



XANADU MINES

**Proven Explorer with Focus on Mongolia**  
**Excellent Exposure to Near Term Copper**

Investor Presentation

April 2024

ASX:XAM | TSX:XAM

## Cautionary Statements

The Study has been undertaken to assess viability of developing the Kharmagtai Copper-Gold Project (Kharmagtai) by constructing an open cut mine and processing facility to produce copper concentrate for export. It is a preliminary technical and economic Study of the potential viability of Kharmagtai. It is based on low level technical and economic assessments that are not sufficient to support the estimation of ore reserves. Further exploration and evaluation work and appropriate studies are required before Xanadu will be in a position to estimate any ore reserves or to provide any assurance of an economic development case. The Study is based on the material assumptions in this document. These include assumptions about the availability of funding. While Xanadu considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Study will be achieved. To achieve the range of outcomes indicated in the Study, funding of in the order of US\$700 million will likely be required. Investors should note that there is no certainty that Xanadu will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Xanadu's existing shares. It is also possible that Xanadu could pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the project. If it does, this could materially reduce Xanadu proportionate ownership of the project. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Study. There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised. The Study is based on the December 2021 Mineral Resource Estimate, is based on low-level technical and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Study will be realised. The Study has been completed to a level of accuracy of +/-35% in line with industry standard accuracy for this stage of development. The Company has reasonable grounds for disclosing a Production Target, given that in the first seven years of production, 100% of the mill feed is scheduled from the Indicated Resource category, which exceeds the economic payback period for the project by 3 years. Approximately 55% of the Life of Mine Production Target is in the Indicated Mineral Resource category, and 45% is in the Inferred Mineral Resource category. There is a lower level of geological confidence associated with Inferred Mineral Resources, and while the Company considers all the material assumptions in this Study to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated will be achieved. The Mineral Resources underpinning the production target in the Study have been prepared by a Competent Person in accordance with the requirements of Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012). The Competent Person's Statement is found in the Geology and Resources section of this Study. For full details of the Mineral Resource Estimate, please refer to Xanadu ASX/TSX Announcement dated 25 February 2022. Xanadu confirms that it is not aware of any new information or data that materially affects the information included in that release. All material assumptions and technical parameters underpinning the estimates in that Announcement continue to apply and have not materially changed. Note that unless otherwise stated, all currency in this Study is US dollars.

## Forward Looking Statements

Certain statements contained in this Study, including information as to the future financial or operating performance of Xanadu and its projects may also include statements which are 'forward-looking statements' that may include, amongst other things, statements regarding targets, estimates and assumptions in respect of mineral reserves and mineral resources and anticipated grades and recovery rates, production and prices, recovery costs and results, capital expenditures and are or may be based on assumptions and estimates related to future technical, economic, market, political, social and other conditions. These 'forward-looking statements' are necessarily based upon a number of estimates and assumptions that, while considered reasonable by Xanadu, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies and involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements. Xanadu disclaims any intent or obligation to update publicly or release any revisions to any forward-looking statements, whether as a result of new information, future events, circumstances or results or otherwise after the date of this Study or to reflect the occurrence of unanticipated events, other than required by the Corporations Act 2001 (Cth) and the Listing Rules of the Australian Securities Exchange (ASX) and Toronto Stock Exchange (TSX). The words 'believe', 'expect', 'anticipate', 'indicate', 'contemplate', 'target', 'plan', 'intends', 'continue', 'budget', 'estimate', 'may', 'will', 'schedule' and similar expressions identify forward-looking statements. All 'forward-looking statements' made in this Study are qualified by the foregoing cautionary statements. Investors are cautioned that 'forward-looking statements' are not a guarantee of future performance and accordingly investors are cautioned not to put undue reliance on 'forward-looking statements' due to the inherent uncertainty therein. Xanadu has concluded that it has a reasonable basis for providing these forward-looking statements and the forecast financial information included in this Study. To achieve the range of outcomes indicated in the 2022 Kharmagtai Scoping Study, funding of in the order of an approximately US\$700 million will likely be required by the Company. Based on current market conditions and the results of studies undertaken, there are reasonable grounds to believe the Project can be financed via a combination of equity and debt, as has been done for numerous comparable projects in Mongolia and other jurisdictions in Asia in recent years. Debt may be secured from several sources including Australian banks, international banks, the high yield bond market, resource credit funds, and in conjunction with product sales of offtake agreements. It is also possible the Company may pursue alternative funding options, including undertaking a corporate transaction, seeking a joint venture partner or partial asset sale. There is, however, no certainty that Xanadu will be able to source funding as and when required. Whilst no formal funding discussions have concluded, the Company has engaged with several potential financiers of Kharmagtai and these financial institutions and corporations have expressed an interest in being involved in funding of the Project. This ASX Study has been prepared in compliance with the current JORC Code (2012) and the ASX Listing Rules. All material assumptions, including sufficient progression of all JORC modifying factors, on which the production target and forecast financial information are based have been included in this ASX Study.



# Xanadu Overview

## Successfully Exploring for World Class Deposits in Mongolia

XANADU MINES

Listed exploration company **with a proven track record of discovery**

**Kharmagtai gold rich porphyry copper project** in PFS stage, funded by JV with Zijin Mining Group

**Growing portfolio** of precious and base metal exploration projects in Mongolia

**Mandate to evaluate quality projects** across the broader Central Asian Orogenic Belts



# Latest News

## Exciting March 2024 Quarter

### ● Kharmagtai

- Met-test work results showed strong sulphide and oxide recoveries
- Commenced water supply drilling at primary source basin ~7km north

### ● Exploration

- Commenced drilling defined targets at the Red Mountain Copper-Gold Project
- Acquired a majority interest in the Sant Tolgoi copper-nickel project

### ● Corporate

- EGM held to approve Zijin's participation in November 2023 capital raise
- Subsequently appointed Bacchus Capital as Strategic and Funding Adviser



Hydrological Drilling at Kharmagtai

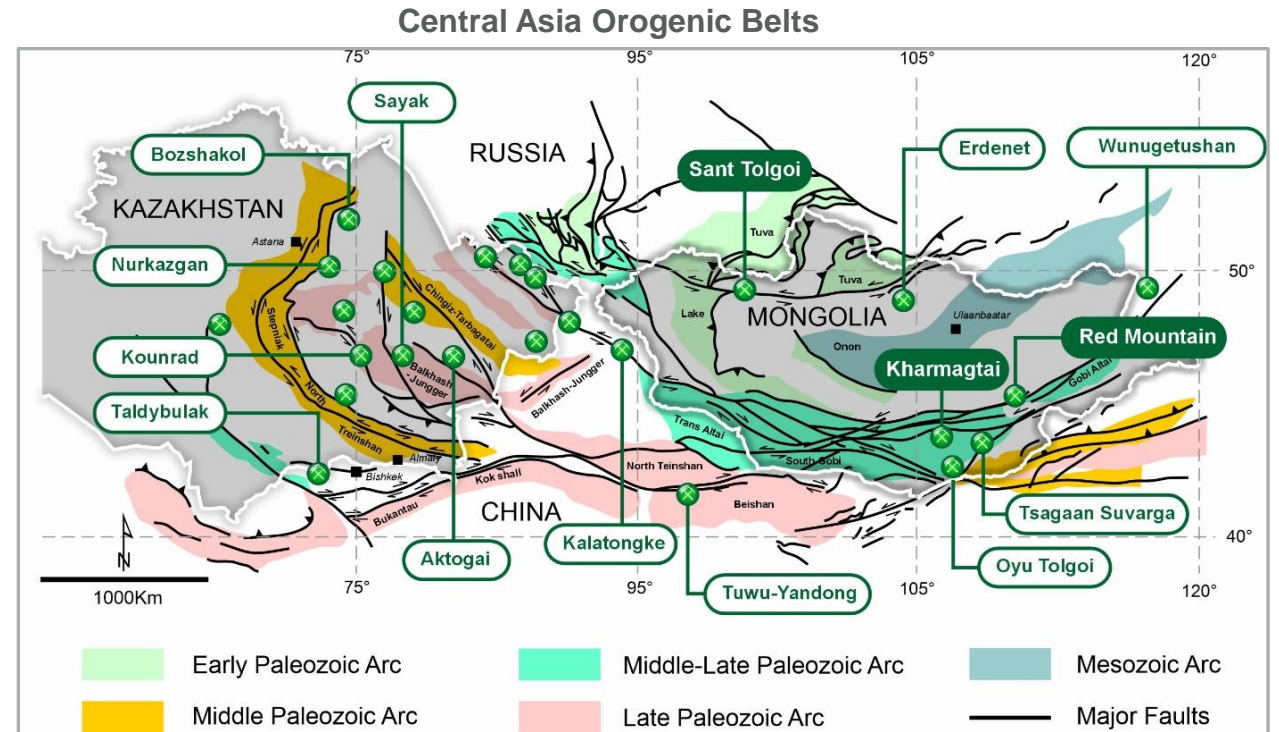


# Central Asian Orogenic Belts

## Under-explored copper and gold jurisdiction in Mongolia

### Exploration Strategy

- Leverage experience and competitive advantage in Mongolia
- Focus on copper, gold and other future facing minerals
- Build a portfolio of high-quality projects through acquisition, exploration and development
- Use modern exploration techniques and deep exploration experience to make significant new discoveries



Minimum Exploration Target Size: >10 years at +100koz gold and/or 20kt CuEq per annum

# Why Mongolia?

An emerging mining jurisdiction supported by an extensive, existing infrastructure network

## Prospectivity

The right rocks with some globally significant discoveries, yet remains largely underexplored

## Develop-ability

Sparse population and wide-open spaces with excellent infrastructure (especially in South Gobi)

## Mining Culture

Stable democracy with high education and training standards with mining representing 25% of GDP and 90% of exports

## Location

On China's doorstep (#1 global copper consumer) with excellent infrastructure existing and planned

## Local Know-How

Xanadu has deep knowledge and experience with of the geology and demonstrated ability to operate to high ESG standards in Mongolia



# Demonstrable Bench Strength

## Board



**Colin Moorhead**  
Executive Chairman  
& Managing Director



**Ganbayar Lkhagvasuren**  
Country Manager  
& Executive Director



**Michele Muscillo**  
Non-executive Director



**Tony Pearson**  
Non-executive Director



**Shaoyang Shen**  
Non-executive Director  
(Nominated by Zijin)

## Management



**Munkhsaikhan  
(Mugii) Dambiinyam**  
Chief Operating Officer



**Andrew Stewart**  
Vice President  
Exploration



**Mat Brown**  
Chief Geologist



**Spencer Cole**  
Chief Development Officer  
Chief Financial Officer



**Guodong Yu**  
Deputy General Manager,  
Kharmagtai Project  
(On secondment from Zijin)

Highly experienced leadership team with a track record of discovering and developing successful porphyry copper-gold mines

