

## CORPORATE UPDATE WEBINAR

5 September 2021

Xanadu Mines Ltd (**ASX: XAM, TSX: XAM**) ("**Xanadu**" or "**the Company**") advises that investors and analysts are invited to participate in a webinar on Thursday, 7 October 2021 at 11:00am AEST.

The purpose is to provide a Xanadu Corporate Update, which will be hosted by Xanadu's CEO, Andrew Stewart. The attached corporate presentation will be used during this update.

Participants will be able to ask questions online, which will be answered at the end of the call. The webcast will be accessible via the following browser link:

<https://services.choruscall.com.au/webcast/xanadu-mbkkdcr4.html>

### For further information, please contact:

Andrew Stewart  
Chief Executive Officer

M: +61 409 819 922

E: [Andrew.stewart@xanadumines.com](mailto:Andrew.stewart@xanadumines.com)

W: [www.xanadumines.com](http://www.xanadumines.com)

Spencer Cole  
Chief Financial Officer

M: +61 434 047 987

E: [spencer.cole@xanadumines.com](mailto:spencer.cole@xanadumines.com)

This Announcement was authorised for release by Xanadu's Board of Directors.

#### AUSTRALIA

c/o Company Matters Pty Limited  
Level 12, 680 George Street  
Sydney NSW 2000  
T: +612 8280 7497

#### MONGOLIA

Suite 23, Building 9B  
Olympic St, Sukhbaatar District  
Ulaanbaatar, Mongolia  
T: +967 7012 0211

Xanadu Mines Ltd ACN 114 249 026

[www.xanadumines.com](http://www.xanadumines.com)

A person stands in silhouette on a dark horizon, looking up at a vast night sky filled with stars and the Milky Way. A bright, glowing tent is visible on the left side of the frame. The overall scene is dark and atmospheric, emphasizing the vastness of the universe.

XANADU MINES

Discovering & growing  
globally significant copper  
deposits in Mongolia

ASX: **XAM** | TSX: **XAM**

5 October 2021



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**Drilling Results and JORC:** The information in this report relates to the exploration results previously reported in ASX Announcements which are available on the Xanadu website at <https://www.xanadumines.com/site/investor-centre/asx-announcements>. Xanadu is not aware of any new information or data that materially affects the information included in the ASX Announcements referenced in the attached slides, and all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

**Currency:** All currencies in this presentation are in Australian dollars unless otherwise stated.

**Competent Persons:** Please refer to the Appendix of this presentation for Competent Person's Statement.

# Introduction & Agenda

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INVESTMENT HIGHLIGHTS

WHY MONGOLIA?

WHY COPPER?

**KHARMAGTAI**  
A GROWTH STORY

**RED MOUNTAIN**  
A DISCOVERY PROJECT

WHY INVEST IN XANADU?



# Investment Highlights

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Progressing two high-quality, gold-rich porphyry copper projects in the highly prospective South Gobi region of Mongolia:  
**Kharmagtai and Red Mountain**

## DISCOVERY

**Kharmagtai** is already one of the largest undeveloped Cu-Au deposits globally, with 2018 JORC MRE of 0.6Bt, containing 1.9Mt Cu & 4.3Moz Au <sup>1</sup>.

**Red Mountain** is an earlier stage exploration project targeting both porphyry copper and high grade vein style discoveries.

## GROWTH

Our **Aspirational Target** at Kharmagtai is to grow the total resource to >1.0Bt and to double the higher grade component to >100Mt.

**Kharmagtai** deposits remain open with grades increasing at depth. Ongoing drilling will test these targets.

## DEFINITION

An **Updated Mineral Resource Estimate** for Kharmagtai incorporating all new drilling since 2018 is underway, expected Q4 2021.

**Preliminary** concept studies indicate Kharmagtai will be amenable to conventional bulk mining & sulphide flotation.

<sup>1</sup> ASX/TSX Announcement 31 October 2018 – Major Increase in Kharmagtai Open-Cut Resource to 1.9Mt Cu & 4.3Moz Au



# Highly experienced Directors & Management

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Track record of discovering & developing multiple large scale porphyry copper deposits

## BOARD



**GANBAYAR  
LKHAGVASUREN**

COUNTRY MANAGER & EXECUTIVE DIRECTOR



**ANDREW  
STEWART**

CEO & EXECUTIVE DIRECTOR



**COLIN  
MOORHEAD**

NON-EXECUTIVE CHAIRMAN



**MICHELE  
MUSCILLO**

NON-EXECUTIVE DIRECTOR



**TONY  
PEARSON**

NON-EXECUTIVE DIRECTOR



**MUNKHSAIKHAN  
DAMBIINYAM**

CHIEF OPERATING OFFICER



**MAT  
BROWN**

CHIEF GEOLOGIST



**SPENCER  
COLE**

CHIEF FINANCIAL OFFICER

**MONGOLIA EXPERTISE**

**PROVEN EXPLORATION SKILLS**

**COMMERCIAL CAPABILITY**

# World class advisory team

On the pathway to development, Xanadu has engaged industry leading experts

## GEOLOGY EXPERTISE



### Barry Dewett (Geophysics)

Former Chief Geophysicist of HPX and Ivanhoe Mines. Retired as Global Practice Leader in geophysics at BHP Billiton Minerals Exploration with 31 years experience.



### Geotek (Artificial Intelligence core scanning)

Specialist partner in high resolution, non-destructive analysis of geological cores, developing AI systems in partnership with Xanadu.

## EXPLORATION KNOWLEDGE



### Rob Spiers (Resource Geology)

Independent geologist with over 30 years experience across multiple commodities and jurisdictions. Competent person under JORC and NI43-101.



### Paul Dunham (Development Geologist)

Economic geologist with extensive porphyry copper-gold experience and 40 years in exploration, resource drill-outs, estimation and development studies.

