

# Quarterly Report

For the quarter ending  
31 December 2023

mtmcriticalmetals.com

MTM Critical Minerals Ltd  
ABN 27 645 885 463

ASX Code: **MTM**

Date Released: 31 January 2024

**MTM**  
CRITICAL METALS



MTM Critical Metals Limited is focused on developing its niobium and rare earth elements projects while advancing its Flash Joule Heating mineral processing and recycling technology.

## Highlights

- Acquired West Arunta Nb-REE Project, prospective for mineralised carbonatites adjacent to WA1 in Western Australia.
- Deal includes acquisition of the Mukinbudin Nb-REE Project in WA's South West Mineral Field.
- Also acquired an option to licence Flash Joule Heating recycling and processing technology.
- Reported new broad zones of rare earth elements (REE) and niobium (Nb) mineralisation and further total rare earth oxides (TREO) intercepts reported at Pomme REE-Nb Project, Québec
  - POM-23-13: **330m @ 0.34% TREO & 0.02% Nb<sub>2</sub>O<sub>5</sub>**
  - POM-23-11: **468.35m @ 0.29% TREO & 0.06% Nb<sub>2</sub>O<sub>5</sub>** including **74.75m @ 0.47% TREO & 0.06% Nb<sub>2</sub>O<sub>5</sub>**.
- MTM expands REE acreage in Canada.
- Encouraging beneficiation results received for East Laverton REE clays project.

# Flash Metals Pty Ltd acquisition

In December, MTM announced it had entered into a binding agreement to acquire 100% of Flash Metals Pty Ltd, the beneficial owner of three key exploration licenses prospective for niobium (Nb) and rare earth elements (REE) in the West Arunta region of Western Australia.

Covering around 140km<sup>2</sup>, the three granted West Arunta Nb-REE licences (E80/5858, E80/5874 and E80/5875) are located immediately adjacent to tenements held by WA1 Resources Limited (ASX:WA1, \$455m mkt. cap<sup>1</sup>.) and Encounter Resources Limited (ASX:ENR, \$110m mkt. cap<sup>1</sup>.), where niobium-REE mineralised carbonatites have recently been discovered:

- **WA1:** **P2 Carbonatite Discovery:** 54m @ 0.62% Nb<sub>2</sub>O<sub>5</sub> ending in 2m @ 1.22% Nb<sub>2</sub>O<sub>5</sub>  
**Luni Carbonatite Discovery:** 31m @ 3.5% Nb<sub>2</sub>O<sub>5</sub> incl. 13m @ 5.0% Nb<sub>2</sub>O<sub>5</sub>  
 24m @ 2.1% Nb<sub>2</sub>O<sub>5</sub> incl. 10m @ 4.0% Nb<sub>2</sub>O<sub>5</sub>  
 21m @ 2.2% Nb<sub>2</sub>O<sub>5</sub> incl. 12m @ 3.2% Nb<sub>2</sub>O<sub>5</sub>
- **ENR:** **Crean Carbonatite Discovery:** 282m @ 0.54% Nb<sub>2</sub>O<sub>5</sub> & 0.17% TREO from 64m  
**Hurley Carbonatite Target:** Large scale mineralised carbonatite, open at depth

The West Arunta region is one of Australia's critical metal exploration hotspots with over \$60m in exploration expenditure collectively invested in the district by a number of ASX companies including Rio Tinto Limited (JV with Tali Resources Pty Ltd) (ASX:RIO), CGN Resources Limited (ASX:CGR), and IGO Limited (ASX:IGO).

The Flash transaction also includes the acquisition of the Mukinbudin Nb-REE Project, comprising two exploration licences, (E70/6048 and E70/6359) located 250km northeast of Perth in the South West Mineral Field of Western Australia. REE mineralisation has been locally reported by Codrus Minerals and Caprice Resources.

As part of the Flash Metals transaction, MTM has also acquired an option to licence a processing and recycling technology for REE and other critical minerals known as Flash Joule Heating (FJH), which has been developed by researchers at Rice University in the USA.

## Deal Overview

MTM has agreed to pay Flash:

- a) A non-refundable \$10,000 fee (which has previously been paid).
- b) 100 million fully paid ordinary shares of MTM and 50 million MTMO listed options;
- c) 37.5m performance rights and 15m unquoted options with an exercise price of \$0.25 and an expiry date of 30 December 2026 vesting equally across three milestones:
  1. Drilling results of > 10m at > 1,000ppm REE and/or > 0.5% Nb<sub>2</sub>O<sub>5</sub>;
  2. JORC inferred resource of > 10MT at > 1,000ppm REE and/or > 0.5% Nb<sub>2</sub>O<sub>5</sub>
  3. JORC inferred resource of > 20MT at > 1,000 ppm REE and/or > 0.5% Nb<sub>2</sub>O<sub>5</sub>

<sup>1</sup> As quoted by ASX on Thursday 18 January 2024 [asx.com.au](http://asx.com.au)

# West Arunta Niobium & Rare Earths Project

Western Australia, Australia

The West Arunta Nb-REE Project comprises three exploration licences totalling 140km<sup>2</sup> immediately adjacent to tenements held by WA1 Resources Ltd (ASX:WA1) near the Luni Carbonatite Discovery and the P2 Carbonatite Discovery; and Encounter Resources Ltd (ASX:ENR) where Nb-REE mineralised carbonatites have recently been discovered.

Historical exploration within the West Arunta tenement areas is very limited. There has been no drilling on the ground, nor have any systematic geochemical sampling or geophysical surveys been completed. The West Arunta region has historically been explored for gold and copper with reconnaissance airborne geophysics and limited ground geophysical and geochemical surveys.

The immediate focus will be to complete heritage agreements and commence a reconnaissance exploration program.

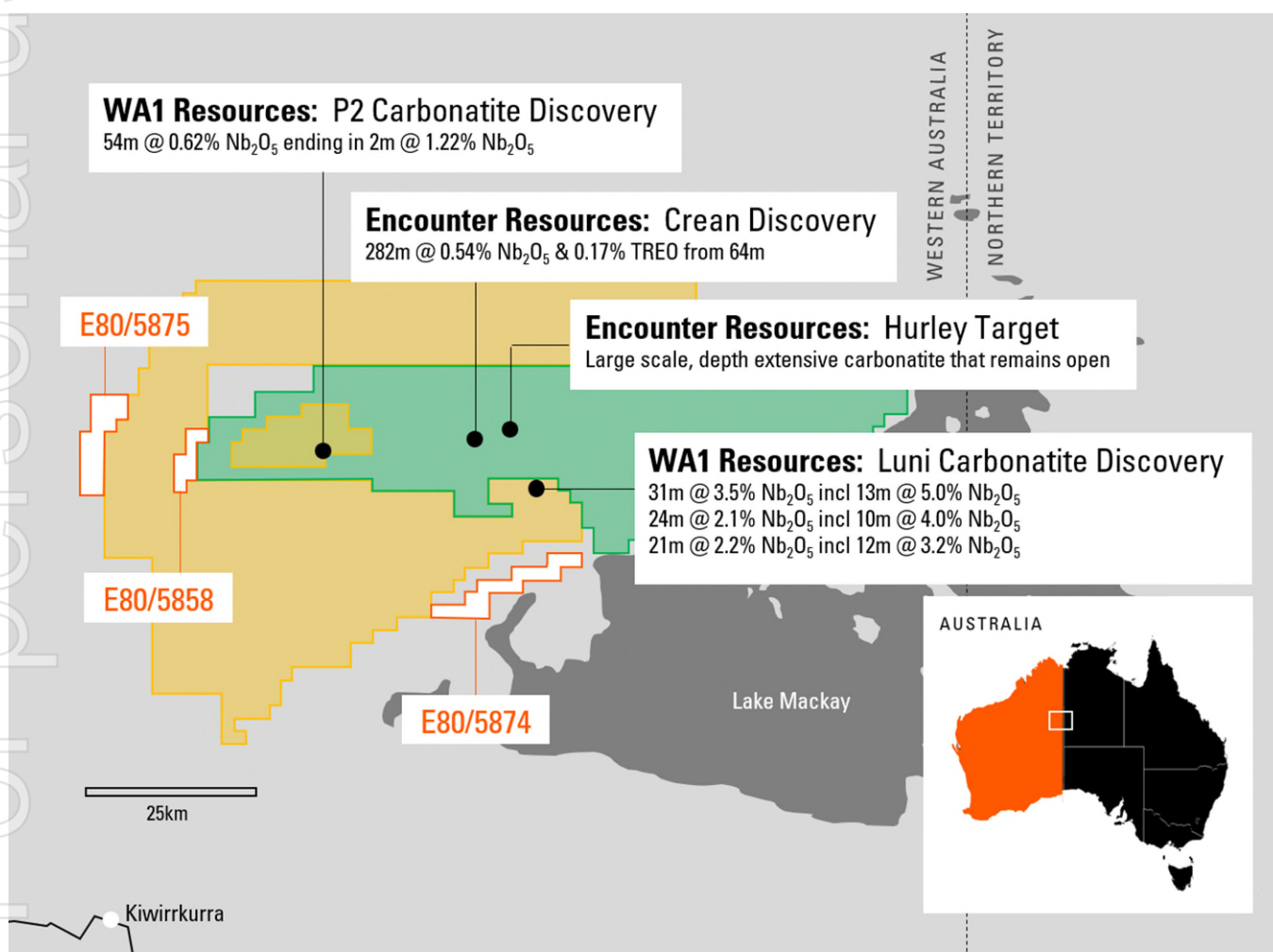


Figure 1. The West Arunta Nb-REE Project location.