- ✓ Mongolia Expertise
- ✓ Deep Exploration Skills
- ✓ Experienced Developers of Porphyry Deposits
- ✓ Significant Commercial and Deal Making Capability



# Sustainability – Five Pillars to Community Support

A valued partner to the local community



Supporting **local sustainable living**



Protecting **environment**



Supporting **education**



Supporting **public health**



Protecting **cultural heritage**





# Share Price and Enterprise Value

## Kharmagtai JV with Zijin Funding PFS and Discovery Exploration

**1,716M**

Shares on issue

**\$0.066**

Share Price  
(22/04/2024)

**\$113M**

Market Capitalisation

### A\$8.1M XAM + US\$12M Khuiten

Xanadu Cash Balance plus Khuiten Metals JV Cash reported @ 31/12/2023 <sup>1,5</sup>

#### Research Coverage:

MST Financial  
-  
PAC Partners

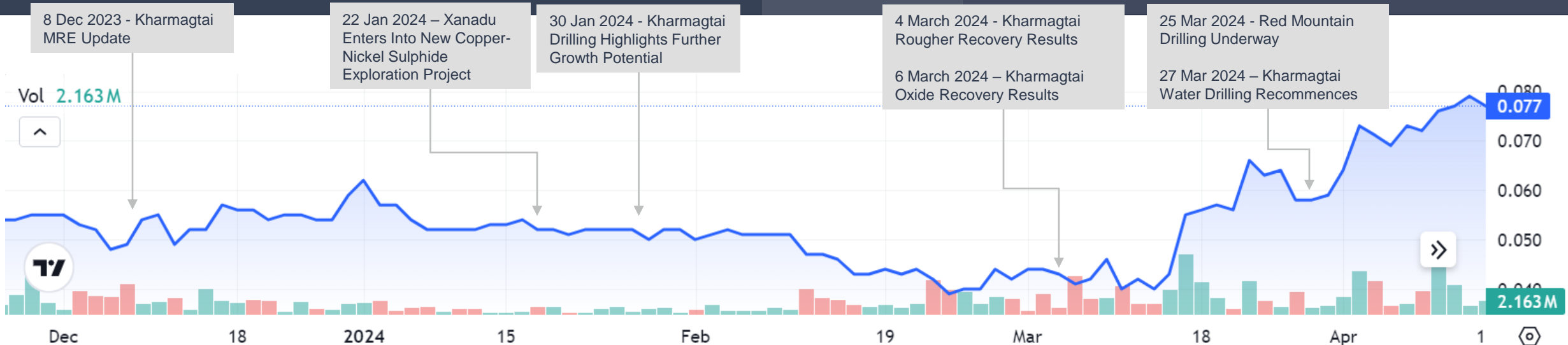
#### 61% TOP 20 SHAREHOLDERS

**46% INSTITUTIONAL & CORPORATE**

Zijin 19%  
ACA 14%  
Others 13%

**9.2% BOARD AND MANAGEMENT**

on a fully diluted basis<sup>4</sup>  
(48m shares & 112m performance options)



<sup>1</sup> ASX/TSX Announcement – 31 January 2024 - Quarterly Activities Report & Appendix 5B

<sup>2</sup> For timeline announcements, please refer to Xanadu Mines ASX/TSX Announcements – Date and Title per text boxes above

<sup>3</sup> Share price and volume chart per [marketindex.com.au](http://marketindex.com.au) at the time and date shown

<sup>4</sup> Assumes all performance options are 'in the money'

<sup>5</sup> Adds funds received from Tranche 2 Placement – ASX/TSX Announcement 4 March 2024 – Completion of Placement to Zijin Mining

# Kharmagtai

One of the largest undeveloped copper-gold deposits in the world



—○ Mongolia's next major copper mine

—○ PFS on track and funded via JV with Zijin Mining Group

—○ Low ESG complexity and clear pathway to permitting and approvals

—○ Significant exploration and technology upside



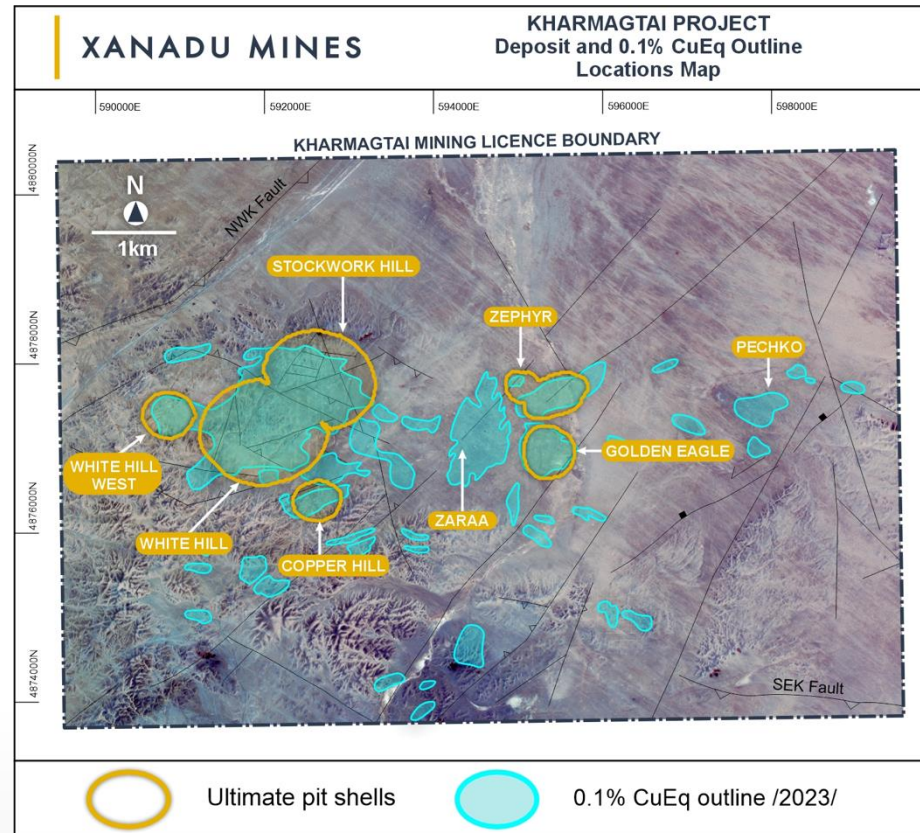
# Kharmagtai Mineralised Complex



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One of the largest undeveloped copper-gold deposits globally

## Kharmagtai Copper-Gold Project Plan View



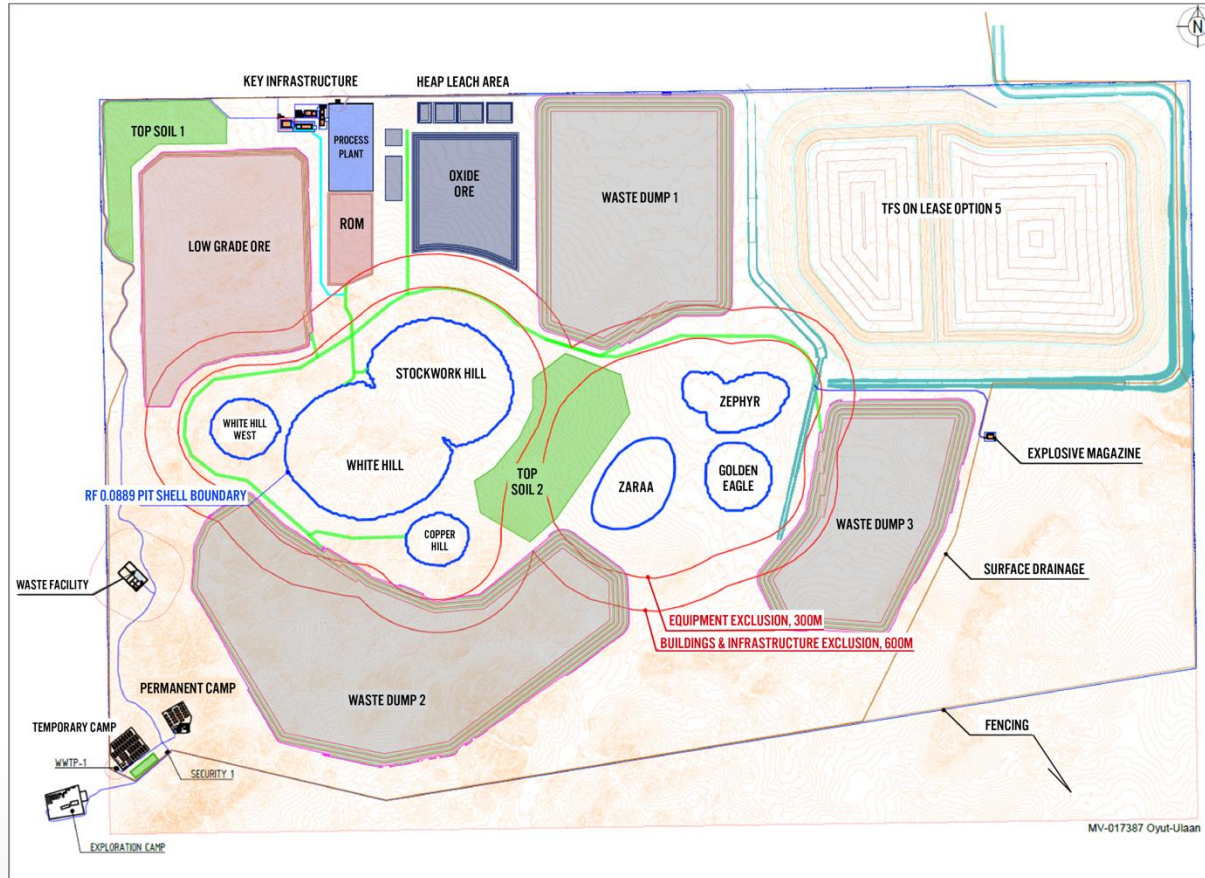
- Granted mining licence with 30-year tenure with an option to extend another 40 years
- Large resource of 1.3Bt @ 0.3% Cu & 0.2g/t Au (approx 3.4Mt / 7,500Mlb Cu and 8.4Moz Au)<sup>1</sup>
  - 125Mt higher-grade zones @ >0.75% CuEq
  - 63% Indicated Classification (including >90% within PEA defined pit-shells)
- Mineralisation outcrops at surface; minimal strip required