## MINING CAPABILITY



### Geoff Dunston (Block Cave Design)

International leader in all phases of large scale underground mining, with over 30 years experience across Americas, Africa and Asia.



### Gerald Whittle (Surface Mine Optimisation)

Thought Leader and CEO of Whittle Consulting – the leading global practitioners of Integrated Strategic Planning, a holistic approach to life of mine, processing and production planning.

## MARKET ENGAGEMENT



### Anna Kassianos (Investor Relations and Corporate Advisory)

Resource industry advisor with 20 years in funds management, equities research & investment, corporate development and strategy.

## STUDY DEVELOPMENT



### Jonathon Lew (Major Studies)

Accomplished Study Manager with 40 years experience in studies, evaluation, and exploration, including 30 years at CRA /Rio Tinto.

## METALLURGY EXPERTISE



### Andrew Goulsbra (Metallurgy)

Metallurgist with 30 years experience at Ivanhoe Australia and Newcrest Mining, with speciality skills in extractive metallurgy of gold, copper, molybdenum, rhenium and mineral sands.



# Focused on ESG and social licence to operate

Our 1st Sustainability Report will be released Q4 2021

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## SOCIAL & COMMUNITY

- Mongolian workforce includes Xanadu's Chief Operating Officer & Country Manager
- University sponsorships & internships for local students
- Equipment & supply donations to hospital & schools
- Free medical check-ups for local community
- COVID19 vaccinations provided for all in country employees



## ENVIRONMENT

- Operations utilise non-potable water sources
- Potable water well monitoring and maintenance for community
- Camp upgrades improve energy use and sewerage handling
- Studies aim to reduce environmental footprint of a future operation:
  - **Reduced energy intensity** – leveraging technology to reduce grinding and haulage (e.g. coarse particle separation, underground sorting)
  - **Reduced direct emissions** – electrified underground fleet and haulage systems





# Building an effective capital foundation

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**A\$0.03**

Share Price  
as at 30/09/2021

**A\$37.8M**

Market Cap at  
A\$0.03/share

**A\$27.0M**

Enterprise Value

**A\$10.8M**

Cash Balance

**1,255.6M**

Share on issue

**60%** TOP 20  
SHAREHOLDERS

INSTITUTIONAL  
SHAREHOLDERS

ACA **18%** SSI **10%** Others **21%**

BOARD AND  
MANAGEMENT

**6%** (on a fully diluted basis, includes 25m  
shares & 52m performance options)

# Why Mongolia & the South Gobi?

Two highly prospective districts in a pro-mining jurisdiction

- ▶ **Excellent infrastructure** - leverage for low-capex intensity development
- ▶ **Pro-mining jurisdiction** - in 2020, mining accounted for 23% of Mongolia's GDP & 70% of export revenues<sup>1</sup>
- ▶ **Significant mining region** - tops Investment Monitor's 2021 Mining Vulnerability Index<sup>1</sup>, followed by Zambia & Australia
- ▶ **Stable democratic system** – 30-yr history of democratic elections
- ▶ **Favourable ESG position** – social license to operate enables shorter lead times to production

## KHARMAGTAI Cu-Au DISTRICT

**Ownership 76.5%**

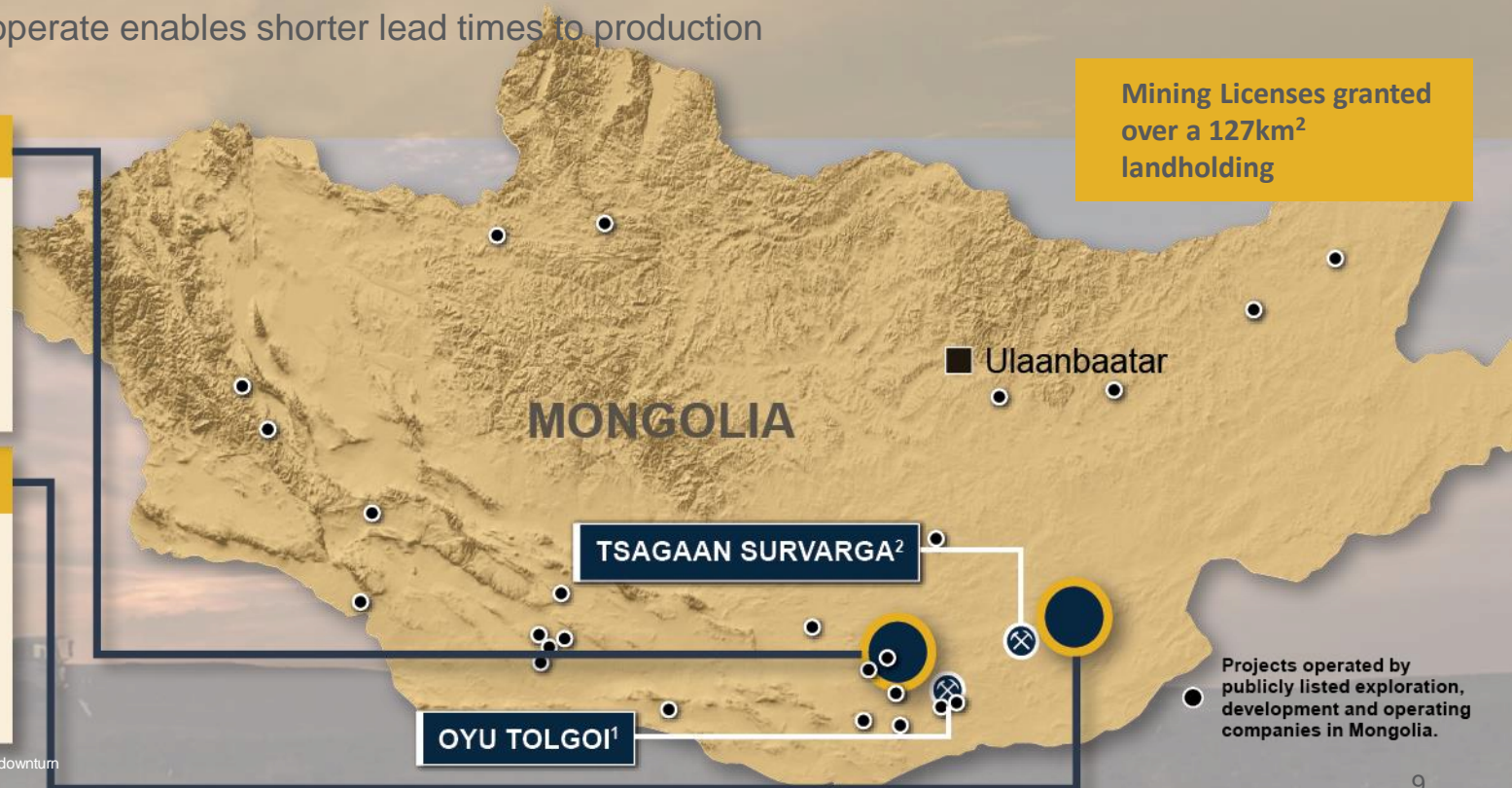
Emerging **Global Scale** mining district