# Mukinbudin Niobium & Rare Earths Project

Western Australia, Australia

The Mukinbudin Nb-REE Project comprises two exploration licences (E70/6048 and E70/6359) located 250km northeast of Perth in the South West Mineral Field of Western Australia.

In May 2023, Mukinbudin took its place on the global critical minerals stage when two separate companies with two separate projects in close proximity to MTM's new acreage announced significant REE results within hours of each other. Codrus Minerals' (ASX:CDR) clay-hosted Karloning Project provided instant success when the first drill-hole completed in its maiden dill program hit a significant zone of high-grade REE mineralisation. Meanwhile, Caprice Resources (ASX:CRS) identified a significant 300m long anomaly which returned elevated readings up to 3,761ppm rare earth oxides in rock chip and soil samples.

Tenement E70/6048 lies over the site of the Calcing Pegmatite and was previously mined for feldspar in a small open pit.

The immediate priority is to commence compilation of historical data over the tenement areas and commence planning of an exploration program for REE and for lithium, which may be associated with the known pegmatites in the district. The areas are easily accessible by sealed road from Perth and then via local roads and farming tracks.

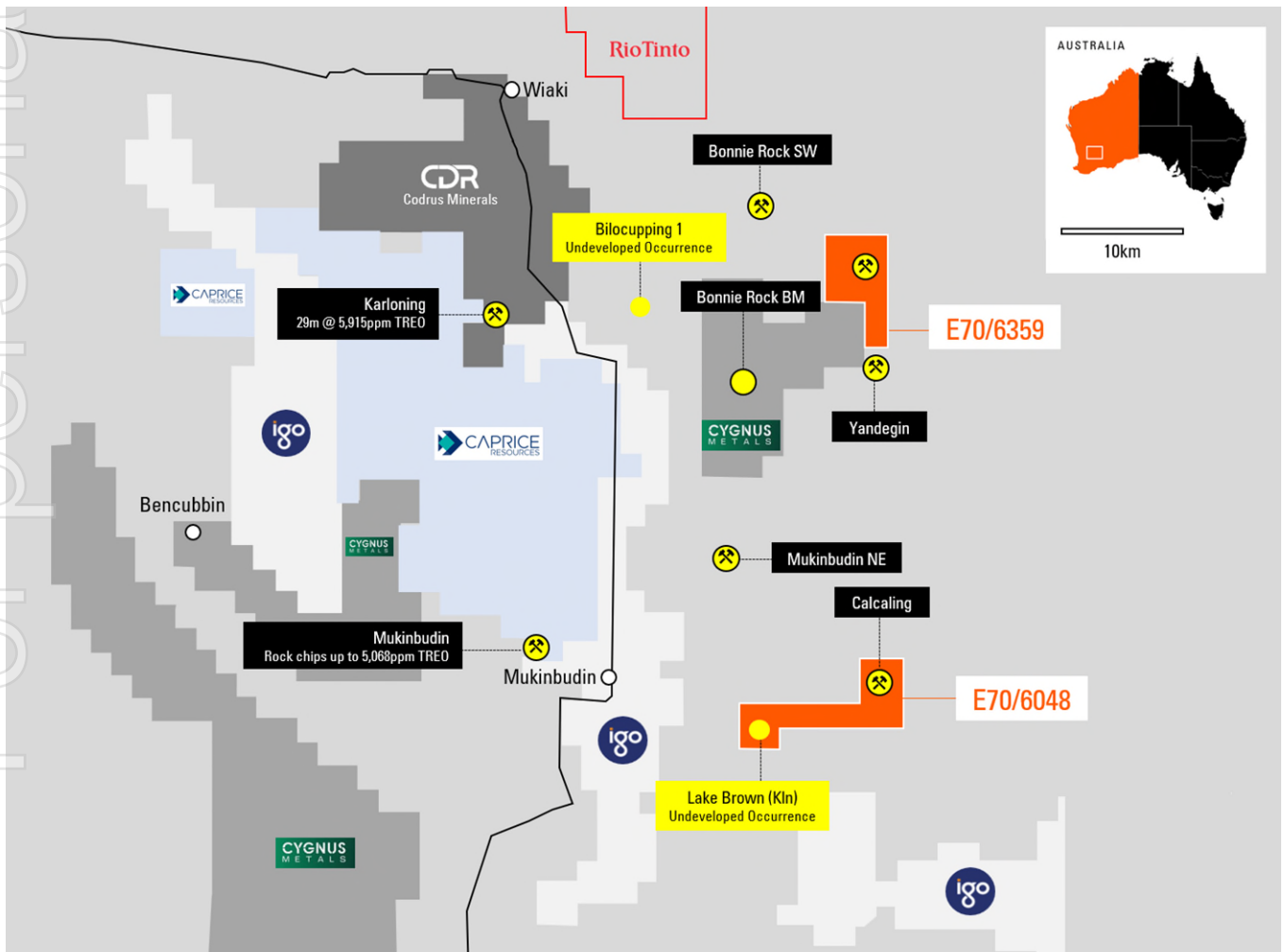


Figure 2. The Mukinbudin Nb-REE Project location.

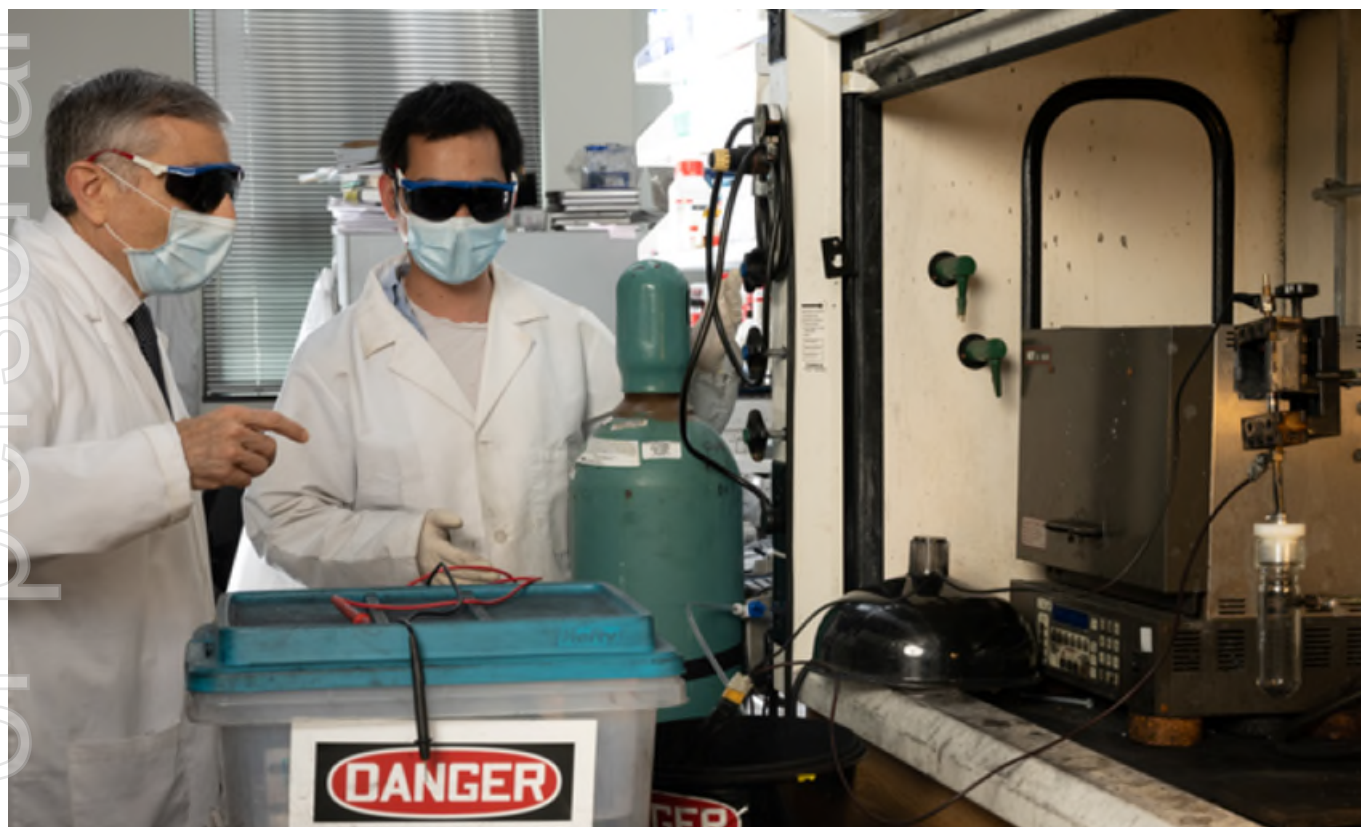
## Flash Joule Heating Technology

**Flash Joule Heating (FJH) is a processing and recycling technology being developed to extract critical metals like REE, nickel, cobalt and lithium from natural mineralisation and from waste material.**

As part of the Flash Metals transaction, MTM has acquired an option to licence the FJH, which has been developed by researchers at Rice University in the USA. Rice has had previous ASX successes including Weebit-Nano Ltd (ASX:WBT, over \$700M mkt cap) and Universal Matters.

The technology involves the rapid and intense heating of material to volatilise metals to make them more amenable to extraction with conventional acid leaching. Its application for treating REE mineralisation could unlock immense value from otherwise economically marginal deposits. Notably, the recycling of lithium-ion batteries, e-waste, coal fly ash and bauxite residue offers an exciting recycling application to more efficiently recover critical metals including REE, precious metals and battery minerals.

