

# Targeting World – Class IOCG Systems



ASX :GBZ

[www.gbmr.com.au](http://www.gbmr.com.au)

**gbm**

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# Corporate Snapshot

## Capital Structure (ASX: GBZ)

Ordinary shares	267 m
Listed 20 cent Options Expiring 30/06/13	129 m
Market Capitalisation @ 5c	A\$13m
Total 1200 shareholders	
Top 20 hold	45%

## Board of Directors

<b>Peter Thompson</b>	<i>Chairman &amp; Managing Director</i>
<b>Neil Norris</b>	<i>Exploration Director</i>
<b>Cameron Switzer</b>	<i>Non-Executive Director</i>
<b>Sunny Loh</b>	<i>Non-Executive Director</i>

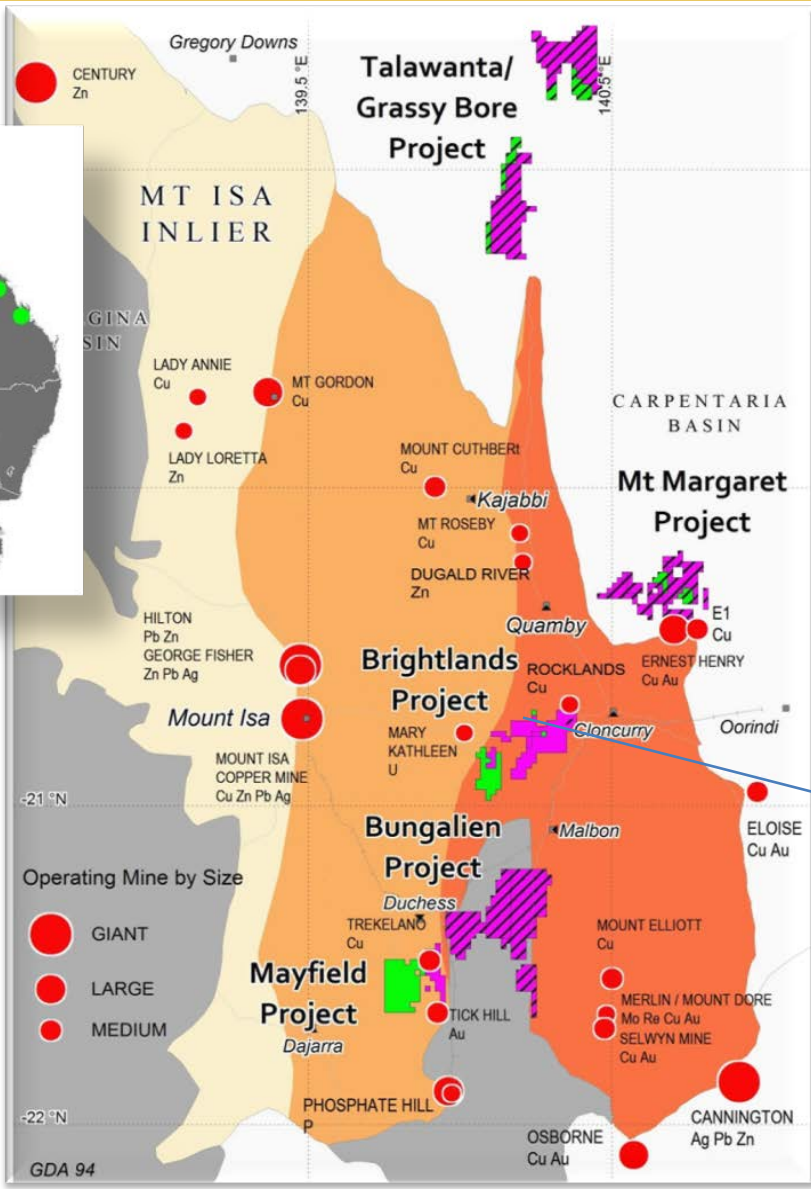
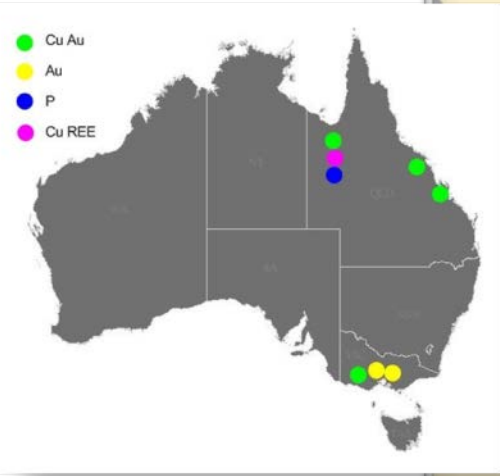
Management hold 15% issued capital

Major Shareholders	No Shares '000	%
UOB Kay Hian	41,336	15.4
Chew Leok Chuan	10,000	3.7
Lion Resources Development pte Ltd	10,000	3.7
Swift Venture Holdings	8,336	3.1

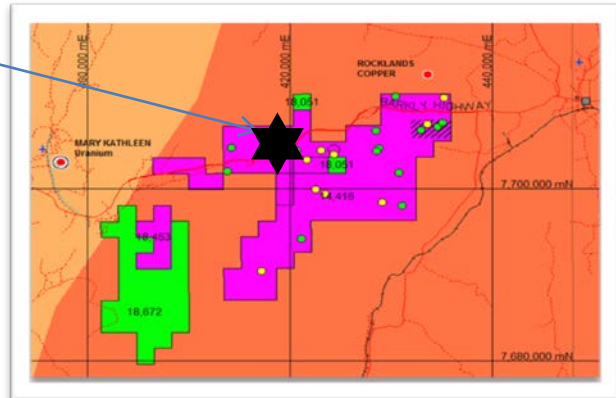
# MILO IOCG – REE PROJECT



# MILO PROJECT LOCATION



- Queensland's North West Mineral Province (Mt Isa Inlier)
- Prolific Mineral Province
- Low Sovereign Risk



# THE MILO DISCOVERY

Massive breccia outcrop at Milo

➤ Poly metallic discovery in 2010.  
Cu Au Ag Mo U Co.

➤ Significant Rare Earth Element mineralisation identified in 2011.

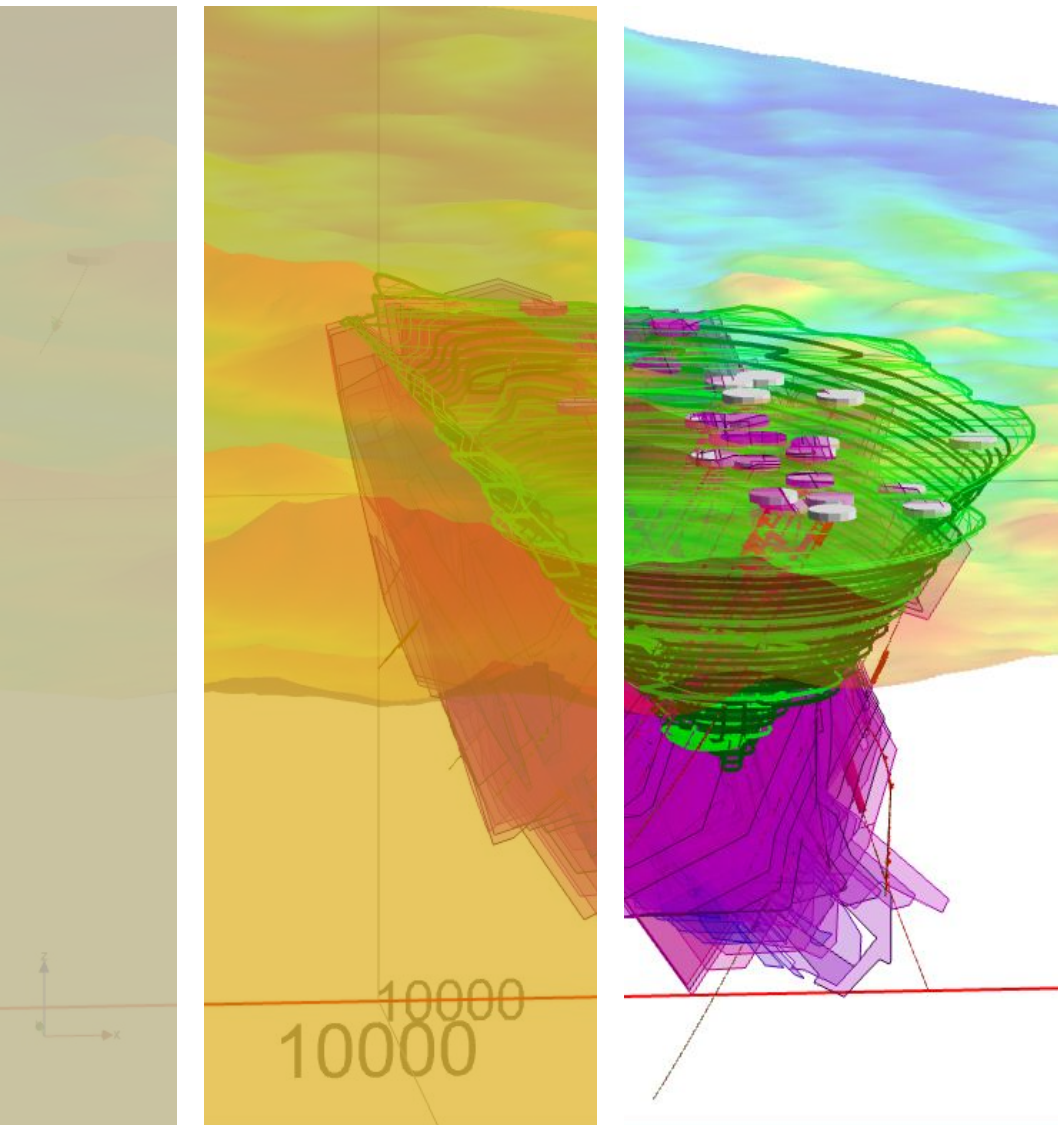
➤ Milo is a multi- element IOCG project with a Rare Earth halo.

