

12 November 2025

HIGH-VALUE MONAZITE SOURCE WITH HEAVY RARE-EARTHS IDENTIFIED AT MINTA EST

INFILL DRILLING PROGRAM COMMENCING TO TARGET MONAZITE AND
XENOTIME

HIGHLIGHTS

- **Source defined:** A unique “**monazite-enriched granite**” across approximately 250km² at Minta Est identified as the **source of monazite and heavy rare-earth**s.
- **High value mineral suite:** Enriched with monazite, rutile and zircon showing an exceptional basket value.
- **Rare-earth pathfinder results:** Primary tributary samples up to **74% monazite assemblage** in heavy mineral concentrate with **dysprosium up to 1.8% and terbium up to 1.1%**¹.
- **ANSTO Laboratory confirmation:** Minta Est monazite sand concentrate TREO enriched with **Dy Tb** heavy rare-earths greater than typical hard-rock monazite deposits.
- **Elevated samarium:** Up to **3.1 % Sm₂O₃ of TREO**¹ is considered **exceptionally high**, especially when accompanied by elevated Dy and Tb, suggesting a **heavy rare-earth enriched monazite** or a **mixed monazite–xenotime assemblage**.
- **Rapid infill targeting program:** Drilling commencing to define zones of enriched monazite and xenotime mineralisation at Minta Est.
- **Project potential:** The Minta and Minta Est Project areas have the potential to host numerous high-value mineral sands deposits over the 5,000km² reconnaissance area.
- **REE and rutile strategy:** Lion Rock’s rare earth strategy progressing alongside ongoing rutile exploration following recent strategic partnership and placement with Tronox Holdings plc (NYSE: TROX).

Lion Rock Minerals Ltd (**ASX: LRM**) (**Lion Rock** or the **Company**) is pleased to announce the identification of the source of monazite, xenotime and zircon coincident within the zone of high-grade rutile mineralisation on the Minta Est Project in Cameroon.

The key takeaway is that in the Minta Est area very high rutile grades, as also seen throughout Minta, are materially enriched by the presence of monazite, zircon and potentially xenotime. The Company sees the significant value upside to shareholders in pursuing the exploration of the thorium-enriched granite zone on Minta Est with exceptional heavy mineral assemblage without delay.

Detailed field truthing completed during the rutile reconnaissance exploration program identified the existence of monazite enriched alluvial soils in the Minta Est region. Particularly high grade and concentrated zones (up to 74% monazite¹) were identified in high energy streams and rivers.

The source of the detrital monazite concentrations at Minta Est was determined to be a unique monazite-enriched granite basement across the project area. Remote-sensed thorium radiometric data, acquired after the start of the reconnaissance drilling program, was used with

¹ Refer ASX release dated 19 June 2025 for further information.

available geology maps to identify a unique late-tectonic granite intrusion at Minta Est. In contrast, earlier more prevalent granite intrusions in the region show no thorium anomalism.

The Company has prioritised an infill drilling program on Minta Est which targets the largest contiguous areas with highest thorium anomalies over the identified granite. Drilled samples over the target monazite-enriched granite from the reconnaissance program, which have not yet been tested, have been prioritised for assay (refer Figure 1).