**“Not a uniform mass of low-grade mineralisation – KHJV will exploit variability to drive value”**

# Conventional, Large Scale, Open Pit Copper Mine

## Using proven designs and practices

### Preliminary Site General Arrangement



### Key Parameters (2022 PEA)

- Mining – Conventional truck and shovel hard rock open pit mine (multiple pits)
  - Low strip ratio 1.1:1 waste to ore
- Ore Processing – Conventional copper concentrator producing a high quality, gold rich copper concentrate
  - Staged development up to 30Mtpa producing average 50ktpa copper and 110kozpa gold
- Infrastructure
  - Power - Hybrid of grid + renewable (solar/wind)
  - Conventional wet tailings storage facility with max water recovery
  - Ground water sourced from nearby artesian basins



# Well-Funded by Zijin Strategic Partnership

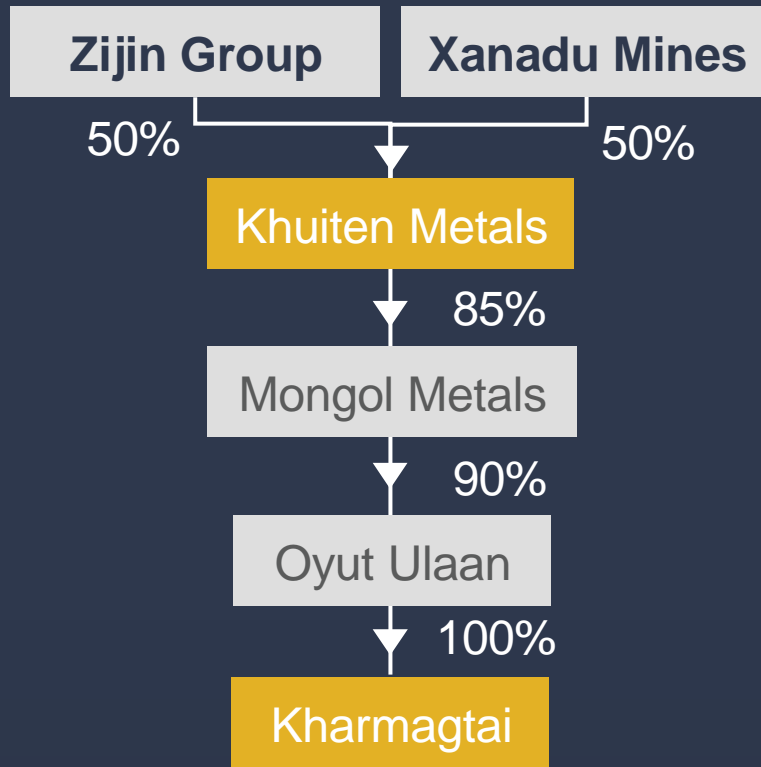
Zijin Mining, a Major Global Gold and Copper Mining Company



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## Post-Deal Asset Ownership<sup>3</sup>

Kharmagtai controlled by Khuiten Metals



## Preliminary Economic Assessment (PEA 2022)

- Completed June 2022 describing a large open pit mining operation producing approx. 50ktpa copper & 110kozpa gold over 30-year mine life
- Xanadu entered into discussions with Zijin Mining Group soon after, agreeing to create a joint venture at the asset level in addition to a placement in Xanadu

## Strategic Partnership commenced in March 2023

- US\$35M cash invested by Zijin in Khuiten Metals, for 50-50 JV that controls Kharmagtai – Funds PFS and project to Sep 2024
- To date Zijin has also invested A\$13.6M cash into Xanadu for a 19.4% stake in the listed company

## About Zijin Mining Group

- Sixth largest metals mining company in the world, operating in 16 countries with 2022 production included 877kt copper and 1.8Moz gold
- Ownership in 3 of Top 10 newly discovered copper projects over past 20 years, all prospective for further discovery & growth:

*“Xanadu is pleased to have Zijin as our major partner”*

<sup>1</sup> ASX/TSX Announcement 19 April 2022 – Strategic Partnership with Zijin Mining

<sup>2</sup> Currency conversion based on AUD:USD = 0.7387 as at 19 Apr 2022 close (transaction announcement date)

<sup>3</sup> Effective ownership of Kharmagtai by each of Xanadu and Zijin is 38.25% (= 50% \* 85% \* 90%)

<sup>4</sup> Adds funds received from Tranche 2 Placement – ASX/TSX Announcement 4 March 2024 – Completion of Placement to Zijin Mining

# Clearly Defined Timeline

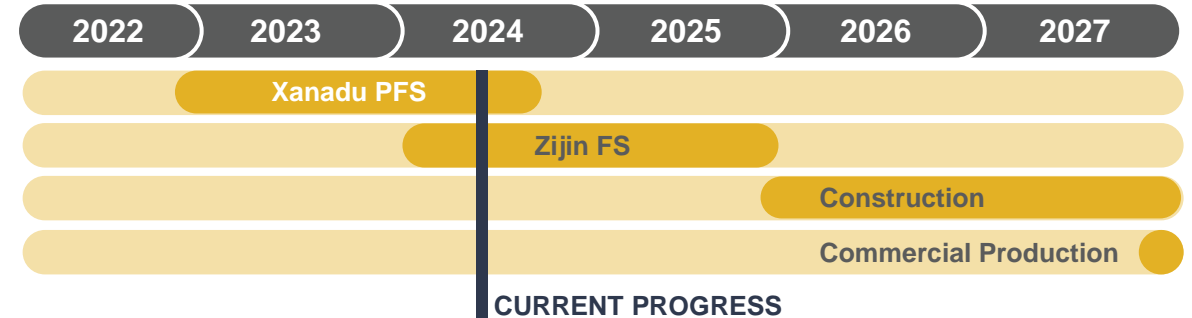
## Aiming for first production in 2027

- PFS on target for completion Q3 CY2024; single go-forward case underpinned by a Maiden Ore Reserve
- Enables FID subject to Mongolian Feasibility Study (TEZU) approvals
- FS strong alignment a focus to enable final construction decision
- TEZU, based on PFS and limited forward works, will enable regulatory approvals and permitting

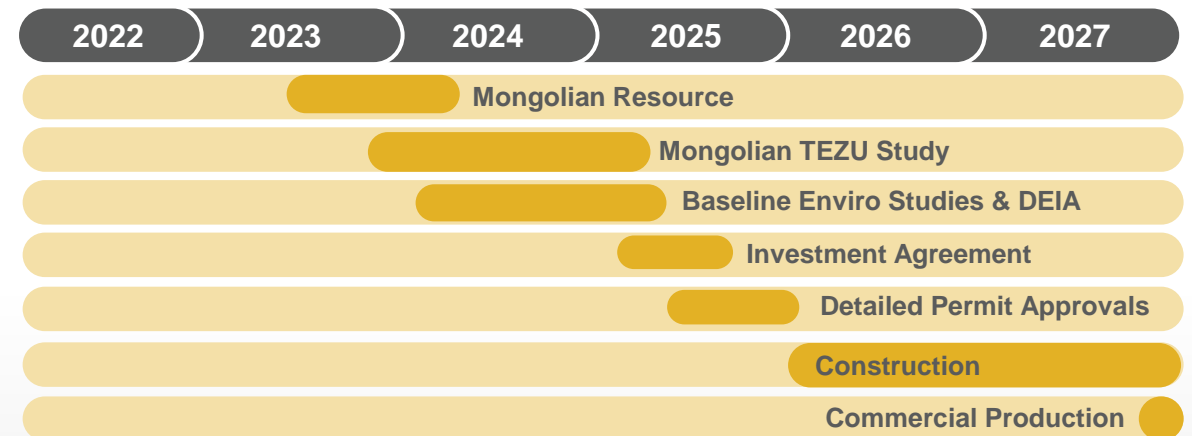
**“Targets first production by end of CY2027”  
(subject to financing and approvals)**



### Studies - Timeline to Commercial Production



### Permitting - Timeline to Commercial Production

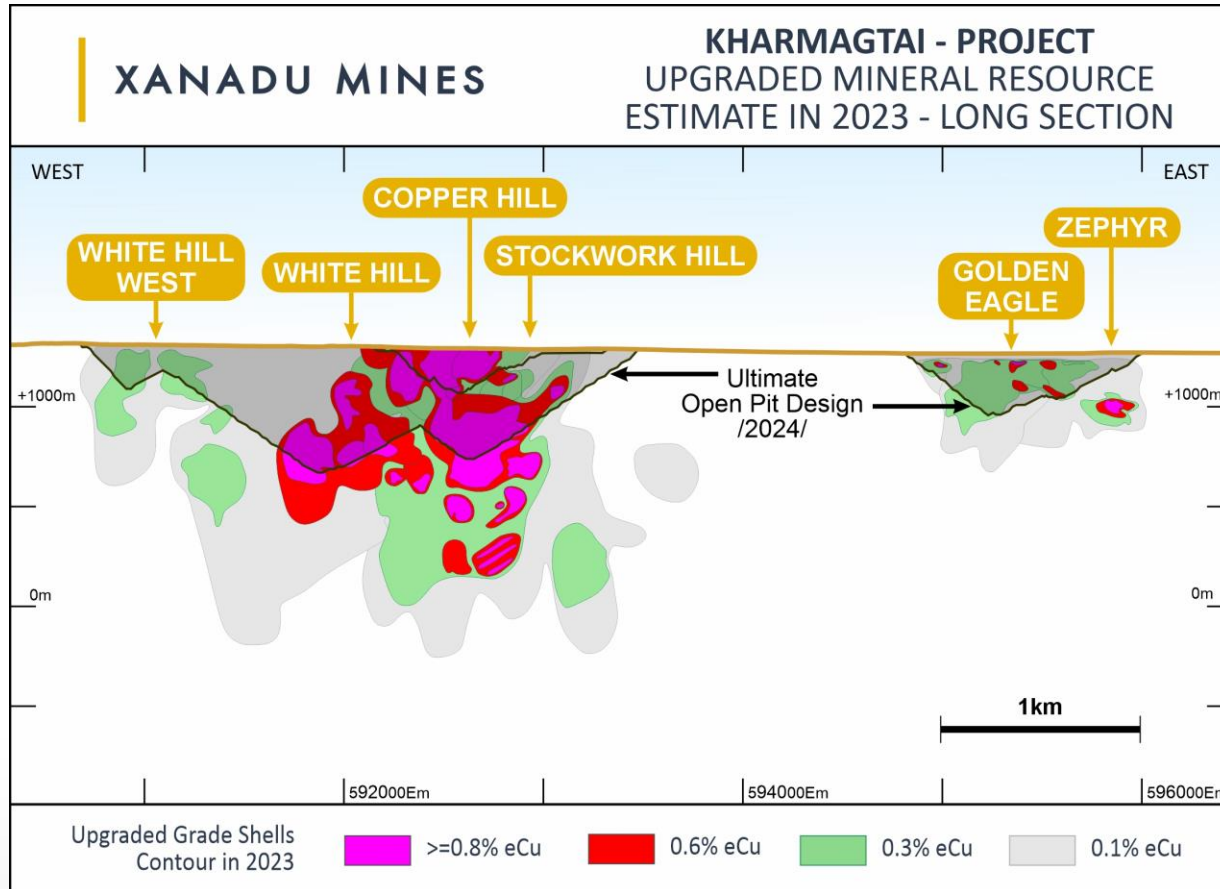




# Mining Shapes Aligned to Grade

Value map shows increasing grade at depth

Kharmagtai Copper-Gold Project Long Section



- Bulk of PEA tonnes come from big adjoining pits at Stockwork Hill and White Hill
- Smaller higher-grade pits at Copper Hill, Golden Eagle and Zephyr
- Remains open, with grades increasing at depth e.g. Zaraa & White Hill
- Limited drilling below 400m is untapped opportunity
- Linking system at depth is future growth potential

