



PARABELLUM  
RESOURCES

Developing one of the  
largest rare earth deposits  
in the world

PRESENTATION | AUGUST 2022

ASX:PBL

# Disclaimer

This investor presentation has been prepared by Parabellum Resources Limited (ACN 645 149 211) (Company or Parabellum). The issue of this presentation is intended only for the person or entity to which it has been transmitted.

## COMPETENT PERSON STATEMENT

The 2004 Mineral Resource estimate for the Khotgor project in Mongolia was originally reported by Khotgor Minerals in June 2013, has not been reported in accordance with the JORC Code 2012 and a Competent Person has not done sufficient work to classify the estimates of Mineral Resources in accordance with the JORC Code 2012. It is possible that following evaluation and/or further exploration work the currently reported estimates may materially change and hence will need to be reported afresh under and in accordance with the JORC Code 2012. The information in this announcement that relates to mineral resources for the Khotgor project in Mongolia is based on information reviewed by Toby Wellman, an independent consultant to Parabellum Resources Limited who is a Member of the Australian Institute of Mining and Metallurgy ("AusIMM") and has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration, and to the activity being undertaken, to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

Mr Wellman considers the information and data on the nature of the mineralisation and resources, subject to the qualifications set out in the Cautionary Statement, to be an accurate representation of the available data and studies for the Khotgor project.

Nothing has come to the attention of Mr Wellman that causes him to question the accuracy or reliability of the estimates other than as is set out in this announcement, however, neither Mr Wellman nor PBL has not has independently validated the 2004 Mineral Resource estimates.

Mr Wellman consents to the inclusion in this report of the matters based on the information in the form and context in which it appears. Further information is set out in the Company's announcement dated 4<sup>th</sup> August 2022,

The information in this presentation that relates to exploration results on the Australian Copper Projects was first released in the Company's Prospectus dated 4 October 2021 and on the ASX on 19 January 2022 ("Prior Disclosures"). The Company confirms that it is not aware of any new information or data that materially affects the information included in the Prior Disclosures.

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## NO OTHER MATERIAL AUTHORISED

The Company has not authorised any person to give any information or make any representation in connection with any proposed offer of securities. A prospective investor cannot rely upon any information or representations not contained in this presentation.

**SCANDIUM** - Aerospace components

**YTTRIUM** - Spark plugs, cancer treatments, etc.

**LANTHANUM** - Camera lenses, battery electrodes, etc.

**CERIUM** - Oxidising agent, glass/ceramic colouring, etc.

**PRASEODYMIUM** - Magnets, lasers, wind turbines.

**NEODYMIUM** - Magnets, lasers, electric motors, etc.

**PROMETHIUM** - Nuclear batteries, luminous paint, etc.

**SAMARIUM** - Magnets, lasers, control rods for nuclear reactors, etc.

**EUROPIUM** - Phosphors, fluorescent lamps, stabiliser of fuel cells, etc.

**GADOLINIUM** - X-ray tubes, computer memory, etc.

**TERBIUM** - Fluorescent lamps, stabiliser of fuel cells, etc.

**DYSPROSIUM** - Magnetostrictive alloys, hard disk drives, etc.

**HOLMIUM** - Lasers, wavelength calibration standards, etc.

**ERBIUM** - Infrared lasers, fibre-optic technology, etc.

**THULIUM** - X-ray machines, metal-halide lamps, etc.

**YTTERBIUM** - Stainless steel, nuclear medicine, etc.

## Rare Earth Elements: What are they used for?

A 3MW direct drive **wind turbine** consumes **close to two tonnes** of **rare-earth** permanent magnets

Source: [www.lynasrareearths.com](http://www.lynasrareearths.com)



In 2021, the world installed **260,000** kW of renewable energy

In 2021, China alone installed **140,000** kW of renewable energy generation

A 3MW wind turbine consumes close to **two tonnes** of REE magnets

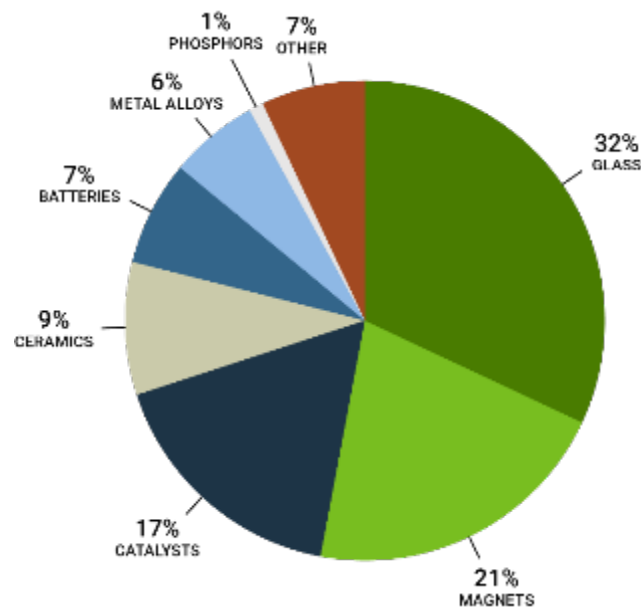
Renewable energy growth in 2021 was **>9% CAGR**



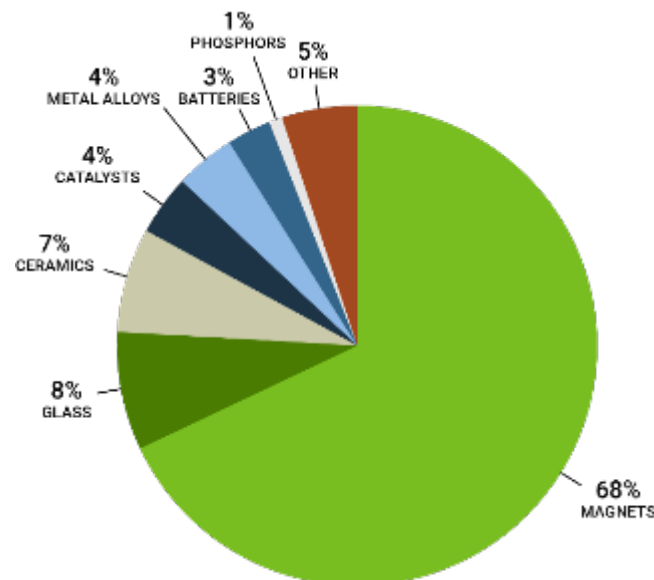
Source: IEA Dec 2021 and Urasian Times June 2022