Significant & growing **MRE 0.6Bt** containing **1.9Mt Cu & 4.3Moz Au** at Kharmagtai<sup>3</sup>

## RED MOUNTAIN Cu-Au DISTRICT

**Ownership 90%**; JOGMEC earning up to 51% by spending US\$7.2m

Exploration focused on a significant **Cu-Au porphyry** district



Projects operated by publicly listed exploration, development and operating companies in Mongolia.

<sup>1</sup><https://investmentmonitor.ai/business-activities/extractive-industries/mongolia-and-australia-among-countries-that-will-suffer-the-most-in-a-mining-downturn>

<sup>2</sup>Turquoise Hill Resources Ltd. Oyu Tolgoi 2020 Technical Report <https://mrdata.usgs.gov/sir201050902/show-sir201050902.php?id=456>

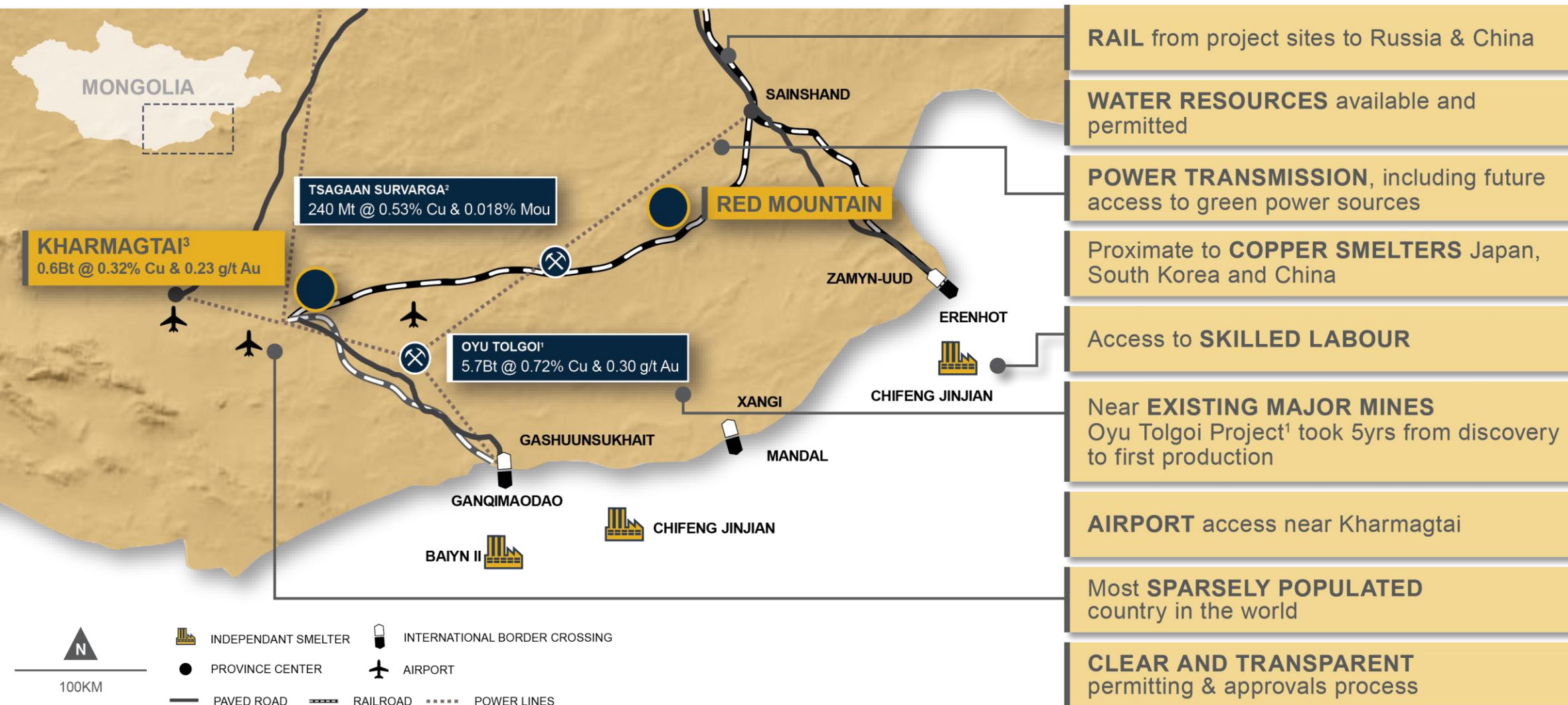
<sup>3</sup> ASX/TSX Announcement 31 October 2018 – Major Increase in Kharmagtai Open-Cut Resource to 1.9Mt Cu & 4.3Moz Au



# Strong infrastructure and favourable ESG environment

## Enables competitive capital intensity and short development time

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<sup>1</sup> In 2020 Oyu Tolgoi produced 50.2K of copper 182K ounces of gold and 876K of ounces of silver.

