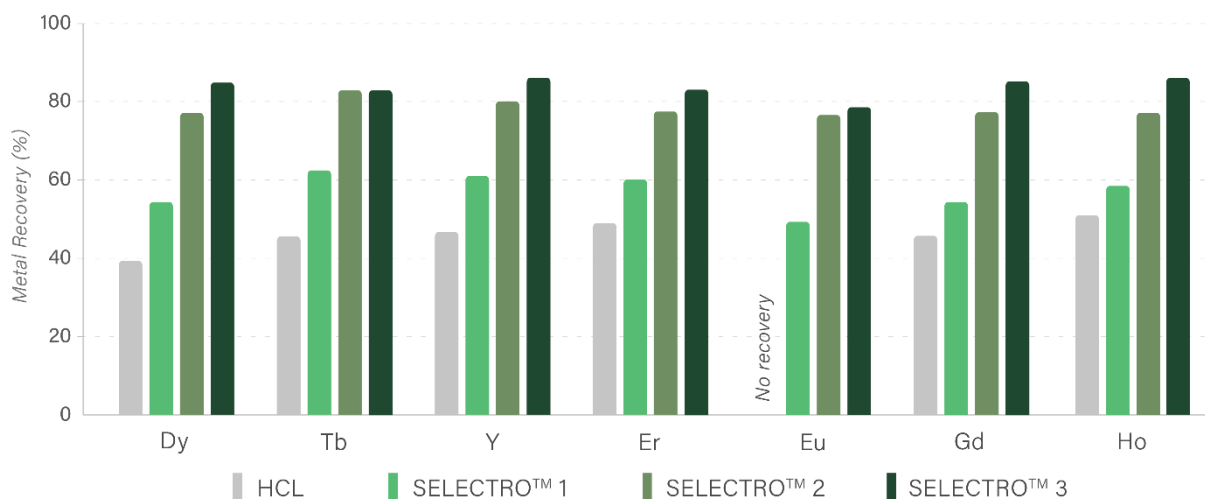


Figure 1: Heavy REE recovery by processing method, HCL baseline versus Selectro™ Leach 1, 2 and 3.

LIGHT RARE EARTH RECOVERY

Recovery by processing method (%)

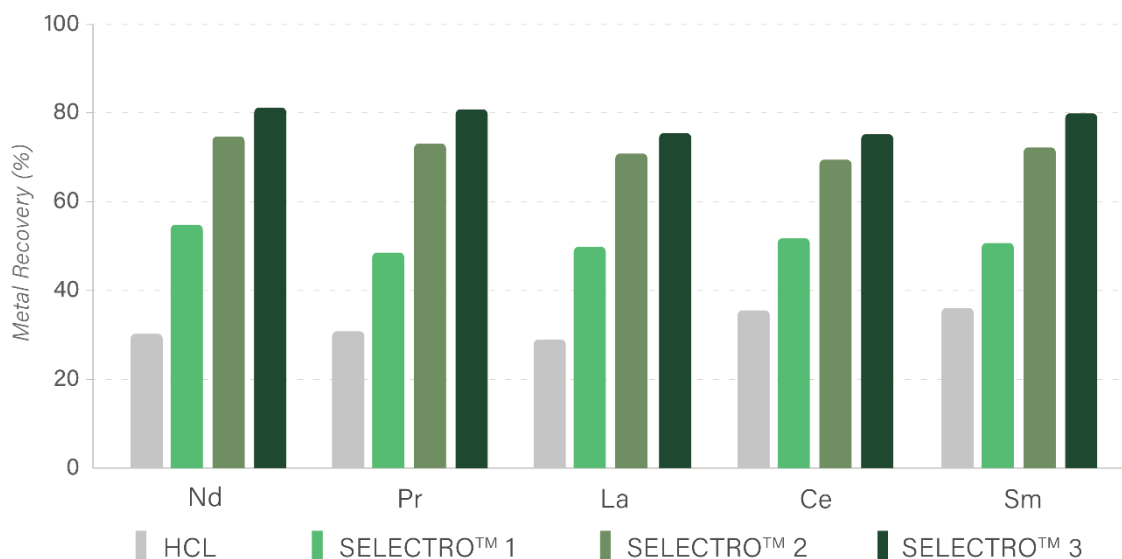


Figure 2: Light REE recovery by processing method, HCL baseline versus Selectro™ Leach 1, 2 and 3

SCANDIUM AND GALLIUM RECOVERY

Recovery by processing method (%)



Figure 3: Scandium and gallium recovery by processing method, HCL baseline versus Selectro™ 1, 2 and 3.