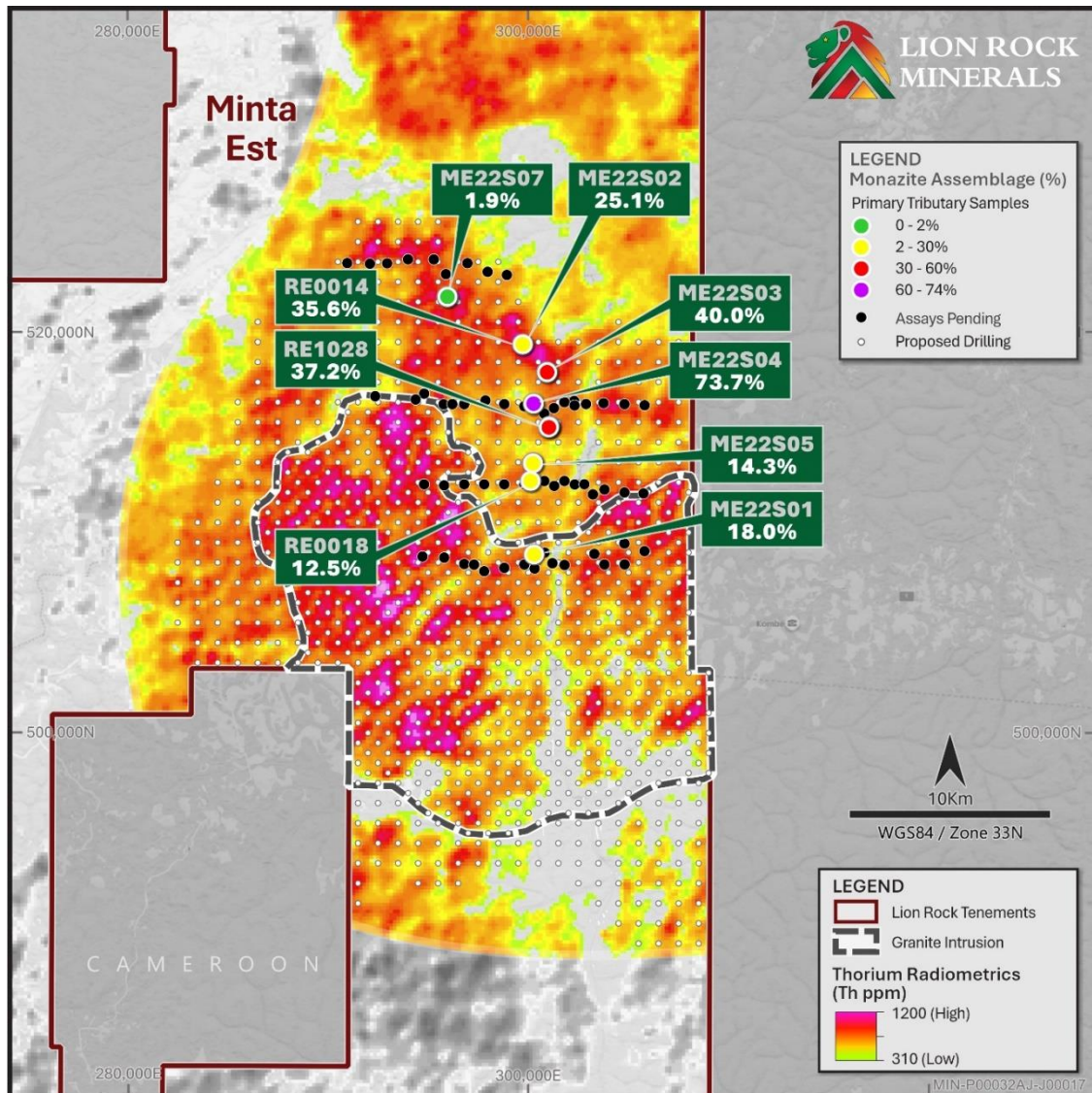


Figure 1: Thorium radiometric high zones and solid geology outline of granite intrusion indicate the “monazite-enriched granite” at Minta Est. Monazite results and samples currently pending are shown alongside the proposed infill drilling program. Refer ASX releases dated 4 February 2025 and 19 June 2025 for previously released assay results identified.

Initial grab samples taken from high-energy, artisanal gold workings in the primary tributaries reported some of the highest monazite assemblage grades globally. These results relate to the proximal erosion and preferential concentration of more subdued grades of heavy minerals anticipated in the surrounding weathered granite rocks or in the larger tributaries with a regional watershed.

Independent analysis of the high-grade monazite samples by Australia's Nuclear Science and Technology Organisation (**ANSTO**) confirmed that the rare-earth distribution is enriched in Dy and Tb heavy rare-earth elements relative to an example of a carbonatite hosted hard-rock monazite. The high-grade monazite samples also displayed anomalous enrichment of yttrium (Y) of 1.2%, indicative of the presence of heavy rare-earth enriched xenotime.

Lion Rock Chief Executive Officer, Casper Adson, commented:

“Following the outstanding rutile results announced recently across what is emerging as a truly district-scale system, we’re now seeing the Minta Project reveal another exciting layer - a zone of monazite and xenotime mineralisation coincident with the rutile, potentially capable of generating a very high-value product suite.

“Our geological team has done exceptional work in pinpointing the source of this mineralisation - a monazite-enriched granite - through the integration of thorium radiometric data and detailed field mapping.

“The rare earth distribution within the monazite concentrate at Minta Est is particularly compelling, showing elevated levels of the high-value heavy rare earth elements dysprosium (Dy) and terbium (Tb) along with samarium (Sm) - the latter recently being recognised by the United States as the most critical mineral. Confirmation of the presence of xenotime as the source of Dy and Tb adds further value as these remain under Chinese export restrictions and are therefore in strong global demand.

“Infill drilling is now advancing rapidly to define the extent of this new monazite–xenotime zone, supported by expanded equipment that has doubled our on-ground capacity. With our strategic partnership alongside global rare-earth and titanium leader Tronox, Lion Rock is fully funded for the next phase of exploration and continues to deliver potential world-class discoveries across the Minta Project.”

TRONOX RARE-EARTHS STRATEGY

Lion Rock strategic partner Tronox Holdings plc (NYSE: TROX) (**Tronox**) provided an update to the market on its rare earth strategy in its recent quarterly results² including its intent to progress a full western supply chain for rare-earths including mining, concentrating, cracking & leaching, and rare earth oxide refining and separation. Lion Rock’s Minta project has been identified as a critical component of Tronox’s long term strategy:

“Tronox remains actively engaged in the advancement of its rare-earth strategy and is uniquely positioned to benefit from the world's focus on diversifying supply away from China.

“With high concentrations of rare-earths in the Company's mineral deposits and decades of expertise in mining and mineral processing, Tronox is uniquely positioned to play a significant role across the value chain - from mining to upgrading. Tronox's geographic position with mining assets in Australia and processing capabilities in the US is also a unique strategic advantage.