# Rare earths demand growth

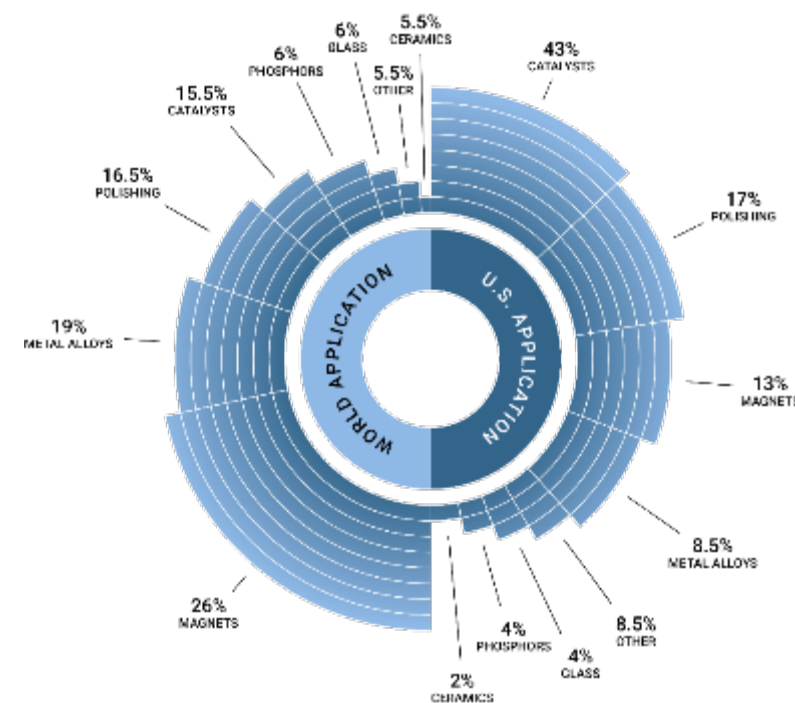
**2021**  
REE Usage



**2028**  
REE Usage



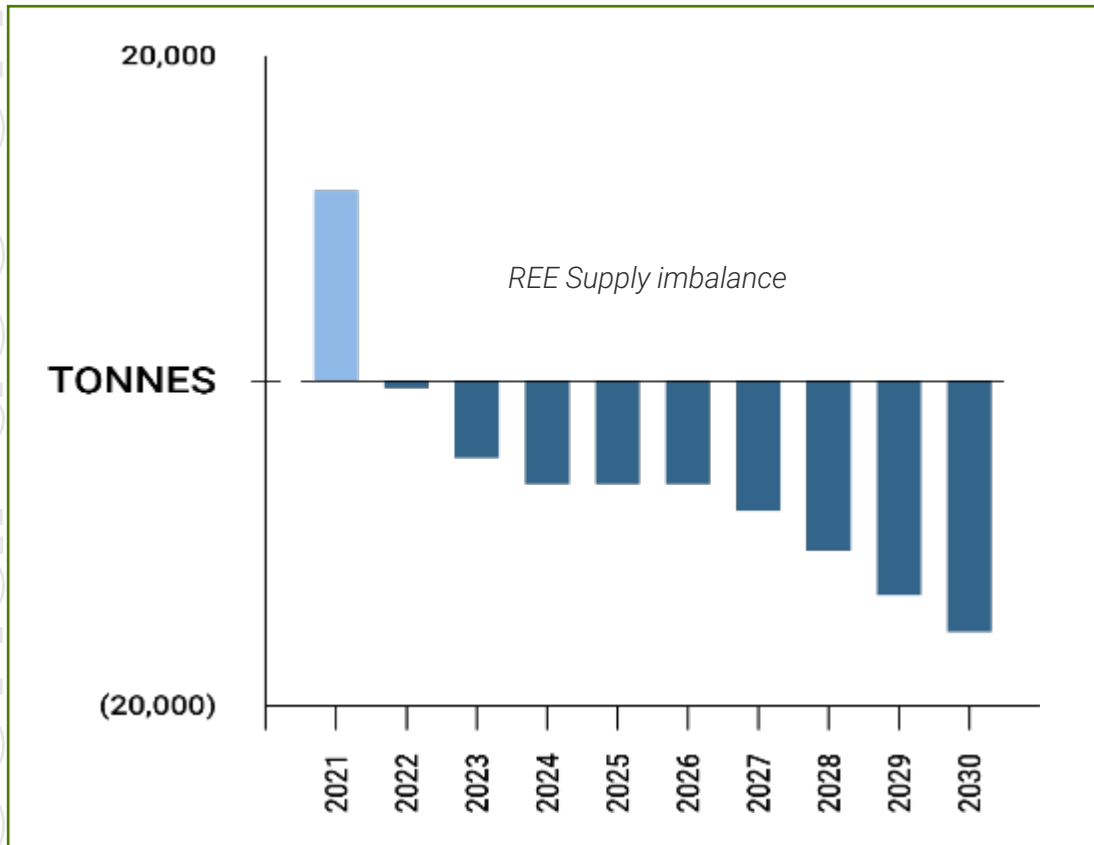
Global Demand and  
Domestic Consumption of REE



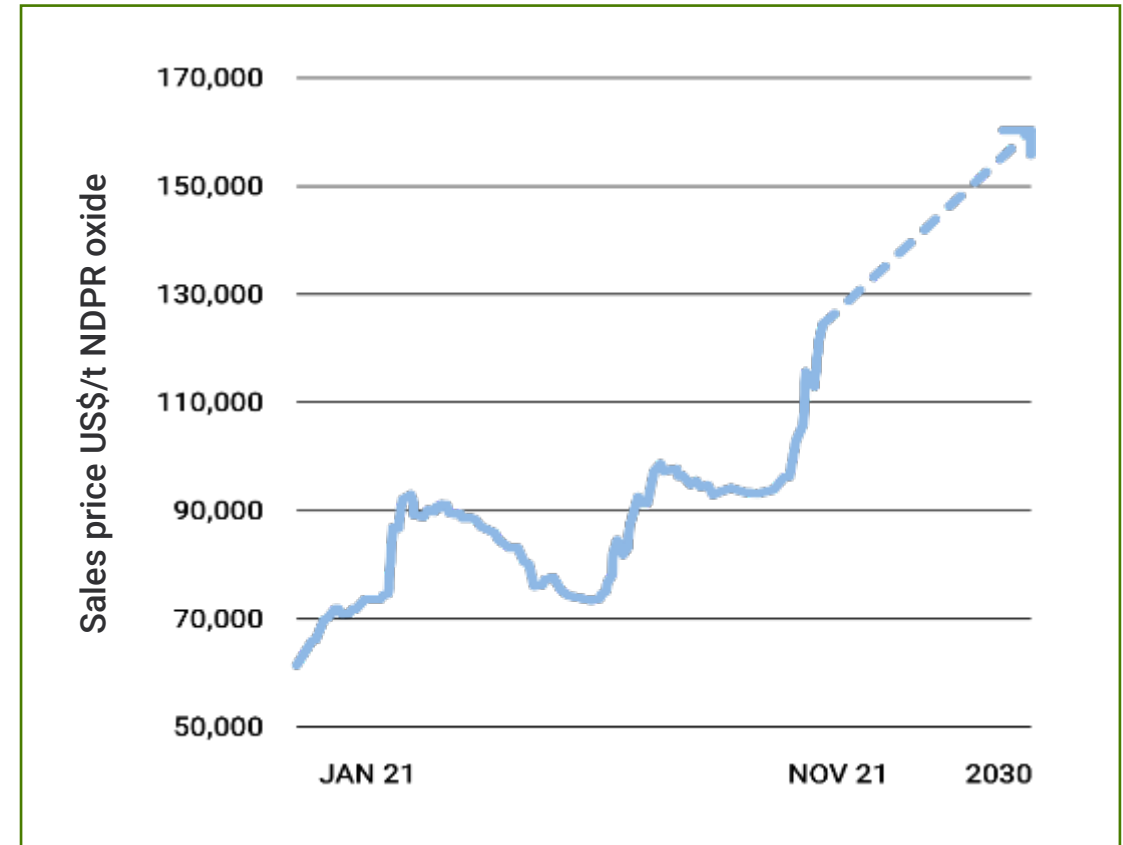
Source: Statista April 2022

# Supply vs demand

## Significant REE supply imbalance from 2023



Source: Statistica April 2022



Source: Pensana April 2022



## Location

Khotgor, Mongolia



# Resource rich

## Mongolia facts

### POPULATION

**3.3 million**  
(1.5 million in Ulaanbaatar)

### AREA

**1.5 million sq. Kilometres**  
(3x size of France)

### UNEMPLOYMENT

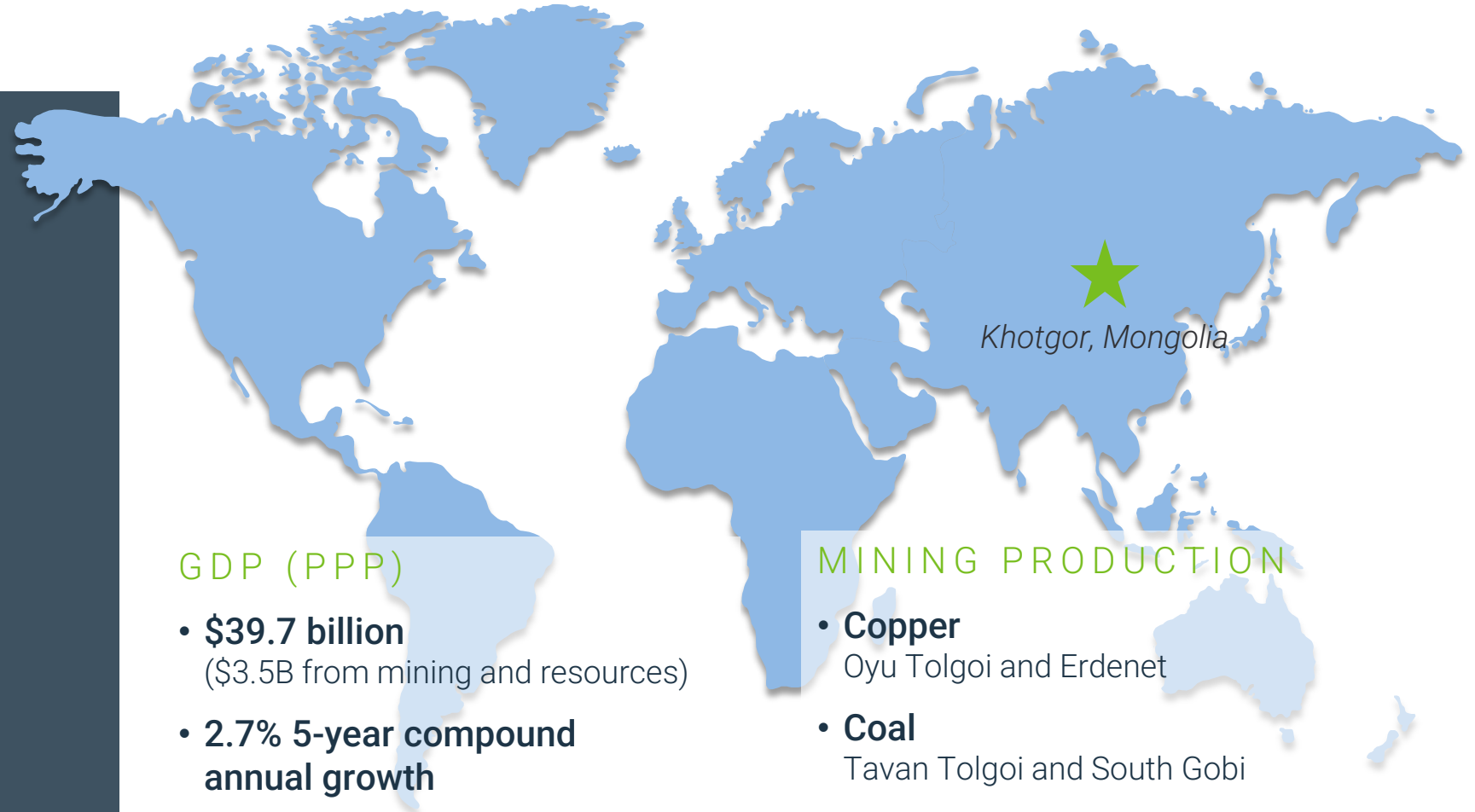
**4.3%**

### INFLATION (CPI)

**~3%**

### FDI INFLOW

**\$1.7 billion**



### GDP (PPP)

- **\$39.7 billion**  
(\$3.5B from mining and resources)
- **2.7% 5-year compound annual growth**
- **\$11,825 per capita**