**“Strong results from recent drilling at White Hill and Golden Eagle to be added to PFS”**

# Mine Engineering and Design in 2 Stages

## Multiple independent mining fronts and grade focused stockpiling strategy

### Optimisation for a Two Stage Plan

- Whittle Consulting developing pit shells, staging and schedule to maximise higher grade ore extraction and value
- Mining Plus commenced detailed mine engineering and design
- Design to be based on 2023 MRE and detailed geo-met models

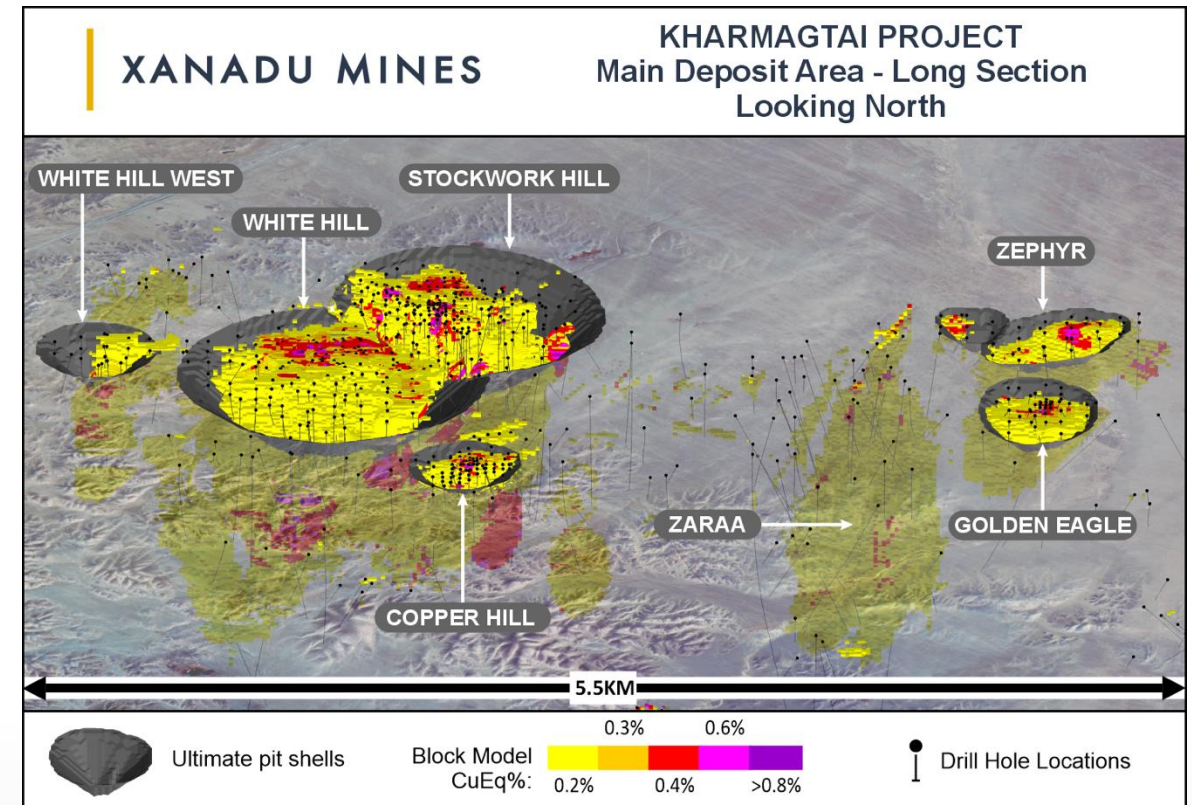
### Stage 1 – Targeting Grade Early

- Pit sequence and stockpiling strategy to optimise Stage 1 ore processing feed grades
- Potential for oxide pre-strip to heap leach (subject to test-work)

### Stage 2 - Expansion

- Scaled up mining rate to match elevated process throughput
- Owner fleet and larger equipment fleet
- Aim to use hybrid EV haulage; trolley assist probable

PEA Pits Overlaid to 2023 Resource





# Metallurgy Positive Results



## Positive results from the base case and uplift test-work

### Flotation Test-work

- Rougher flotation recovery up to 98% copper and 95% gold
- In line with or better than Scoping Study assumptions
- Next stage regrind & cleaner flotation underway

### Grind Size

- 150  $\mu\text{m}$  for Stage 1 and 212  $\mu\text{m}$  for Stage 2 expansion
- Coarse particle flotation results highlight potential to further optimize Stage 2 grind size

### Oxide Leach

- Column leaching tests at MPS had recoveries of up to 93% copper and 46% gold over 8 weeks
- 2022 PEA treated oxide as waste pre-strip
- 52Mt oxide material in Resource, primarily top 20m near surface

Oxide Column Leach at Zijin Research Labs



# Process Engineering and Design - Conventional Circuit

## Future proofing, designing for growth up to 40Mtpa

### Comminution - Two Stages

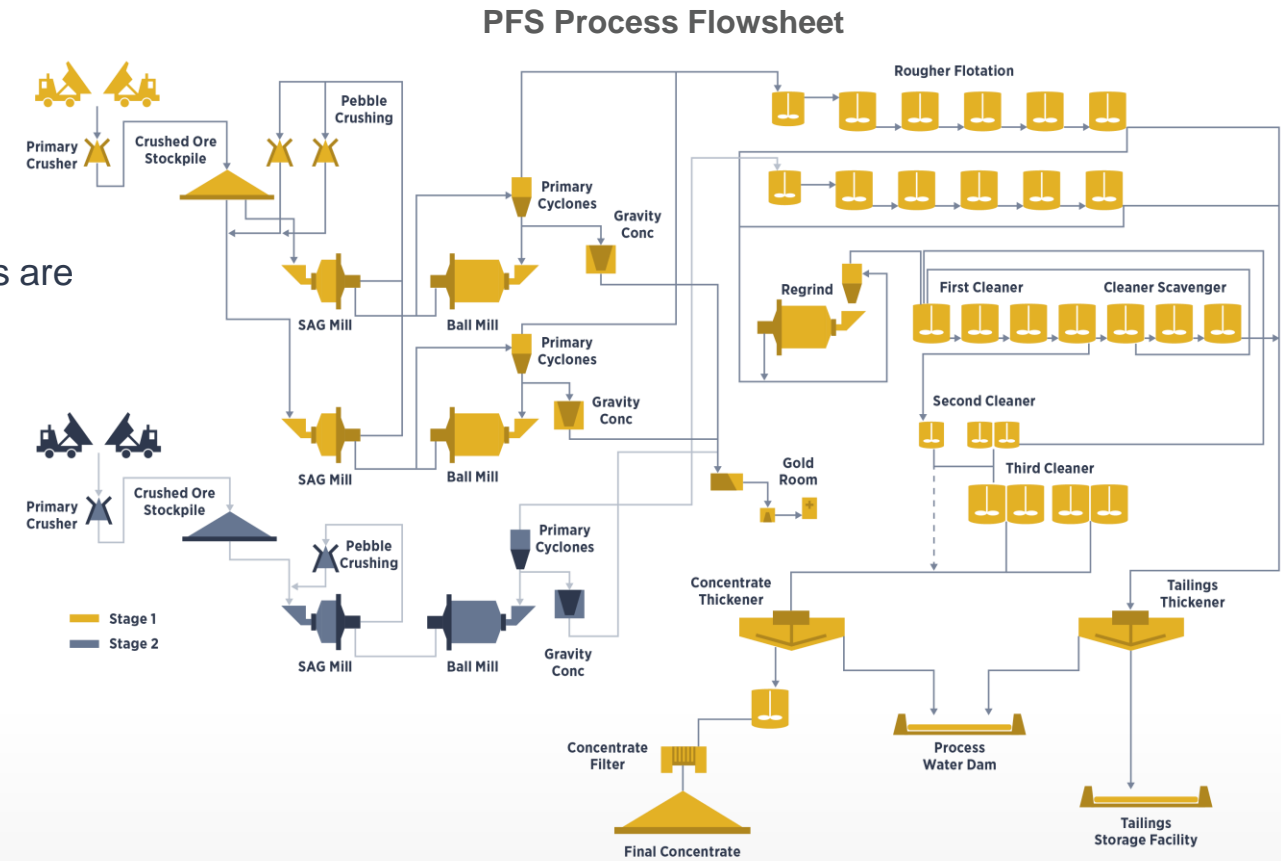
- Stage 1: 20-26 mtpa using 2x 20MW SABC (PEA 15Mtpa)
- Stage 2: 30-40 mtpa using 1x or 2x 20MW SABC and coarser grind (PEA 30Mtpa)
- Ultimate constraint will be access to water. Water supply studies are currently underway at Kharmagtai
- Coarse particle flotation could de-bottleneck Stage 2

### Sulphide Flotation – Optimising for Value

- Includes gravity circuit, single stage rougher, regrind and three stages of cleaning