Reagent Efficiency and Cost Implications

The Selectro™ Process is already designed on a closed loop basis with materially lower reagent costs than the industry standard HCl leach, as outlined in the Company's 12 August 2026 announcement. The halving of reagent dose in the 3rd Selectro™ test, combined with the observed increase in REE recovery and Scandium recovery, points to further opportunity to lower the reagent cost and increase reagent recycling efficiency as testwork advances toward bulk sample and pilot scale programs.

Flotation Testwork and Beneficiation Pathway

Flotation testwork on Grass Patch material is underway ahead of the Company's bulk sample program. The Company's TIMA results, announced on 6 August 2026, confirmed that rare earths in the tested composite are predominantly hosted in discrete phosphate minerals, including xenotime, crandallite group phosphates and monazite/rhabdophane. This mineralogy points to strong potential for favourable flotation outcomes. The results of the flotation program will directly inform the beneficiation approach applied when the Selectro™ Process moves to bulk sample testwork.

Mount Ridley Chief Technology Officer, Mr Chris Larder commented:

"The latest test of the Selectro™ program looked at whether we could improve metal recovery through molecular tuning of the leaching regime. The results make it clear that tuning delivered material improvement, with scandium recovery increasing from 80% to 91.8% while the reagent dose was halved. Being able to manage the process to get outcomes like that is genuinely exciting."

Selectro™ also operates at low temperature and ambient pressure and is designed to fully recycle its reagents, which together point to a potentially very attractive operating cost profile compared with alternative extraction methods"

Additional Metallurgical Testwork Information

The metallurgical testwork was undertaken by Nagrom Pty Ltd at its Kelmscott laboratory in Western Australia using the same 8 sample, T3803 composite prepared from historical Grass Patch drill material and used in the Selectro™ testwork reported by the Company on 12 August 2026. The program comprised comparative hydrochloric acid (HCl) baseline testing and Selectro™ leach tests to assess the recovery response of rare earth elements, scandium and gallium.

The material was tested without prior beneficiation and the results represent initial laboratory-scale testwork. Comparative recoveries from the HCl baseline and Selectro™ tests are set out in Table 2 below.

Table 2: Comparative Metal Recoveries (%)

Grouping	Element	HCl	Selectro™ Test 1	Selectro™ Test 2	Selectro™ Test 3
LREE	Nd	30.2%	55.2%	75.2%	81.7%
	Pr	30.8%	48.9%	73.6%	81.3%
	La	28.9%	50.2%	71.3%	75.9%
	Ce	35.5%	52.1%	69.9%	75.7%
	Sm	36.0%	51.1%	72.7%	80.4%
HREE	Dy	39.4%	54.4%	77.3%	85.0%
	Tb	45.7%	62.6%	83.1%	83.1%
	Y	46.8%	61.1%	80.2%	86.3%
	Er	49.1%	60.2%	77.6%	83.2%
	Eu	0.0%	49.4%	76.7%	78.7%
	Gd	45.8%	54.4%	77.5%	85.3%
	Ho	51.1%	58.6%	77.4%	86.2%
Scandium	Sc	27.6%	62.1%	80.0%	91.8%
Gallium	Ga	0.0%	57.3%	55.8%	41.5%

*The metallurgical testwork suite did not include thulium (Tm), lutetium (Lu) or ytterbium (Yb)

The comparative metallurgical testwork was undertaken at laboratory scale using representative dry-weight aliquots of approximately 90 g derived from a 16.8 kg homogenised composite prepared from five historical Grass Patch diamond drill holes. The HCl baseline and Selectro™ tests were each conducted over a 24-hour leach period with the Selectro™ results achieving maximum recoveries in under 4 hours. The HCl baseline was undertaken at 30°C and 10% pulp density. All leach tests were conducted at atmospheric pressure. Detailed Selectro™ reagent chemistry, concentrations and reagent additions are proprietary and have not been disclosed.