<sup>2</sup> Turquoise Hill Resources Ltd. Oyu Tolgoi 2020 Technical Report <https://mrdata.usgs.gov/sir20105090z/show-sir20105090z.php?id=456>

<sup>3</sup> ASX/TSX Announcement 31 October 2018 – Major Increase in Kharmagtai Open-Cut Resource to 1.9Mt Cu & 4.3Moz Au

# Why Copper?

- **PRODUCTION DYNAMICS**
  - declining supply and fewer discoveries
- **ECONOMIC GROWTH**
  - growing demand from industrialising and urbanising economies
- **GREEN DEMAND MEGATRENDS**
  - a key enabler for global electrification





# Kharmagtai – a growth story

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Our flagship project, in a world class copper district

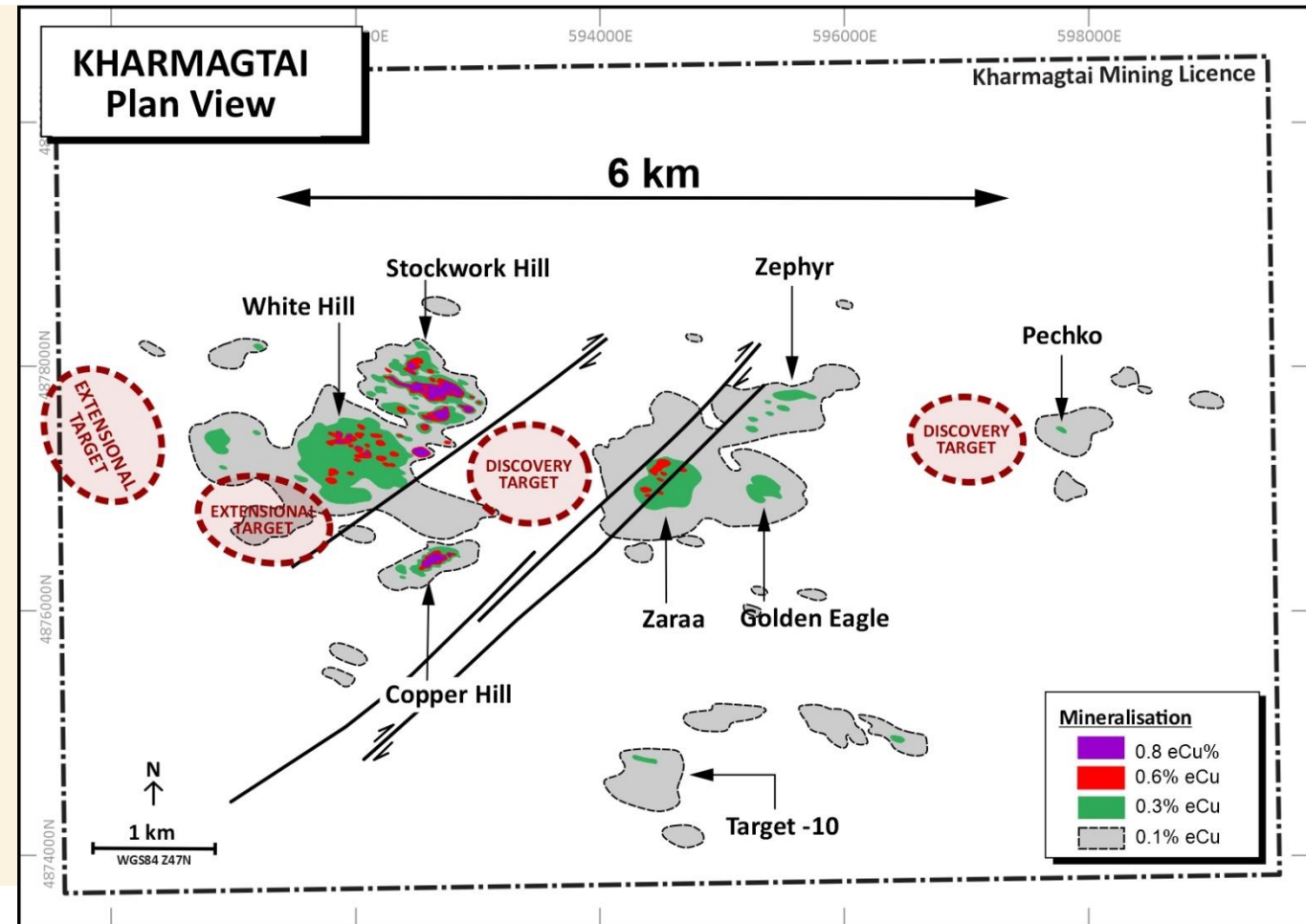
0.6Bt Resource, containing 1.9Mt Cu & 4.3Moz Au <sup>1</sup>

Development project with initial Concept Study completed

Updated Resource to be released Q4 2021, includes 61,500m drilled since 2018 MRE

70km<sup>2</sup> granted mining licence with 30 yrs tenure & option to extend another 40 yrs

- ▶ +200km drilled
- ▶ Strike recently extended 5km for recent Zaraa & Golden Eagle discoveries
- ▶ Mineralisation outcrops at surface
- ▶ Limited drilling below 400m is untapped opportunity
- ▶ Linking system at depth is future growth potential