### MINING PRODUCTION

- **Copper**  
Oyu Tolgoi and Erdenet
- **Coal**  
Tavan Tolgoi and South Gobi
- **Gold**  
Various

# Environment, Safety & Governance:

## Working with local communities

### ENVIRONMENTAL



- Compliance with local and international standards
- Life of Mine rehabilitation strategy being developed
- Project design based on a zero discharge site

### GOVERNANCE



- ESG policy approved by Board
- Senior and operations management committed to ESG philosophy
- Strong independent director representation on Board

### SOCIAL



- Workforce will comprise >95% Mongolia local personnel
- Support of local communities by creating local jobs and support functions
- Long established relationship with local communities

### HEALTH & SAFETY



- International health and safety practices recognised throughout operation
- Health and safety statistics report each month to board
- HSEQ Manager reporting directly to site GM

# Project Overview



# Resource Rich Geological Setting

## Significant Geological Upside

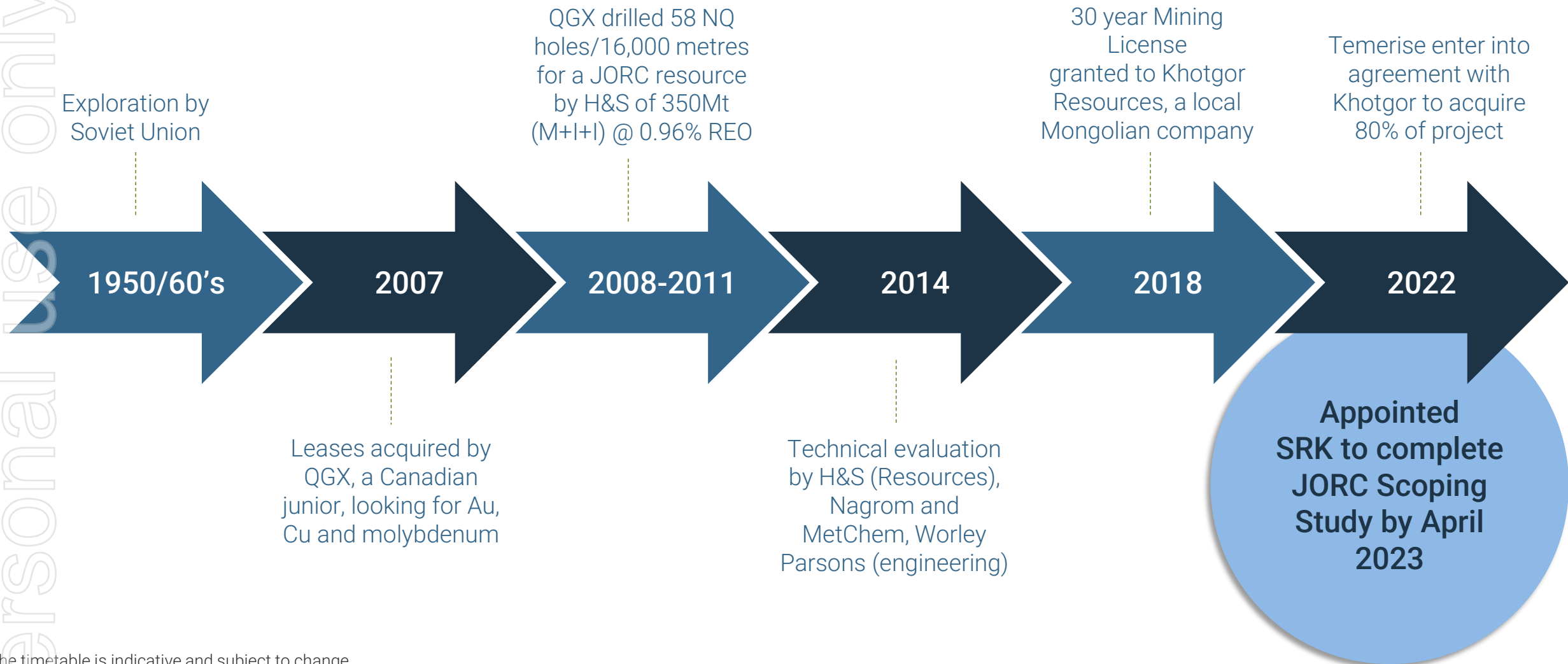
- Located in the Tsogt-Ovoo sum of Southgobi Province, 500km south of Ulaanbaatar, accessed via paved road
- Local geology dominated by metamorphic rocks such as black grey sandstone, siltstone, schist and limestone intruded by early Permian biotite-amphibole intrusive and late Jurassic alkaline intrusive rocks and their dykes
- Khotgor REE deposit formed in vertical pipe like body which intruded early Permian granite and Silurian metamorphic rocks. Main mineralisation hosted in britholite and associated with apatite and magnetite
- Mineralisation occurs close to surface within multiple vein systems up to 20 metres thick and currently drilled to 200 metres below surface



KHOTGOR, SOUTHGobi



# Project history



# Upside

## Large Land Package

### LICENSE

Mining License MV-015631 granted in 2010 and valid for 30 years

Until 2040

### AREA

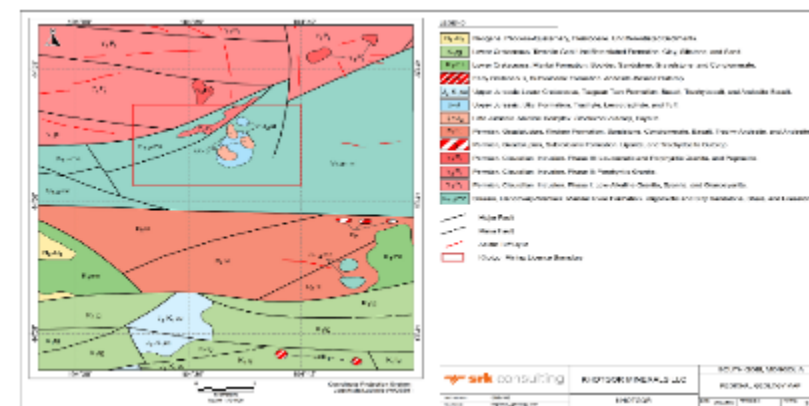
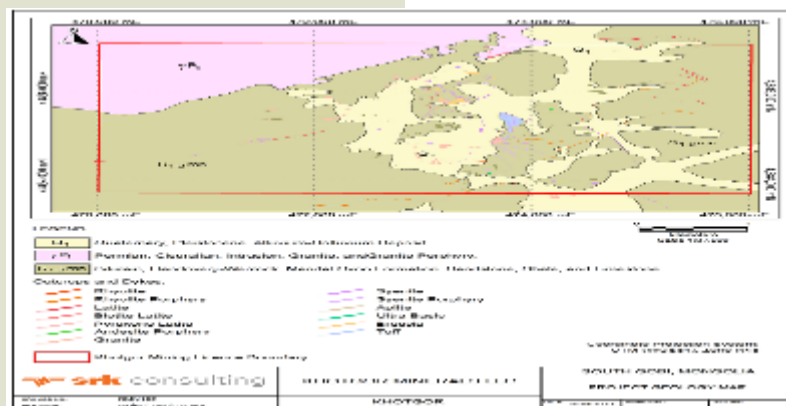
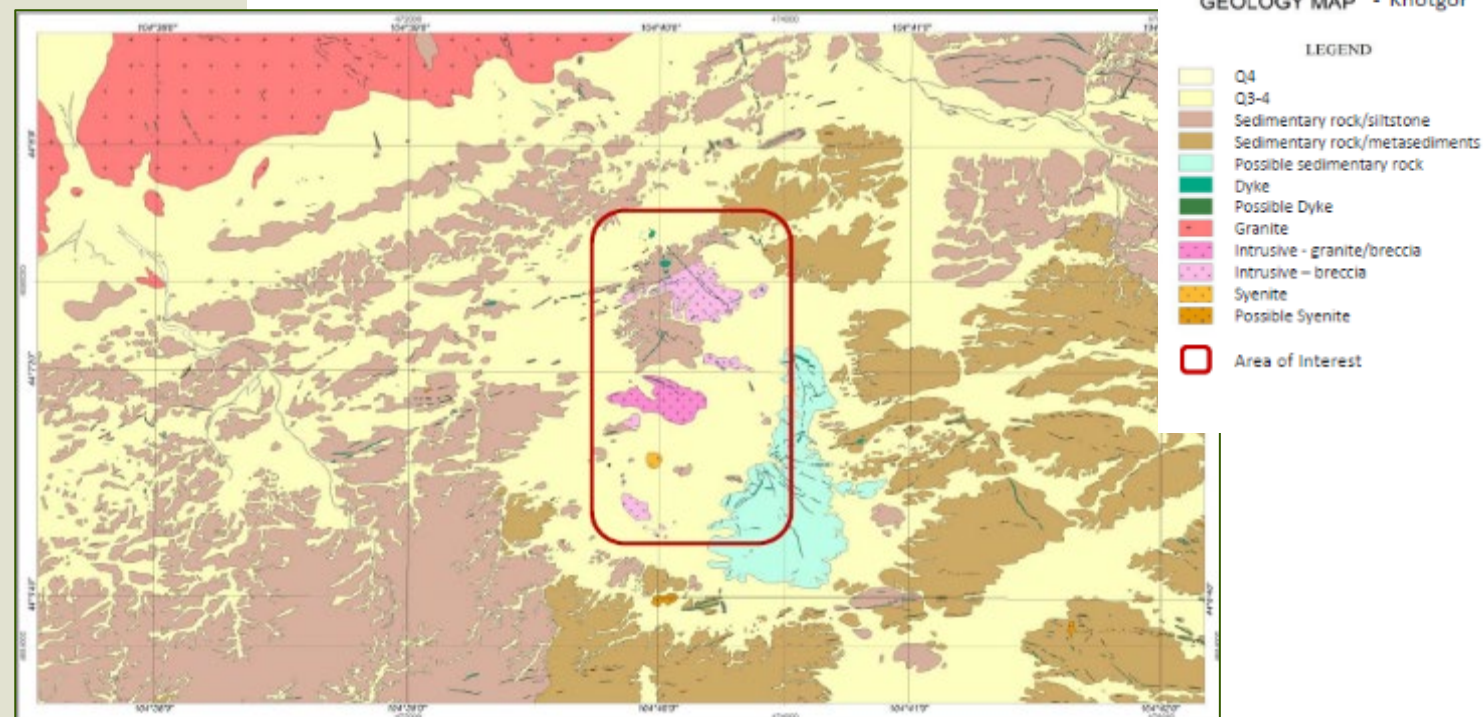
License area of 2m x 10km

