

# MTM ACQUIRES FLASH METALS

**Prospective niobium and  
REE ground adjacent to WA1  
with complimentary critical  
mineral processing  
technology**

MANAGING DIRECTOR  
LACHLAN REYNOLDS

JANUARY 2024

INVESTOR UPDATE

**MTM**  
CRITICAL METALS



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# MTM TO ACQUIRE 100% OF FLASH METALS PTY LTD

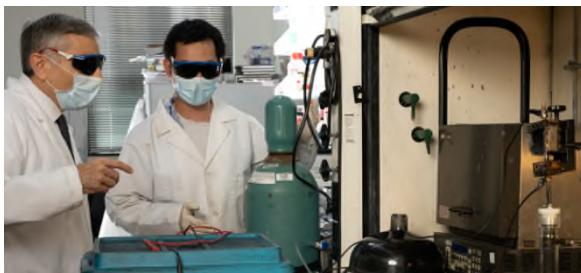
## WEST ARUNTA PROJECT

MTM to acquire 100% of Flash Metals Pty Ltd, owner of three exploration licences in Western Australia's West Arunta region, immediately adjacent to ground held by WA1 Resources (ASX:WA1) and Encounter Resources (ASXX:ENR).



## FLASH JOULE HEATING

An emerging processing and recycling technology being developed to extract critical metals like REE, nickel, cobalt and lithium from natural mineralisation and from waste material.



## MUKINBUDIN PROJECT

Located in an emerging exploration hotspot where REE mineralisation has been locally reported by Codrus Minerals (ASX:CDR) and Caprice Resources (ASX:CRS).



## DEAL OVERVIEW

MTM has agreed to pay Flash:

- A non-refundable \$10,000 fee (which has previously been paid).
- \*100 million fully paid ordinary shares of MTM and 50 million MTMO quoted options;
- \*37m performance rights and 15m unquoted options with an exercise price of \$0.25 and an expiry date of 30 December 2026 vesting equally across 3 milestones:
  - Drilling results of >10m at > 1,000ppm total rare earth oxide ("TREO") and/or >0.5% Nb<sub>2</sub>O<sub>5</sub>;
  - JORC inferred resource of > 10MT at > 1,000ppm TREO and/or >0.5% Nb<sub>2</sub>O<sub>5</sub>
  - JORC inferred resource of >20MT at > 1,000 ppm TREO and/or >0.5% Nb<sub>2</sub>O<sub>5</sub>



# EXCITING ACQUISITION USHERS IN A BOLD VISION

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**Deliver critical minerals directly to the world's largest markets economically and sustainably.**

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- Build a massive inventory of critical minerals in large low sovereign risk markets.
- Establish environmentally safe and sustainable processing facilities in key markets outside China.
- Deliver a safe, sustainable business producing critical minerals in multiple diverse locations enabling non fossil fuel energy transition free of political supply chain risks.