➤ Work so far considered as “early exploration” phase with only 11,000 metres drilled to date.

➤ Deposit remains open and is part of a larger mineralising system.

Confidence to commission Scoping Study & Demonstrate potential for ongoing investment

# MILO PROJECT SCOPING STUDY



- 11 Year Mine Life
- 10 mtpa treatment rate
- 100 Mt ore mined
- Low Stripping Ratio (W:O, 1.3:1 )
- LOM Production;
  - 38Kt TREEYO
  - 1.9Mt Phosphate
  - 58Kt Cu
  - 10Mlbs U<sub>3</sub>O<sub>8</sub>
- Capex
  - Start up-\$792M
  - LOM - \$ 60M tailings
  - \$52M sustaining
  - \$41M closure
- Published 22/11/12

# MILO SCOPING STUDY

- **Completed by Independent Consultant Mining One & supported by:**
  - **Geomodelling Ltd for the resource and block.**
  - **Core Resources Pty Ltd for test work and flow sheet.**
- **AIM is to demonstrate that we can mine it , treat the various ore types, what the capital required will be and what makes it profitable.**
- **Positive results to confirm Milo economic and development potential and justify further investment.**

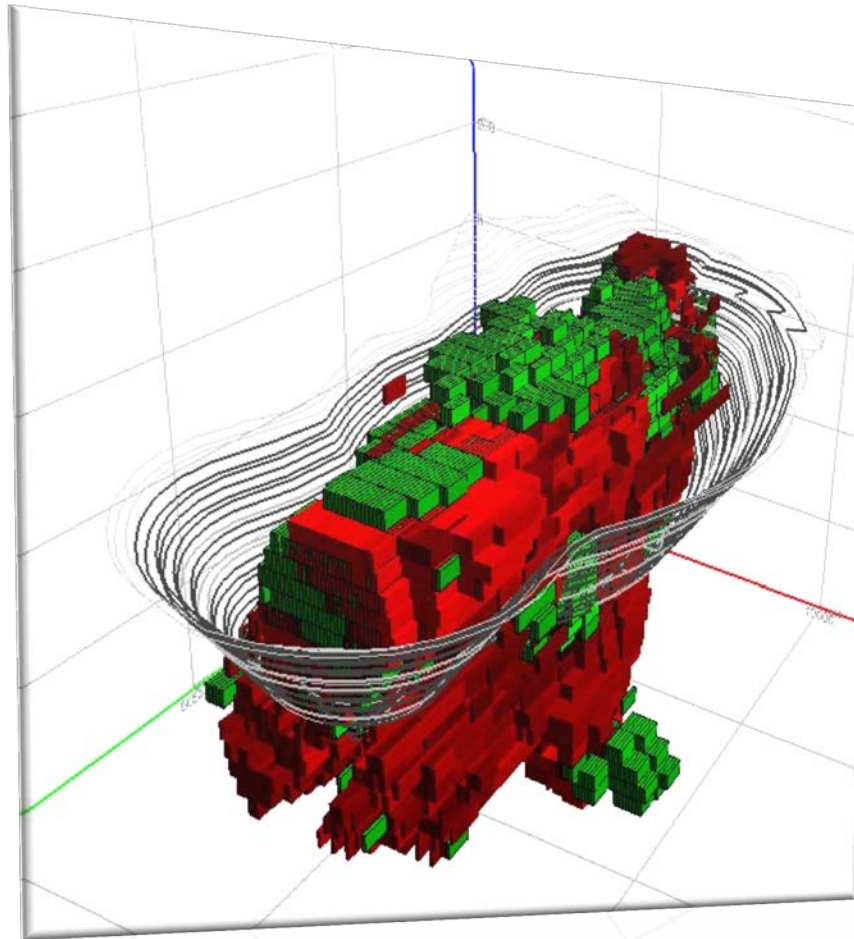


# MILO PROJECT FINANCIAL KPI's

Project KPIs	<u>Long Term</u> Base Case	Upside Case
Undiscounted Cash (\$M)	\$701	\$1,160
Pay back in years	4.4	2.9
Operating Margin ( EBIT/ Revenue)	33%	38%
Operating Cost/Revenue	67%	62%
<i>Key Model Differences:</i> Improved TREEYO plant recoveries	60%	70%
AUD: USD	.90	.90
Rare Earths prices	\$75/kg	\$75/kg

- Strong operating cashflows
- Product diversity providing natural price hedge
- Significant upside on commodity prices
- Opportunities to enhance projected outcomes further through increased mine life, reduced capital and improved recoveries

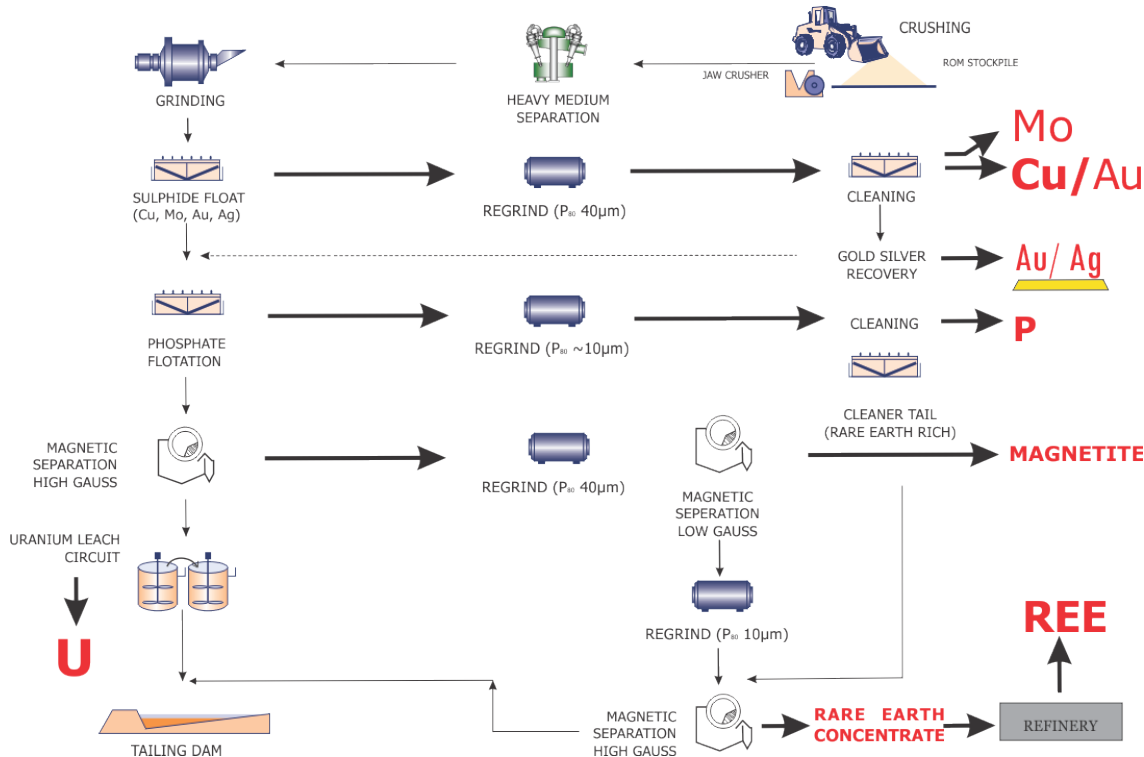
# MILO OPEN PIT



- Large open pit
  - 1400 m long
  - 600 m wide
  - 320 m maximum depth
- Bulk mining scale advantage
  - 100 Mt ore
  - 128Mt waste and LG
- Close to established infrastructure
- Skilled Mining work force and supportive communities in Cloncurry, Isa & Townsville