20km<sup>2</sup>

### EXPLORATION

Potential for gold/copper porphyry

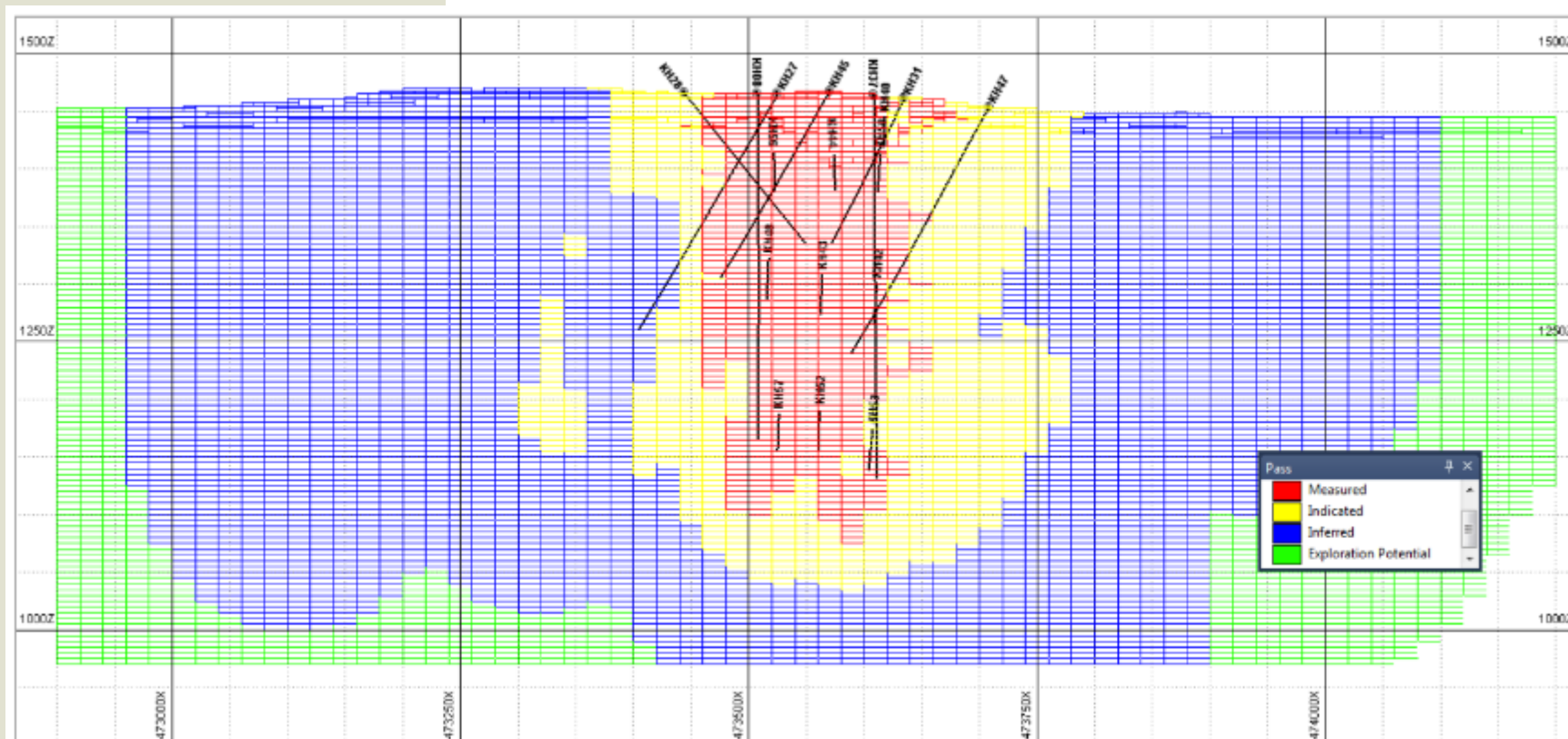
Focus on granite domes



300 metres >1.5%

## Resource Classification Section

looking north through 4885950 N



Source: H&S Consultants PL, 2013  
PBL Press release 04/08/2022



# 2013 Resource Summary (TBA)

## Prime location

and excellent geological prospectivity given orebody's in the vicinity

## Easy access

## Multiple targets

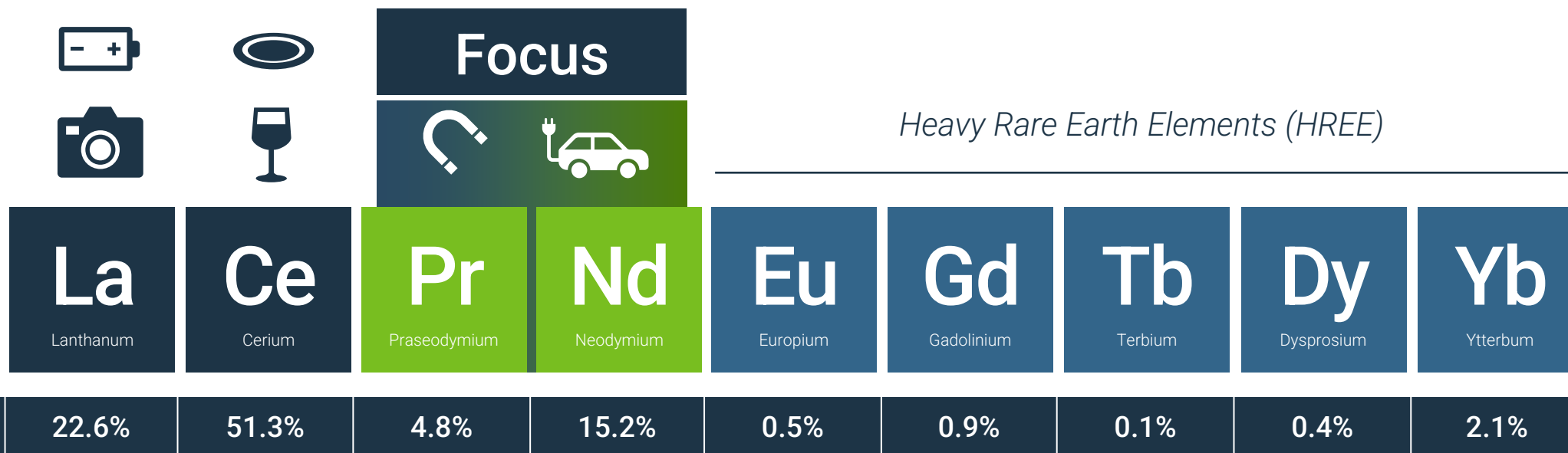
Classification @ 1% cut-off	Ore (min tonnes)	Grade (%)	SG	TREO (000 tonnes)	LREO (000 tonnes)	HREO (000 tonnes)
Measured	22.5	1.6	2.67	361	345	17
Indicated	29.6	1.43	2.66	424	404	20
Inferred	45.1	1.49	2.67	673	637	36
Total	97.2	1.4	2.67	1,458	1,386	72

*The historical estimate, originally report by Khotgor Minerals in January 2013, has not been reported in accordance with the JORC Code 2012 and a Competent Person has not done sufficient work to classify the estimates of Mineral Resources in accordance with the JORC Code 2012. It is possible that following evaluation and/or further exploration work the currently reported estimates may materially change and hence will need to be reported afresh under and in accordance with the JORC Code 2012. Nothing has come to the attention of the Company that causes it to question the accuracy or reliability of the estimates but the Company has not independently validated the estimates and therefore the Company is not be regarded as reporting, adopting or endorsing those estimates.  
(Note: Historic resource numbers from 2013, currently being updated by SRK)*