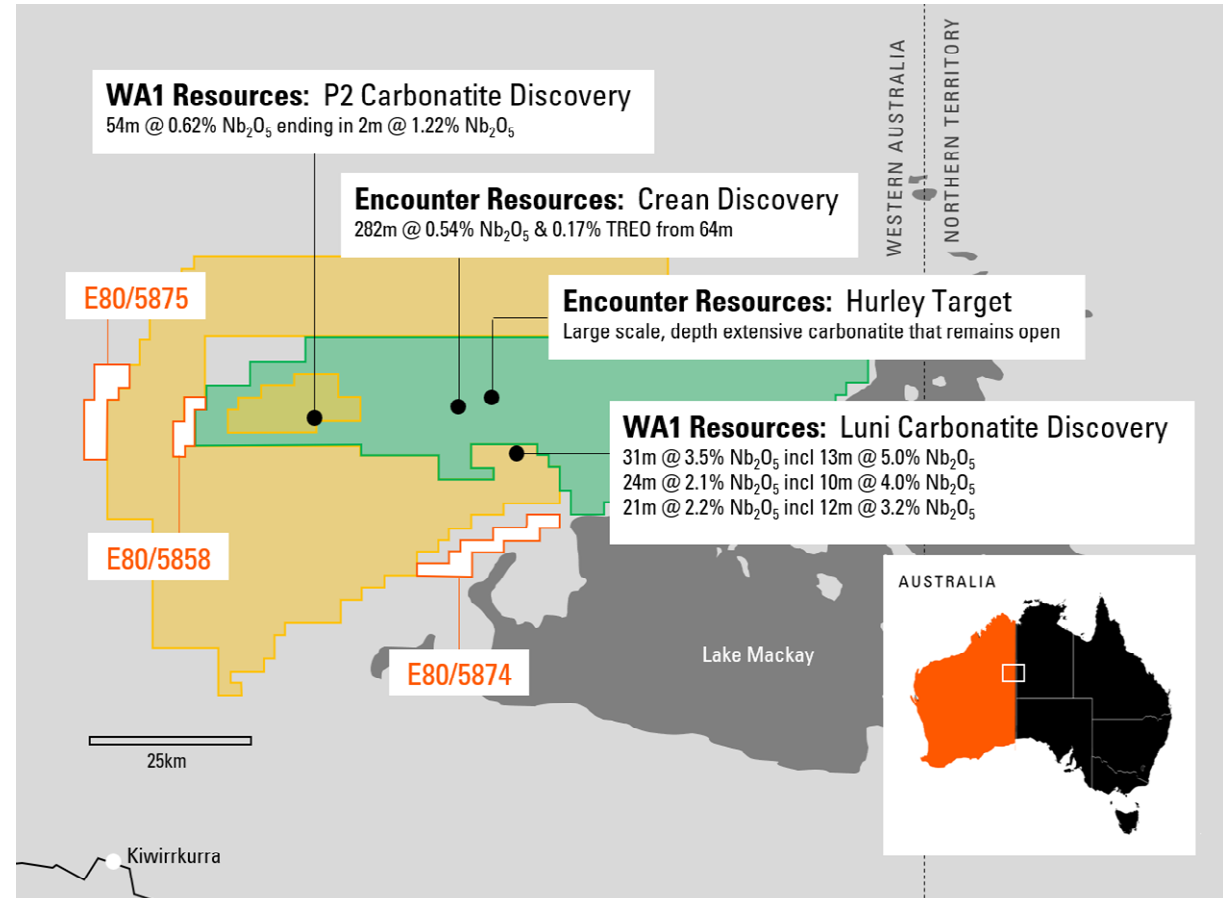


# WEST ARUNTA NIOBIUM-REE PROJECT

Western Australia, Australia  
140km<sup>2</sup>

## Next door to recent niobium-REE carbonatite discoveries by WA1 and Encounter.

- Located immediately adjacent to tenements held by WA1 Resources Ltd (ASX:WA1) near the Luni Carbonatite Discovery and the Carbonatite Discovery; and Encounter Resources Ltd (ASX:ENR) where niobium-REE mineralised carbonatites have recently been discovered.
- New acreage acquired from Flash Metals comprises three exploration tenements totalling 140km<sup>2</sup>.
- The West Arunta region has emerged as one of Australia's exploration hotspots with over \$60m collectively invested in the district by a number of ASX companies including Rio Tinto (JV with Tali Resources) (ASX:RIO), CGN Resources (ASX:CGR), and IGO Limited (ASX:IGO).