<sup>1</sup> ASX/TSX Announcement 31 October 2018 – Major Increase in Kharmagtai Open-Cut Resource to 1.9Mt Cu & 4.3Moz Au

# Impressive track record of wide, high-grade intercepts

## 2021 drilling success underpinned by deeper, gold-rich bornite discoveries

ASX Announcement Date	Deposit <sup>1</sup>	Hole ID <sup>2</sup>	From (m)	Interval (m)	Cu (%)	Au (g/t)	CuEq (%) <sup>3</sup>	CuEq (%m) <sup>4</sup>
3/02/2014	SWH	KHDDH240	3	245	0.75	2.48	2.26	555
3/02/2014	SWH	KHDDH259	3	203	0.45	2.45	1.95	395
3/02/2014	SWH	KHDDH281	28	210	0.63	1.61	1.61	339
3/02/2014	SWH	KHDDH275	358	298	0.45	0.58	0.8	240
23/07/2014	SWH	KHDDH343	358	205	0.73	0.55	1.07	219
28/07/2014	SWH	KHDDH343	358	242	0.55	0.75	1.01	244
25/08/2014	SWH	KHDDH347	406	202	0.55	0.73	1	201
22/06/2015	SWH	KHDDH371	242	244	0.81	0.32	1.01	245
29/03/2017	SWH	KHDDH394	16	646	0.51	0.87	1.04	672
29/03/2017	SWH	KHDDH394A	351	385	0.52	0.6	0.89	341
29/03/2017	SWH	KHDDH394A	351	225	0.61	0.73	1.06	237
5/09/2017	CH	KHDDH416	0	180	0.95	1.84	2.07	373
11/09/2017	SWH	KHDDH415	0	264	0.56	1.46	1.45	383
11/09/2017	SWH	KHDDH415	0	148	0.81	2.41	2.28	338
18/09/2017	SWH	KHDDH419	466	234	0.57	1.04	1.2	282
18/09/2017	SWH	KHDDH419	536	118	0.72	1.54	1.66	196
5/10/2017	CH	KHDDH421	0	412	0.54	0.79	1.02	421
5/10/2017	CH	KHDDH421	14	134	1.01	1.84	2.13	286
5/10/2017	CH	KHDDH421	14	134	1.01	1.84	2.13	286

ASX Announcement Date	Deposit <sup>1</sup>	Hole ID <sup>2</sup>	From (m)	Interval (m)	Cu (%)	Au (g/t)	CuEq (%) <sup>3</sup>	CuEq (%m) <sup>4</sup>
5/10/2017	CH	KHDDH421	30	118	1.07	2.05	2.32	274
30/10/2017	SWH	KHDDH419	466	294	0.47	0.85	0.99	291
30/10/2017	SWH	KHDDH419	496	222	0.59	1.09	1.26	279
30/10/2017	SWH	KHDDH419	528	126	0.7	1.46	1.59	200
26/02/2018	SWH	KHDDH448	574	230	0.5	0.91	1.06	243
26/02/2018	SWH	KHDDH448	582	164	0.64	1.21	1.38	226
26/02/2019	SWH	KHDDH448	625	118	0.76	1.63	1.75	206
28/02/2019	SWH	KHDDH488	550	126	0.88	1.39	1.73	218
28/02/2019	SWH	KHDDH488	572	102	1	1.67	2.02	206
15/02/2021	SWH	KHDDH559B	612	226	0.68	1.43	1.55	351
15/02/2021	SWH	KHDDH559B	615	175	0.84	1.83	1.96	342
15/02/2021	SWH	KHDDH559B	649	134	0.89	2.04	2.14	286
15/02/2021	SWH	KHDDH559B	651	61	1.43	3.76	3.72	227
24/03/2021	SWH	KHDDH563	649	181	0.68	1.78	1.77	320
24/03/2021	SWH	KHDDH563	651	169	0.72	1.91	1.89	319
24/03/2021	SWH	KHDDH563	680	106	0.99	2.89	2.75	291
24/03/2021	SWH	KHDDH563	686	92	1.06	3.23	3.03	279
16/08/2021	SWH	KHDDH573	474	240	0.72	1.24	1.48	354
16/08/2021	SWH	KHDDH573	522	184	0.87	1.54	1.81	333
16/08/2021	SWH	KHDDH573	534	130	0.94	1.58	1.9	248

Source: S&P Market Intelligence

<sup>1</sup> SWH = Stockwork Hill, CH = Copper Hill, WH = White Hill

<sup>2</sup> Includes drill holes with intersections at >0.8% CuEq

<sup>3</sup> CuEq % calculation methodology and assumptions are described in Appendix 6