### Oxide Leaching – Capturing Upside

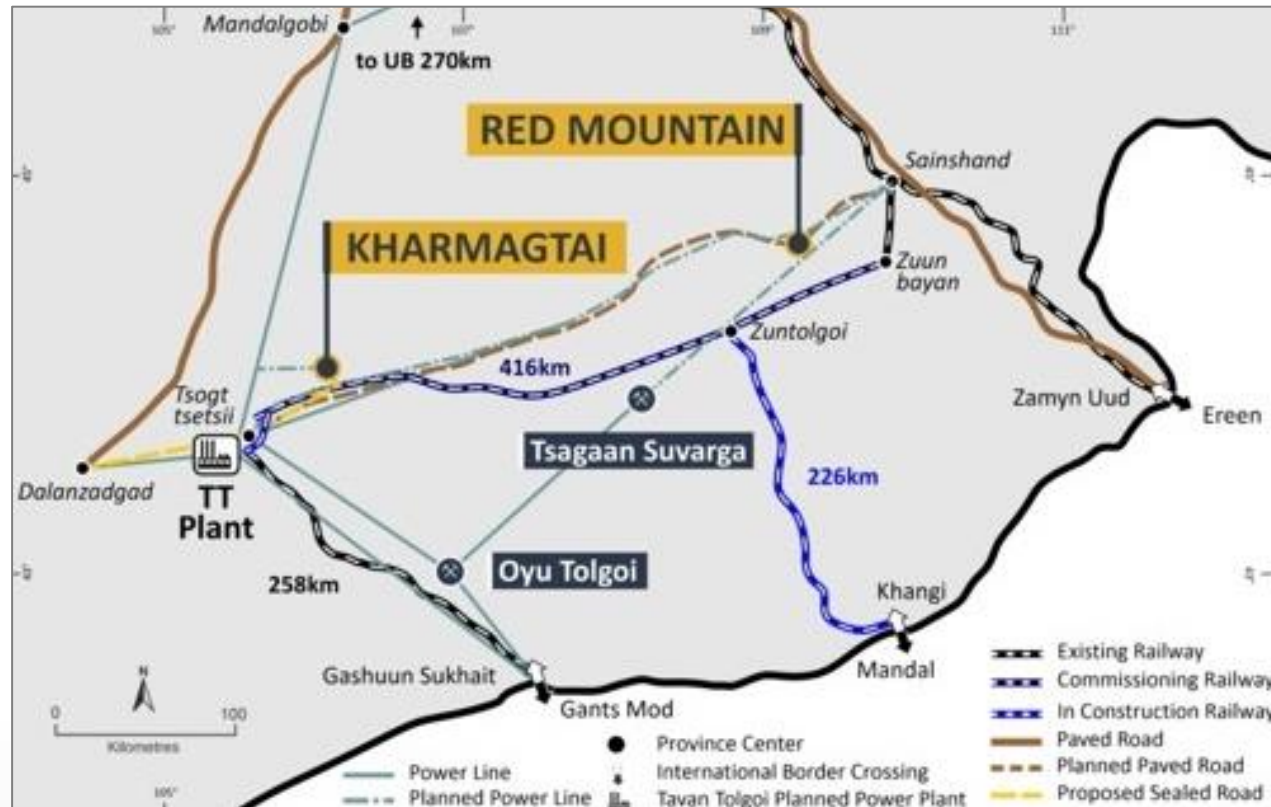
- Targets acid copper leach followed by glycine neutralization and cyanide gold/silver leach



# South Gobi Infrastructure Enhances Kharmagtai

The Mongolian Government is investing heavily in the mining sector

South Gobi Regional Infrastructure



- New rail lines across South Gobi link Kharmagtai to the major north-south rail corridor
- New southern rail lines add more links to China
- New sealed road follows rail line
- Mongolia seeking funding for new power plant at Tavan Tolgoi (TT Plant)

Train within 15km of Kharmagtai





# Exploration is our Competitive Advantage

Uniquely positioned with deep exploration skills and Mongolian know how

## XANADU'S PORTFOLIO

### Kharmagtai (JV)

Growth via lateral and depth extensions

### Red Mountain (100%)

Targeting smaller but higher-grade copper and gold

### Sant Tolgoi (Earning up to 80%)

Early-stage magmatic copper-nickel systems

### Business Development

Proactive search for quality projects



# Kharmagtai Growth



## Strong Results Across Multiple Areas outside MRE represents material upside

### Lateral Extensions

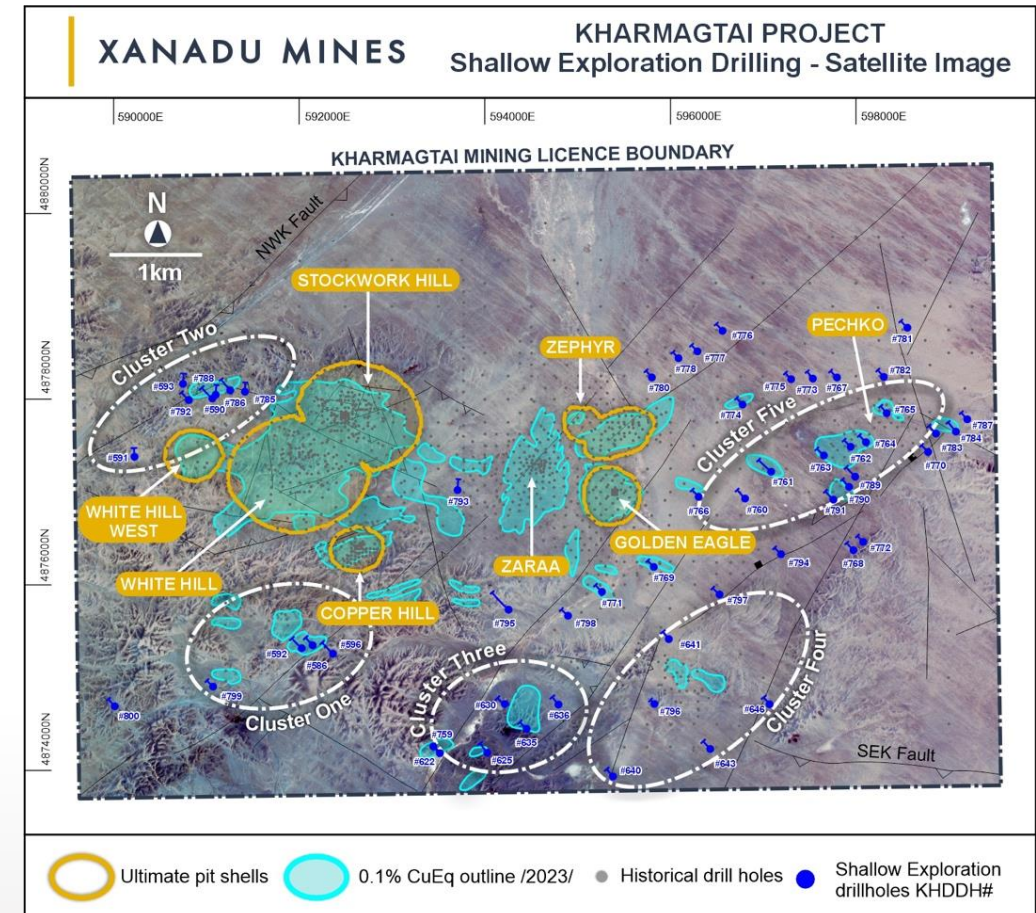
- Systems remains open with known porphyry clusters yet to be tested
- Drilling at Cluster Two indicates NE extension of Stockwork Hill

### Depth Extensions

- Grades generally increasing with depth; system is clearly untested at depth
- Recent deep drill hole KHDDH648 recently returned a long intercept under White Hill;
  - KHDDH648 – 1,080m at 0.21% CuEq from 491m

***“This programme also serves to inform future infrastructure location decisions”***

Kharmagtai Shallow Drilling



# Red Mountain Exploration

## 5,000m drill program will test multiple porphyry related gold and copper targets

### Target 33 – Targeting shallow high-grade gold mineralisation

- Previous drill results of **40m @ 1.06g/t Au**  
incl. **10m @ 3.7g/t Au** from 50m\*<sup>1</sup>

### Target 10 – Targeting High Grade Cu mineralisation

- Previous drill results of **6.2m @ 4.24% Cu**  
incl. **0.9m @ 22.1% Cu** from 129m\*<sup>2</sup>

### Bavuu – Targeting large-scale porphyry Cu-Au target

- Previous drill results of **200m @ 0.32% CuEq**  
incl. **14m @ 0.6% CuEq** from surface

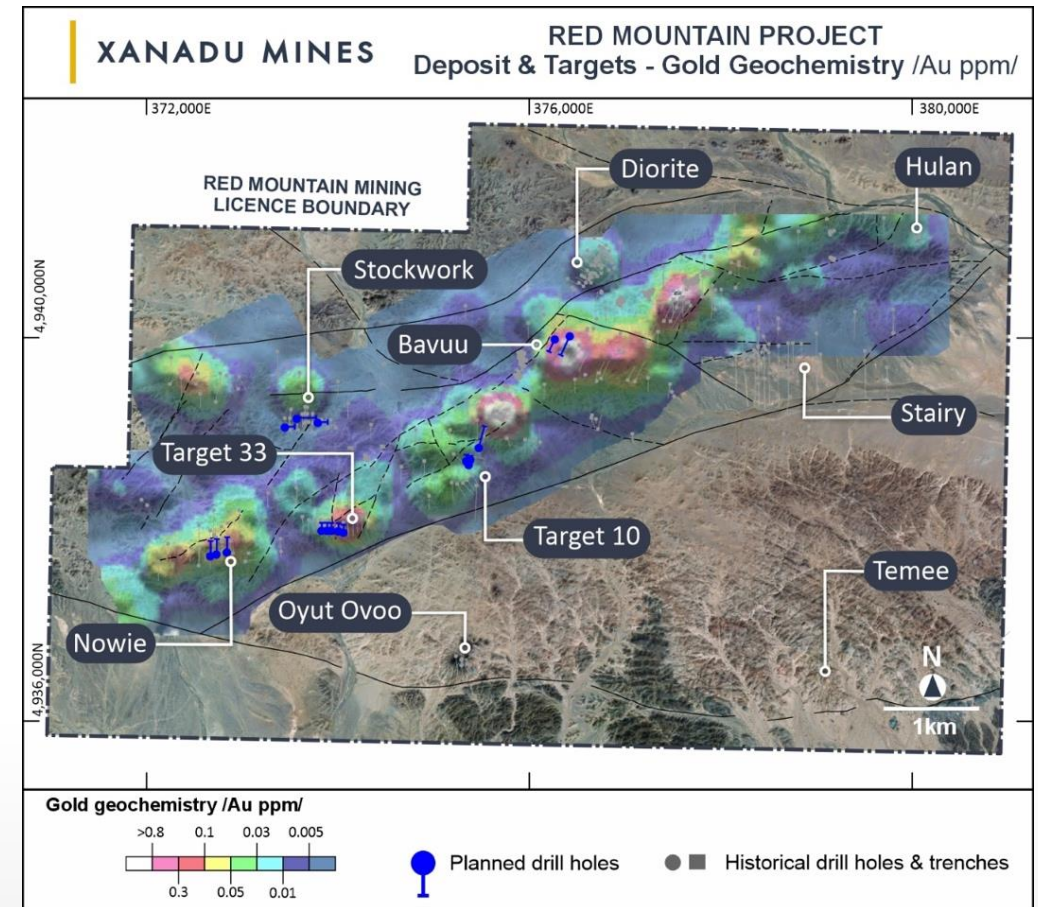
### Stockwork – Outcropping porphyry Cu-Au target

- Historical drill results of **64m @ 0.59% CuEq**,  
incl. **18m @ 1.08% CuEq** from 64m