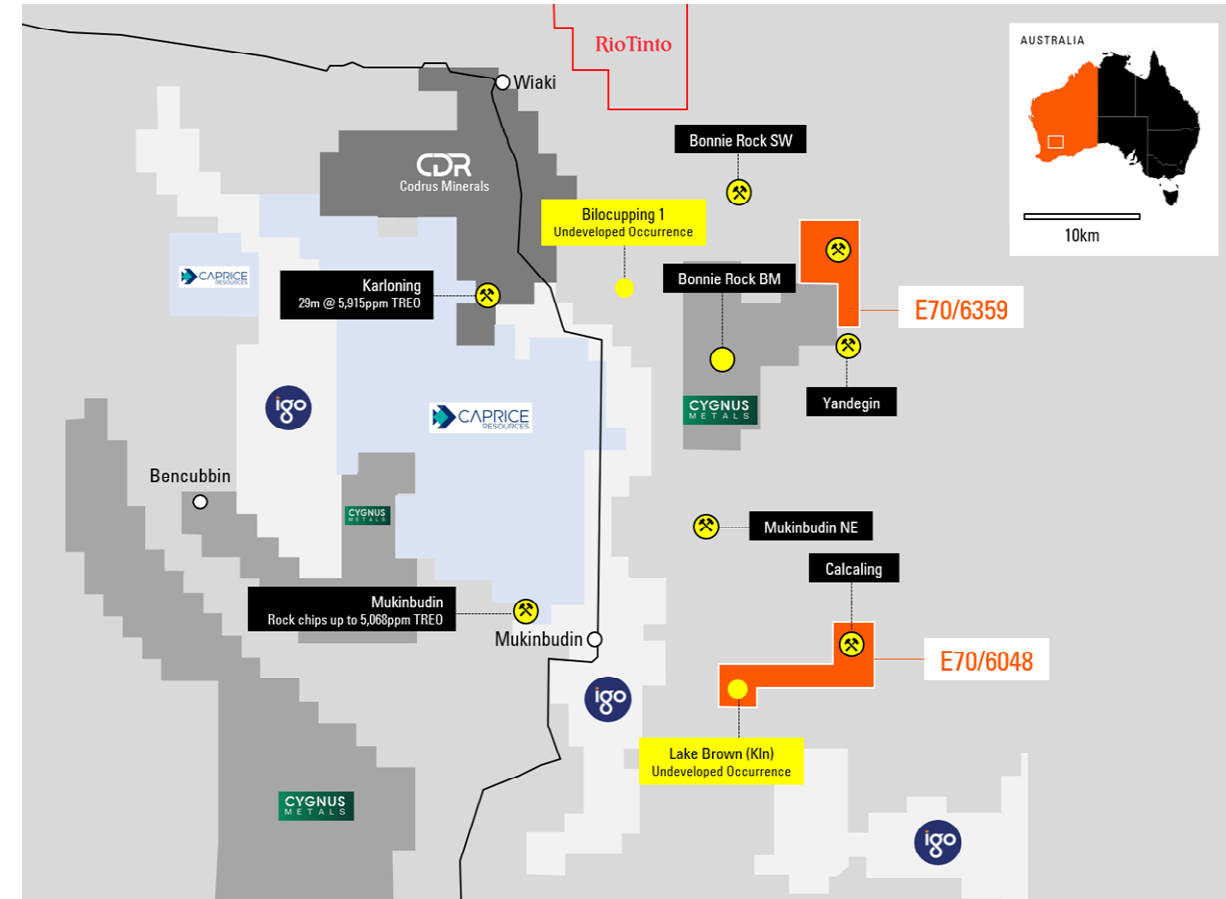


# MUKINBUDIN NIOBIUM-REE PROJECT

Western Australia, Australia  
74km<sup>2</sup>

**Emerging REE province with significant players including IGO and Rio Tinto.**

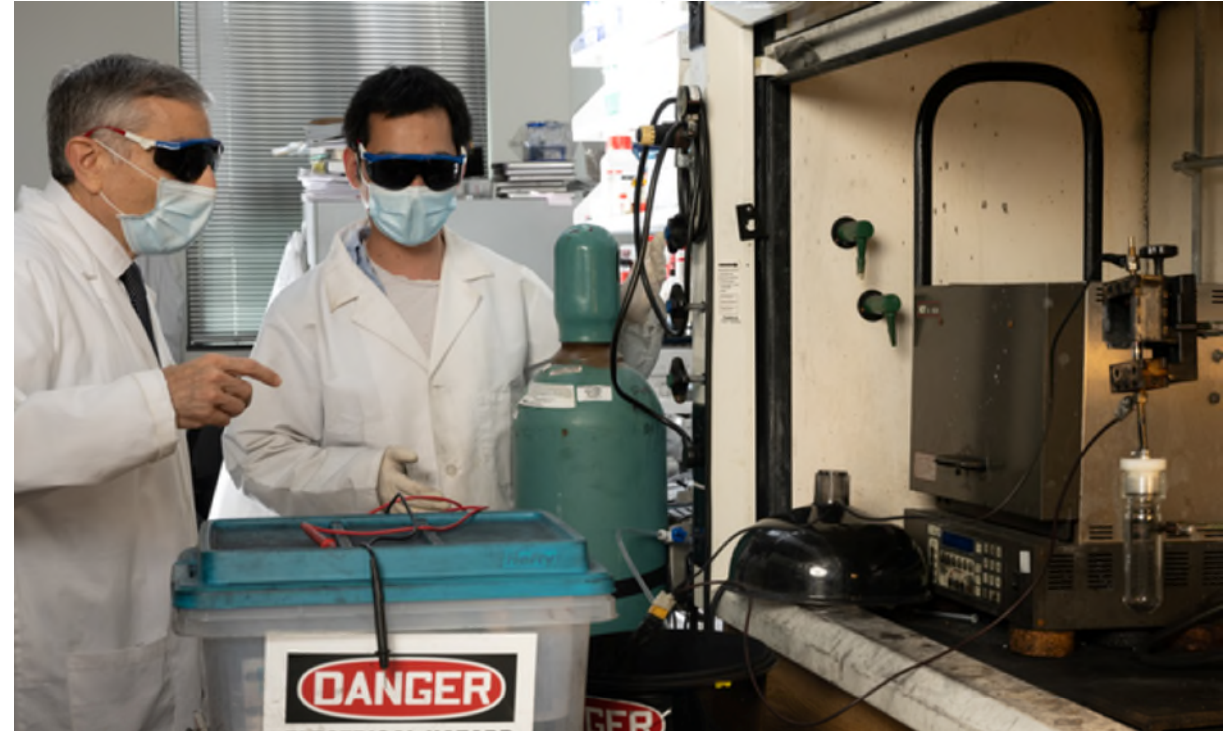
- Located 250km northeast of Perth in the South West Mineral Field of Western Australia.
- E70/6048 lies over the site of the Calcing Pegmatite and was previously mined for feldspar in a small open pit. Historical reports indicate niobium and REE minerals associated with pegmatites.
- Immediate priority is to commence compilation of historical data over the tenement areas and commence planning of an exploration program for REE and for lithium. The areas are easily accessible by sealed road from Perth and then via local roads and farming tracks.



# FLASH JOULE HEATING TECHNOLOGY OPTION

**Emerging processing and recycling technology shown to extract critical metals like REE, nickel, cobalt and lithium from natural mineralisation and from waste material.**

- Application for treating rare earth mineralisation could unlock immense value from otherwise economically marginal deposits.
- Exciting recycling application, that has demonstrated the potential to more efficiently recover critical metals including REE, precious metals and battery minerals through the recycling of lithium-ion batteries, e-waste, coal fly ash and bauxite residue.