<sup>4</sup> CuEq %m = CuEq % \* Interval m

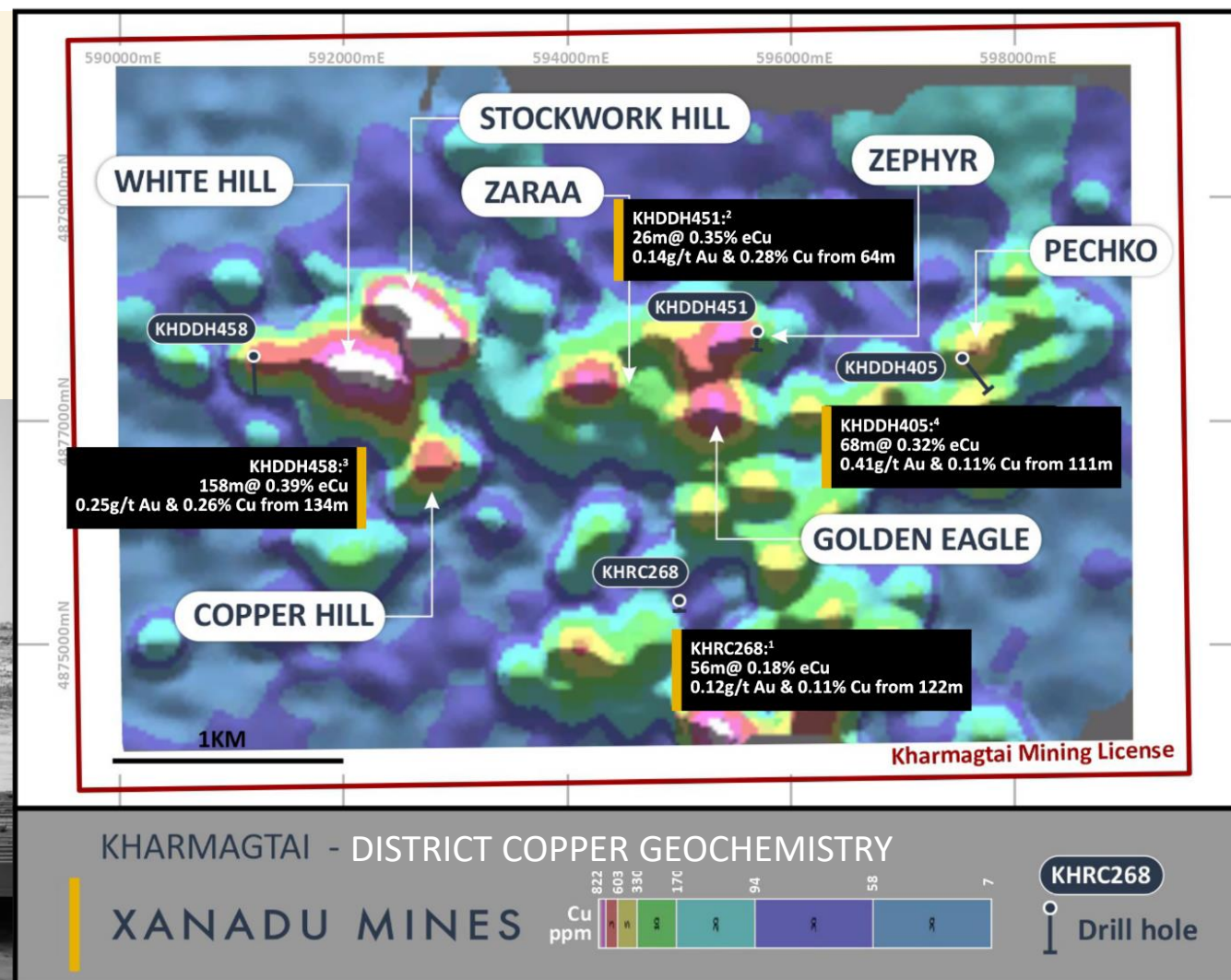


# Exploration upside, grade increasing with depth

## Extension drilling unlocks scale of the system

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- ▶ Large porphyry system being unlocked
- ▶ Open in all directions, with untested extensions
- ▶ Aiming to link up systems at depth
- ▶ Recent Zaraa & Golden Eagle discovery extended global strike to over 5km



<sup>1</sup> ASX/TSX Announcement 30 April 2016 – Quarterly Activities Report to 31 March 2016

<sup>2</sup> ASX/TSX Announcement 30 April 2018 – Quarterly Activities Report to 31 March 2018

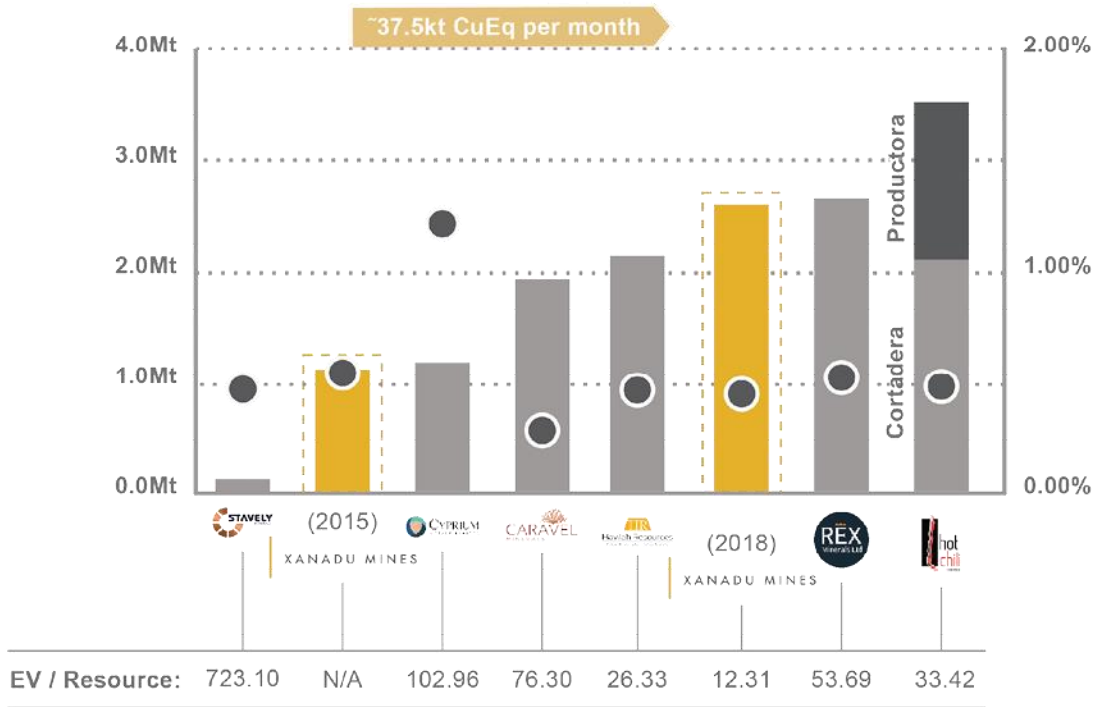
<sup>3</sup> ASX/TSX Announcement 19 April 2018 – Kharmagtai, New Copper Porphyry Centre Discovered (Zaraa)