*“In support of the Company's strategy, on October 15, 2025, Tronox took an approximate 5% equity interest in Lion Rock Minerals Ltd, a mineral exploration company whose **Minta and Minta Est deposits have the potential to be a major source of high-quality monazite and rutile.** Lion Rock represents an attractive opportunity for Tronox with a substantial potential for resource development in support of the Company's rare-earth strategy.”*

EXPLORATION STRATEGY UPDATE

As first movers into the region and with a substantial tenement holding, Lion Rock has taken the approach to apply a very broad, shallow reconnaissance program (nominally 10kmN by 1kmE) to

² <https://investor.tronox.com/press-releases/press-releases-details/2025/Tronox-Reports-Third-Quarter-2025-Financial-Results/default.aspx>

confirm an initial prospectivity assessment which had indicated a substantial, underexplored but highly prospective new rutile province was to be discovered.

As heavy mineral assay and mineralogy results returned, it was clear that rutile mineralisation was ubiquitous in this new mineral province and more recently, with results returning from Minta Est, monazite, zircon and potentially xenotime is also locally enriched. Drilling of the 700+ holes was completed over the last 12 months and assay results are still returning.

Results to date demonstrate widespread and consistent rutile mineralisation above key industry benchmark grades across an area exceeding 1,800km², providing a strong foundation for the next phase of work. All holes and samples within these anomalous zones will now be prioritised for detailed analysis.

Consecutively, infill drilling will step out at 500m-centres on residual targets and holes will be pursued to depth. Alluvial targets will see the application of drill lines at 400m by 40m spacing to cross the alluvial flats orthogonally, on the return of the dry season.

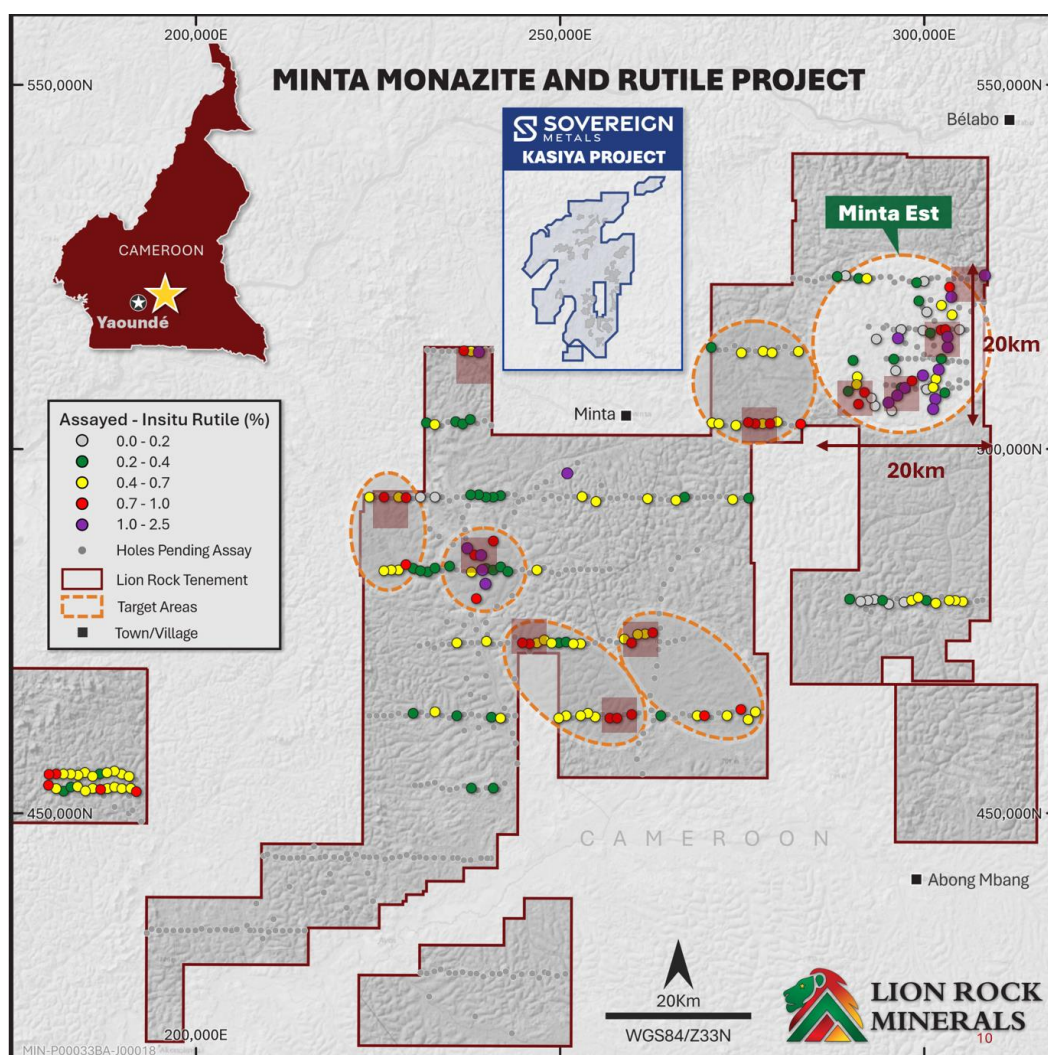


Figure 2: First pass results from the Minta Project with highest value rutile zones circled³. 5km x 5km zones are shown to demonstrate the scale of a large mineral sands mine. Minta Est, where rutile is coincident with monazite, xenotime and zircon, is also highlighted. Sovereign Metals Ltd's (ASX: SVM) Kasiya project tenure outline displayed in image above. The Company notes the Kasiya Project is located in Malawi and is only shown for scale comparison purposes.