# Magnets and motors

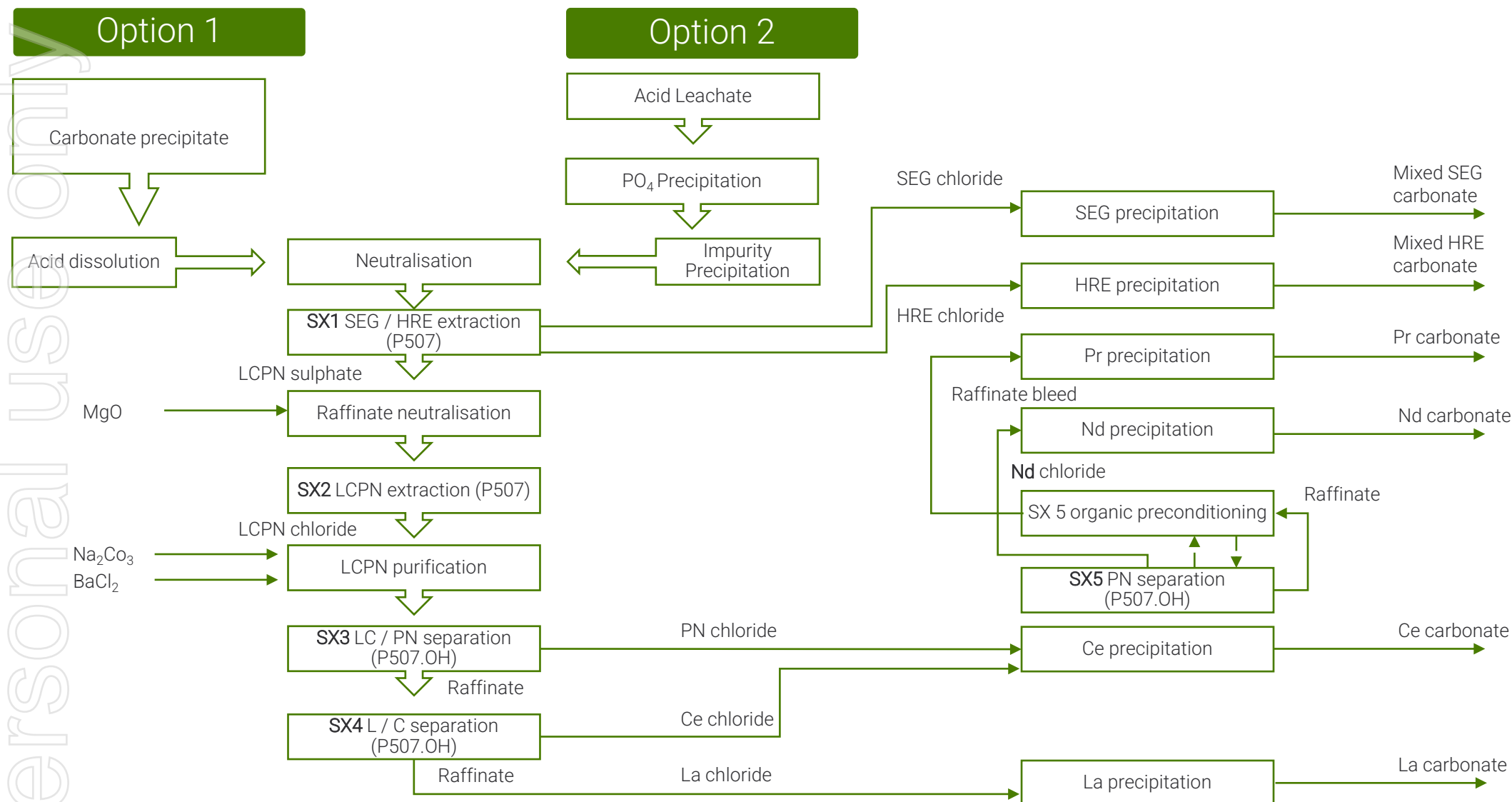
Favourable mineral suite focussing on **NdPr** Product



*Heavy Rare Earth Elements (HREE)*

# Flow sheet optimisation

## Flow sheet testwork underway

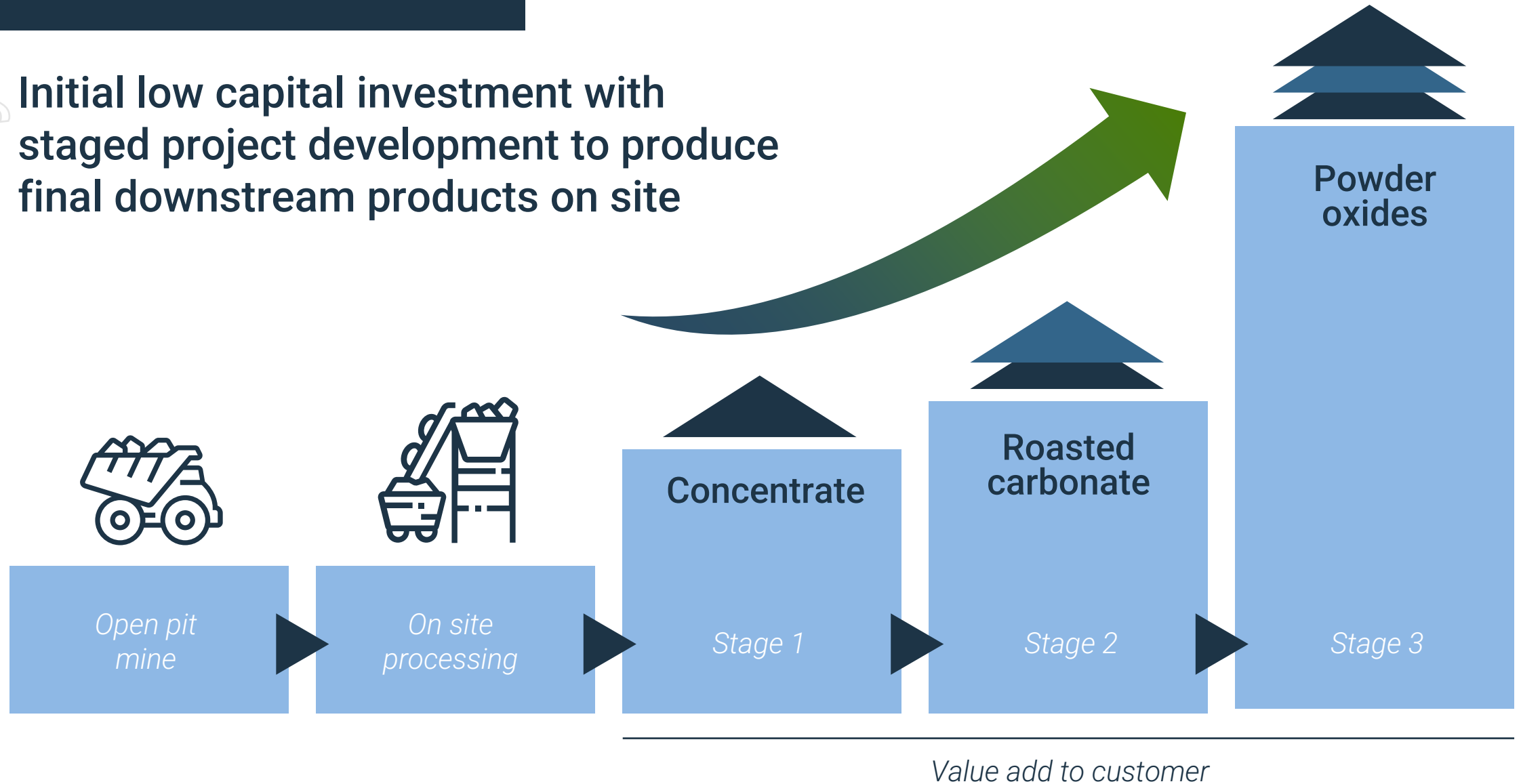


# A Two-Year Strategy



# Process

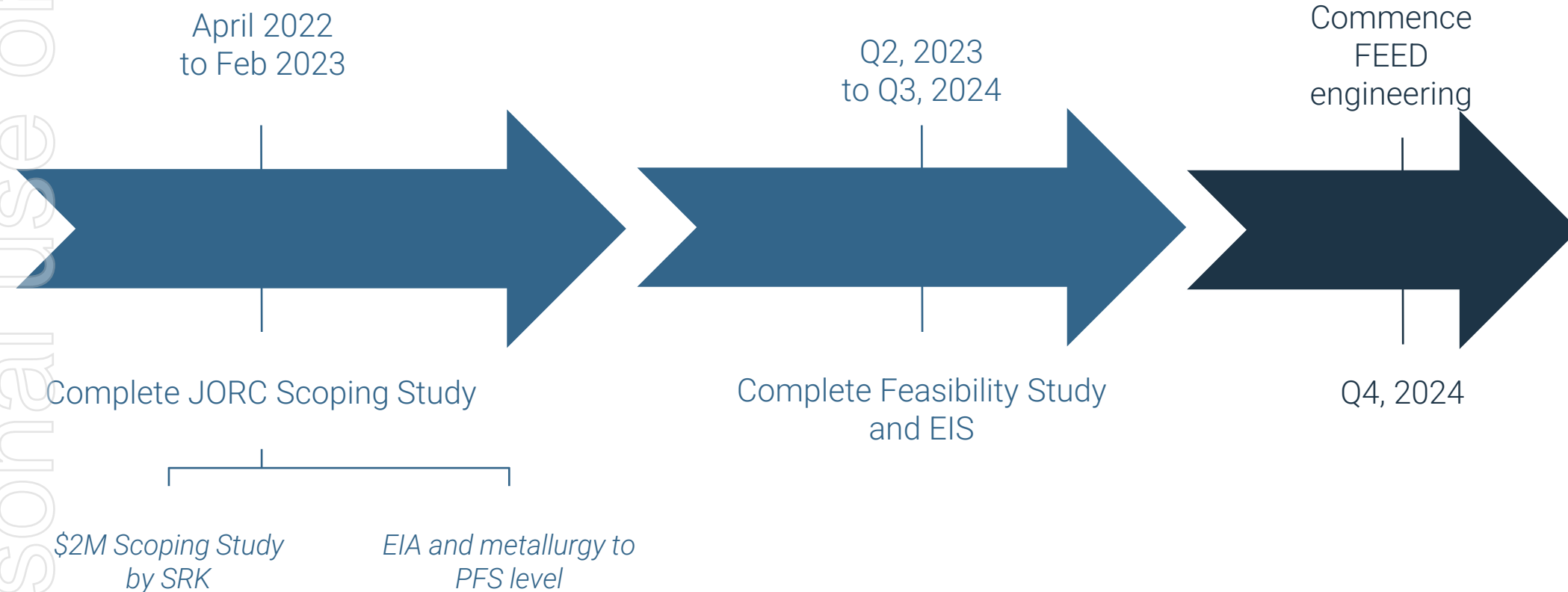
Initial low capital investment with staged project development to produce final downstream products on site