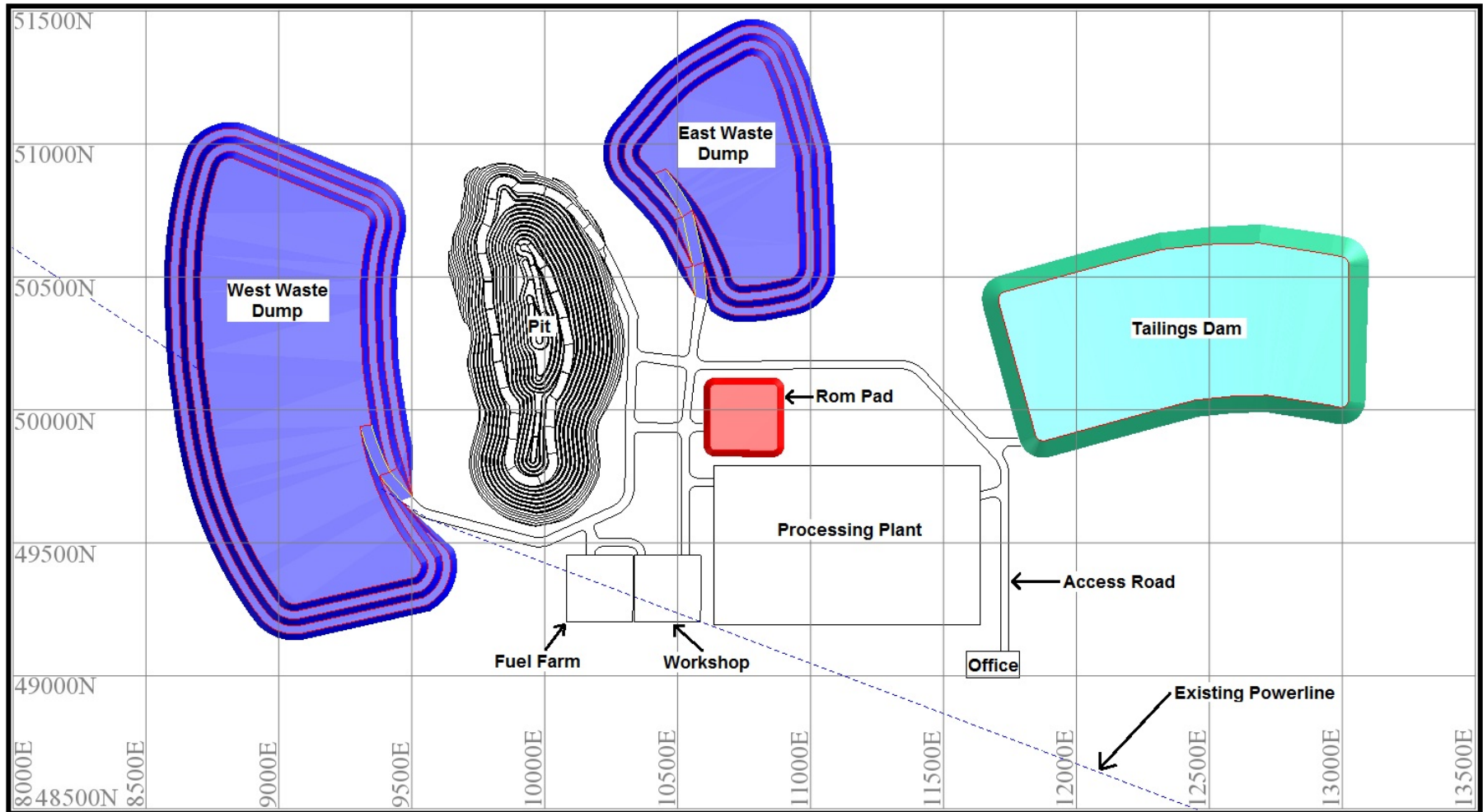
# MILO METALLURGY

SCHEMATIC ORE TREATMENT FLOWCHART



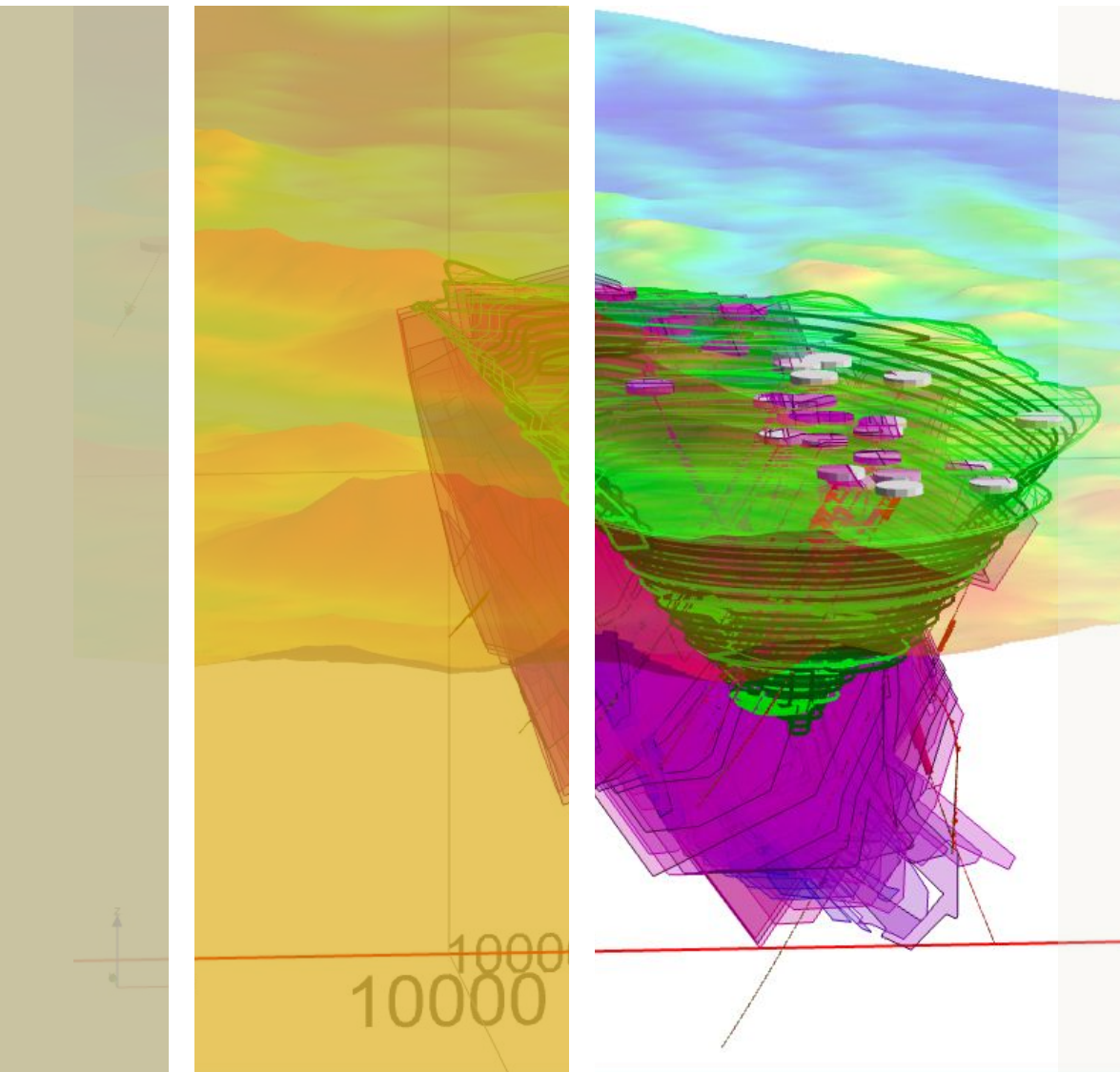
- ✓ Initial Heavy Media Separation confirms potential to reject low grade/waste material
- ✓ Sulphide floatation separates Cu-Au-Ag-Mo-Co
- ✓ Saleable Cu concentrate produced
- ✓ Apatite floatation produces phosphate product
- ✓ Wet High Intensity Magnetic separation capture REEY's
- ✓ Magnetic separation produces magnetite concentrate
- ✓ U captured by acid leach