FJH ushers in an exciting new era for MTM, with the potential to deliver critical minerals directly to the world's largest markets economically and sustainably while building the world's largest inventory of REEs.



**Figure 3.** Flash Joule Heating is being developed by Rice University in Houston, USA which has had previous ASX successes including Weebit-Nano Ltd and Universal Matters.

# Pomme Rare Earths-Niobium Project

Québec, Canada

The Pomme REE-Nb Project is a known carbonatite intrusion located in south-western Québec, Canada (Figure 4). The Project has exceptional results from a recently completed drilling program, showing enrichment in rare earth elements (REE) and niobium (Nb) and is considered to be an extremely prospective exploration target.

Pomme is located adjacent to the world-class Montviel REE-Nb deposit (owned by Geomega Resources Inc), that has a defined total indicated and inferred resource of 266 million tonnes (Mt) @ 1.45% TREO & 0.14% Nb<sub>2</sub>O<sub>5</sub>.

MTM has entered into a binding option agreement with Geomega Resources to acquire a 100% interest in the Pomme claims and is now advancing exploration at Pomme to discover a REE-Nb resource.

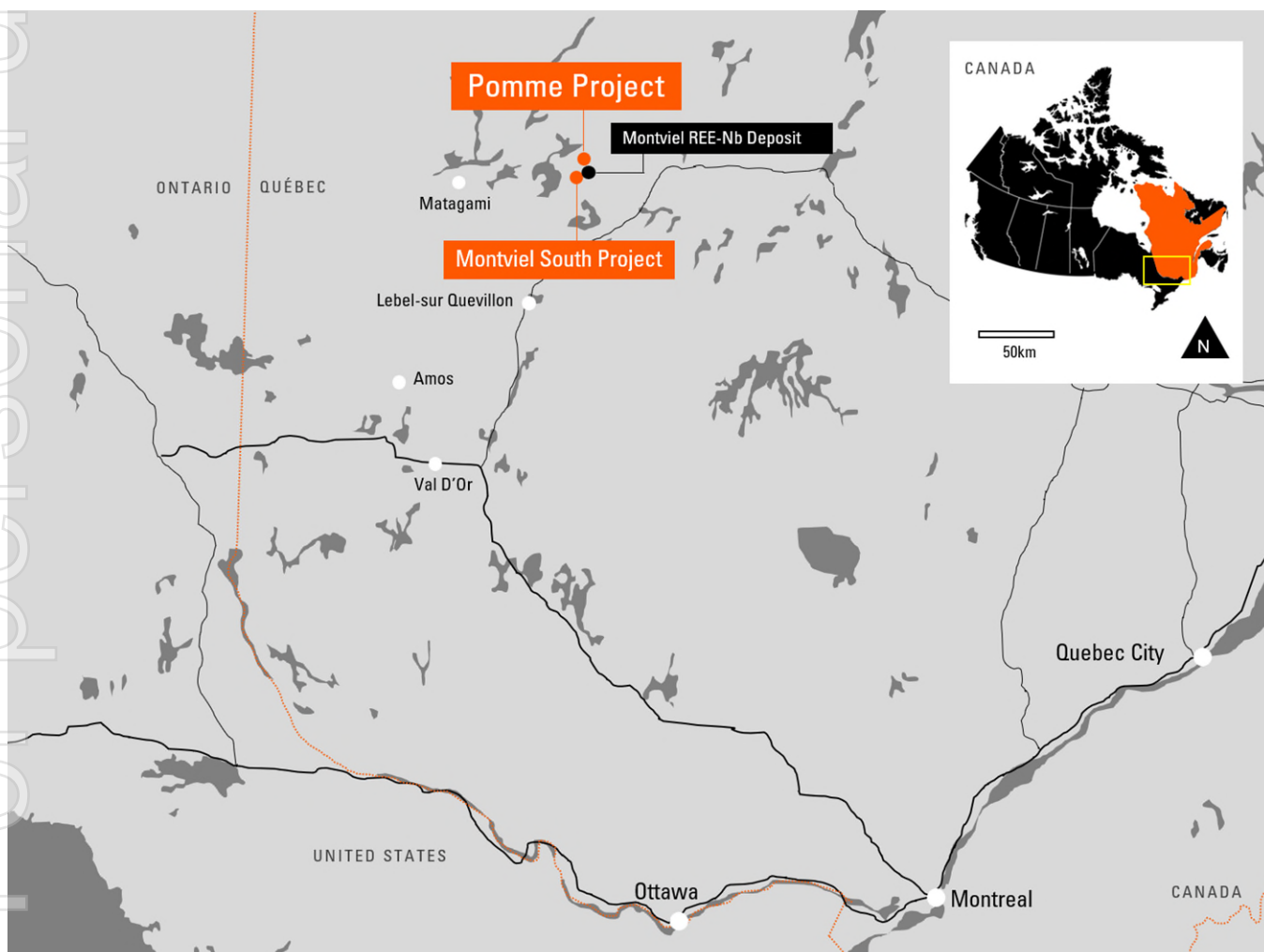


Figure 4. Pomme REE-Nb Project location.

### New broad zones of REE-Niobium mineralisation identified

In September 2023, MTM completed a 13-hole program over 5,718m at Pomme. The latest diamond drilling results, announced in January 2024 subsequent to the end of the quarter, further confirm REE and niobium mineralisation over broad intervals in previously untested parts of the Pomme carbonatite complex.

- **Hole POM-23-13** intersected **330m @ 0.34% TREO & 0.02% Nb<sub>2</sub>O<sub>5</sub>** (from 71.7m) including a number of zones greater than 0.6% TREO and locally up to 2.0% TREO.
- **Hole POM-23-11** intersected **468.35m @ 0.29% TREO & 0.06% Nb<sub>2</sub>O<sub>5</sub>** (from 22.65m), including 74.75m @ 0.47% TREO & 0.06% Nb<sub>2</sub>O<sub>5</sub> (from 252m).

MTM has been announcing drilling results since September last year. Drilling highlights were:

- **Hole POM-23-05** **276m @ 0.37% TREO & 0.08% Nb<sub>2</sub>O<sub>5</sub>** (from 225m) including:  
**9.0m @ 0.94% TREO & 0.02% Nb<sub>2</sub>O<sub>5</sub>** (from 226.5.5m) including  
**3.8m @ 1.46% TREO & 0.01% Nb<sub>2</sub>O<sub>5</sub>**  
**57m @ 0.47% TREO & 0.10% Nb<sub>2</sub>O<sub>5</sub>** (from 375m) including:  
**3.4m @ 1.99% TREO & 0.02% Nb<sub>2</sub>O<sub>5</sub>**  
**63.5m @ 0.48% TREO & 0.06% Nb<sub>2</sub>O<sub>5</sub>** (from 437.5m to EOH) including:  
**12.7m @ 1.04% TREO & 0.04% Nb<sub>2</sub>O<sub>5</sub>**
- **Hole POM-23-04:** **266.2m @ 0.22% TREO & 0.04% Nb<sub>2</sub>O<sub>5</sub>** (from 36.8m), including:  
**39.5m @ 0.46% TREO & 0.05% Nb<sub>2</sub>O<sub>5</sub>** (from 79m) including  
**4.25m @ 0.88% TREO & 0.07% Nb<sub>2</sub>O<sub>5</sub>**
- **Hole POM-23-08:** **149.5m @ 0.32% TREO & 0.05% Nb<sub>2</sub>O<sub>5</sub>** (from 122m), including:  
**1.5m @ 1.31% TREO & 0.06% Nb<sub>2</sub>O<sub>5</sub>** (from 79m)
- **Hole POM-23-07:** **20.3m @ 0.79% TREO & 0.03% Nb<sub>2</sub>O<sub>5</sub>** (from 225m), including:  
**1.6m @ 1.25% TREO & 0.06% Nb<sub>2</sub>O<sub>5</sub>** (from 170.5m) and  
**4.25m @ 0.88% TREO & 0.07% Nb<sub>2</sub>O<sub>5</sub>**  
**47.8m @ 0.30% TREO & 0.07% Nb<sub>2</sub>O<sub>5</sub>** (from 190.8m)  
**106.5m @ 0.27% TREO & 0.04% Nb<sub>2</sub>O<sub>5</sub>** (from 249.0m)  
**47.5m @ 0.42% TREO & 0.05% Nb<sub>2</sub>O<sub>5</sub>** (from 378.0m), including:  
**6.0m @ 0.60% TREO & 0.06% Nb<sub>2</sub>O<sub>5</sub>** (from 387.0m) and  
**1.0m @ 1.80% TREO & 0.04% Nb<sub>2</sub>O<sub>5</sub>** (from 401.9m) and  
**1.25m @ 3.34% TREO & 0.03% Nb<sub>2</sub>O<sub>5</sub>** (from 419.5m)

Assays confirm that a significant proportion of the TREO grade is high value magnet REE mineralisation - neodymium (Nd) and praseodymium (Pr).

All assays have now been received for the Pomme diamond drilling program and modelling of results are underway to plan follow-up work during the next field season in Quebec.