³ Refer ASX releases dated 4 February 2025, 12 May 2025, 21 May 2025, 28 May 2025, 19 June 2025, 1 July 2025, 12 August 2025, 21 August 2025 and 29 October 2025 for further information regarding previously released assay results.

In the eastern region, where exceptionally high monazite grades were intersected within narrow, high-energy stream systems that also hosted artisanal gold workings, the Company is confident that the primary monazite source has now been identified. Monazite observed in drill pans and confirmed through SEM and QEMSCAN analyses is notably coarse, and given the mineral's relatively soft nature, it was reasonable to expect minimal transport, indicating that the source was nearby.

Granite is known to liberate zircon during weathering, and several granite intrusions in the eastern Minta region host abundant zircon. However, one particular granite body, covering approximately 250 km² at Minta Est, is distinguished by a unique thorium radiometric response in remote-sensed imagery, when compared with the surrounding metamorphic country rock and other generations of granite intrusion (refer Figure 4).

A strong thorium channel response, typical of detrital heavy mineral sand deposits enriched in monazite, can be identified coincident with this granite and the first order streams that delivered assemblages of Monazite between 2 - 74%, zircon between 2 - 28% and rutile making up almost all the remaining heavy mineral. This "monazite-enriched granite" covers much of the Minta Est permit and the northern reaches of the Yong North permit.

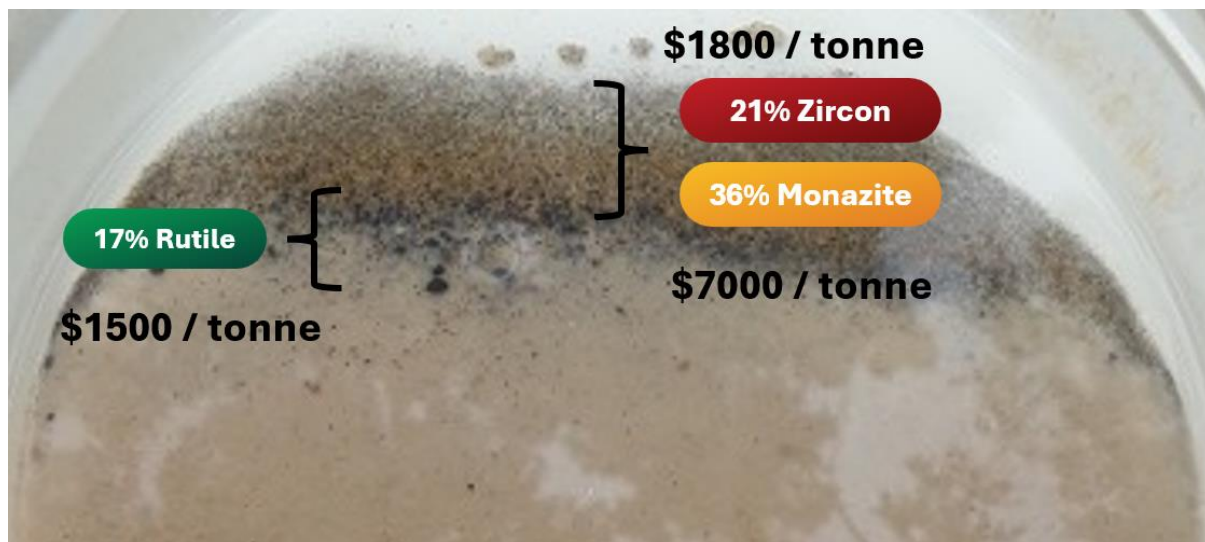


Figure 3: Panned concentrate RE0014 from primary tributary demonstrating the high-value of assemblage of rutile, monazite and zircon⁴.

⁴ Refer ASX release dated 4 February 2025 for further information.