# MILO MINE DESIGN



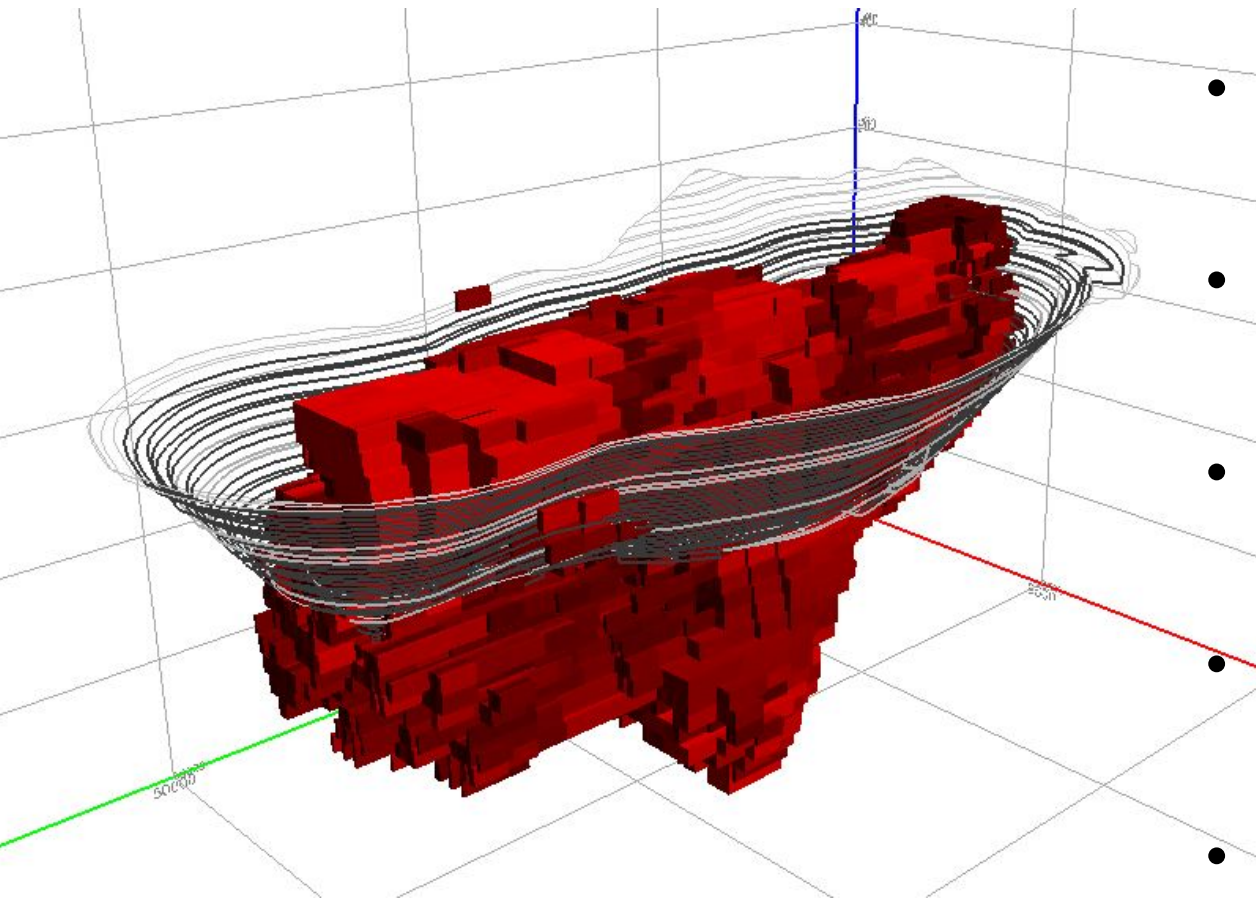
General Mine Layout

# MILO PROJECT RESOURCE



- **IOCG-REE Breccia Deposit**
- **Key Commodities –rare earths, copper, uranium and phosphate.**
- **Valuable metal mix**
  - 108Kt TREEYO
  - 1.3 Mt P<sub>2</sub>O<sub>5</sub>
  - 97Kt Cu
  - 14Mlbs U<sub>3</sub>O<sub>8</sub>

# Milo Inferred TREEYO Resource

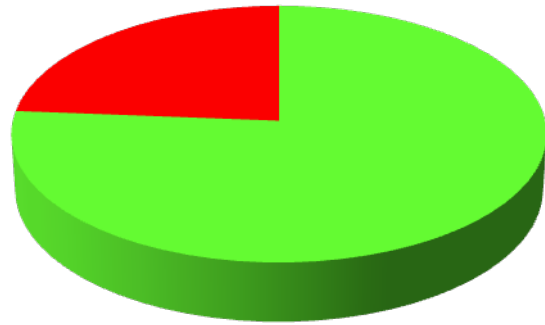


- **Broad continuous zone over 1 kilometre long**
- **Large Resource -176Mt and expansion potential**
- **Contains:** 108,000 t TREEYO  
1.3 Mt P<sub>2</sub>O<sub>5</sub>
- **'halo' to CuEq mineralisation**
- **Remains open at depth and along strike**

**176 Mt @ 620 ppm TREEYO,  
0.75%P2O5 .**

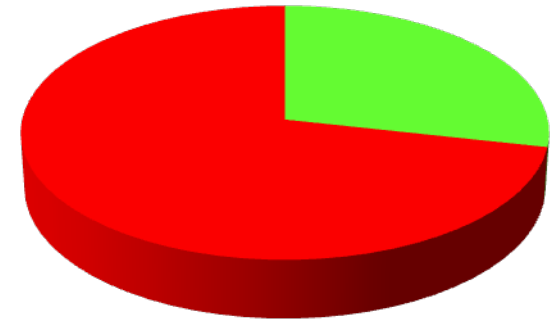
# Milo Inferred TREEYO Resource

Contribution by Weight



■ Other LREE    ■ Sum Critical elements

Contribution by Value



■ Other LREE    ■ Sum Critical elements

- Critical REEY 24% by weight
- High importance clean energy industries
- Forecast shortage and positive price reaction

- Critical REEY 72% by value
- Buffer against LREE prices

# RARE EARTHS- “Market”

## USES

- **Critical:**

LED's

Wind power generators

Electric vehicles

Hard disk drivers

Flat screens

Medical applications

Electronics

- **LREE:**

Communications and entertainment Ce and La

in touch screens

Military technologies

Auto catalyst

## SUPPLY:

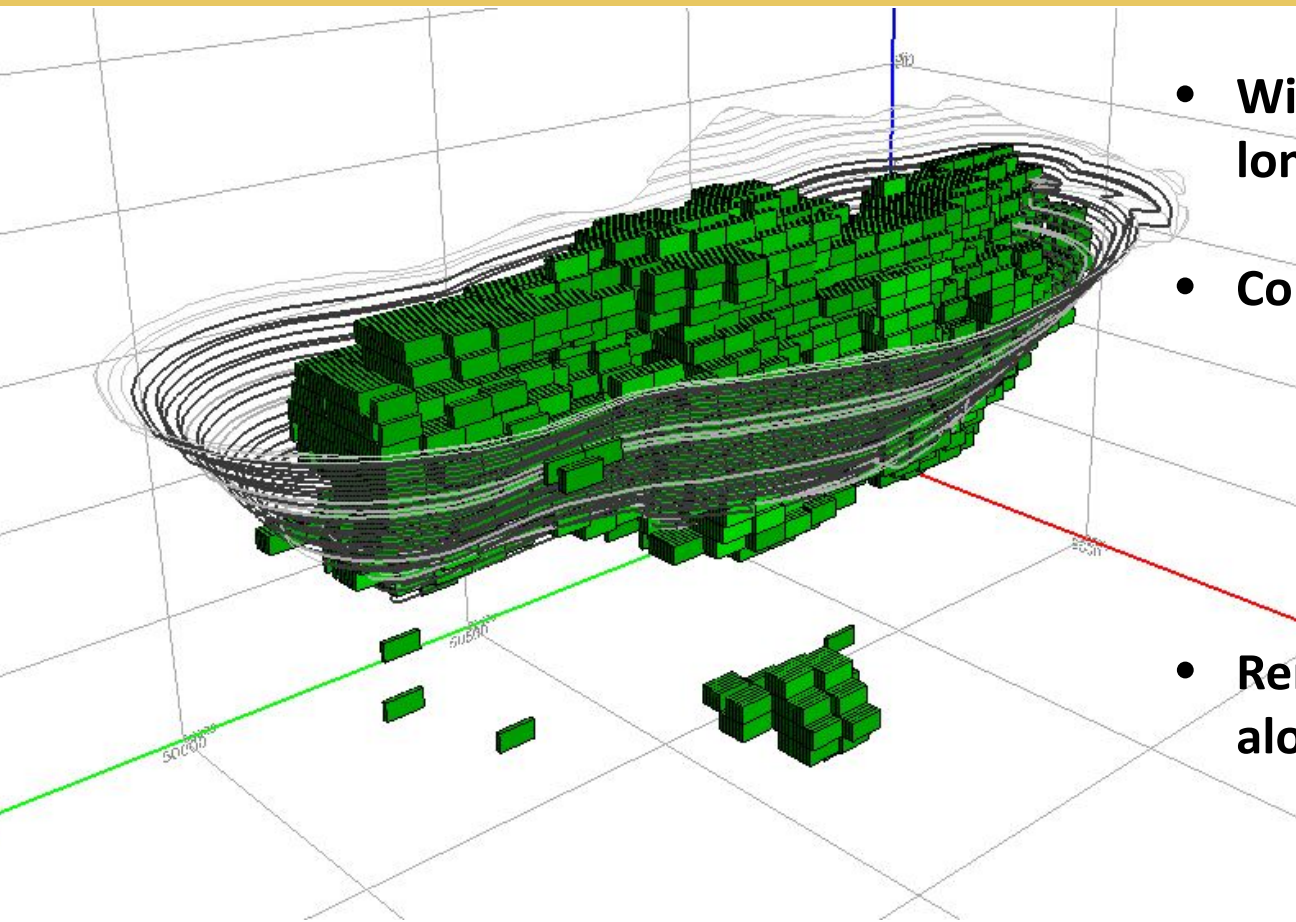
- China accounts for 97% of world supply
- Imposed export quota 30K tonnes
- New discoveries tend to be in high sovereign risk areas
- Demand 105K tonnes 2011.
- Demand forecast >200K tonnes by 2015.