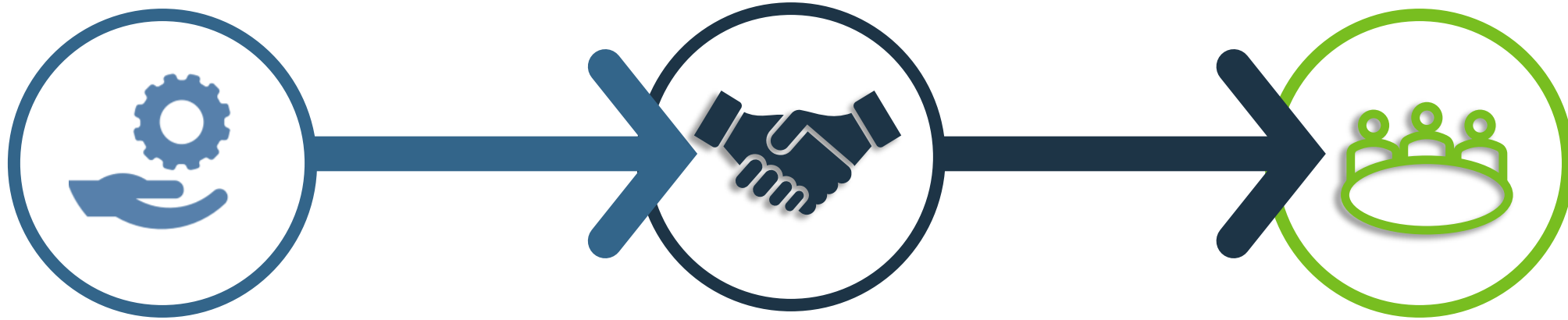
# Schedule

## Two-year focus



# Proposed Transaction & Corporate Overview

# Khotgor Minerals – Temarise Limited – Parabellum (PBL) Corporate & Transaction Structure



## KHOTGOR REE PROJECT

### EXISTING OWNERSHIP

Khotgor Minerals is the project operator and holds the Khotgor Mining Licence valid until 2040

## TEMARISE LIMITED

OPTION TO ACQUIRE 80% KHOTGOR PROJECT BY ENTERING INTO AN 80/20 JV WITH KHOTGOR MINERALS

TEM to complete:

1. An updated independent mineral resource estimate to JORC standard.
2. Undertake metallurgical test work
3. Complete a JORC Standard Scoping Study by April 2023
4. Final payment by June 2023

*At present, PBL has no obligation to fund any part of the option payment and any participation by PBL will be subject to further regulatory and any required shareholder approvals.*

## PARABELLUM RESOURCES LIMITED & TEMERISE LIMITED

### SUBSCRIPTION AGREEMENT

PBL to complete:

1. Confirmatory/Metallurgical Diamond Drilling Program 2,000m
2. Metallurgical/Mining Study – SRK, ALS
3. JORC Resource Study - SRK
4. JORC Scoping Study - SRK

Subscription conditional on Parabellum receiving firm commitments for \$A3,900,000

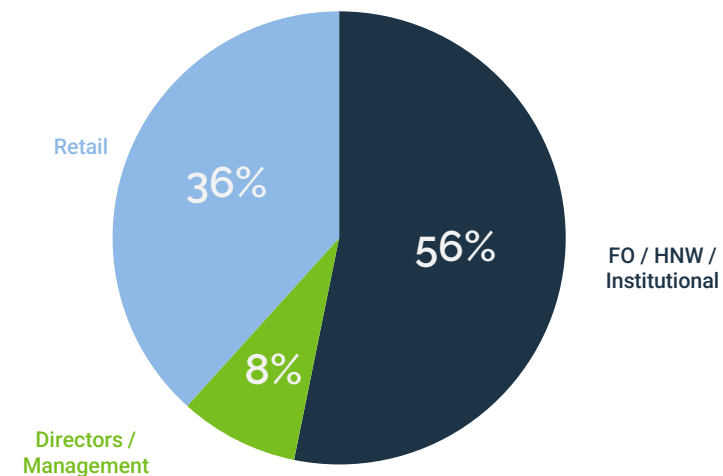
PBL to be initially issued 30% of the issued capital in Temarise Limited

# Corporate overview

Share price performance



Shareholder composition<sup>1</sup>



**~\$9.0**

million

Market Cap  
(at \$0.21 per share)

**\$3.1**

million

Enterprise  
Value

**42.8**

million

Shares on  
Issue

**8.8**

million

Unlisted Options  
(\$0.25-\$0.30 exercise)

**65%**

Top 20  
Shareholdings<sup>1</sup>

**\$4.6**

million

Cash<sup>2</sup>

<sup>1</sup> Shareholder information as at August 2022 <sup>2</sup> Cash as at 30 June 2022



# Use of funds – 12-month outlook

The Company's proposed use of funds over the next 12 months are outlined in the following table:

Projects	Development Expenditure (AUD)	Exploration Expenditure (AUD)
Khotgor – Scoping study	\$2,600,000	
Khotgor – Infill/Metallurgical drill program	\$1,300,000	
NSW Copper/Gold exploration		\$1,250,000
<b>Total</b>	<b>\$3,900,000</b>	<b>\$1,250,000</b>

# Board of Directors

## MARK HOHNEN

### Non-Executive Chairman

Mark Hohnen has significant experience in the mineral resource sector since the late 1970s, and in a range of other industries including property, software and agriculture.

Mark is an executive director and chairman of Bacanora Lithium Plc (LSE:BCN) until its takeover by Ganfeng International Trading (Shanghai) Limited in December 2021. Also previously non-executive Chairman of Boss Resources Ltd (ASX:BOE), and director of Salt Lake Potash Limited (ASX:SO4) and Pensana Plc (LSE:PRE).

Further he was a director of Kalahari Minerals and Extract Resources, having negotiated the sale of both companies to Taurus Minerals Ltd.

## PETER RUSE

### Non-Executive Director

Peter Ruse is a finance professional with over 15 years' experience in Equity Funds Management and Private/ Institutional Wealth Management in the Mining/Minerals and Industrial related sectors.

Peter is an Executive Director of Mont Royal Resources (ASX:MRZ) & Non-Executive Director of Gunsynd PLC (LSE:GUN).

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## SHAUN MENEZES

### Non-Executive Director, CFO, Company Secretary

Shaun Menezes is an accounting and finance professional with over 20 years' experience.

Shaun has worked in the capacity of Company Secretary and Chief Financial Officer of a number of ASX and SGX listed companies, held a senior management role within an ASX 200 listed company and was an executive director at a leading international accounting firm.

# Management

## PETER SECKER

### Proposed Executive & Technical consultant

Peter Secker is a Mining Engineer with over 40 years experience in the resources industry. Peter has developed and operated green field projects in Australia, China, Africa, Canada and Mexico and has worked with multiple commodities including lithium, titanium, copper, gold and iron ore.

Peter is currently on the Boards of Bacanora Lithium Ltd and Zinnwald Lithium plc.

## Ms BATTUYA GANKHUYAG

### Country Manager – Mongolia

Ms Battuya Gankhuyag has over 15 years of experience in the mining and natural resources sectors in Mongolia and the UK. Ms Gankhuyag holds a Master's Degree in International Business and is CIMA qualified.

During the past decade she has built a strong network of business contacts within the Mongolian finance and mining communities, whilst building her family mining business and working as a Mongolian Trade Ambassador in Central Asia.

## MARK ARUNDELL

### Chief Geologist/Project Manager, NSW

Mark Arundell is a highly experienced and successful geologist and geochemist with over 30 years' experience in mineral exploration, mining, mining project assessment and equity capital markets.

Mark previously served CEO of Sky Metals Limited (ASX:SKY), and held senior roles with RGC, North Ltd and Rio Tinto operating across Australia and internationally. He has extensive experience in copper and base metals exploration and development, particularly in NSW.

Mark holds a Master's Degree in Economic Geology from the University of Tasmania.