### Nowie - Targeting shallow high-grade porphyry target

- Historical trenching - OUXT008 **95m @ 0.68% Cu**  
and **0.48g/t Au** (0.93% CuEq)

Red Mountain Targets



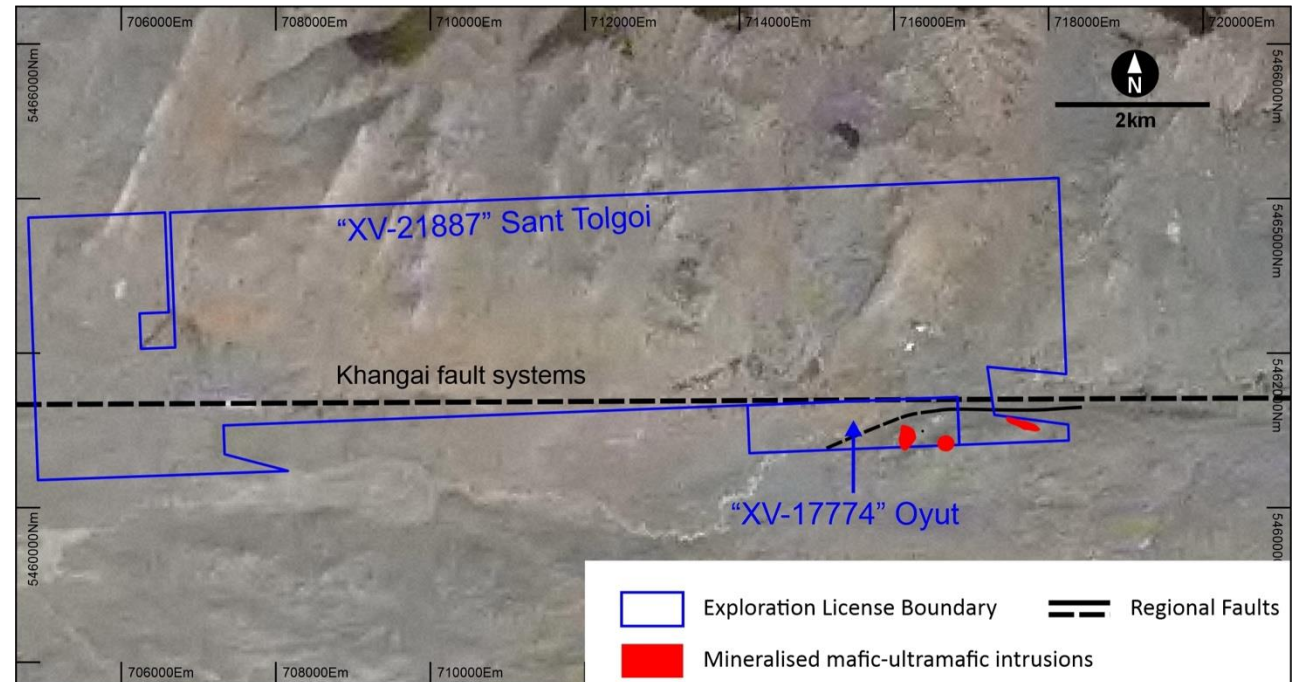


# Sant Tolgoi Added to Portfolio

## New Magmatic Copper-Nickel project in Western Mongolia

- Binding term sheet signed, granting right to earn up to 80% interest in two exploration licenses, which comprise the Sant Tolgoi project
  - XV-17774 (Oyut)
  - XV-21887 (Sant Tolgoi)
- Located in the Zavkhan Province of Western Mongolia
- Highly prospective for discovery of new magmatic intrusion-related Copper-Nickel sulphide systems
- Hosts multiple shallow copper-nickel targets over several kilometres of strike
- Detailed mapping, geochemistry and geophysics is planned to start in May 2024

Sant Tolgoi License Map



# Objectives for CY2024

## Delivering on Kharmagtai and positioning for the future



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### Kharmagtai

- Work with Zijin Engineering to align & complete PFS by September 2024
- Release Maiden Ore Reserve
- Unlock metallurgical upside opportunities, including oxide leaching and coarse particle flotation
- Progress delivery of Mongolian Resource, Feasibility (TEZU) & Detailed Environmental Impact Statement (DEIA) reports
- Evaluation project funding optionality, working with strategic and funding advisor Bacchus Capital

### Exploration

- Update the Kharmagtai MRE for material drill holes completed since the December 2023 update
- Complete the current drilling program (5,000m) at the Red Mountain Copper-Gold Project
- Conduct an initial field evaluation at Sant Tolgoi and identify high priority drilling targets

Kharmagtai Core Processing Facility





## Contact Us

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Keep up to date with us



ASX:XAM | TSX:XAM



# Appendix



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# Competent Person's Statement



**The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the 'JORC Code 2012') sets out minimum standards, recommendations and guidelines for Public Reporting in Australasia of Exploration Results, Mineral Resources and Ore Reserves. The Information contained in this announcement has been presented in accordance with the JORC Code 2012.**

**Mineral Resources:** The information in this announcement that relates to Mineral Resources is based on information compiled by Mr. Robert Spiers who is responsible for the Mineral Resource estimate. Mr Spiers is a full-time Principal Geologist employed by Spiers Geological Consultants (SGC) and is a Member of the Australian Institute of Geoscientists with sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as the "Qualified Person" as defined in the CIM Guidelines and National Instrument 43-101. Mr Spiers consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

**Exploration Results:** The information in this announcement that relates to Exploration Results is based on information compiled by Dr Andrew Stewart who is responsible for the exploration data, comments on exploration target sizes, QA/QC and geological interpretation and information. Dr Stewart, who is an employee of Xanadu and is a Member of the Australasian Institute of Geoscientists, has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as the "Competent Person" as defined in the 2012 Edition of the "Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves" and the National Instrument 43-101. Dr Stewart consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

**Metallurgy:** The information in this Announcement that relates to metallurgy and metallurgical testwork has been reviewed by Graham Brock, BSc (Eng), ARSM. Mr Brock is not an employee of the Company but is employed as a contract consultant. Mr Brock is a Fellow of the Australasian Institute of Mining and Metallurgy; he has sufficient experience with the style of processing response and type of deposit under consideration, and to the activities undertaken, to qualify as a competent as defined in the 2012 Edition of the Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves and the National Instrument 43-101. Mr Brock consents to the inclusion in this report of the contained technical information in the form and context as it appears.

# Copper Equivalence

## Calculation consistent with 2023 MRE

The copper equivalent (CuEq) calculation represents the total metal value for each metal, multiplied by the conversion factor, summed and expressed in equivalent copper percentage with a metallurgical recovery factor applied.

Copper equivalent (CuEq) grade values were calculated using the formula:

$$\text{CuEq} = \text{Cu} + \text{Au} * 0.60049 * 0.86667$$

Where:

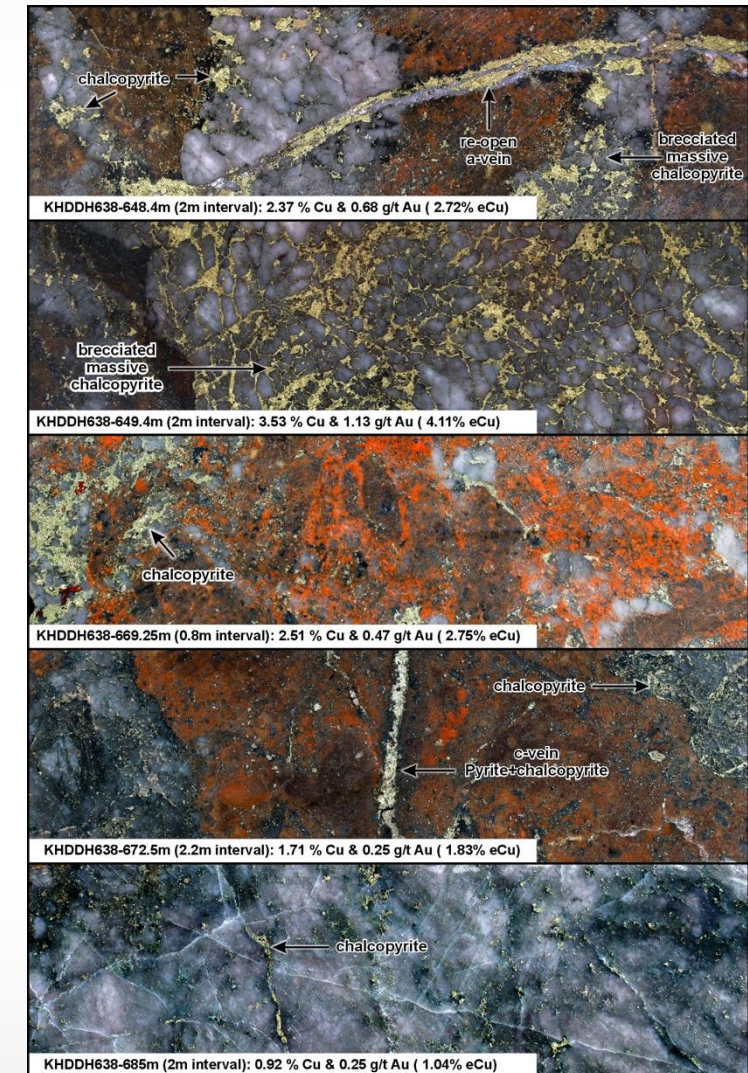
- Cu = copper grade (%);
- Au = gold grade (g/t);
- 0.60049 = conversion factor (gold to copper);
- 0.86667 = relative recovery of gold to copper (78% / 90% = 86.67%);
- Copper price = US\$3.40/lb
- Gold price = US\$1,400/oz



# Geology & Mineralisation

## Kharmagtai sits in a Global-Scale, Porphyry Copper-Gold District

- **Hosted** in the orogenic belt of the Southern Mongolian fold system, within the Central Asian Fold Belt.
- **Characterised** by extensive sequence of Devonian to Carboniferous volcanoclastic ash siltstone & sandstone, intruded by lower to upper Carboniferous rocks.
- **Structural Control** clear & dominated by WNW striking reverse faults, producing a positive flower structure.
- **Porphyry alteration model** with potassic alteration associated with mineralised intrusive suites surrounded by phyllic alteration halo & broad propylitic wash.
- **Principle minerals of economic interest** chalcopyrite & bornite copper, plus gold.
- **Main mineralisation styles** Porphyry stockwork, tourmaline breccia.
- **Copper to gold ratios** for porphyry stockwork: 1% Cu to 1g/t Au (early stockwork); 1% Cu to 2g/t Au (higher-grade C-vein); 1% Cu to 3g/t Au (bornite zone).
- **Tourmaline Breccia** occurs throughout, with Stockwork Hill deposit exhibiting most mineralised tourmaline breccia of significant size. Ratio: 1% Cu to 0.5g/t Au.