## PRICING:

- China has restricted and eased supply = Price volatility  
Increase reserves  
domestic demand
- New technologies continue to drive demand higher for Critical and HREE
- Supply deficit 2015



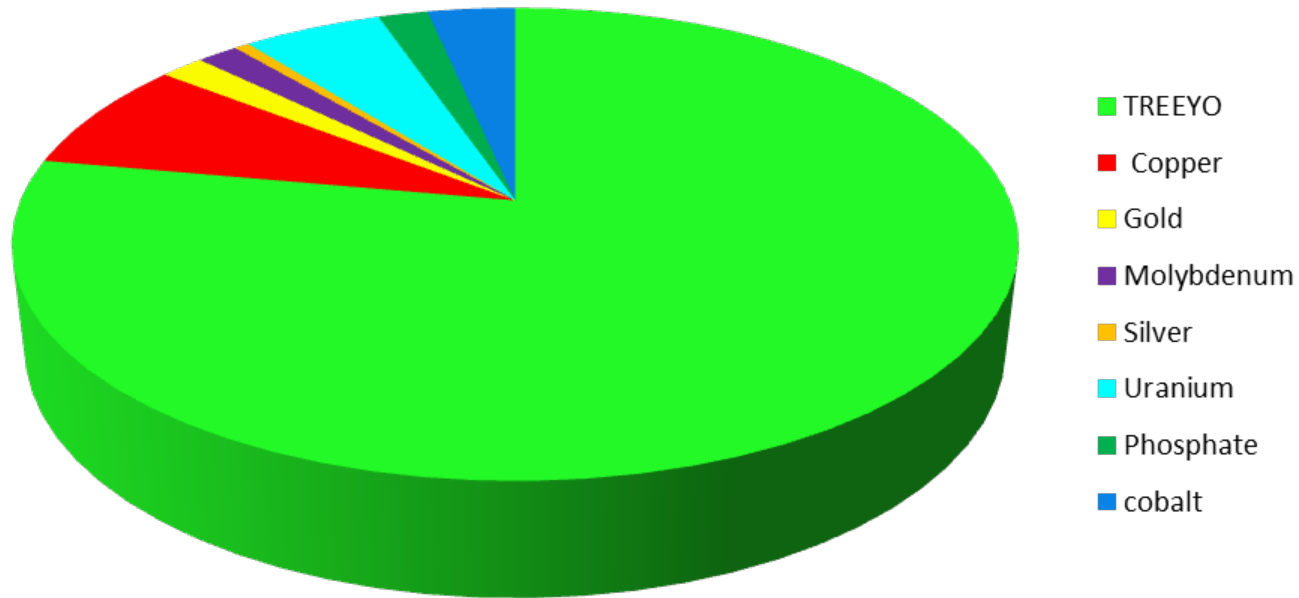
# Milo Inferred CuEq Resource



- Wide zones over 1 kilometre long
- Contains;
  - 97,000 t Cu
  - 126 kozs Au
  - 4.6 Mozs Ag
  - 5,700 t Mo
  - 14 Mlbs. U3O8
- Remains open at depth and along strike

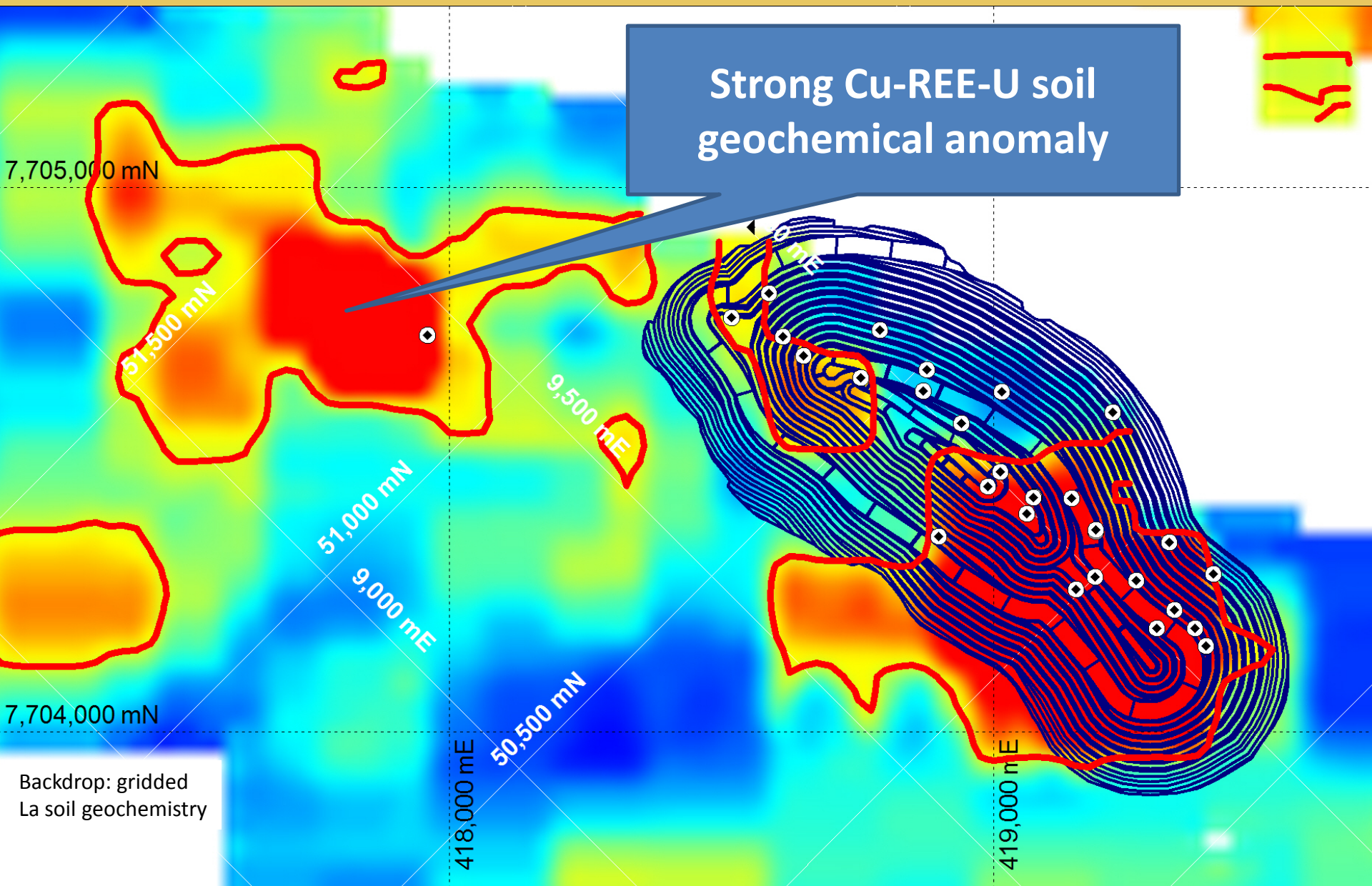
88 Mt @ 0.34% CuEq, 0.11% Cu,  
72 ppm U<sub>3</sub>O<sub>8</sub>.

# Milo Resource Commodities- Relative Value

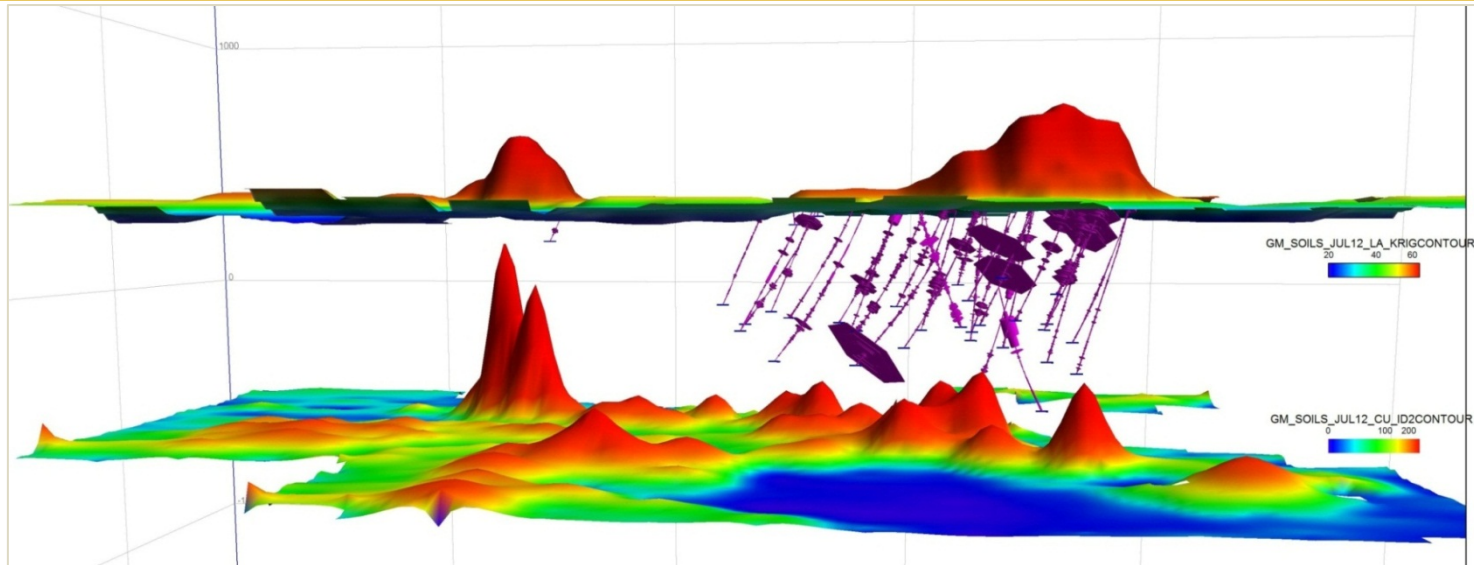


- **TREEYO represent around three quarters of the value of contained commodities**
- **Copper and Uranium are the next most important commodities by relative value (The Queensland Gov't has announced it intends to allow the recommencement of Uranium mining)**