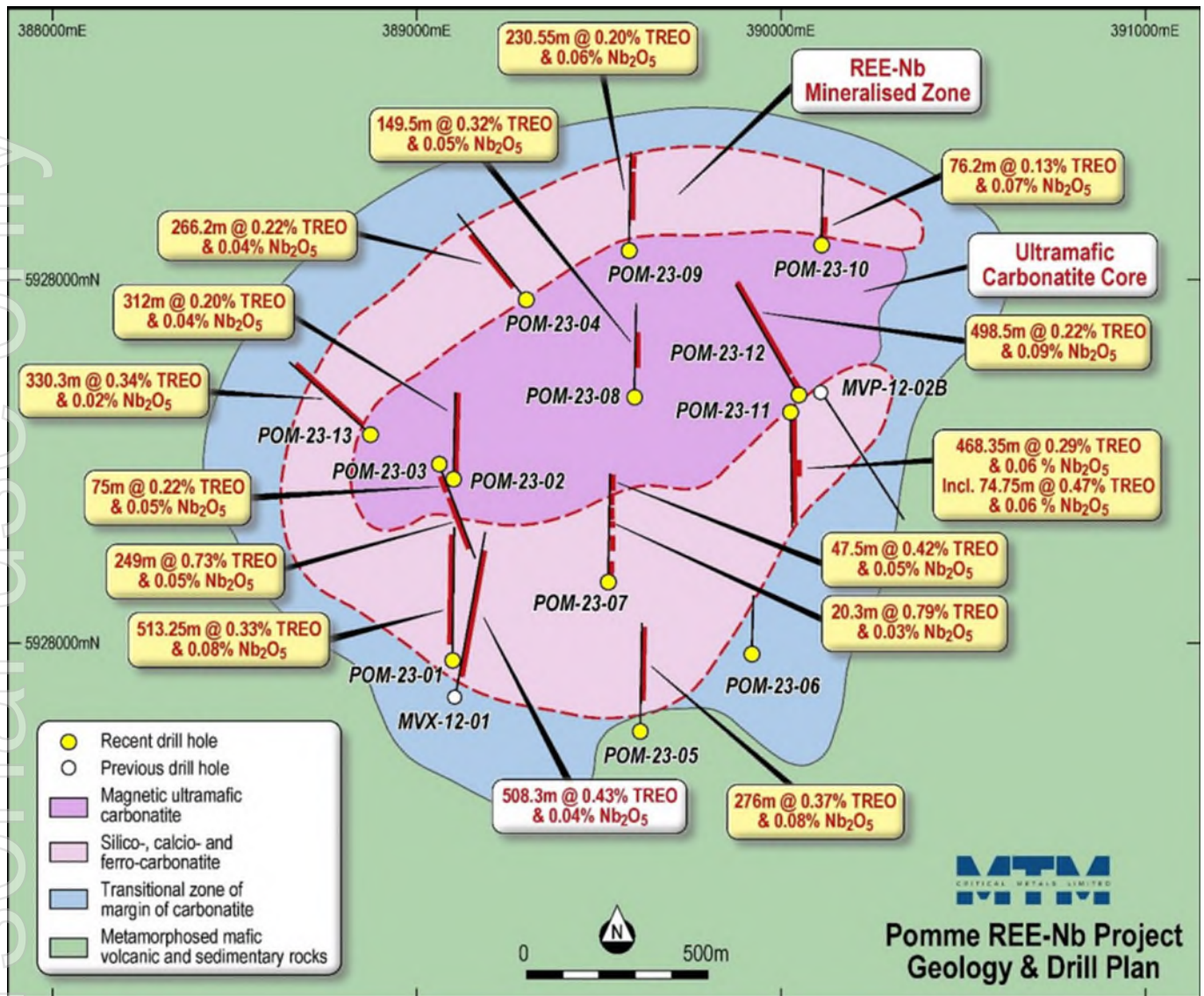


Figure 5 Drill status map of the Pomme project, showing current and historical drill hole locations overlain on simplified interpreted basement geology diagram.

**New deal to expand MTM’s REE-Nb acreage in Canada**

In October 2023, MTM announced it had bolstered its portfolio of highly prospective REE-Nb targets in southern Quebec, Canada, entering into a second binding option agreement with Geomega Resources Inc. to acquire a 100% interest in the Montviel South Project. The new project is located 10km south of MTM’s Pomme Project.



# East Laverton Rare Earths Project

Western Australia, Australia

The East Laverton Project covers 1,900km<sup>2</sup> in the prolific Eastern Goldfields region of Western Australia and hosts an emerging district-scale REE mineralisation opportunity at Point Kidman in the north of the project as well as gold and base metals anomalies at Seahorse in the south.

## Encouraging beneficiation results for REE clays at Point Kidman prospect

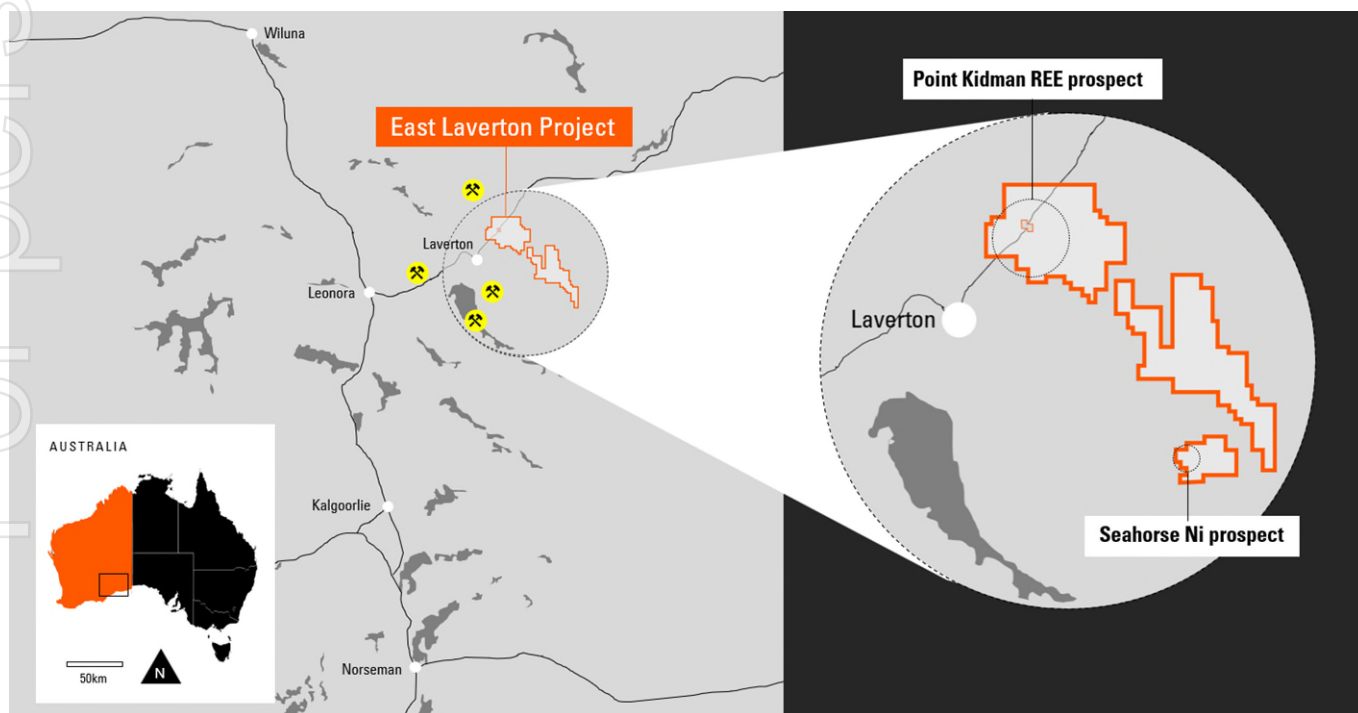
During the quarter, MTM received the results of preliminary metallurgical test work on four composite drilling samples collected from the Point Kidman REE prospect, which showed that there are significant opportunities to potentially optimise the future processing of the clay-hosted mineralisation. This is a major step forward in proving the economic viability of a rare earth deposit at East Laverton.

Basic metallurgical tests including analysis of different size fractions and leach tests were completed to evaluate recovery of REEs from widespread clay-hosted mineralisation identified by previous aircore drilling.

The Company was encouraged by the substantial uplift in head grade and rejection of low-grade material that can be achieved by simple particle size separation.