<sup>4</sup> ASX/TSX Announcement 31 January 2018 – Quarterly Activities Report to 31 December 2017

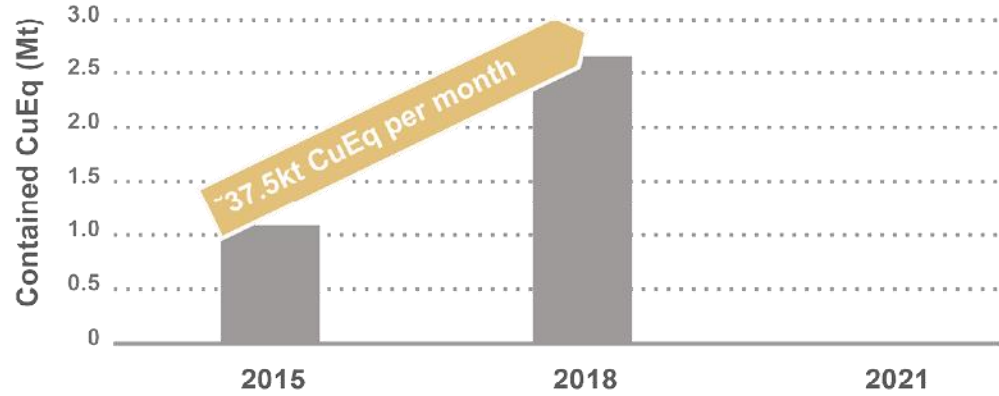
# Kharmagtai Resource continues to grow

Already one of the largest copper districts controlled by an ASX junior  
Resource update expected Q4 2021

APPENDIX 1 – KHARMAGTAI RESOURCE GROWTH AND BENCHMARKING



**2021 Resource Update**  
(includes ~61,500m drilled since 2018 MRE)



Source: S&P Market Intelligence, Company Disclosure, CuEq calculations in Appendix 6

\* XAM updated Mineral Resource due late 2021; aiming to move towards a medium term objective of >1 billion tonnes @ >0.5% eCu, including >100 million tonnes @ >0.8% eCu

Current Mineral Resource of 0.6Bt containing 2.6Mt CuEq<sup>1</sup>

Higher grade core of 54Mt @ 0.86% CuEq<sup>1</sup>

Resource has grown at ~37.5kt CuEq per month since XAM commenced exploration in 2016

Low discovery cost <\$0.01/lb CuEq

<sup>1</sup> ASX/TSX Announcement 31 October 2018 – Major Increase in Kharmagtai Open-Cut Resource to 1.9Mt Cu & 4.3Moz Au

# A truly significant porphyry district

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## New systems continue to be unlocked through discovery drilling

### EXPLORATION SCORECARD

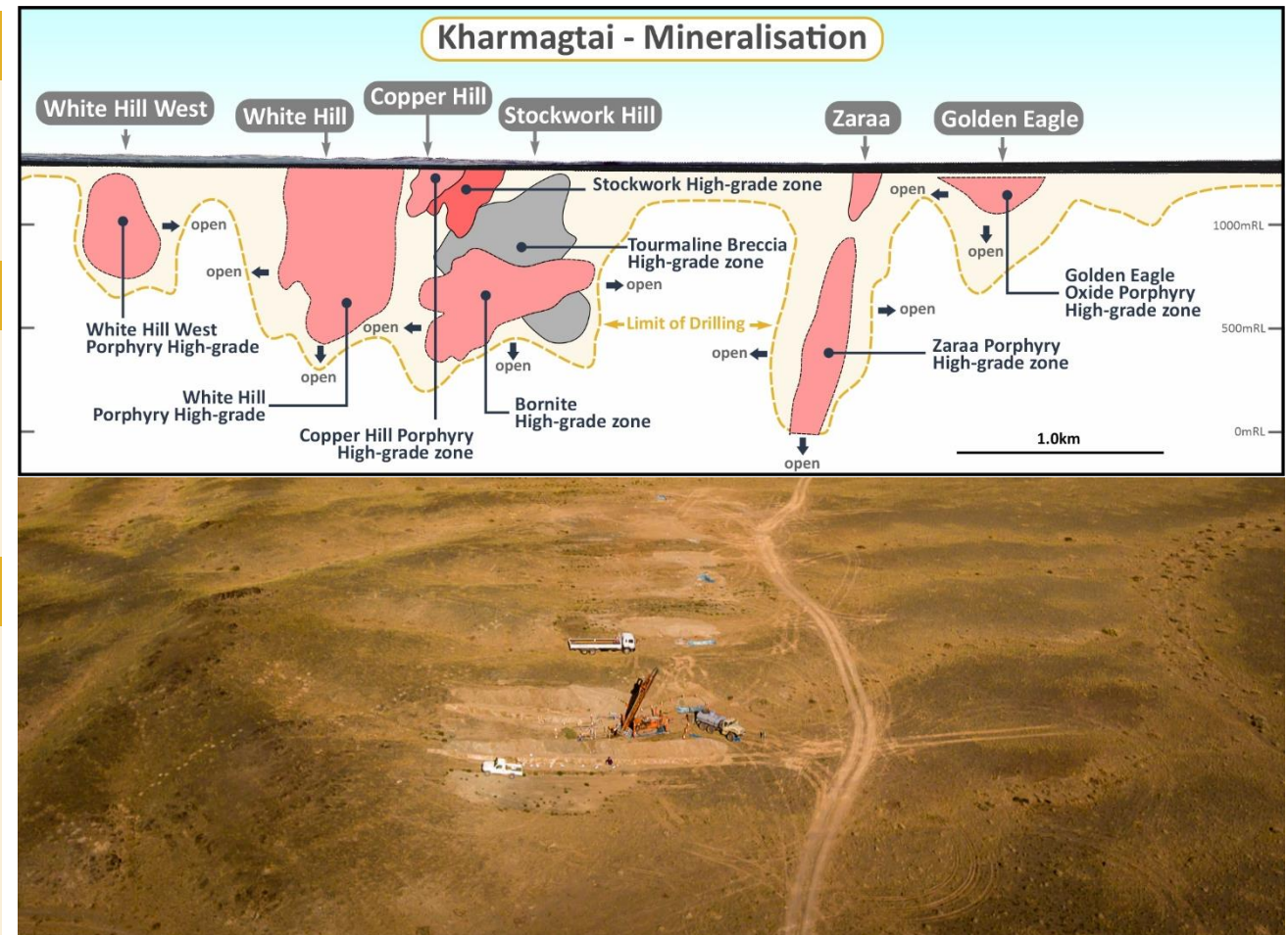
- 5 subsurface discoveries out of 10 prospects drilled
- <\$0.01/lb CuEq discovery cost vs ~\$0.07/lb industry avg<sup>5</sup>