# MILO NEAR PIT POTENTIAL ?



# MILO – RESOURCE GROWTH



- ‘In Pit’ exploration target(\*3) of 12.3 Mt and 23.0 Mt. between 300 and 900 ppm TREEYO
- Depth and strike extent of Milo Deposit
- High order soil geochemical targets existing resource boundary.

# Milo Next Steps and Opportunity

## **AIM:**

Commence Pre- feasibility study (PFS) in 2013.

## **Challenge :**

Securing JV partner/s.

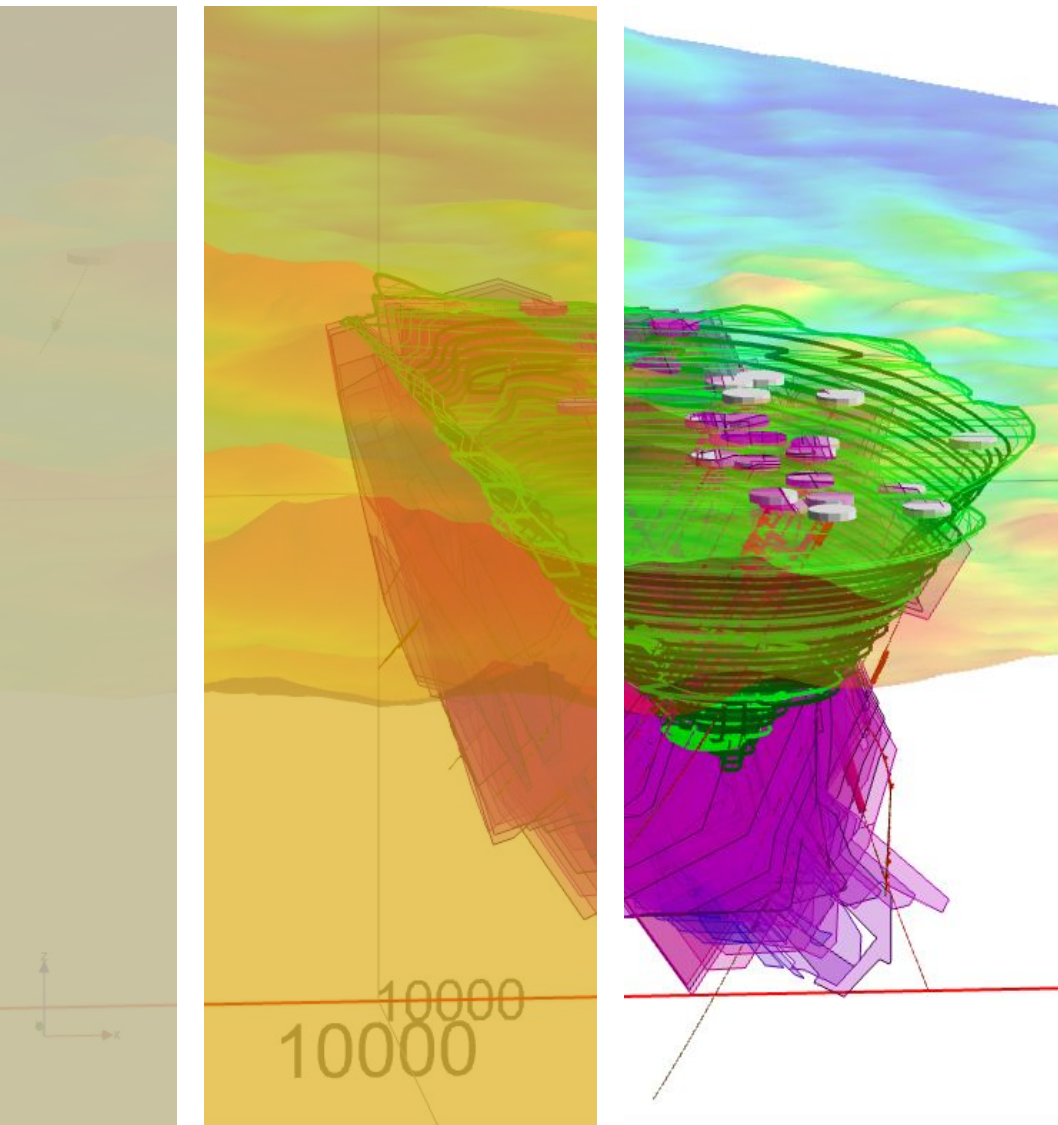
## **Key areas of development include:**

- Metallurgical Test work- validate flowsheet and process design.
- Upgrade inferred Resource to Indicated.
- Geotechnical and infrastructure studies..
- Commence engagement with Traditional Landholders ,pastoralists and other stakeholders.

## **Opportunities:**

- Increase Mine Life- In pit target and 3 additional new mineralised zones.
- Test work to achieve:
  - Reduce REE operating costs.
  - Reduce Plant capital through flow sheet improvements.
  - Improve REE recoveries >60%.
  - Increase reject rates –increase feed grades.
- Capital -Reduce start up capex. Staging and outsourcing.

# MILO PROJECT - CONCLUSIONS

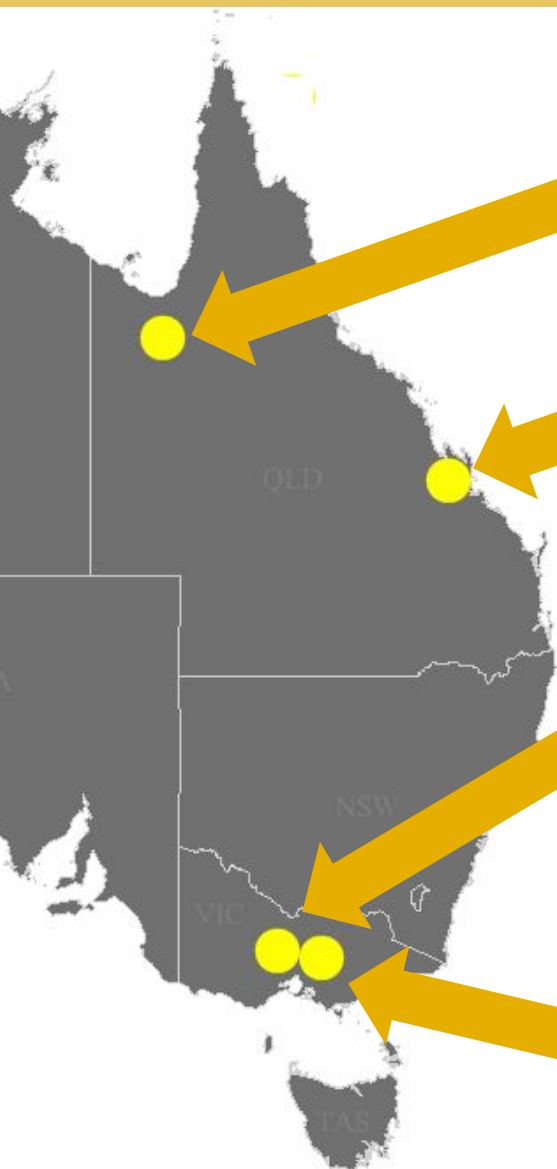


- Confirms strong commercial development opportunity.
- Financial Model :
  - *Long Term Base Case operating cash flow \$701M over 11 yrs LOM.*
  - *Upside Case operating cash flow \$1,160M same LOM.*
- Can mine it - favourable metallurgy.
- Multi-element nature price hedge.
- Milo is a significant valuable asset.