Developed by Rice University in Houston, USA which has had previous ASX successes including Weebit-Nano Ltd (ASX:WBT) and Universal Matter

# FLASH PATENT APPLICATIONS

| Patent Title   | Area of Coverage                  | PCT               | Filing Date |
|--|-----------------------------------|-------------------|-------------|
| Ultrafast Flash Joule Heating Synthesis Methods and Systems For Performing Same                | Electronic Waste, CFA, Bauxite    | PCT/US2021/052043 | 24/09/2021  |
| Flash Recycling of Batteries   | Batteries                         | PCT/US2023/065506 | 7/04/2023   |
| Removal of Heavy Metals From Waste and Uses Thereof  | CFA and Bauxite for Cement        | PCT/US2022/015616 | 8/02/2022   |
| Methods and Systems For the Recovery and Reuse of Conductive Additives for Flash Joule Heating | Recycling Carbon Additive for FJH | Provisional       | 14/12/2022  |



# WHY PRODUCE CRITICAL MINERALS SUCH AS REE AND LI FROM BATTERIES, EWASTE AND INDUSTRIAL WASTE?

## **Local Supply:**

Abundant waste sources in key end user markets near infrastructure

## **Environmental Solution:**

Utilities and government will pay to clean up toxic waste

## **Abundant Resource:**

The opportunity to build a massive inventory of critical minerals

## **Secure Supply:**

Supply chain certainty and security free of geopolitical risks

## **Rapid Scale:**

Scale production quickly and cheaply with low capex and opex

## **Exploration:**

No exploration or mining risk and cost

## **Sustainable Sourcing:**

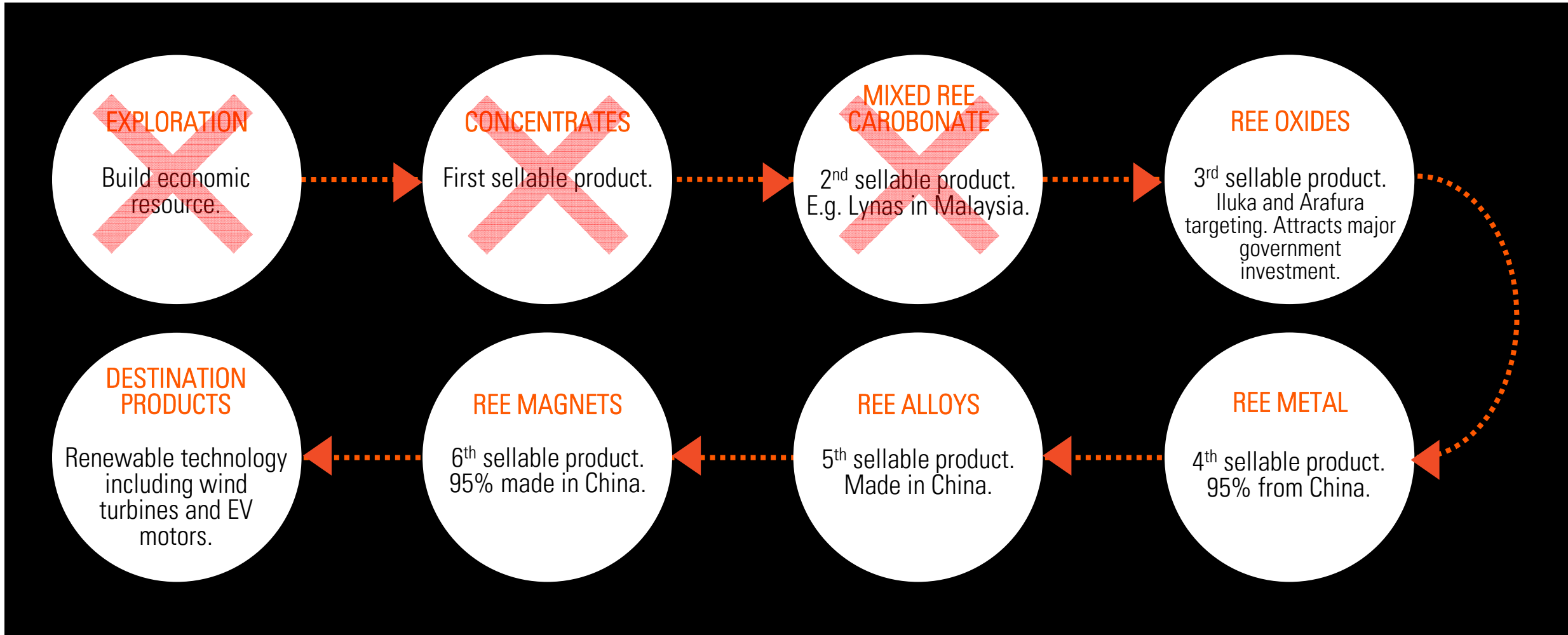
Sustainable supply chain with no waste water issues