## Size Fraction Analysis

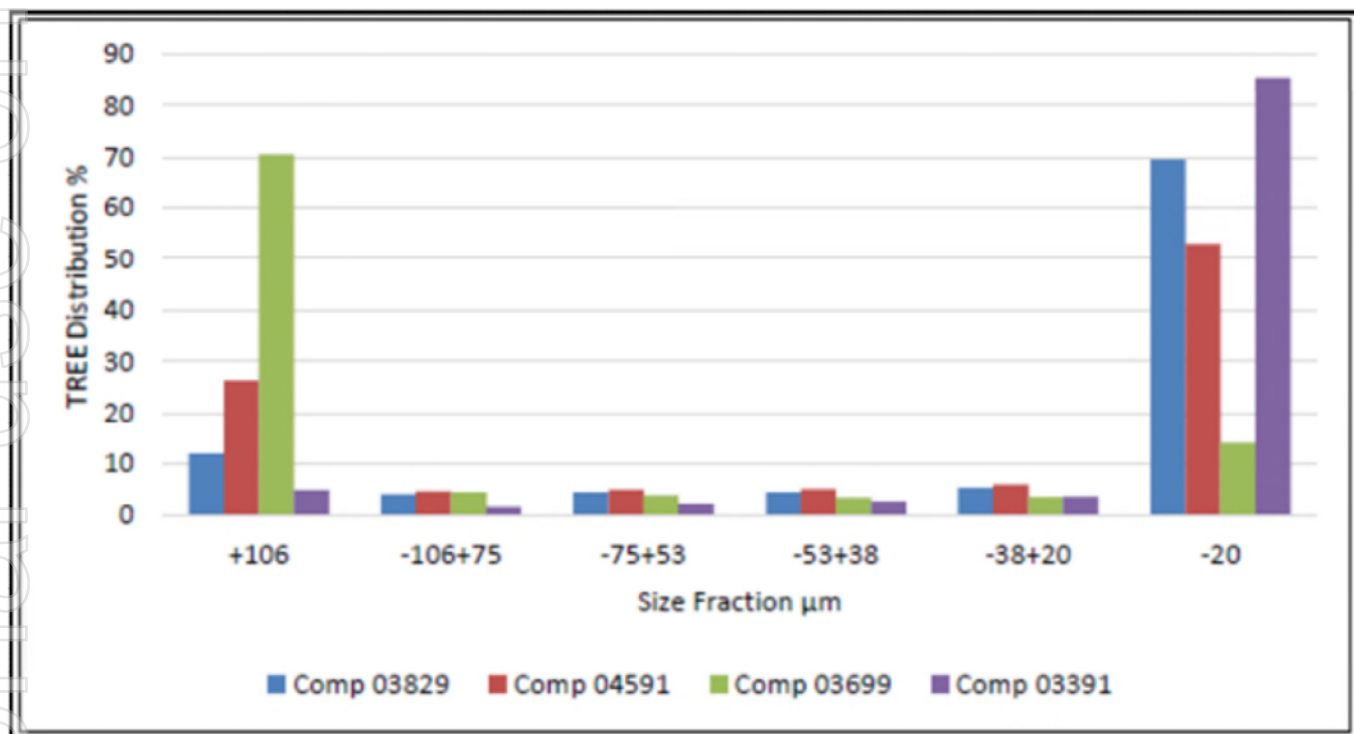
Sizing analysis work has demonstrated that the REE mineralised material is highly amenable to upstream beneficiation as the majority of the REEs are apparently hosted in the ultrafine -20 μm (less than 20 micron) size fraction. REE grade can potentially be significantly increased, and waste material removed, by adopting simple mineral beneficiation techniques during processing.



**Figure 6.** East Laverton Project location diagram showing prospect areas.

For the sizing analysis, a 500g split was prepared from each of the metallurgical sample composites and was screened at 106, 75, 53, 38 and 20  $\mu\text{m}$  particle size. The distribution of REE throughout the size fractions of each sample is summarised in Figure 7 below, indicating that a large portion of the REE report to the -20  $\mu\text{m}$  size fraction.

Overall sizing results indicate that the -20  $\mu\text{m}$  fraction contains more than half of the TREE for all samples except 03699, where the majority of REE was retained in the coarser +106  $\mu\text{m}$  fraction.



**Figure 7.** Total REE distribution in different size fractions for all composite samples.

Screening of the samples at a particle size of +106  $\mu\text{m}$  allow for the following:

- Mass recoveries to the fine fraction (-106  $\mu\text{m}$ ) ranging from 22.0% to 62.5%, averaging 45.6%;
- TREE recoveries to the fine fraction ranging from 29.4% to 95.1%, averaging 76.1%;
- Excluding the results from sample 03699, mass recovery averaged 53.4% and TREE recovery averaged 85.6%.

Results indicate minimal difference in the distribution between the HREE and LREE throughout the samples.

Analysis of the different fraction sizes show that removal of coarse size particles substantial increases in TREE grades, with the average grade generally increasing in progressively finer particle sizes.

An average of  $\sim 100\%$  upgrade from the TREE head grade assay and  $\sim 75\%$  upgrade from the MREE head grade assay was achieved in the finest -20  $\mu\text{m}$  fraction (Table 1). The best result achieved was a 132% increase in TREE (sample 04591), where the grade increased from a head grade of 3,071 ppm to 7,120 ppm TREE, albeit with a reduced TREE recovery of 52.9% TREE.

Results indicate minimal difference in the distribution between the HREE and LREE throughout the samples.

Analysis of the different fraction sizes show that removal of coarse size particles substantial increases in TREE grades, with the average grade generally increasing in progressively finer particle sizes.

An average of  $\sim 200\%$  upgrade from the TREE head grade assay was achieved in the finest -20  $\mu\text{m}$  fraction (Table 1). The best result achieved was a 232% increase (sample 04591), where the TREE grade increased from a head grade of 3,071 ppm to 7,120 ppm TREE, albeit with a TREE recovery of 52.9% TREE.

**Table 1:** TREE recovery, grade uplift and mass removed using 'ultrafine' -20 µm size fraction.

-20 µm fraction	Comp Sample 03391	Comp Sample 03699	Comp Sample 03829	Comp Sample 04591
TREE mass distribution (%)	85.3	14.1	69.6	52.9
TREE grade uplift (%) <sup>1</sup>	210	151	202	232
Mass removed (%) <sup>2</sup>	58.5	91.8	65.1	76.1

<sup>1</sup> compared to head grade assay<sup>2</sup> compared to head sample

### Leaching Analysis

Preliminary metallurgical leaching tests have also been received for the samples of REE-enriched clays from the Pt Kidman prospect. Four leach tests were conducted on each of the composite samples, as summarised in Table 2.

**Table 2:** Summary of leach test regimes

Test	Purpose	Reagents (Lixiviant)	Reagents (Acid)	pH	Temp. (°C)	Time (h)
1	Leach any REE Ionically Exchangeable phase present	1.0M (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> + 1.0M NaCl	H <sub>2</sub> SO <sub>4</sub> to maintain pH at ~ 4	4	25 (ambient)	6
2	Test if increased temp. and lower pH improve recoveries of the REE Ion Exchange phase	1.0M (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> + 1.0M NaCl	H <sub>2</sub> SO <sub>4</sub> to maintain pH at ~ 1	1	50	6
3	Test if REEs within the Colloid phase (insoluble oxides or hydroxides) are leachable	1.0M NaCl	25g/t HCl	< 1	50	6
4	Test if REE's within the Mineral phase (insoluble oxides or hydroxides) are leachable.	1.0M NaCl	100g/t HCl	~ 0	50	6

Test results show that significant recovery of REE from the clay can be achieved by leaching in hydrochloric acid (HCl). Recoveries of the REE's using a 100 g/l HCl leach showed average TREE recoveries of up to 76.1%. Leach recoveries for each sample over the four test regimes are shown below (Figure 8 and Table 2). Elemental recoveries are shown in Figure 9.

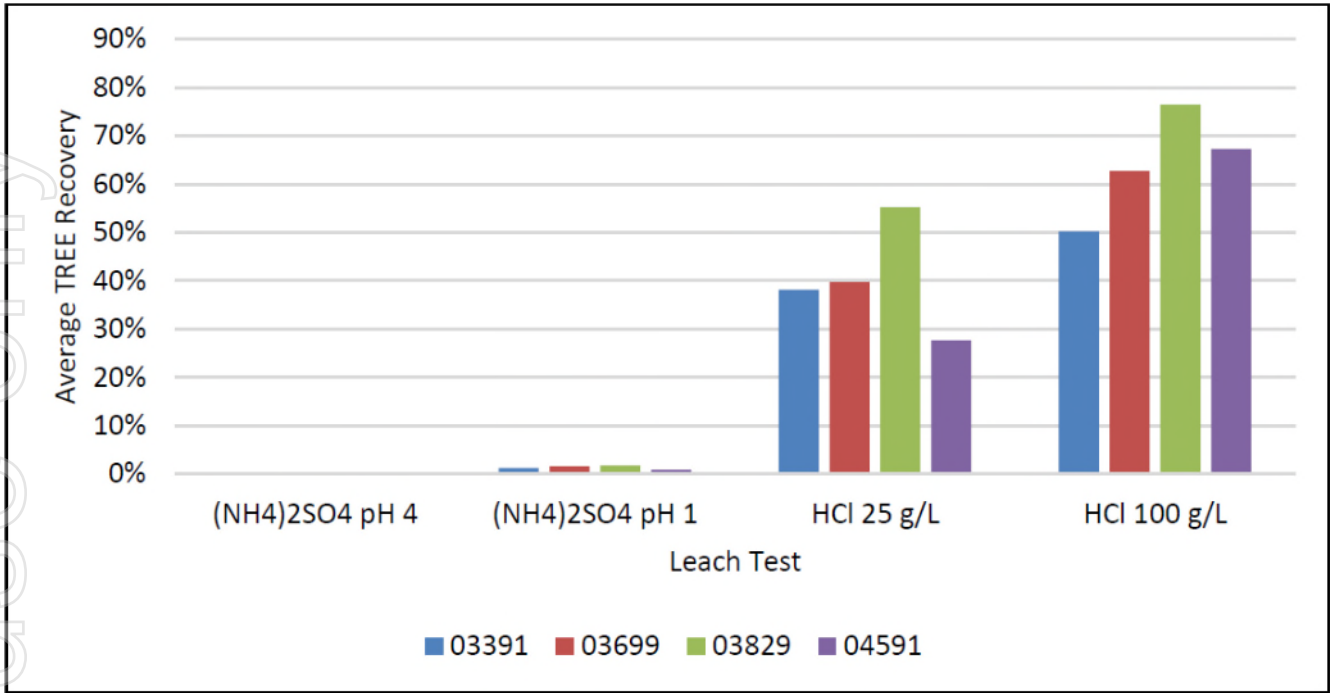


Figure 8: Leach test average TREE Recoveries for all composite samples.