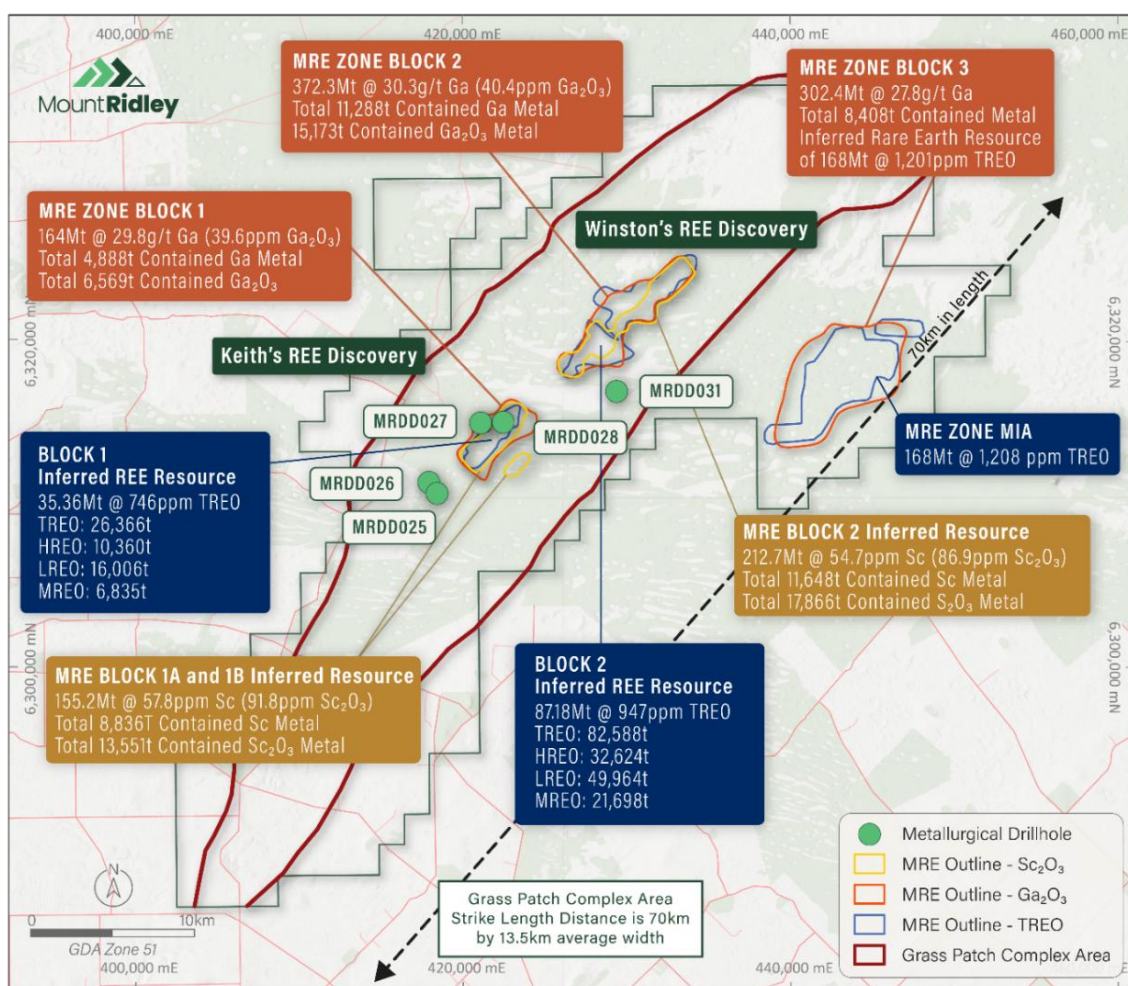


Figure 4: Location of the Grass Patch samples used to prepare the Selectro™ & TIMA composite

JORC Disclosure

Selectro™ Test 3 reported in this announcement was undertaken on the same T3803 composite used for the Selectro™ metallurgical testwork reported by the Company on 12 August 2026. No new drilling or sampling was undertaken in connection with the Selectro™ 3 test, and the source material, sampling methodology, drill hole information and sample preparation relating to the composite remain unchanged.

The Company refers to its ASX announcement dated 12 August 2026, “Proprietary Leach Process Delivers Exceptional HREE, Scandium & Gallium Recoveries”, including the drill hole information and JORC Code (2012 Edition) Table 1 contained therein, for further information regarding the source, sampling and preparation of the composite used in the metallurgical testwork.