## **Upside Process potential:**

Potential to produce REE oxides, metals and alloys on site

# FROM MINE TO MAGNET: THE TRADITIONAL PATH

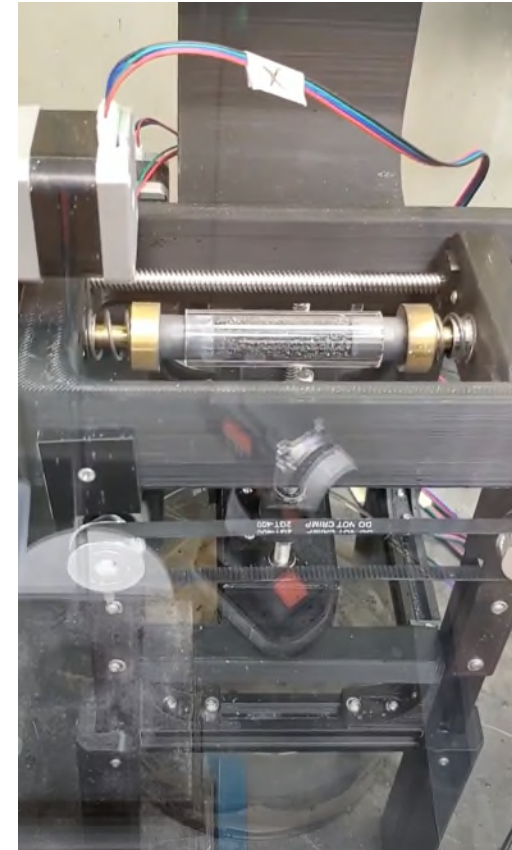
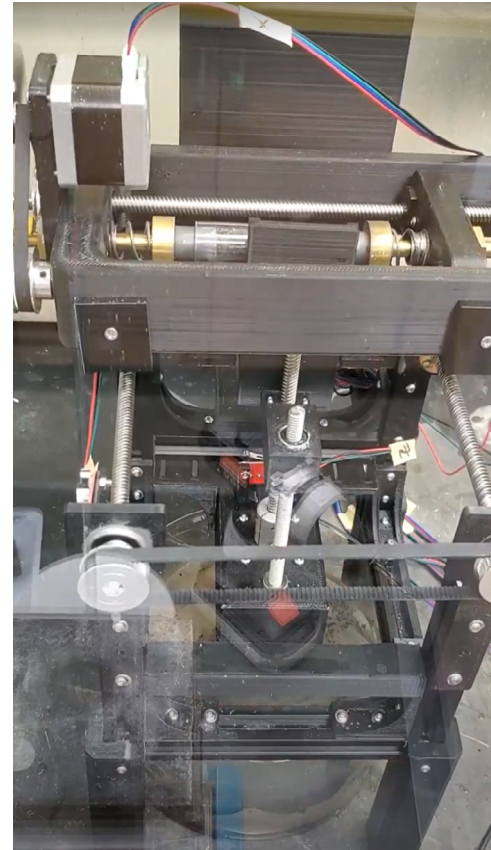
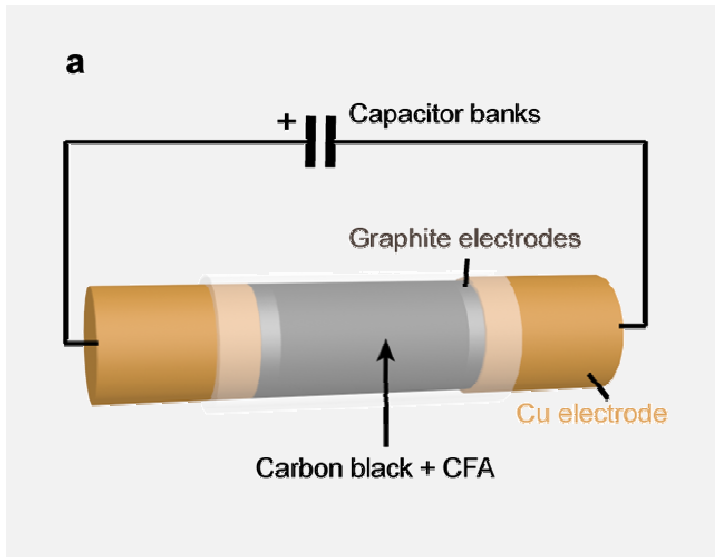
Flash Joule Heating can potentially skip the first three steps, which could result in saving hundreds of millions in capex and years in development.