Table 2: Average REE leaching recoveries for each sample, for a range of leaching regimes.

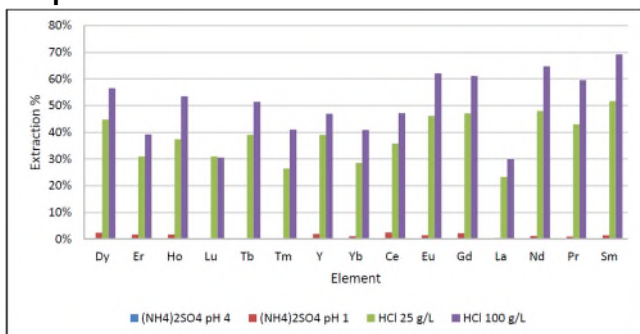
Leach Solution	Composite Sample 03391				Composite Sample 03699			
	Amm. Sulphate pH 4	Amm. Sulphate pH 1	HCl 25g/L	HCl 100g/L	Amm. Sulphate pH 4	Amm. Sulphate pH 1	HCl 25g/L	HCl 100g/L
TREE (AVE)	0.06%	1.28%	38.14%	50.25%	0.19%	1.62%	39.17%	62.17%

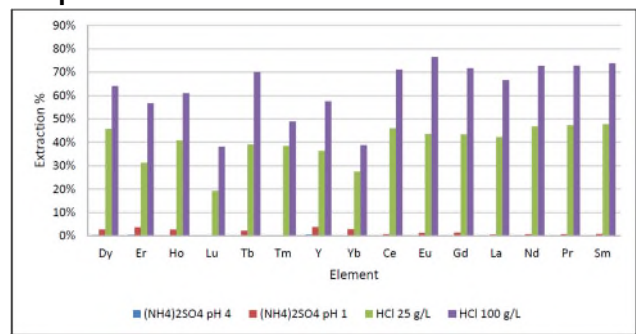
Leach Solution	Composite Sample 03829				Composite Sample 04591			
	Amm. Sulphate pH 4	Amm. Sulphate pH 1	HCl 25g/L	HCl 100g/L	Amm. Sulphate pH 4	Amm. Sulphate pH 1	HCl 25g/L	HCl 100g/L
TREE (AVE)	0.08%	1.85%	55.15%	76.45%	0.07%	0.91%	27.61%	67.23%

Work has shown that the majority of mineralisation is not associated with ionic clays as evidenced by the low recoveries achieved by the first two test utilising ammonium sulphate. The REE's are instead likely contained within colloidal (ultrafine) REE particles, oxidised rare earth carbonate or rare earth oxide minerals. Recovery of these REE's can be achieved via acid leaching, requiring higher acid concentrations. These results are comparable with the majority of known REE clays projects in Western Australia.

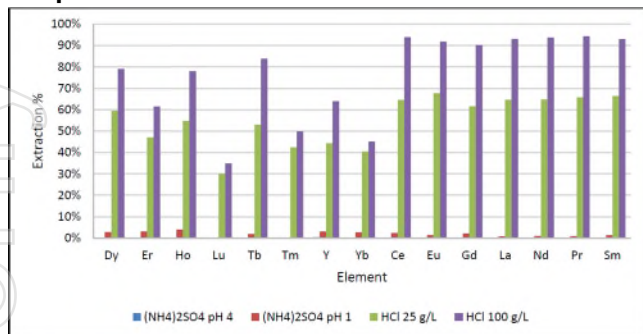
**Composite 03391**



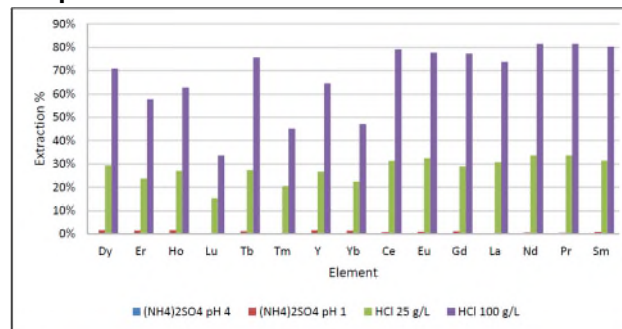
**Composite 03699**



**Composite 03829**



**Composite 04591**



**Figure 9:** Summary of elemental REE recoveries for each composite sample, for the different leaching regimes.

**Further Work**

Only a small part of the extensive Pt Kidman prospect area has been tested with drilling and more than 200 km<sup>2</sup> area has critical metal prospectivity based on the recent geochemical soil sampling completed by the Company.

The next phase of target generation is currently underway, ahead of a further campaign of drilling where the Company’s focus will be on identifying further contiguous zones of higher-grade REE mineralisation that could form the basis of a substantial resource.

Further metallurgical test work will also be undertaken to characterise the recovery of the REEs from within the identified mineralised areas and determine if there are zones that have potential for both beneficiation and for higher recoveries. The reported test results are non-optimised and there remains significant potential for improvement in recovery and acid consumption.

# Ravensthorpe Project

Western Australia, Australia

**The Ravensthorpe Project covers a number of exploration licences in Western Australia’s Albany-Fraser Orogen and is prospective for a suite of battery metals, including lithium, graphite, nickel-copper-PGE, REE and gold mineralisation. There are numerous active mining operations, project developments and exploration projects in the region.**

No fieldwork was completed at the Ravensthorpe project during the quarter. The Company has undertaken a strategic review of the project and is currently undertaking a process to divest its exploration licences in the project areas in order to focus on higher priority exploration project held by the Company.

# Mt Monger Project

Western Australia, Australia

The Mt Monger Gold Project is centred approximately 45km east-northeast of Kambalda and 70km to the southeast of Kalgoorlie-Boulder, within the Goldfields Region of Western Australia. The project comprises six granted exploration licences, one pending exploration license and three granted prospecting licences, covering an area of about 80km<sup>2</sup>.

The Mt Monger region has proven potential for hosting gold, with gold mining commencing in the area during the late 1890s and continuing to the present day. The Mt Monger Gold Project is within close proximity to Gold Fields Limited’s (JSE:GFI) St Ives gold camp and adjacent to the Silver Lake Resources Ltd (ASX:SLR) Daisy Milano gold operation and their currently operating 1.2Mtpa Randalls gold processing facility. Lefroy Exploration Limited (ASX:LEX, Lefroy) has experienced recent exploration success at their Burns Prospect, located to the south of the Mt Monger Gold Project.

No fieldwork was completed at the Mt Monger project during the quarter. The Company is currently assessing strategic options for this project.

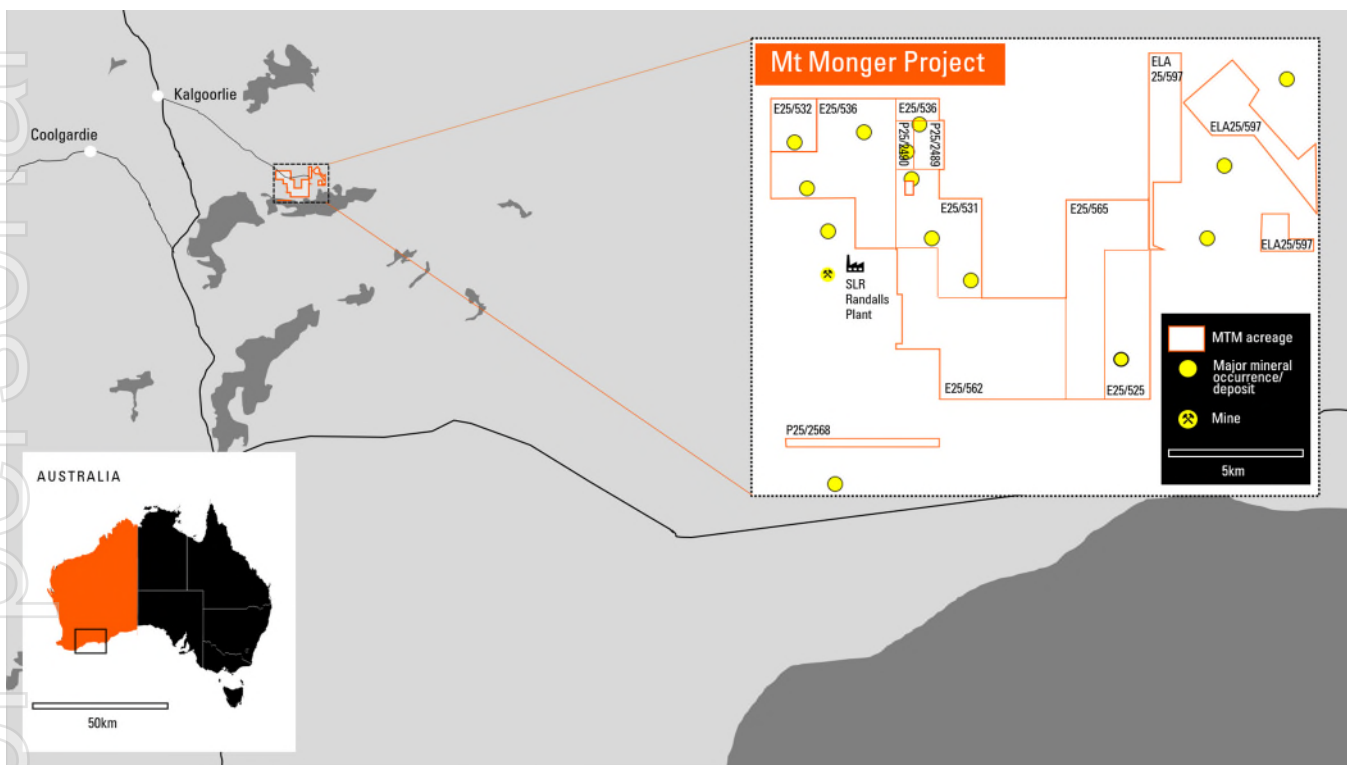


Figure 13: Location diagram of the Mt Monger Project showing tenements and known gold occurrences.