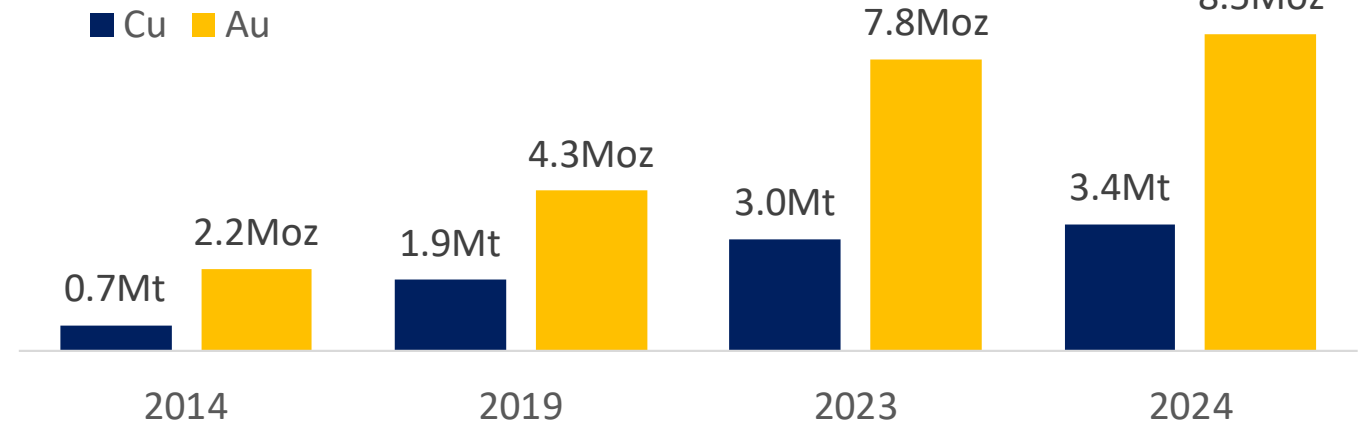


# Kharmagtai Journey

## 2014 to Zijin Deal

Well-structured approach creates long-term shareholder value

Kharmagtai Resource



	2014	2019	2023	2024
<b>Funding Source</b>	Equity	Equity	Zijin JV	Zijin JV
<b>Project Value</b>	BUY US\$13M		PEA US\$630M	PFS tbc
<b>Copper Growth</b>	1x	2.7x	4.3x	4.9x
<b>Gold Growth</b>	1x	2.0x	3.5x	3.8x

# Upgraded Mineral Resource Estimate

One of the largest undeveloped copper deposits in the world

- Classification – 63% Indicated including >90% within PEA pit shell volumes
- Includes 125Mt @ 0.75% CuEq in higher-grade zones
- Remains open along strike and at depth
- Strong results from recent drilling at White Hill and Golden Eagle yet to be included in MRE, will be updated as part of the PFS report
- Updated December 2023 based on PFS Infill Drill Program

Resource	Cutoff (% CuEq)	Classification	Tonnes (Mt)	Grades			Contained Metal			
				CuEq (%)	Cu (%)	Au (g/t)	CuEq (Mlbs)	CuEq (kt)	Cu (kt)	Au (koz)
2023	0.20 (OC)	Indicated	790	0.38	0.27	0.22	6,700	3,000	2,100	5,600
	0.30 (UG)	Inferred	460	0.37	0.27	0.19	3,800	1,700	1,300	2,800

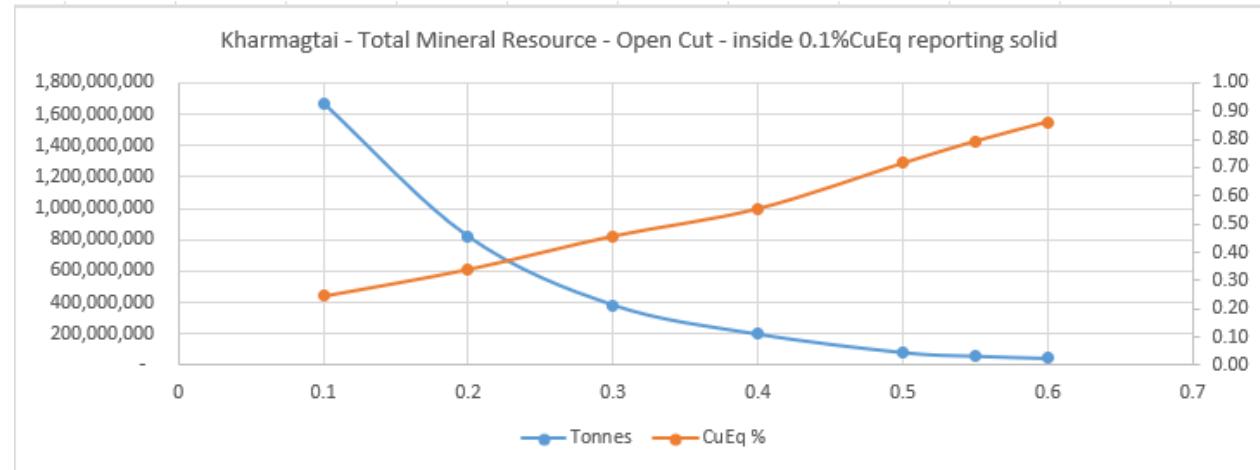


# 2023 Resource Grade-Tonnage Curve



Relatively Flat; Influenced by Higher-Grade Zones

- Reflects typical porphyry grade distribution
- Key influencing factor is 125Mt higher-grade core at >0.75% CuEq



# Kharmagtai Gold-Rich Copper Evolving into World Class Project



## XAM's top drill intersections in 2023/24

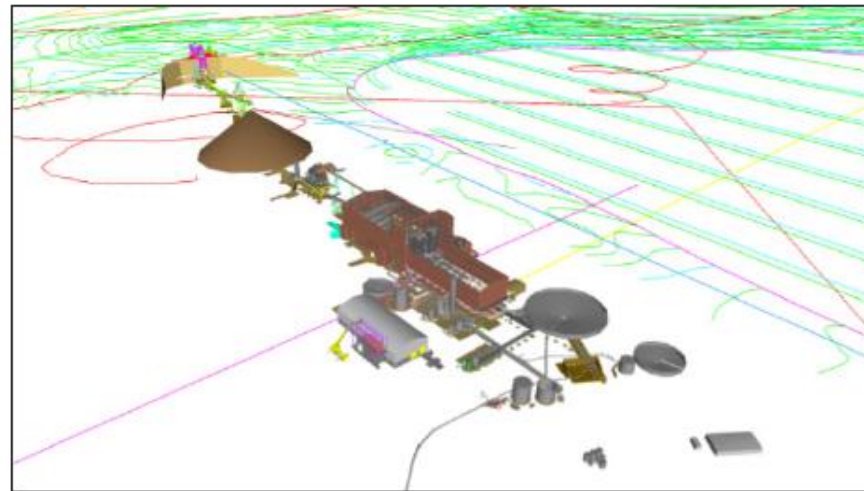
	Best Mineralised Results	gram-metres g/t AuEq.m	grade-metres % CuEq.m	KHDDH
1	762.7m at 0.83g/t AuEq ( or 0.42% CuEq )	<b>633</b>	320	670
2	733m at 0.77g/t AuEq ( or 0.39% CuEq )	<b>564</b>	286	665
3	597.7m at 0.84g/t AuEq ( or 0.43% CuEq )	<b>502</b>	257	669
4	1080m at 0.41g/t AuEq ( or 0.21% CuEq )	<b>443</b>	227	648
5	654.5m at 0.67g/t AuEq ( or 0.34% CuEq )	<b>439</b>	223	634
6	544m at 0.79g/t AuEq ( or 0.4% CuEq )	<b>430</b>	218	638
7	370m at 1.08g/t AuEq ( or 0.55% CuEq )	<b>400</b>	204	655
8	421.25m at 0.93g/t AuEq ( or 0.48% CuEq )	<b>392</b>	202	660
9	593m at 0.63g/t AuEq ( or 0.32% CuEq )	<b>374</b>	190	626
10	659.8m at 0.52g/t AuEq ( or 0.26% CuEq )	<b>343</b>	172	627
11	644.6m at 0.49g/t AuEq ( or 0.25% CuEq )	<b>316</b>	161	659
12	402.6m at 0.77g/t AuEq ( or 0.4% CuEq )	<b>310</b>	161	645
13	424m at 0.71g/t AuEq ( or 0.36% CuEq )	<b>301</b>	153	649
14	559.7m at 0.53g/t AuEq ( or 0.27% CuEq )	<b>297</b>	151	807
15	608.6m at 0.48g/t AuEq ( or 0.24% CuEq )	<b>292</b>	146	631
16	592.5m at 0.49g/t AuEq ( or 0.25% CuEq )	<b>290</b>	148	639
17	374.6m at 0.77g/t AuEq ( or 0.4% CuEq )	<b>288</b>	150	613
18	276m at 1.01g/t AuEq ( or 0.52% CuEq )	<b>279</b>	144	650
19	294m at 0.89g/t AuEq ( or 0.46% CuEq )	<b>262</b>	135	594
20	325m at 0.74g/t AuEq ( or 0.38% CuEq )	<b>241</b>	124	661
21	357.4m at 0.61g/t AuEq ( or 0.31% CuEq )	<b>218</b>	111	637
22	499.1m at 0.43g/t AuEq ( or 0.22% CuEq )	<b>215</b>	110	619
23	493.1m at 0.42g/t AuEq ( or 0.21% CuEq )	<b>207</b>	104	668
24	335m at 0.58g/t AuEq ( or 0.3% CuEq )	<b>194</b>	101	808
25	397m at 0.46g/t AuEq ( or 0.24% CuEq )	<b>183</b>	95	624