# GBM EXPLORATION



# EASTERN AUSTRALIA GOLD



## Mayfield

- Extensions to Tick Hill (Au) & Trekelano (Cu-Au) Mines
- Multiple + 0.1% Cu intersections in previous exploration

## Mount Morgan (Under explored region)

- adjacent to Mt Morgan Mine 8M oz Au, 0.4Mt Cu
- High order targets from soils and previous drill data

## Malmsbury

- Strike over 4km Belltopper and Drummond
- inferred resource 820kt @ 4.0 g/t for 104k.

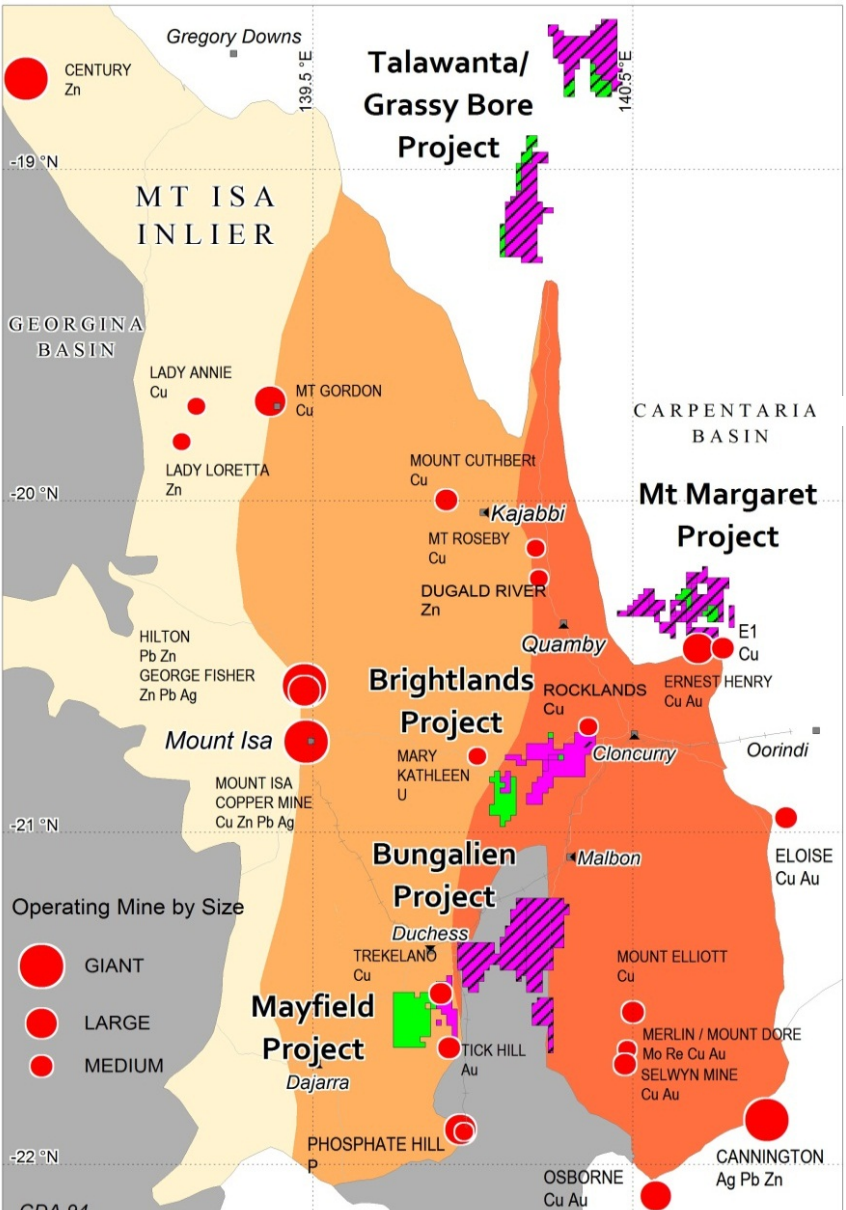
## Yea

- Prospective for an IRGS – gold, tungsten, Mo and copper.
- GBM hole on Monkey Gully Prospect; 8m @ 0.34% WO<sub>4</sub> & 500ppm Mo .

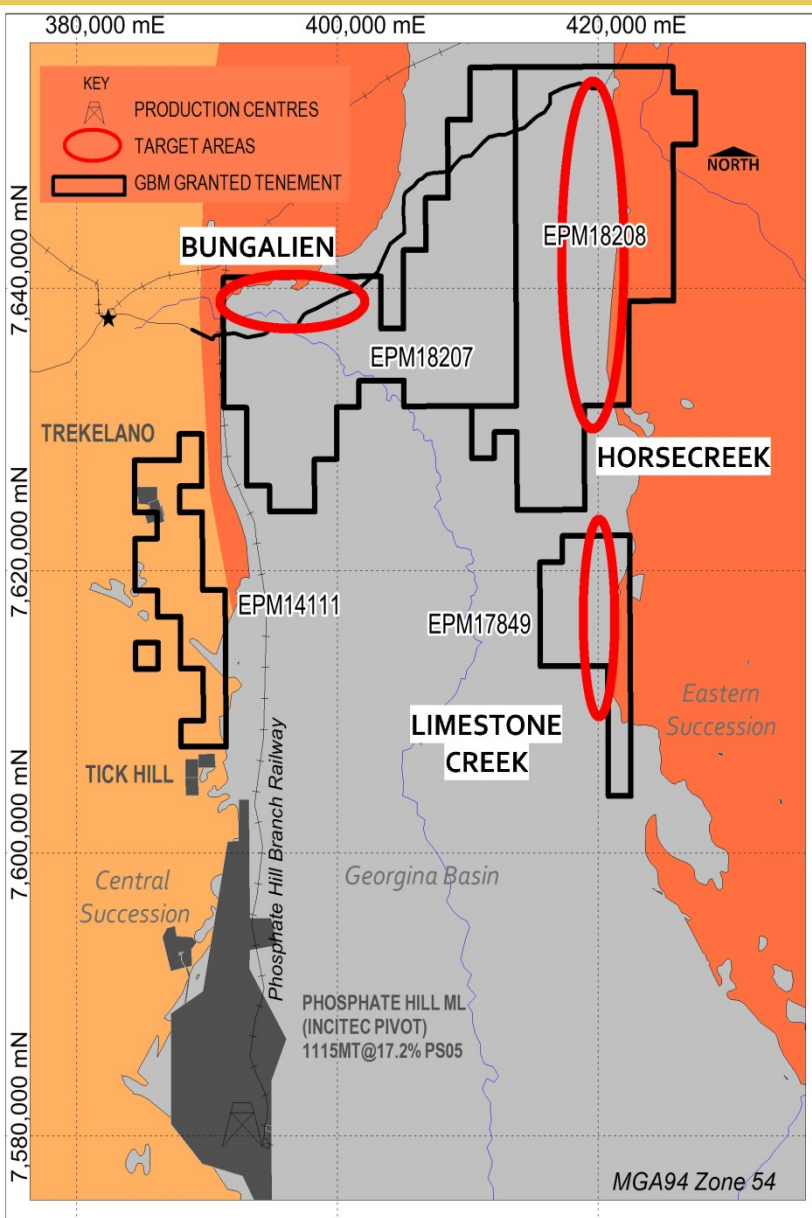


# Pan Pacific and Mitsui IOCG JV

- Partner's Interest - Pan Pacific Copper 75% and Mitsui & Co 25%.
- Major global companies.
- 'Copper under cover'. Big targets, require big budgets.
- Spend \$15m over 6 years to earn 51%.
- Budget this year is \$3.8 million.
- Spend \$1.03m for each 1% increment up to \$40m.
- GBM retains a 10% Free Carried Interest to Bankable Feasibility.