The Company confirms that it is not aware of any new information or data that materially affects the previously reported information relating to the composite and that the relevant material assumptions and technical parameters continue to apply and have not materially changed.

Next Steps

- Selectro™ Test 3 results to be incorporated into updated process economics and scoping assumptions
- Further testwork to establish the lower limit of reagent concentration and optimise the balance between scandium, REE and gallium recovery, with the Company anticipating gallium recovery can be improved through reagent tuning during the optimisation program
- Flotation testwork to be completed, with results informing the beneficiation approach for the bulk sample program
- Bulk sample testwork to follow the flotation program, testing both the reduced reagent approach validated in Selectro™ Test 3 and the flotation-beneficiated feed
- Validate the Selectro™ Process on third party feed

This ASX announcement has been authorised for release by the Board of Mount Ridley Mines Ltd.

For further information, please contact:

Allister Caird, Managing Director & Chief Executive Officer

Mount Ridley Mines Ltd

info@mtridleymines.com.au

Forward Statement

This announcement contains forward-looking statements that are subject to risks, uncertainties and assumptions. Forward-looking statements include, but are not limited to, statements regarding future exploration activities, resource growth potential, resource model updates, Mineral Resource Estimate upgrades, development opportunities, metallurgical outcomes, market conditions, commodity demand, project economics and the timing and outcome of future work programs.

Such statements are based on the Company's current expectations, estimates, projections and assumptions as at the date of this announcement. Forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors, many of which are beyond the control of the Company, that may cause actual results, performance or achievements to differ materially from those expressed or implied in such statements. Factors that could cause actual results to differ materially include, but are not limited to, changes in commodity prices, exploration and development risks, resource estimation outcomes, metallurgical performance, regulatory approvals, environmental and heritage matters, funding availability, market conditions and general economic factors.

Readers are cautioned not to place undue reliance on forward-looking statements. Except as required by applicable law or the ASX Listing Rules, the Company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Any references to exploration targets, resource growth potential or future development opportunities are conceptual in nature and there can be no assurance that further exploration work will result in the estimation of additional Mineral Resources or that any Mineral Resource will ultimately be converted to an Ore Reserve.

Competent Persons Statement

The information in this announcement that relates to Exploration Results is based on information compiled and reviewed by Mr Pedro Kastellorizos, a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Kastellorizos is a Technical Advisor to Mount Ridley Mines Limited and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Kastellorizos consents to the inclusion in this announcement of the matters based on his information in the form and context in which they appear.

The information in this announcement that relates to metallurgical results is based on information compiled and reviewed by Mr Chris Larder, a Fellow of the AusIMM. Mr Larder is the Chief Technology Officer of Mount Ridley Mines Limited and has sufficient experience relevant to the metallurgical testwork and processing of the style of mineralisation under consideration to qualify as a Competent Person as defined in the 2012 Edition of the *Australasian Code for Reporting of Exploration Results*,

Mineral Resources and Ore Reserves. Mr Larder consents to the inclusion in this announcement of the matters based on his information in the form and context in which they appear.

The Company confirms that it is not aware of any new information or data that materially affects the Mineral Resource Estimates referred to in this announcement and that all material assumptions and technical parameters underpinning those estimates continue to apply and have not materially changed.

For further information please refer to previous ASX announcements from Mount Ridley Mines Ltd:

30 March 2023. "Resource Drilling Commences at Mount Ridley REE Project"
 28 October 2025. "838.7Mt Gallium Resource Estimate at Mt Ridley"
 12 November 2025. "MRD Expands Rare Earth and Gallium Tenure"
 25 November 2025. "33km of New REE-Gallium Targets Defined at Mt Ridley"
 28 January 2026. "367.98Mt Scandium Resource Estimate at Mount Ridley"
 11 March 2026. "Mount Ridley Strengthens Board and Leadership Team"
 24 March 2026. "Major Heavy Rare Earth Resource at Mount Ridley"
 20 May 2026. "Phase 1 Metallurgical Testwork Commences"
 6 August 2026. "Grass Patch Rare Earths Confirmed to be Hosted in Phosphates"
 12 August 2026. "Proprietary Leach Process Delivers Exceptional HREE, Scandium & Gallium Recoveries"