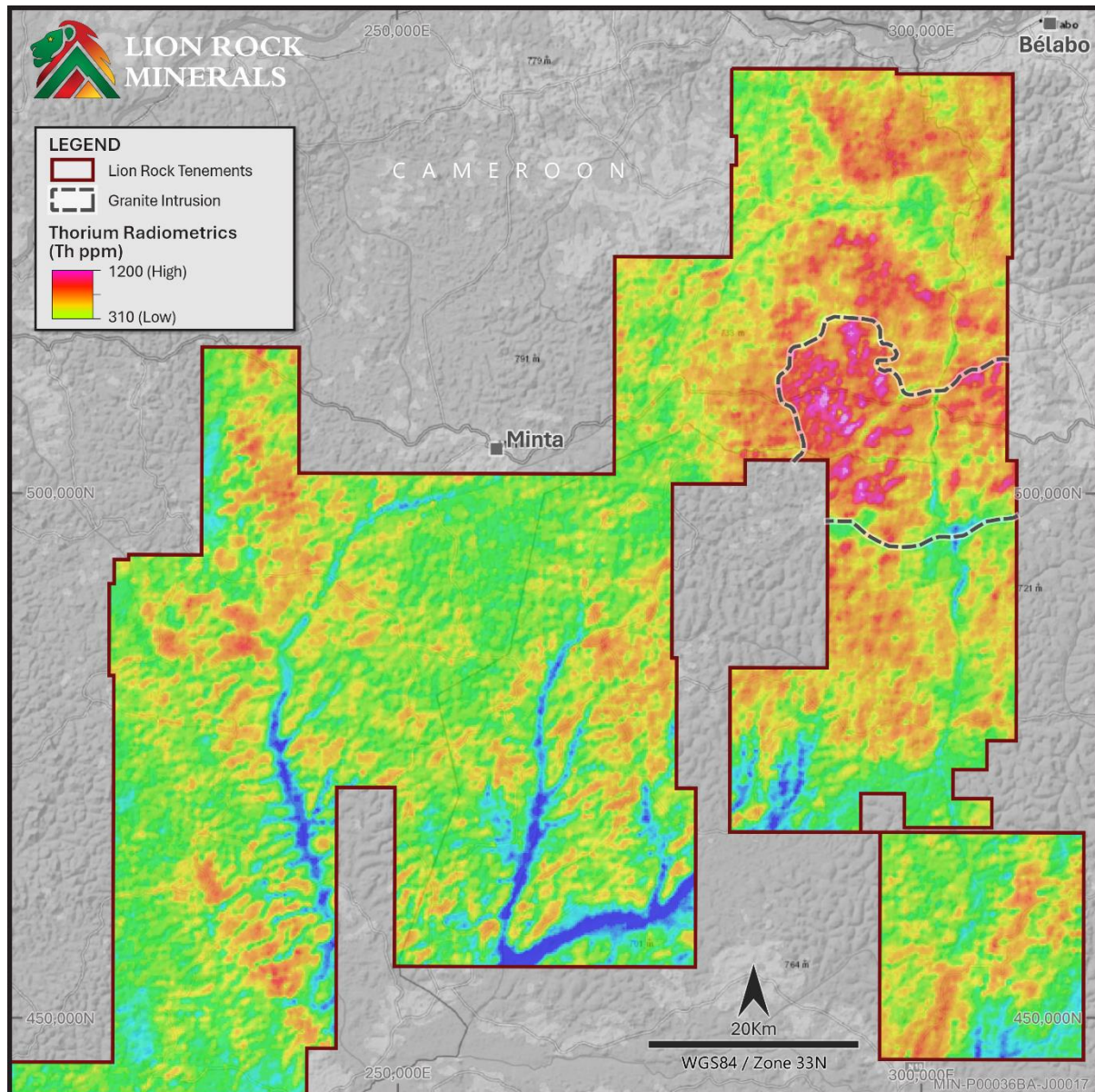


Figure 4: Regional map of Lion Rock's tenure indicating the uniqueness of the "monazite-enriched granite" intrusion across the broader region. Demonstrating the source of the monazite and zircon mineralisation.

Lion Rock Competent Person, Richard Stockwell, commented:

"It was obvious that the spectacular Monazite grades discovered in alluvial grabs at Minta Est required a high-grade source and the coarseness of the Monazite suggested it was nearby. The discovery of the high-Th grade monazite granite expedites the targeting process and allows infill drilling to commence immediately with an expanded field team and equipment inventory. Accompanying high-grade zircon and rutile, plus the potential for xenotime, creates a very attractive mineral assemblage target at Minta Est.

"Elsewhere work continues on the systematic assessment and infill drilling of high-grade rutile targets. Analysis results continue to be assessed for all valuable mineral species upon their return from our partnered laboratories."

Infill drilling on a 500m diamond grid pattern within the Minta Est permit will target those regions of the highest and most contiguous thorium response in residual soils (refer Figure 5).

Approximately 1,500 hand-auger holes are proposed over and around the “monazite-enriched granite”.

Whilst heavy mineral grades are not expected to be as spectacular as those in heavily concentrated streams, the same high-value assemblage has been observed in residual soils and volumes are expected to mount as work progresses across anomalous areas.

Work continues at pace, governed by the scale of the province secured by Lion Rock and governed by the quantity of locations recording anomalous rutile, monazite and zircon. Field teams have been expanded, additional drill equipment has been sourced, and work continues by the team to complete the fit out and commissioning of a dedicated heavy mineral sands laboratory in Yaoundé.

MINTA EST MONAZITE AND XENOTIME

The Thorium anomalism evident at Minta Est extends beyond the government-mapped granite intrusion (refer Figure 5). Infill drilling will allow for testing of these anomalous zones.