# Corporate

## Cash Position

At 31 December 2023, cash at bank totalled ~ \$0.495 million. On 19 January 2024, Tranche 1 of a Placement announced by the Company was completed which resulted in the receipt of \$1.59 million (before costs).

## Equity

As at 31 December 2023, the Company had on issue 99,437,086 Ordinary Shares, 52,830,875 quoted options (MTMO), 10,250,000 unlisted options and 600,000 unlisted performance rights.

The Company has announced a Placement and Entitlement Offer which will result in the issue of approximately 87.5 million shares and 43.75 million quoted options if these offers are fully subscribed.

Tranche 1 of the Convertible Note (see below) was converted to shares on 19<sup>th</sup> January 2024 resulting in the issue of 4.97 million shares. Subject to shareholder approval, a further 10.65 million shares will be issued on conversion of Tranche 2 of the Convertible Notes along with 7.81 million quoted options.

As part of the acquisition of Flash Pty Ltd (refer ASX announcement 19<sup>th</sup> December 2023), subject to shareholder approval, 100 million shares and 50 million quoted options will be issued as consideration for the purchase of Flash Metals Pty Ltd. A further 37.5 million performance rights and 15 million unlisted performance options will be issued as consideration.

## Capital Raise

In January 2024, subsequent to the end of the quarter, MTM announced that it had received exceptionally strong demand from institutional and professional investors pursuant to Section 708 of the Corporations Act 2001 (Cth) (Corporations Act) for a two tranche Placement to raise \$5 million (before costs) through the issue of 62.5 million fully paid ordinary shares (New Shares) at an issue price of \$0.08 per New Share. For every two New Shares purchased in the Placement, one free attaching option (Quoted Option) will be issued. The Quoted Options will be issued on the same terms and form part of the same class as the existing quoted options (ASX: MTMO) which have an exercise price of \$0.25 and an expiry date of 26 November 2024.

In conjunction with the Placement, the Company will carry out a non-renounceable pro-rata offer (Entitlement Offer) to Eligible Shareholders (defined below) to raise up to approximately \$2 million (before costs) through the issue of one New Share for every four Shares held on the Record Date, at an issue price of \$0.08 per New Share. The Entitlement Offer includes one (1) free attaching Quoted Option for every two New Shares purchased in the Entitlement Offer. The Quoted Options will be the same as the existing quoted options (ASX: MTMO).

## Convertible Note Agreement

In November, MTM executed binding convertible note agreements (Convertible Note Agreement) with a syndicate of sophisticated and institutional investors, for an investment in the Company of \$1.0m (before costs). The Convertible Note Agreement remains subject to and conditional upon shareholder approval for the issue of a portion of the Securities that will be issued as part of the conversion of the Notes. A general meeting of shareholders will be called and the notice of meeting will contain further details in relation to the Securities that are the subject of conversion of the Notes. The Convertible Note Agreements will convert into 14,374,975 Shares. All of the Notes will convert to equity in MTM at a price of \$0.068 per share which is a 20% discount to the share price that was set for the Company's placement and entitlement offers, as per the Convertible Note terms.

## Other Corporate Matters

The Company held its annual general meeting on 29<sup>th</sup> November 2023. All resolutions were passed.

## ASX Additional Information

### Exploration Activities ASX Listing Rule 5.3.1:

Total exploration expenditure for the December 2023 Quarter was \$0.956 million (refer Item 2.1(d) of the accompanying Appendix 5B), which predominantly comprised:

- Drilling and assay costs relating to the Pomme REE Project in Québec, Canada;
- Assay results and metallurgical testing from REE samples from the East Laverton Project, Western Australia.

### Mine Production Activities ASX Listing Rule 5.3.2:

There were no mine production or development activities conducted during the Quarter.

### Payments to Related Parties ASX Listing Rule 5.3.5:

The aggregate amount of payments to related parties and their associates for the December quarter of \$141k (refer Item 6 of the accompanying Appendix 5B) related to director fees, consulting services and salaries (\$108k) and office and storage rental and administration services (\$33k).

During the quarter, lead manager fees of \$66k were charged by an entity associated with directors Hannaford and Izzard under a mandate relating to funds raised by way of the Convertible Note.

### Release of Escrow Securities

In accordance with ASX Listing Rule 3.10A, the following securities were released from escrow during the quarter:

Date Escrow ended	Description	No of Shares
15 <sup>th</sup> July 2023	Directors – Founders Shares	8,022,500
1 <sup>st</sup> September 2023	Geomega Resources, Inc. – purchase of Pomme Project	1,333,330



## Tenement Interests

Project location	Tenement Reference	Status	Equity at 30 Sept 2023	Equity at 31 Dec 2023	Changes during the quarter
<b>Western Australia, Australia</b>					
Mt Monger Project	E 25/525	Live	100%	100%	
	E 25/531	Live	100%	100%	
	E 25/532	Live	100%	100%	
	E 25/536	Live	100%	100%	
	E 25/562	Live	80%	80%	
	E 25/565	Live	100%	100%	
	E 25/603	Pending	-	-	
	P 25/2489	Live	100%	100%	
	P 25/2490	Live	100%	100%	
	P 25/2568	Live	80%	80%	
East Laverton Project	E 38/3302	Live	100%	100%	
	E 38/3462 <sup>1</sup>	Live	51%	51%	
	E 38/3466 <sup>1</sup>	Live	51%	51%	
	E 38/3499 <sup>1</sup>	Live	51%	51%	
	E 38/3506	Live	100%	100%	
	E 38/3507	Live	100%	100%	
	E 38/3510	Live	100%	100%	
	E 38/3511	Live	100%	100%	
Ravensthorpe Project	E 38/3765	Live	100%	100%	
	E 63/2146	Live	100%	-	Surrendered
	E 70/5942	Live	100%	100%	
	E 74/618	Live	100%	100%	
	E 74/692	Live	100%	-	Surrendered
	E 74/696	Live	100%	-	Surrendered
	E 74/700	Live	100%	100%	
	E 74/701	Live	100%	100%	
	E 74/703	Live	100%	100%	
	E 74/723	Live	100%	100%	
West Arunta Project	E 74/725	Pending	-	-	
	E 74/726	Live	100%	100%	
	E 74/727	Live	100%	100%	
	E 80/5858	Live	-	-	Acquisition pending
	E 80/5874	Live	-	-	Acquisition pending
	E 80/5875	Live	-	-	Acquisition pending
	Muckinbudin Project	E 70/6048	Live	-	-
E 70/6359		Live	-	-	Acquisition pending

<sup>1</sup> Tevel Pty Ltd (Tevel) is the registered holder of E38/3462, E38/3466 and E38/3499; MTM has entered into a Farm-In agreement with Tevel to earn up to a 75% interest in the tenements.

Project location	Claim Title #	Status	Equity at 30 Sept 2023	Equity at 31 Dec 2023	Changes during the quarter
<b>Quebec, Canada</b>					
	CDC121	Live	-	-	
	CDC122	Live	-	-	
	CDC1005980	Live	-	-	
	CDC1005982	Live	-	-	
	CDC1005983	Live	-	-	
	CDC2234423	Live	-	-	
	CDC2234424	Live	-	-	
	CDC2234425	Live	-	-	
	CDC2234426	Live	-	-	
	CDC2234427	Live	-	-	
	CDC2234428	Live	-	-	
	CDC2234429	Live	-	-	
	CDC2234430	Live	-	-	
	CDC2234431	Live	-	-	
	CDC2234432	Live	-	-	
	CDC2234433	Live	-	-	
	CDC2240300	Live	-	-	
	CDC2240301	Live	-	-	
	CDC2240302	Live	-	-	
	CDC2240303	Live	-	-	
	CDC2240304	Live	-	-	
	CDC2240305	Live	-	-	
	CDC2240306	Live	-	-	
	CDC2240307	Live	-	-	
	CDC2240309	Live	-	-	
	CDC2240310	Live	-	-	
	CDC2240311	Live	-	-	
	CDC2240312	Live	-	-	
	CDC2240313	Live	-	-	
	CDC2458316	Live	-	-	
	CDC2458327	Live	-	-	
	CDC2458328	Live	-	-	
	CDC2458329	Live	-	-	
	CDC2458330	Live	-	-	
	CDC2458331	Live	-	-	
	CDC2458332	Live	-	-	
	CDC2458333	Live	-	-	
	CDC2458334	Live	-	-	
	CDC2458345	Live	-	-	
	CDC2458346	Live	-	-	
	CDC2458349	Live	-	-	
	CDC2522460	Live	-	-	
	CDC2598360	Live	-	-	
	CDC2754413	Live	100%	100%	
	CDC2754414	Live	100%	100%	
	CDC2757444	Live	100%	100%	
	CDC2757445	Live	100%	100%	
	CDC2757446	Live	100%	100%	
	CDC2784081	Live	100%	100%	
	CDC2784082	Live	100%	100%	

Pomme Project

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Project location	Claim Title #	Status	Equity at 30 Sept 2023	Equity at 31 Dec 2023	Changes during the quarter	
Quebec, Canada	CDC112	Live	-	-		
	CDC94141	Live	-	-		
	CDC1105928	Live	-	-		
	CDC2458312	Live	-	-		
	CDC2458313	Live	-	-		
	CDC2458317	Live	-	-		
	CDC2458318	Live	-	-		
	CDC2458319	Live	-	-		
	CDC2458320	Live	-	-		
	CDC2458321	Live	-	-		
	Montviel South	CDC2783265	Live	-	-	
		CDC2783266	Live	-	-	
		CDC2783267	Live	-	-	
		CDC2783268	Live	-	-	
		CDC2783269	Live	-	-	
		CDC2783270	Live	-	-	
		CDC2783271	Live	-	-	
		CDC2783272	Live	-	-	
		CDC2783273	Live	-	-	
CDC2783274	Live	-	-			

Geomega Resources Inc is the registered holder of the Pomme claims and the Montviel South claims. MTM has entered into an option agreement with Geomega to earn up to a 100% interest in the claims.