# A *Rare* Investment Proposition to create Shareholder Value

One of the world's *largest rare earth deposits*

Focus on *NdPr* mineral suite

NdPr market size **will grow over next 5 years** as renewable energy demand increases at 9% CAGR

RRE basket price has *increased significantly in last decade*

*Located next to the fastest growing* EV and wind power projects in Asia

Management team with *significant experience working in Mongolia and China*

Experienced Board with over 100 years combined *project development* and *project finance experience*

*Fast track to project construction* with significant project work completed



PARABELLUM  
RESOURCES



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[@ParabellumRes](https://twitter.com/ParabellumRes)

ASX:PBL

# Australian Copper projects



# Australian Copper Projects Location & Overview

PBL's Australian focus is on exploring for copper and gold deposits within the Lachlan Fold Belt in central NSW

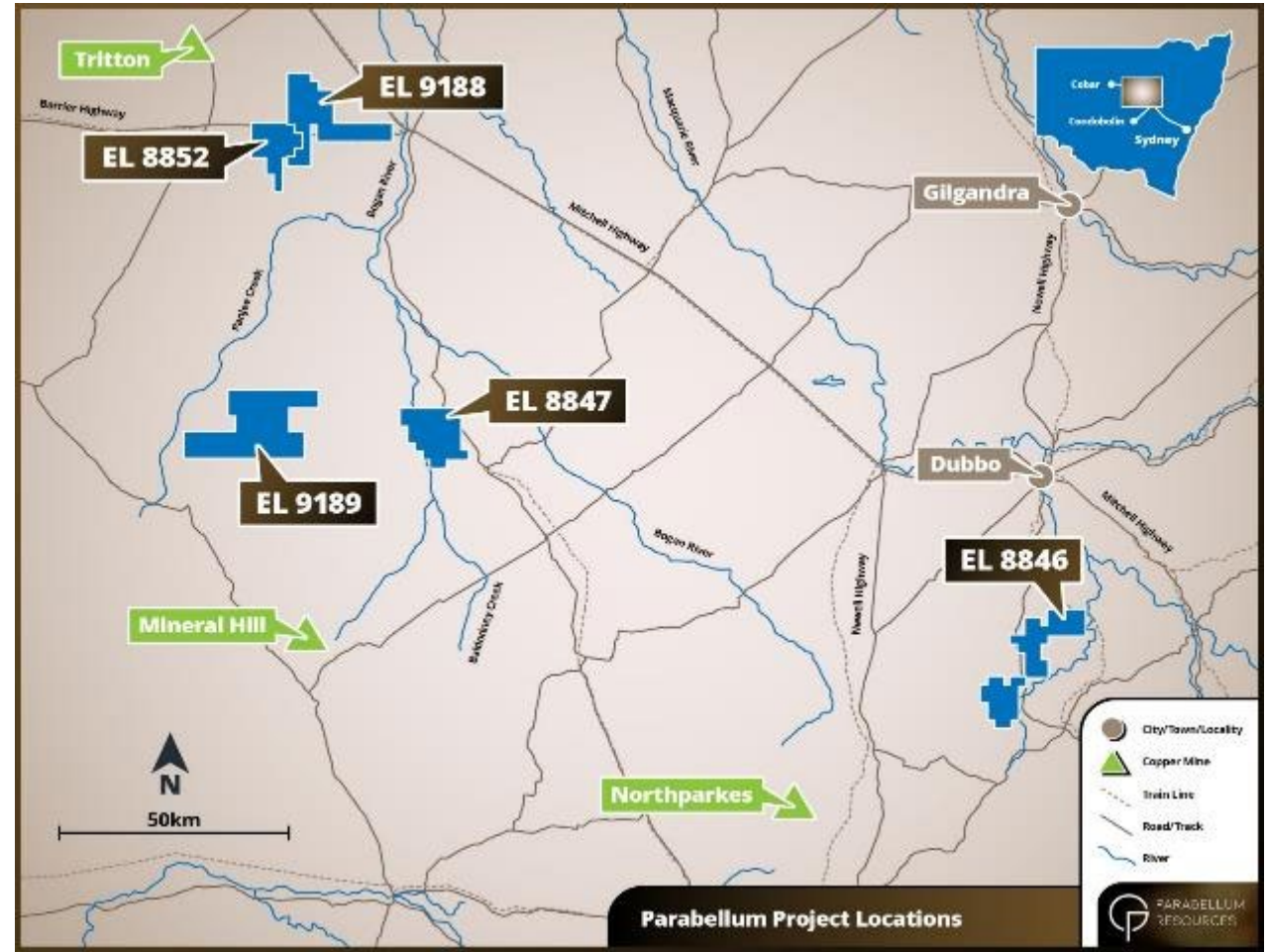
NSW is a Tier 1 mining and exploration jurisdiction with world class infrastructure

Multiple copper and gold mines in the area (Northparkes, Cadia, CSA, Peak, Tritton, Mineral Hill)

Recent unprecedented exploration activity with multiple copper discoveries (Alkane Resources – Boda; Aeris Resources – Constellation/Kurrajong; Peel Mining- Mallee Bull/Wirlong; Helix Resources - Canbelego/Collierina)

PBL's strategic tenure position:

- Redlands/Whitbarrow, Recovery and Lunns Dam Projects in the Tottenham-Girilambone district comprises four granted exploration licences covering approx. 690km<sup>2</sup>;
- Obley Project in the Yeoval district comprises one granted exploration licence covering approx. 180km<sup>2</sup>

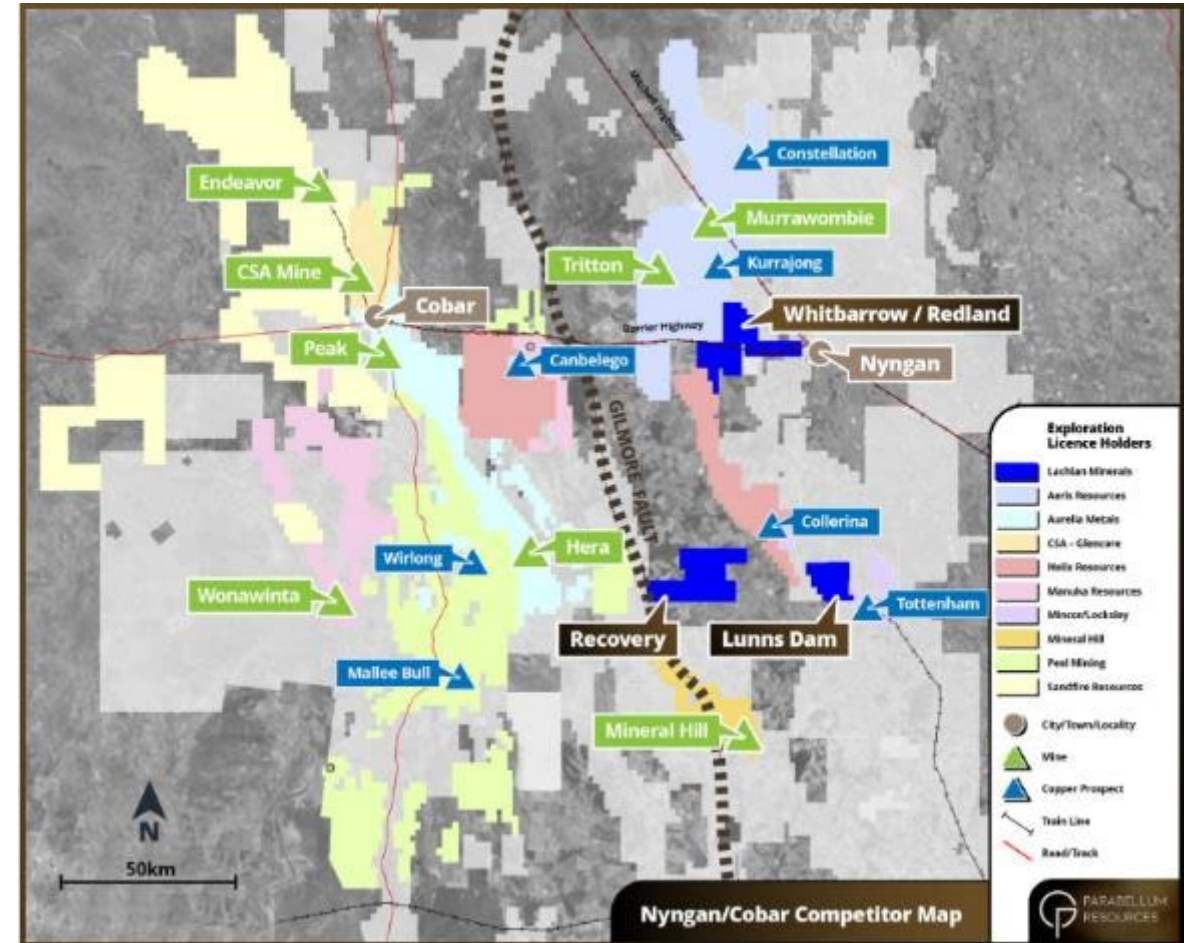


# An exciting suite of copper-gold opportunities

PBL's four Australian copper assets have outstanding potential in an under- explored though highly prospective copper province

Targeting massive sulphide (Besshi-type) copper mineralisation in rocks of the Girilambone Group in Western NSW, and copper/gold skarn mineralisation around an intrusive complex with known copper mineralisation in Central NSW

Massive Sulphide mineralisation has been detected by electromagnetics (EM) surveys at Aeris Resources (ASX: AIS) Constellation discovery, which is proximal to PBL's tenements