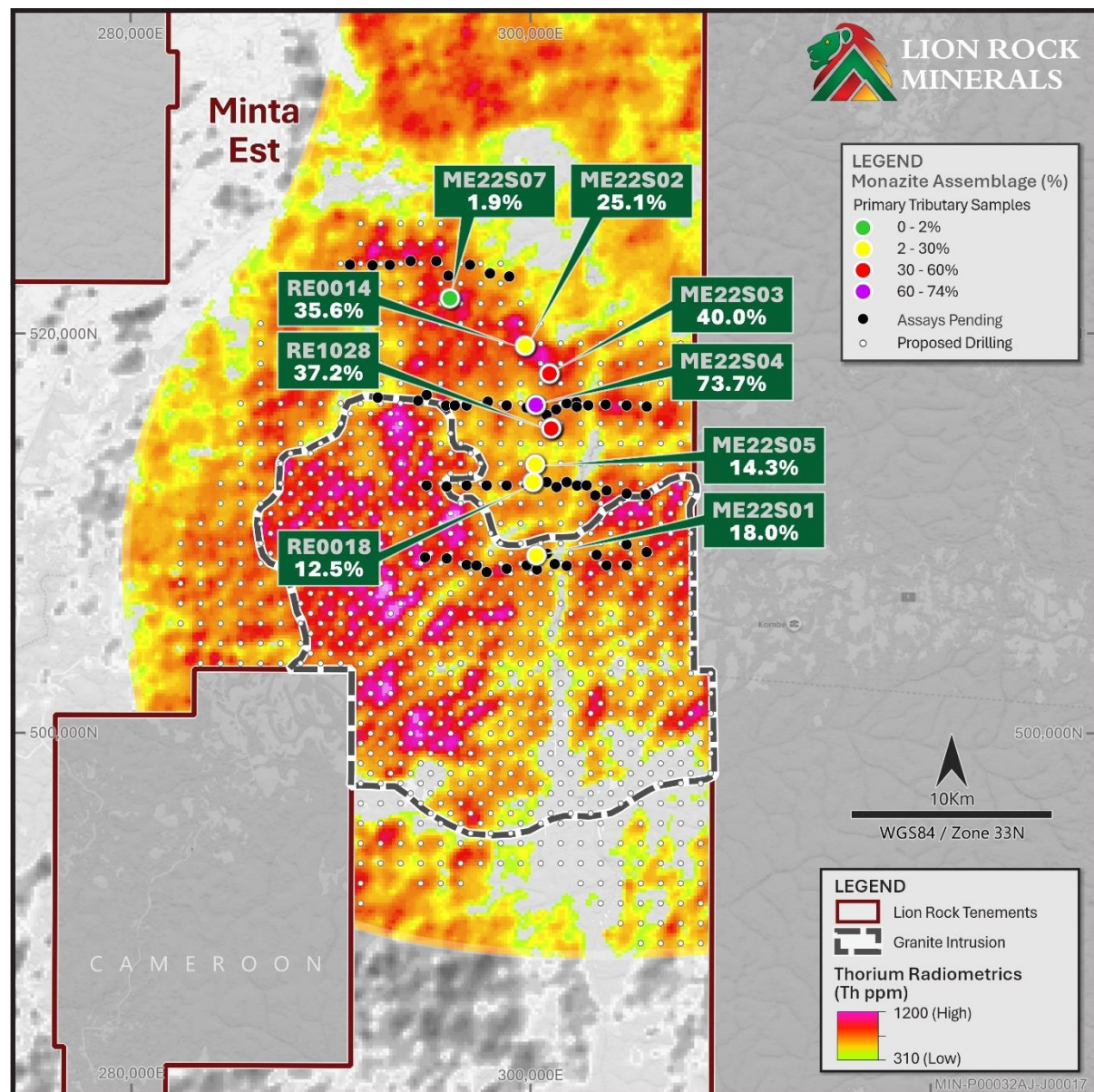


Figure 5: Thorium radiometric high zones and solid geology outline of granite intrusion indicate the “Monazite-enriched granite” at Minta Est. Monazite results and samples currently pending are shown alongside proposed infill drilling program.

The broad concept of the drilling program is shown in Figure 5, where a 500mN by 500mE diamond-pattern drilling program will be applied prioritising the largest and highest response anomalies. Work will continue to define exploration targets in the high-monazite grade alluvial areas draining the monazite granite.

Minta Est monazite has appreciable levels of high-value light rare earth elements neodymium and praseodymium (up to 22.5% combined) and heavy rare earth elements dysprosium and terbium (up to 2.7% combined) as previously reported⁵ and depicted in Table 1 below. China has announced export controls on several rare-earth elements which are highlighted – a number of which are significantly enriched in the Minta Est monazite concentrate. The US Department of the Interior has also recently announced that Samarium (up to 3.1%) is now the most vulnerable critical mineral⁶.

Geochemical analysis of the monazite concentrate sample RE1028⁷ showed elevated Yttrium (1.2%) and elevated heavy rare-earths Dy and Tb (up to 2.7% of TREO). These two elevated elements and the coincident enrichment in Y are a strong indicator of the presence of heavy rare-earth-rich xenotime mineralisation.

Table 1: Minta Est Monazite Rare Earth Oxide distribution as a proportion of TREO from primary tributary samples at Minta Est, with rare-earth elements currently under China export control highlighted.