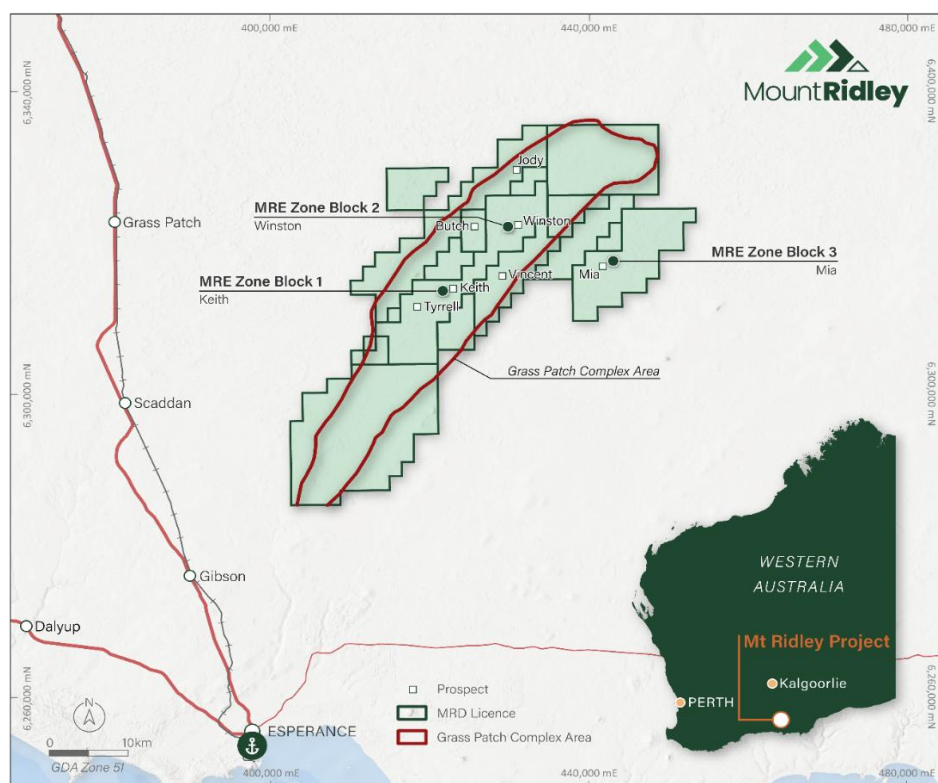
REOs

TREO: the sum of La₂O₃, CeO₂, Pr₆O₁₁, Nd₂O₃, Sm₂O₃, Eu₂O₃, Gd₂O₃, Tb₄O₇, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃, Y₂O₃.

HREO: the sum of Gd₂O₃, Tb₄O₇, Dy₂O₃, Ho₂O₃, Er₂O₃, Eu₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃, Y₂O₃.

LREO: the sum of La₂O₃, CeO₂, Pr₆O₁₁, Nd₂O₃, Sm₂O₃.

MREO: the sum of Dy₂O₃, Pr₆O₁₁, Nd₂O₃, Tb₄O₇.



Location of the Grass Patch Project in 25km north of Esperance, Western Australia

About Mount Ridley Mines Ltd

Mount Ridley Mines Ltd is an Australian critical minerals explorer focused on the discovery and development of heavy rare earth elements, gallium and scandium across its wholly owned Mount Ridley and Weld Range projects in Western Australia. Complementary to its upstream business, the Company is actively pursuing longer term downstream pathways aimed at enhancing value through processing and separation of critical minerals for supply into allied markets.

Grass Patch Project

The flagship Grass Patch Project is located approximately 25 kilometres north of the deep water port of Esperance and hosts defined heavy rare earth element, scandium and gallium resourced identified through 70 000 metres of historical drilling. A majority of the project tenure is centred on the Grass Patch Complex, which is widely interpreted to be the primary source of the heavy rare earth enrichment identified across the project area.

The Grass Patch Project remains significantly underexplored relative to its scale and geological endowment. Multiple high priority walk up drill targets have been identified through historical drilling, geophysics and recent technical reviews. These targets are currently being assessed and prioritised with the intention of supporting future drilling programs planned for 2026.

Weld Range Project

The Company also holds the Weld Range Project in Western Australia, which provides additional exposure to large scale mineral systems within a well-established mining region. Together, the Mount Ridley and Weld Range projects position the Company as an emerging participant in the supply of critical minerals into allied markets.