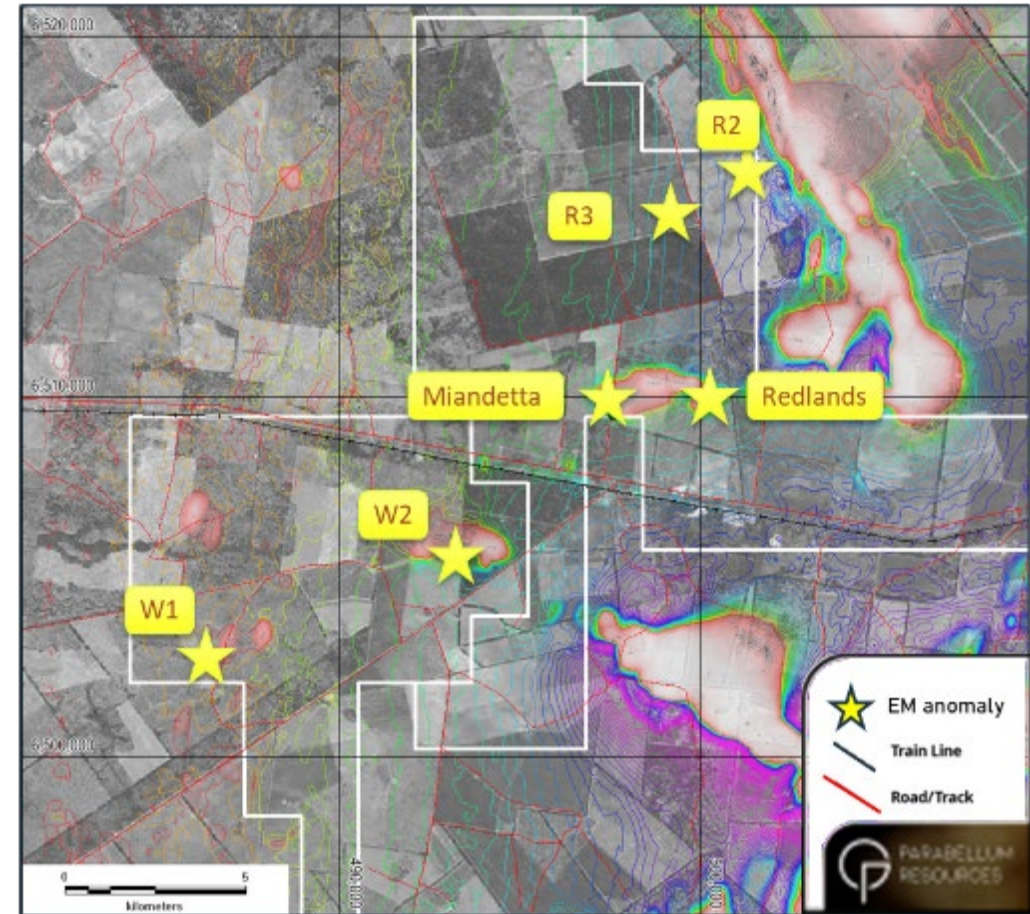
# Redlands & Whitbarrow Projects

Redlands and Whitbarrow are located along strike from Aeris Resources' Constellation deposit (I&I resource of 3.3mt at 1.4% Cu, 0.3g/t Au, 1.7 g/t Ag) 3 and Kurrajong discovery, and is contiguous with Aeris' operating Tritton and Murrawombie mines.

Also, Helix Resources (ASX: HLX) "Regional Mineralised Copper Trend" passes into EL 8852 from their Quanda copper prospect

Airborne EM completed over the Whitbarrow/Redlands Project areas has delineated six high ranking EM anomalies – W1, W2, R2, R3, Miandetta and Redlands.

Follow up ground EM has been designed and is scheduled to be completed in August with drill testing planned for late Q3 / early Q4 CY2022.



Whitbarrow/Redlands Project – AEM anomalies overlain on Magnetic contours.  
(Source PBL 25th July 2022)

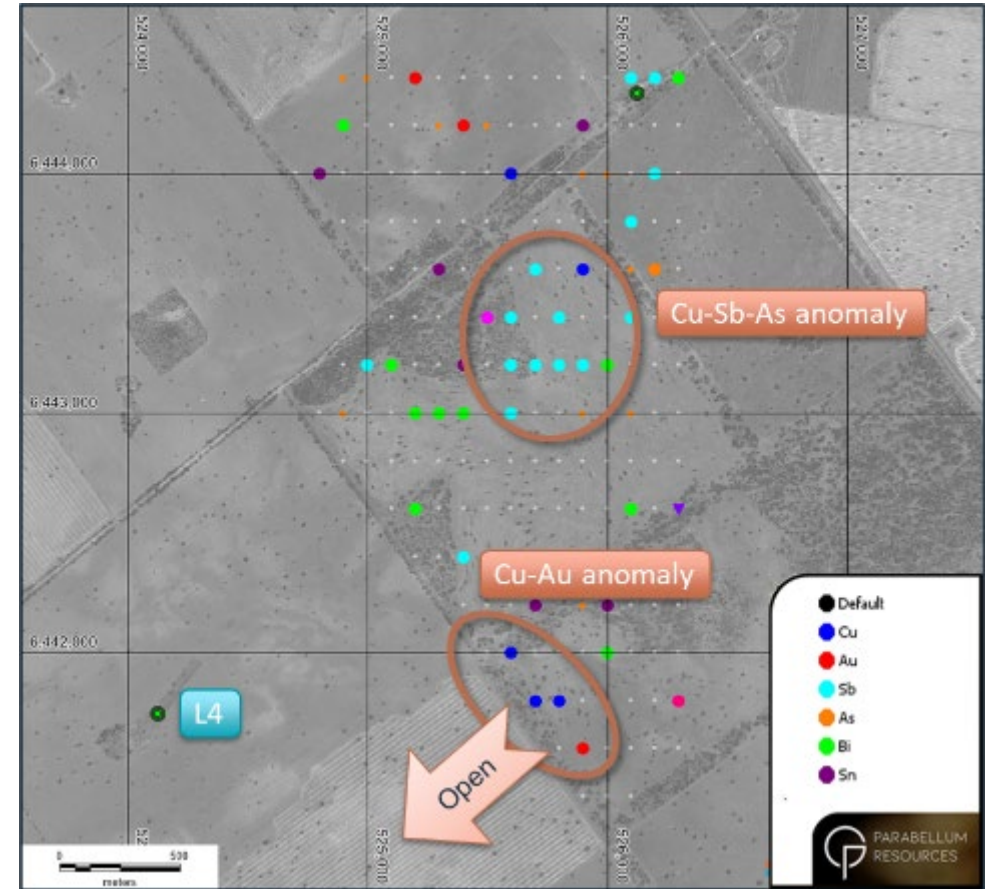


# Lunns Dam Project

Lunns Dam is along strike from Locksley Resources (ASX:LKY) Tottenham Project

Airborne EM completed over the Lunns Dam Project area has delineated two high ranking anomalies - L1 and L4. Follow up ground EM has been designed and is scheduled to be completed in August with drill testing planned for late Q3 / early Q4 CY2022.

Auger sampling has defined two Copper plus pathfinder anomalies. The southern anomaly is open to the south-west. PBL plan to drill test these targets in Q4 CY2022.



Lunns Dam Project – Swansons Lag/Auger Sampling Results (Source: PBL 25th July 2022)

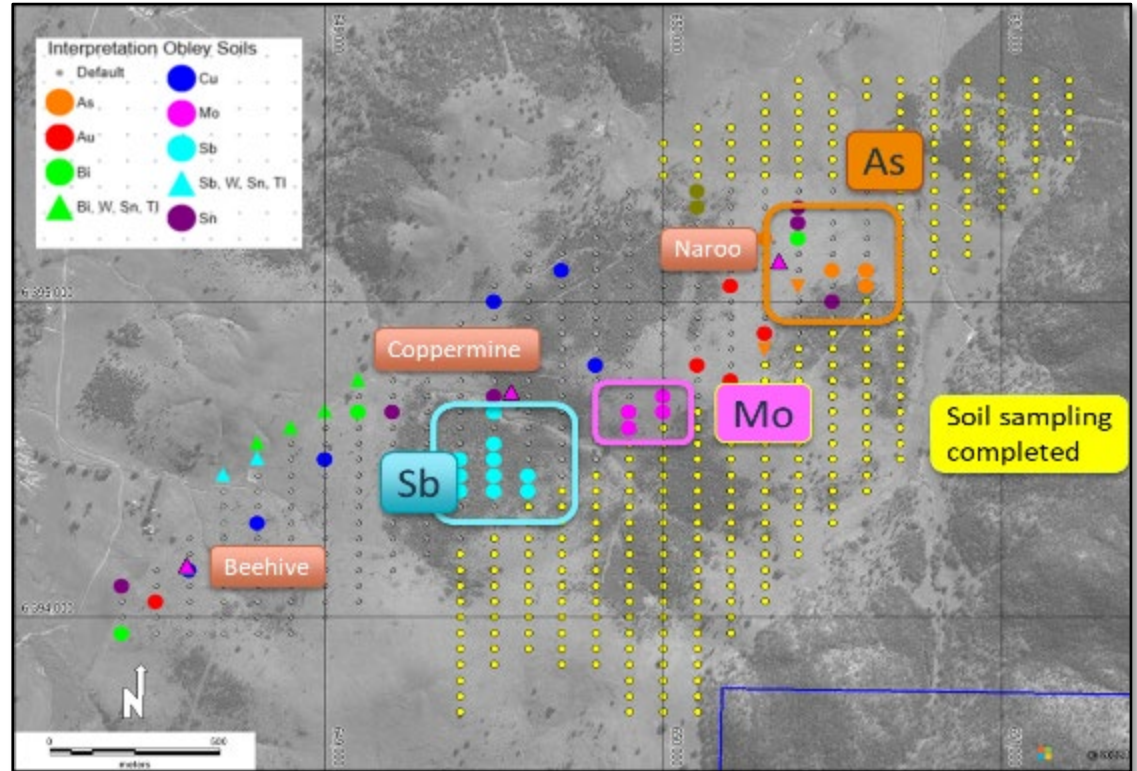
# Obley Project

Multiple historic workings at Obley including Beehive, Coppermine Gully and Naroo Pits

All copper-gold skarn prospects associated with distinct magnetic high within Cuga Burga Volcanics at contact zone of Yeoval Granite

Follow up soil sampling of the three coherent Copper mineralisation pathfinder anomalies – Antimony (Sb) & Molybdenum (Mo) proximal to Coppermine Gully & Arsenic/Bismuth/Tin (As/Bi/Sn) at Naroo – has recently been completed).

Approximately 300 samples were collected as part of this program and analytical results are expected late Q3 CY2022.





Thank you