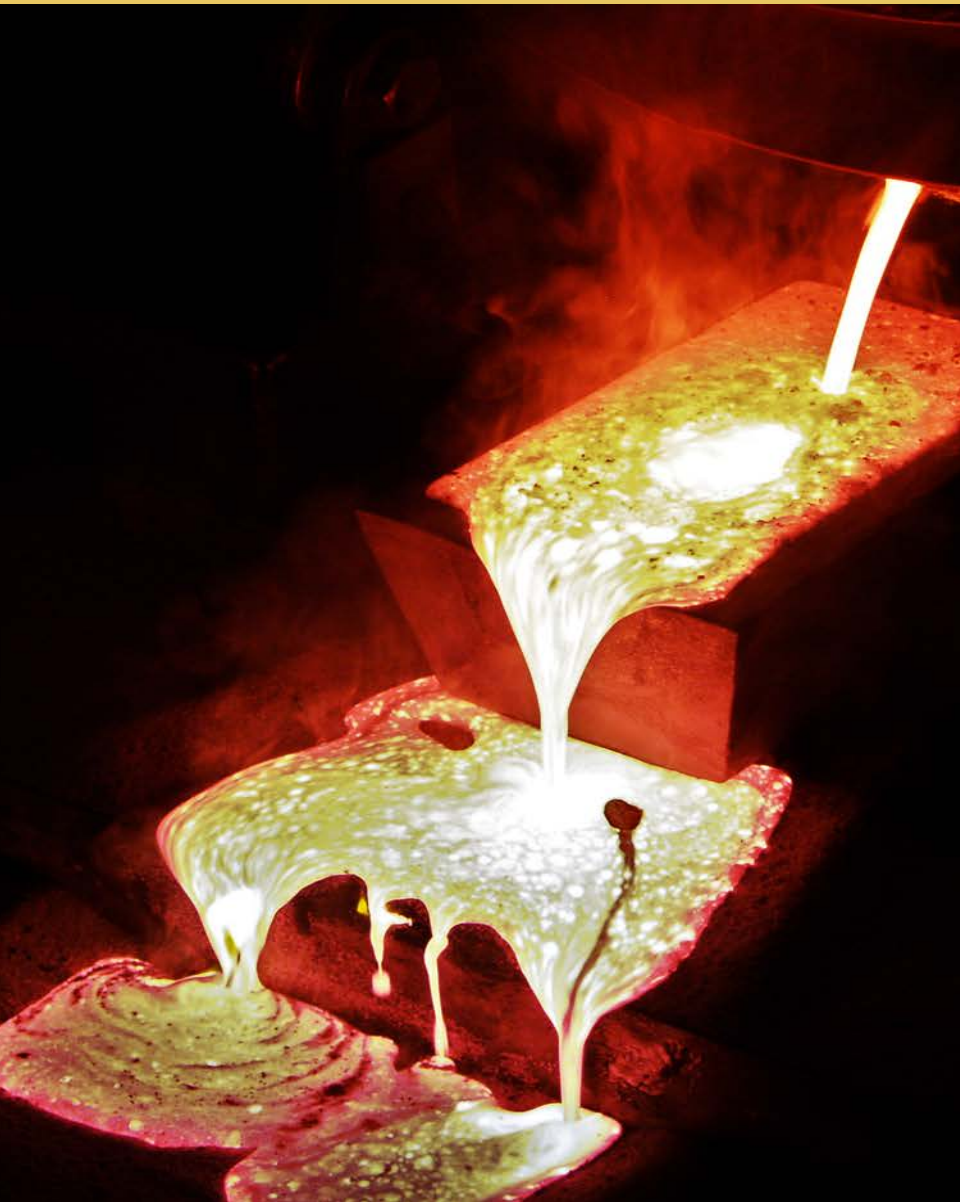


# PHOSPHATE



- **GBM has acquired 100% of the phosphate rights on the ground.**
- **Beetle Creek Formation confirmed over the project area which is key host for phosphate.**
- **Road and rail transport corridor.**
- **Look to see how best it can be developed or IPO in a more favourable market .**

# VALUE & GROWTH THROUGH DISCOVERIES



- Develop Milo as a mid-tier supply of REEYO with significant credits for copper, phosphate and uranium
- IOCG discovery on JV IOCG ground
- Unique position to have the global strength of Pan Pacific Copper and Mitsui & Co as JV partners
- Multi discovery potential on GBM's gold assets
- Phosphate - unlock value and return to GBM shareholders

# EXPLANATORY NOTES

**\*1** *Copper Equivalent calculation represents the total metal value for each metal, multiplied by the conversion factor, summed and expressed in equivalent copper percentage. These results are exploration results only and no allowance is made for recovery losses that may occur should mining eventually result. However it is the company's opinion that elements considered here have a reasonable potential to be recovered. It should also be noted that current state and federal legislation may impact any potential future extraction of Uranium. Prices and conversion factors used are summarised below, rounding errors may occur.*

Commodity	Price	Units	unit value	unit	Conversion factor unit value/copper value
copper	6836	US\$/t	68.36	US\$/%	1.0000
gold	1212	US\$/oz	38.97	US\$/ppm	0.5700
cobalt	40000	US\$/t	0.04	US\$/ppm	0.0006
silver	18	\$/oz	0.58	US\$/ppm	0.0085
uranium	40	US\$/lb	0.08	US\$/ppm	0.0012
molybdenum	38000	US\$/t	0.04	US\$/ppm	0.0006

**\* 2** *Intersections quoted are length weighted averages of results for individual sample intervals. Samples were taken at 1 metre intervals in RC drilling by multistage splitter and generally 1 metre intervals of half sawn core with maximum of 2metres for diamond drilling. Analyses were completed by ALS in Mt Isa for all elements other than gold by ME-ICP61, over limit (>1%) Cu by Cu-OG46 and AU by Au-AA25 in Brisbane. Holes range in declination from 50° to 70° to 225° MGA at Milo and 270° MGA at Tiger. Mineralised zones are interpreted to dip steeply in the opposite direction, holes are therefore drilled approximately perpendicular to the interpreted strike of mineralised zones.*

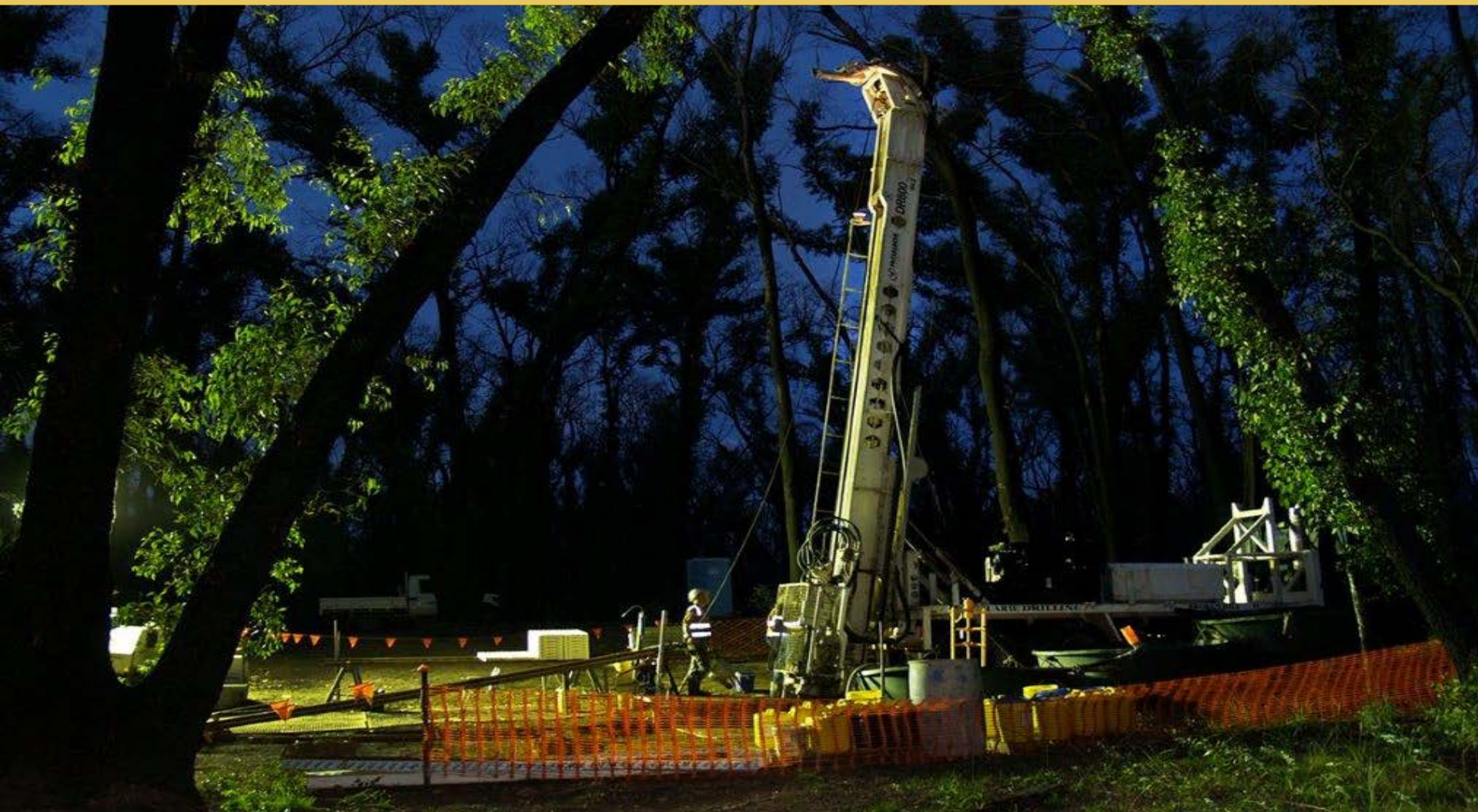
**\*3** *It should be noted that this is an exploration target only, potential quantity and grade is conceptual in nature, there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource.*

*The information in this report that relates to Exploration Results and Mineral Resources (Malmsbury) is based on information compiled by Neil Norris, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Norris is a full-time employee of the company. Mr Norris 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 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Norris consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

*The information in this report that relates to Mineral Resources (Milo) is based on information compiled by Kerrin Allwood, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Allwood is a full-time employee of Geomodelling Pty Ltd. Mr Allwood 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 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Norris consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

**\*4** *The information on the Milo Scoping Study was announced in an ASX release dated 22 November 2012*

# END



*Diamond Drilling at night Malmsbury Gold project*