SAMPLE	La ₂ O ₃ %	CeO ₂ %	Pr ₆ O ₁₁ %	Nd ₂ O ₃ %	Sm ₂ O ₃ %	Eu ₂ O ₃ %	Gd ₂ O ₃ %	Tb ₄ O ₇ %	Dy ₂ O ₃ %	Ho ₂ O ₃ %	Er ₂ O ₃ %	Tm ₂ O ₃ %	Yb ₂ O ₃ %	Lu ₂ O ₃ %
ME22S01	19.6	41.2	5.0	16.1	2.8	1.1	2.8	1.0	1.6	0.7	1.5	1.9	2.2	2.5
ME22S02	20.2	41.2	4.8	16.4	2.8	0.9	2.8	0.9	1.4	0.7	1.4	1.8	2.1	2.4
ME22S03	18.9	41.5	5.0	16.6	3.8	0.9	3.5	0.8	1.8	0.6	1.2	1.5	1.6	2.2
ME22S04	20.4	41.8	4.8	15.8	2.9	1.1	2.7	0.9	1.2	0.7	1.2	2.0	2.2	2.5
ME22S05	19.7	40.9	4.9	16.5	3.0	1.2	2.8	0.9	1.2	0.7	1.3	2.0	2.2	2.6
ME22007	20.0	40.9	5.1	15.7	2.5	1.2	2.5	1.1	1.5	0.7	1.4	2.1	2.4	2.8
RE1028	22.7	46.6	5.1	17.5	3.1	0.2	1.8	0.2	0.6	0.1	0.1	0.0	0.1	0.0

WHAT IS XENOTIME?

Xenotime is a rare earth phosphate mineral that is a key source of heavy rare earth elements (HREEs) such as dysprosium (Dy), terbium (Tb), yttrium (Y), erbium (Er), and ytterbium (Yb). These elements are critical for advanced technologies including high-temperature magnets, defense systems, and solid-state lasers. Xenotime-bearing mineral sands are one of the richest sources of heavy rare earths available globally.

Unlike monazite and bastnäsite, which are enriched in light rare earths (Nd, Pr, La, Ce), xenotime is distinctly HREE-dominant, making it strategically important for diversifying supply chains reliant on heavy rare earths that are scarce outside China.

HREEs such as dysprosium (Dy), terbium (Tb), and lutetium (Lu) command significantly higher market prices than light rare earths due to their relative scarcity, complex separation requirements, and critical roles in high-performance technologies. Dy and Tb are indispensable for enhancing the high-temperature performance of permanent magnets used in electric vehicles and defense applications, while Lu has niche but high-value uses in medical imaging and scintillators. Samarium (Sm), though technically a middle REE, also trades at a premium to most light REEs due to its use in SmCo magnets for aerospace and defense. In contrast, light rare earths such as lanthanum (La), cerium (Ce), and even neodymium (Nd) are more abundant and widely produced, resulting in lower unit prices. The sustained price differential underscores the

⁵ Refer ASX release dated 19 June 2025 for further information.

⁶ <https://www.forbes.com/sites/noelfletcher/2025/10/30/us-names-samarium-as-most-vulnerable-critical-mineral/>

⁷ Refer ASX release dated 19 June 2025 for further information.

strategic and economic importance of heavy rare earth-rich minerals such as xenotime in securing non-Chinese supply chains.

Xenotime typically occurs as a heavy mineral within mineral sands deposits, often intergrown with zircon. It can also be found in hydrothermal veins and granitic pegmatites, though mineral sands xenotime is generally preferred due to easier mining and processing. Like monazite, mineral sands xenotime deposits are mined by free-dig or dredging methods, avoiding the need for blasting or crushing. This provides lower-cost extraction and simpler logistics.

Given the growing demand for HREEs in permanent magnets and the limited number of high-grade xenotime resources globally, xenotime is increasingly viewed as a strategic complement to monazite in building resilient, diversified rare earth supply chains.

WHAT IS SAMARIUM?

Samarium (Sm) is a heavy rare-earth metal of the lanthanide series, prominently used in high-performance samarium-cobalt (SmCo) permanent magnets, advanced nuclear reactor control rods, and high-temperature applications such as aerospace and defence. Its criticality has recently been underscored by United States Geological Survey (**USGS**), where samarium emerges as the mineral with the highest probability-weighted economic impact in the event of a one-year supply disruption for the U.S. economy⁸.

Unlike more abundant light rare-earths such as neodymium (Nd) or praseodymium (Pr), samarium is far scarcer in economically recoverable concentrates, and is heavily sourced and processed through supply-chains dominated by a small number of jurisdictions (notably China). The USGS's 2025 draft methodology ranked samarium at the top among all 84 mineral commodities analysed in terms of supply disruption risk⁹.

Because samarium is used in magnets for precision guidance systems, aerospace actuators and military hardware (where high thermal stability and resistance to demagnetisation are important), its secure procurement is a strategic priority. The fact that export controls on samarium (and related heavy rare-earths) have already been imposed by China reinforces the urgency of establishing downstream extraction, separation and refining capacity outside that dominance.

In summary, samarium has shifted from being a lesser-noticed rare-earth element to one of the most critical minerals globally - not simply because of its use case, but because of its concentration risk, processing bottlenecks, and strategic relevance. For any supply-chain looking to underpin high-value magnet technologies and allied industrial applications, samarium must now be treated as a top-tier feed-stock in critical-mineral planning.

CAMEROON UPDATE

Drilling: The first-pass, reconnaissance drilling program across the Minta and Minta Est projects is complete with final assays pending. Infill drilling plans are with the in-country team and will commence imminently.

Tenements: The Company continues to work secure additional contiguous areas prospective for monazite, rutile and zircon as identified by the reconnaissance and grab sampling program.

Staff: Staff levels are increasing commensurate with activities in Cameroon. Additional field staff have been trained, and equipment has been sourced. Laboratory staff are being recruited and senior roles for the laboratory and country management have been appointed.