	Best Mineralised Results	gram-metres g/t AuEq.m	grade-metres % CuEq.m	KHDDH
26	269.9m at 0.62g/t AuEq ( or 0.32% CuEq )	<b>167</b>	86	603
27	259m at 0.61g/t AuEq ( or 0.31% CuEq )	<b>158</b>	80	658
28	250m at 0.6g/t AuEq ( or 0.31% CuEq )	<b>150</b>	78	802
29	205.3m at 0.71g/t AuEq ( or 0.36% CuEq )	<b>146</b>	74	691
30	291m at 0.49g/t AuEq ( or 0.25% CuEq )	<b>143</b>	73	685
31	245.1m at 0.56g/t AuEq ( or 0.29% CuEq )	<b>137</b>	71	654
32	314m at 0.39g/t AuEq ( or 0.2% CuEq )	<b>122</b>	63	651
33	287.4m at 0.41g/t AuEq ( or 0.21% CuEq )	<b>118</b>	60	806
34	250m at 0.46g/t AuEq ( or 0.24% CuEq )	<b>115</b>	60	623
35	287m at 0.39g/t AuEq ( or 0.2% CuEq )	<b>112</b>	57	618
36	206.7m at 0.53g/t AuEq ( or 0.27% CuEq )	<b>110</b>	56	667
37	209m at 0.52g/t AuEq ( or 0.26% CuEq )	<b>109</b>	54	599
38	271m at 0.39g/t AuEq ( or 0.2% CuEq )	<b>106</b>	54	633
39	153.4m at 0.68g/t AuEq ( or 0.35% CuEq )	<b>104</b>	54	805
40	253m at 0.41g/t AuEq ( or 0.21% CuEq )	<b>104</b>	53	597
41	203m at 0.5g/t AuEq ( or 0.25% CuEq )	<b>102</b>	51	723
42	244.4m at 0.4g/t AuEq ( or 0.21% CuEq )	<b>98</b>	51	674
43	298m at 0.33g/t AuEq ( or 0.17% CuEq )	<b>98</b>	51	779
44	218.8m at 0.45g/t AuEq ( or 0.23% CuEq )	<b>98</b>	50	717
45	144m at 0.67g/t AuEq ( or 0.34% CuEq )	<b>96</b>	49	786
46	196m at 0.48g/t AuEq ( or 0.25% CuEq )	<b>94</b>	49	736
47	171m at 0.53g/t AuEq ( or 0.27% CuEq )	<b>91</b>	46	663
48	232m at 0.39g/t AuEq ( or 0.2% CuEq )	<b>90</b>	46	657
49	197.4m at 0.45g/t AuEq ( or 0.23% CuEq )	<b>89</b>	45	721
50	115.8m at 0.76g/t AuEq ( or 0.39% CuEq )	<b>88</b>	45	677

Highlighted drill intersections are excluded from 2023 MRE = demonstrate potential for future MRE growth

# PEA / Scoping Study

Conservative, Long-Life, Low-Cost Operation



Area	Measure	Unit	Stage 1 Initial	Stage 2 Expansion	LOM
Production	Period	Years	5	25	30
	Ore process rate	Mtpa	15	30	15-30
	Feed from Indicated Resource	%	100%	50%	55%
	Ore processed	Mt	70	690	760
	Average copper grade	%	0.29	0.21	0.21
	Average gold grade	g/t	0.30	0.16	0.18
	Copper produced	Mt	0.2	1.3	1.5
Capital	Project Capital	US\$M	690	620	1,310
	Sustaining Capital	US\$M	40	530	570
	Operating Cost	All In Sustaining Costs	US\$/lb	1.02	1.99
Economic Assumptions	Copper Price	US\$/lb	4.00	4.00	4.00
	Gold Price	US\$/oz	1,700	1,700	1,700
Financials (after tax)	Net Present Value (NPV) @ 8%	US\$M			630
	Internal Rate of Return (IRR)	% (real)			20
	Capital Payback	Years	4	1	4
	Free Cash Flow (after tax)	US\$M (real)	155	3,260	3,420



# XAM is a Standout vs TSX/ASX Copper Developer Peers



XANADU MINES

High Quality, Funded Production Certainty, Attractive Project Economics

Average XAM Trading Discount vs Average

Company	XANADU MINES	FILO MINING	SolGold	western COPPER AND GOLD	ALTA COPPER	FARADAY COPPER	LOS ANDES COPPER	hot chili	CARAVEL MINERALS	REX Minerals Ltd	HR Havilah Resources	Average	XAM Trading Discount vs Average
Project	Kharmagtai Porphyry	Filo Del Sol Porphyry	Cascabel Porphyry	Casino Porphyry	Canarico Norte Porphyry <sup>3</sup>	Copper Creek Porphyry <sup>4</sup>	Vizachitas Porphyry <sup>5</sup>	Costa Fuego Porphyry <sup>6</sup>	Caravel Porphyry <sup>7</sup>	Hillside IOCG <sup>8</sup>	Kalkaroo IOCG <sup>9</sup>	1.8	
Project Stage	PEA	DFS	DFS	FS Permitting	Optimised PEA	PFS	FS	PFS	DFS	FS Financing	Updated PFS		
LOM Cu Production <sup>1</sup> Mt	1.5	0.8	2.8	2.0	2.2	1.5	4.0	1.4	1.7	1.5	0.6		
First Production	4Q'2027	No Guidance	Mid 2029	2028 Heap Leach 2029 Concentrate	2030	2028	2029	2029	3Q'2026	4Q'2026	No Guidance		
LOM Strip Ratio	1.1	1.6		0.4	0.7	1.6	2.3	1.8	1.3	6.9	3.5	2.1	
EV <sup>2</sup> US\$M	45	1,892	417	151	20	52	249	71	47	64	29	276	
EV / Cu Resource US\$/t	13	943	33	31	3	24	21	21	16	28	26	105	87%
EV / Post-Tax Project NPV	0.07	1.44	0.14	0.05	0.02	0.07	0.09	0.06	0.05	0.11	0.05	0.20	64%

EV Metrics<sup>1,2</sup>

1 LOM production & EV metrics exclude impact of by products given endowment of most peers is comparatively minimal. XAM has 8.5Moz Gold Resource, producing 3.3Moz gold in concentrate  
 2 EV as at 5 February 2024 close. EV = Market Capitalisation - 100% Cash - Equity proportion of JV Cash. AUD:USD = 0.65, CAD:USD = 0.74  
 3 In line with Company Disclosure, production data sourced from Canarico Norte. Construction period guided for 3yrs, with construction start guided for 2027.  
 4 In line with Company Disclosure, production data sourced from Copper Creek. Construction period guided for 2yrs, with construction start guided for 2026.  
 5 In line with Company Disclosure, production data sourced from Vizachitas. Construction period guided for 3.25yrs, with first production delivered 2029 as per recent royalty agreement with Ecora.  
 6 In line with recent Company Disclosure, production data represents Costa Fuego PEA.

7 In line with recent Company Disclosure, production data sourced from both Caravel PFS Processing Update (latest update), and Caravel PFS (original). With DFS scheduled to complete in 4Q'2024, assume construction starts 6 months later in 2H'25, for first concentrate production by 1Q'27, inline with prior guided timeline.  
 8 In line with Company Disclosure, production data sourced from Hillside DFS (production stage 1), and Hillside Ore Reserve (production stages 1 & 2). Construction start guided for 3Q'2023, but not funded and not commenced. With FID guided for mid CY2024, assume construction starts 3Q'2024 for first concentrate production by 4Q'2026, inline with prior guided timeline.  
 9 In line with Company Disclosure, production data sourced from Kalkaroo PFS and rebased for Kalkaroo Project Update, with latter guiding mine life extension to 20yrs (from 13yrs) driven by pit optimisation.  
 10 Benchmark Data included in Appendix, with data sourced from Company Disclosure.

# Benchmark Data

## ASX / TSX Copper Developers



Project	Resource					Cut-off Grade	Resource Date
	Cu Mt	Au Moz	Ag Moz	Co Kt	Mo kt	% Cu	
Kharmagtai Porphyry <sup>1,2</sup>	3.37	8.48				0.23	Dec-23
Filo Del Sol Porphyry	2.01	6.75	210.71			0.18	Jan-23
Cascabel Porphyry	12.73	27.27	102.80			0.21	Mar-22
Casino Porphyry	4.86	21.09	169.53				Apr-22
Canarico Norte Porphyry	6.43	3.87	92.54			0.15	Jan-22
Copper Creek Porphyry	2.15		17.10		36.79	0.13	Feb-23
Vizachitas Porphyry	12.14		76.10		463.12	0.25	Feb-23
Costa Fuego Porphyry	3.33	2.86	12.55		80.81	0.21	Mar-22
Caravel Porphyry	3.03	0.90	46.3		60.60	0.10	Nov-23
Kalkaroo IOCG	1.10	3.00		23.20		0.40	Jan-18
Hillside IOCG	2.29	1.94				0.20	Dec-22

Project	Strip Ratio	Ore Processing Throughput	Copper Production			All in Sustaining Cost	LOM	LOM Production				Reported NPV	NPV Tax Basis	Calculated Post-Tax NPV <sup>3</sup>	Discount Rate	Copper Price	Reported Level of Study	Report Date
			First 5 Years	Steady State	Annualised			Cu Mt	Au Moz	Ag Moz	Mo kt							
			Mtpa	ktpa	ktpa			ktpa	US\$/lb	yrs	US\$M							
Kharmagtai Porphyry <sup>1,2</sup>	1.1	25.0	40		50	1.87	30	1.50	3.30			630	Post	630	8.0	4.00	Scoping / PEA	Apr-22, Jun-22
Filo Del Sol Porphyry	1.57	22.0			66	1.54	13	0.79	2.02	111.07		1,310	Post	1,310	8.0	3.65	Updated PFS / Ore Reserve	Feb-23
Cascabel Porphyry	0	25.0			132	0.06	26	2.80	7.60	21.70		2,907	Post	2,907	8.0	3.60	PFS / Ore Reserve	Apr-22
Casino Porphyry	0.43	53.0			74	-1.00	27	2.01	7.12	37.88		2,778	Post	2,778	8.0	3.60	FS / Ore Reserve	Aug-22
Canarico Norte Porphyry	0.66	25.0			79	1.28	28	2.20	0.88	19.70		1,010	Post	1,010	8.0	3.50	PEA	Mar-22
Copper Creek Porphyry	1.61	11.0			48	1.85	32	1.49		10.21	20.73	713	Post	713	7.0	3.80	PEA	Jun-23
Vizachitas Porphyry	2.33	50.0			153	1.25	26	3.98		32.71	124.00	2,776	Post	2,776	8.0	3.68	PFS / Ore Reserve	Apr-23
Costa Fuego Porphyry	1.8	22.0	96		88	1.74	16	1.41	0.72	0.12	47.98	1,100	Post	1,100	8.0	3.85	Scoping / PEA	Jun-23, Aug-23
Caravel Porphyry	1.3	30.0	71	65	65	2.07	25	1.66			22.50	1,428	Pre	1,000	7.0	4.00	PFS Processing Update / PFS / Ore Reserve	Apr-23, Jul-22
Kalkaroo IOCG	3.5	7.0			30	2.06	20	0.60	0.94			872	Pre	611	7.5	3.50	Project Update / PFS / Ore Reserve	May-21, Jun-19, Jun-18
Hillside IOCG	6.9	8.0		42	24	1.79	33	1.49	1.27			593	Post	593	8.6	3.92	DFS / Ore Reserve	Dec-22, Jul-21

# Drawing on Top Tier Experts



Partnering with recognised industry leaders for the Pre-Feasibility Study