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## Company Profile

MTM Critical Metals Limited is an exploration company which is focused on searching for rare earth elements (REE), gold, lithium, nickel, and base metals in Western Australia and Québec. Additionally, the Company has acquired an option to exclusively negotiate the licencing rights to an early-stage processing technology for REE and precious metals known as Flash Joule Heating, which has been developed by researchers at Rice University, USA.

MTM's West Arunta Nb-REE licences lie within one of Australia's critical metal exploration hotspots where over \$60m in exploration expenditure has been collectively invested in the district by a number of ASX companies including WA1 Resources Limited (ASX:WA1), Encounter Resources Limited (ASX:ENR), Rio Tinto Limited (JV with Tali Resources Pty Ltd) (ASX:RIO), CGN Resources Limited (ASX:CGR), and IGO Limited (ASX:IGO).

The Company also holds tenements in other prolific and highly prospective mineral regions in Western Australia. The Mukinbudin Nb-REE Project comprises two exploration licences located 250km northeast of Perth in the South West Mineral Field of Western Australia. The East Laverton Projects is made up of a regionally extensive package of underexplored tenements prospective for REE, gold and base metals. The Mt Monger Gold Project comprises an area containing known gold deposits and occurrences in the Mt Monger area, located ~ 70km SE of Kalgoorlie and immediately adjacent to the Randalls gold mill operated by Silver Lake Resources Limited.

In Québec, the Pomme Project is a known carbonatite intrusion that is enriched in REE and niobium and is considered to be an extremely prospective exploration target adjacent to a world class REE resource (Montviel deposit).

The Company has an experienced Board and management team which is focused on discovery to increase value for shareholders.

# Important Notices

## Competent Person's Statement

The information in this announcement that relates to Exploration Results is based on and fairly represents information compiled by Mr Lachlan Reynolds. Mr Reynolds is the Managing Director of MTM Critical Metals Limited and is a member of both the Australasian Institute of Mining and Metallurgy and the Australasian Institute of Geoscientists. Mr Reynolds has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Reynolds consents to the inclusion in this announcement of the matters based on information in the form and context in which they appear.

## Previous Disclosure

The information in this announcement is based on the following MTM Critical Metals Limited (formerly Mt Monger Resources Limited) ASX announcements, which are all available from the MTM Critical Metals Limited website [www.mtmcriticalmetals.com.au](http://www.mtmcriticalmetals.com.au) and the ASX website [www.asx.com.au](http://www.asx.com.au).

The following announcements were lodged on the ASX Market Announcements Platform during the quarter:

Date	Description
3 October 2023	MTM expands REE acreage in Canada
9 October 2023	MTM intercepts further TREOs at Pomme
11 October 2023	East Laverton soil survey returns REE and nickel anomalies
24 October 2023	New Zones of REE and Niobium at Pomme
31 October 2023	Quarterly Activities Report/Appendix 5B Cash Flow Report
15 November 2023	New zones of REE and Niobium at Pomme
21 November 2023	MTM secures \$1m in funding
1 December 2023	Encouraging beneficiation results for REE clays E Laverton
19 December 2023	MTM to acquire West Arunta Niobium-REE Project

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original ASX announcements and that all material assumptions and technical parameters underpinning the relevant ASX announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are represented have not been materially modified from the original ASX announcements.

## Cautionary Statement Regarding Values & Forward-Looking Information

The figures, valuations, forecasts, estimates, opinions and projections contained herein involve elements of subjective judgment and analysis and assumption. MTM Critical Metals does not accept any liability in relation to any such matters, or to inform the Recipient of any matter arising or coming to the company's notice after the date of this document which may affect any matter referred to herein. Any opinions expressed in this material are subject to change without notice, including as a result of using different assumptions and criteria. This document may contain forward-looking statements. Forward-looking statements are often, but not always, identified by the use of words such as "seek", "anticipate", "believe", "plan", "expect", and "intend" and statements that an event or result "may", "will", "should", "could", or "might" occur or be achieved and other similar expressions. Forward-looking information is subject to business, legal and economic risks and uncertainties and other factors that could cause actual results to differ materially from those contained in forward-looking statements. Such factors include, among other things, risks relating to property interests, the global economic climate, commodity prices, sovereign and legal risks, and environmental risks. Forward-looking statements are based upon estimates and opinions at the date the statements are made. MTM Critical Metals undertakes no obligation to update these forward-looking statements for events or circumstances that occur subsequent to such dates or to update or keep current any of the information contained herein. The Recipient should not place undue reliance upon forward-looking statements. Any estimates or projections as to events that may occur in the future (including projections of revenue, expense, net income and performance) are based upon the best judgment of MTM Critical Metals from information available as of the date of this document. There is no guarantee that any of these estimates or projections will be achieved. Actual results will vary from the projections and such variations may be material. Nothing contained herein is, or shall be relied upon as, a promise or representation as to the past or future. MTM Critical Metals, its affiliates, directors, employees and/or agents expressly disclaim any and all liability relating or resulting from the use of all or any part of this document or any of the information contained herein.

## Appendix 5B

### Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

**MTM CRITICAL METALS LIMITED**

ABN

27 645 885 463

Quarter ended ("current quarter")

31 December 2023

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation (if expensed)	-	-
(b) development	-	-
(c) production	-	-
(d) staff costs	(209)	(397)
(e) administration and corporate costs	(156)	(335)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	3	9
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (provide details if material)	-	(2)
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(362)</b>	<b>(725)</b>
<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) tenements	-	-
(c) property, plant and equipment	-	(1)
(d) exploration & evaluation (if capitalised)	(957)	(2,276)
(e) investments	-	-
(f) other non-current assets	-	-
2.2 Proceeds from the disposal of:		
(a) entities	-	-
(b) tenements	-	-

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(957)</b>	<b>(2,277)</b>
<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2	Proceeds from issue of convertible debt securities	1,000	1,000
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(66)	(66)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>934</b>	<b>934</b>
<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	880	2,563
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(362)	(725)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(957)	(2,277)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	934	934
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>495</b>	<b>495</b>

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter</b> <b>\$A'000</b>	<b>Previous quarter</b> <b>\$A'000</b>
5.1	Bank balances	495	880
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>495</b>	<b>880</b>

<b>6.</b>	<b>Payments to related parties of the entity and their associates</b>	<b>Current quarter</b> <b>\$A'000</b>
6.1	Aggregate amount of payments to related parties and their associates included in item 1	
	Salaries, Consulting & Director Fees	108
	Office rent and administration	33
		141
	Non-executive director fees and consulting paid to Hannaford, Izzard and Hadley and managing director salary paid to Reynolds. Office rent and administration services provided by Rockford Partners and Fordrock Property on commercial terms.	
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
<i>Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.</i>		

<b>7.</b>	<b>Financing facilities</b> <i>Note: the term "facility" includes all forms of financing arrangements available to the entity.</i> <i>Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	<b>Total facility amount at quarter end</b> <b>\$A'000</b>	<b>Amount drawn at quarter end</b> <b>\$A'000</b>
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	<b>Total financing facilities</b>	-	-
7.5	<b>Unused financing facilities available at quarter end</b>		-
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		



## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

8.	Estimated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (item 1.9)	362
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	957
8.3	Total relevant outgoings (item 8.1 + item 8.2)	1,319
8.4	Cash and cash equivalents at quarter end (item 4.6)	495
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	495
8.7	<b>Estimated quarters of funding available (item 8.6 divided by item 8.3)</b>	0.4
<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>		
8.8	If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1	Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
	<b>Answer:</b> No, exploration expenditure will be significantly lower in future quarters as no major field exploration programs are scheduled. Corporate activity expenditure will continue at current levels.	
8.8.2	Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
	<b>Answer:</b> The Company raised \$1 million (before costs) in the quarter ending 31 December 2023. On 12 January 2024, the Company announced a placement and entitlement offer which together will raise approximately \$7 million (before costs). Tranche 1 of the placement was finalised on 19 January which raised \$1.59 million (before costs). Tranche 2 of the placement will be completed subject to shareholder approval at an EGM which is expected to be held at the beginning of March 2024. The entitlement offer is expected to be completed soon after approval of the acquisition of Flash Metals Pty Ltd (refer ASX announcement <a href="#">19 December 2023</a> ).	
8.8.3	Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
	<b>Answer:</b> Yes, on the basis that additional capital will be successfully raised as per the answer above.	
<i>Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.</i>		

**Compliance statement**

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: .....31/01/2024.....

Authorised by: The Board of Directors  
(Name of body or officer authorising release – see note 4)

**Notes**

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.