# LAB-SCALE PROCESS IS SCALABLE

Lab scale-up has demonstrated 1 kg per day.

Universal Matter is producing graphene using the same technology from Rice University and has already scaled to more than 1 tonne per day and is moving towards 3 tonnes per day.



# MTM CAPITAL STRUCTURE PRE AND POST ACQUISITION

|                                       | No of Shares       | Market Cap<br>(\$ million) <sup>1</sup> | No of Listed Options | No of Unlisted Options | No of Performance Rights |
|---------------------------------------|--------------------|---|----------------------|------------------------|--------------------------|
| Prior to Transaction                  | 99,437,086         | \$8.0                                   | 52,830,875           | 10,250,000             | 700,000                  |
| Convertible Note <sup>2</sup>         | 15,625,000         | \$1.0                                   | 7,812,500            | -                      | -                        |
| Flash Metals Acquisition <sup>3</sup> | 100,000,000        | \$8.0                                   | 50,000,000           | 15,000,000             | 37,500,000               |
| Capital Raise                         |                    |   |                      |                        |                          |
| Entitlement Offer <sup>4</sup>        | 25,000,000         | \$1.9                                   | 12,500,000           | -                      | -                        |
| Placement <sup>5</sup>                | 50,000,000         | \$4.0                                   | 25,000,000           | -                      | -                        |
| <b>Total</b>                          | <b>290,062,086</b> | <b>\$23.2</b>                           | <b>148,143,375</b>   | <b>25,250,000</b>      | <b>38,200,000</b>        |
| Cash (after costs)                    |                    | \$6.1m                                  |                      |                        |                          |
| EV                                    |                    | \$17.15m                                |                      |                        |                          |

<sup>1</sup> Market Capitalisation based on share price of \$0.08 per share.

<sup>2</sup> Shares issued at \$0.064 per share being a discount of 20% to the issue price under the Entitlement Offer and Placement.

<sup>3</sup> Consideration includes 37,500,000 performance rights and 15,000,000 options which are subject to milestones related to identification of various resources at Flash Metals tenements (Refer ASX announcement dated 19 December 2023).

<sup>4</sup> 1:4 rights issue at \$0.08 per share with 1 MTMO option for every 2 new shares. Assuming maximum subscription.

<sup>5</sup> Issued at \$0.08 per share with 1 MTMO option for every 2 new shares. Tranche 2 of the Placement and the issue of the Listed Options remains subject to shareholder approval.

- Excludes adviser and director options to be issued in connection with the acquisition and capital raise





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## CONTACT

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