⁸ <https://www.forbes.com/sites/noelfletcher/2025/10/30/us-names-samarium-as-most-vulnerable-critical-mineral/>

⁹ <https://www.usgs.gov/news/science-snippet/departments-interior-releases-draft-2025-list-critical-minerals>

Yaoundé Laboratory: A facility has been identified on the outskirts of Yaoundé. A lease agreement is in place, and a full refurbishment is nearing completion with equipment being sourced.

NEXT STEPS

- Continue prioritised rutile sample assessment downhole and adjacent to prospective rutile results.
- Receive and publish results at Minta Est for monazite, xenotime, rutile and zircon assemblage from reconnaissance samples already taken.
- Commence infill program to target monazite and xenotime at Minta Est and rutile more broadly at the Minta Project.
- Complete Yaounde lab construction, set up and commissioning.
- Finalise recruitment of laboratory and management staff to support expanded field operations and enable faster processing of results.

All planned exploration activities for the remainder of 2025 and 2026 are fully funded.

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This announcement was authorised for release by the Board of Lion Rock Minerals Limited.

MINTA RUTILE PROJECT BACKGROUND¹⁰

The Minta Rutile Project comprises 18 granted exploration permits and three exploration permits under valid application across approximately 8,800km² in a critically under-explored area of known rutile mineralisation in central Cameroon. Initial reconnaissance sampling has assisted in delineating areas of high grade alluvial and residual rutile at Minta and Minta Est with no, or minimal overburden. Zircon, gold and monazite have also been intersected through on-ground reconnaissance sampling at Minta Est.

In addition to elevated fine rutile and other heavy mineral species, large, angular rutile nuggets have been identified across broad areas in recent and historical sampling programs. This additional rutile source has the potential to materially boost total Valuable Heavy Mineral grade in residual and alluvial prospects.

Zones of very high-grade zircon mineralisation are also identified in Minta Est, the easternmost region of the Minta Rutile Project. Initial exploration work had also intersected alluvial and hard rock gold occurrences across the northeastern tenement area at Minta Est that coincides with a geophysical anomaly associated with granitic intrusions.

¹⁰ Refer ASX release dated 5 July 2024 for further information.

COMPETENT PERSON'S STATEMENT

The information contained in this announcement that relates to interpretation from field mapping and radiometric data at the Minta Project, is based on information compiled by Mr. Richard Stockwell, a Competent Person who is a Fellow of The Australian Institute of Geoscientists. Mr. Stockwell is an employee of Placer Consulting Pty Ltd, which holds equity securities in Lion Rock Minerals Limited. Richard has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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. Stockwell consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

The information in this announcement that relates to historical exploration results at the Minta Project in Cameroon, were first reported by the Company in accordance with listing rule 5.7 on the dates identified throughout this ASX release. The Company confirms it is not aware of any new information or data that materially affects the information included in the original announcement.

FORWARD-LOOKING STATEMENTS

This announcement may include forward-looking statements and opinions. Forward-looking statements, opinions and estimates are only predictions and are subject to risks, uncertainties and assumptions which are outside the control of Lion Rock.

Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward-looking statements, opinions or estimates. Actual values, results or events may be materially different to those expressed or implied in this announcement.

Given these uncertainties, readers are cautioned not to place reliance on forward-looking statements, opinions or estimates. Any forward-looking statements, opinions or estimates in this announcement speak only at the date of issue of this announcement. Subject to any continuing obligations under applicable law and the ASX Listing Rules, Lion Rock does not undertake any obligation to update or revise any information or any of the forward-looking statements, opinions or estimates in this announcement or any changes in events, conditions or circumstances on which any such disclosures are based.

APPENDIX 1: *Table of previously reported primary tributary sample results.*

BHID	Sample ID	Northing	Easting	From (m)	To (m)	Monazite Assemblage (%)	Zircon Assemblage (%)	Rutile Assemblage (%)	Target	Sample Type
N/A	ME22S01	508899	300290	-	-	18.0	7.7	17.7	Primary Tributary	Surface grab, panned concentrate
N/A	ME22S02	519383	299726	-	-	25.1	28.1	10.5	Primary Tributary	Surface grab, panned concentrate
N/A	ME22S03	517991	300939	-	-	40.0	20.3	8.4	Primary Tributary	Surface grab, panned concentrate
N/A	ME22S04	516426	300265	-	-	73.7	17.5	3.6	Primary Tributary	Surface grab, panned concentrate
N/A	ME22S05	513452	300235	-	-	14.3	18.4	32.3	Primary Tributary	Surface grab, panned concentrate
N/A	ME22007	521870	296105	0	0.85	1.9	1.8	35.3	Primary Tributary	Auger, panned concentrate
MRAU0003	RE0014	519421	299792	1	2	35.6	21.5	16.7	Primary Tributary	Auger, panned concentrate
MRAU0004	RE0018	512565	300115	0	1	12.5	20.4	40.1	Primary Tributary	Auger, panned concentrate
MRGR0021	RE1028	515242	301026	-	-	37.2	8.2	4.9	Primary Tributary	Surface grab, panned concentrate

Notes:

- Datum is WGS84_33N.
- All drilling completed was vertical.
- All results have been previously announced by the Company. Refer ASX releases dated 4 February 2025 and 19 June 2025 for further information.