### COMPLEX DISTRICT

- Multiple copper-gold porphyry intrusions
- Mineralised structures linked to faulting
- Increasing grade at depth

### PORPHYRY DEPOSITS ARE MADE NOT FOUND

- Aiming for new systems & new high grade
- Link existing systems at depth
- Highly prospective for new discovery
- Several priority targets drilled in 2021



<sup>1</sup> ASX Announcement 31 March 2016 – Quarterly Activities Report

<sup>2</sup> ASX Announcement 31 March 2018 – Quarterly Activities Report

<sup>3</sup> ASX Announcement 19 April 2018 – Kharmagtai – New Copper Porphyry Centre Discovered (Zaraa)

<sup>4</sup> ASX Announcement 30 June 2017 – Quarterly Activities Report

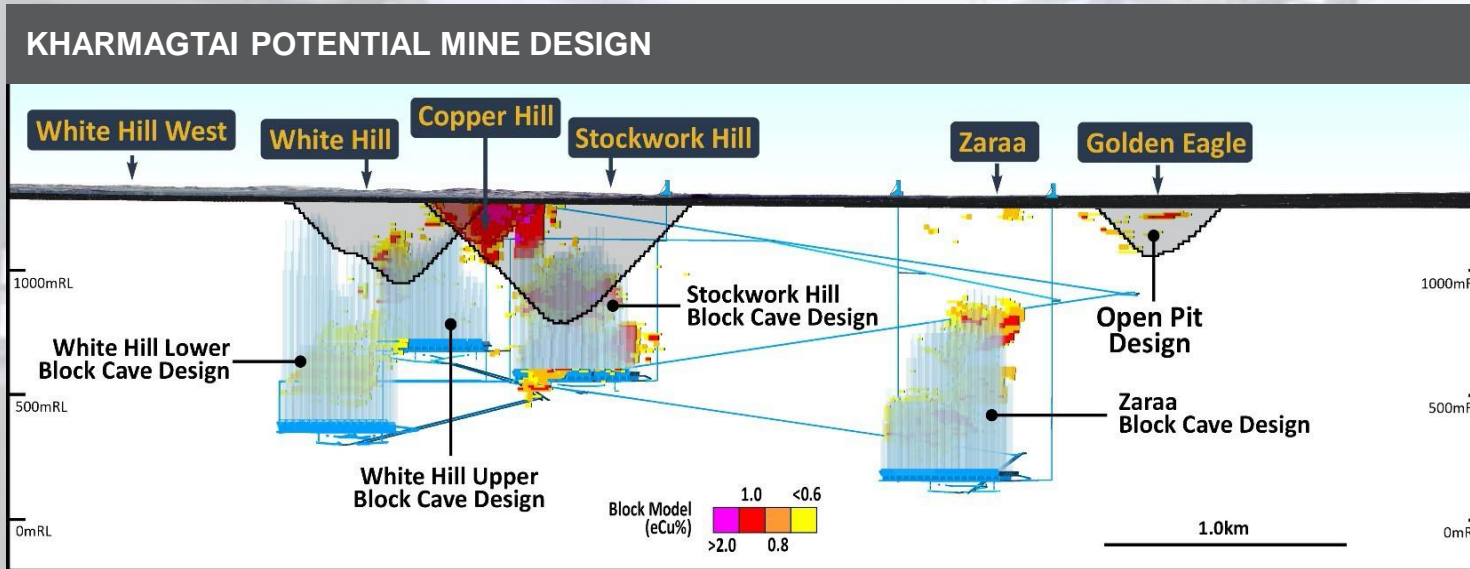
<sup>5</sup> Minexconsulting <https://minexconsulting.com/recent-trends-in-copper-exploration-are-we-finding-enough-2/>



# Studying a contemporary design & conventional approach

Led by our expert advisory panel

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## MINING

- Conventional bulk mining
- Open pit and underground caving
- Staged to accelerate cash flow

## PROCESSING

- Conventional crushing, milling & flotation
- Staged expansion to match grade profile
- Conceptual designs completed

## INFRASTRUCTURE

- Flat & stable topography reduces cost
- Existing regional power infrastructure in place
- Industrial, non-potable water sources available
- Conventional tailings & mine waste management for desert climates

## MARKETING

- Nearby rail facilitates shipping to port
- Close to regional smelters in Japan, South Korea & China
- Large gold credits due to high Au-Cu ratio

## METALLURGY

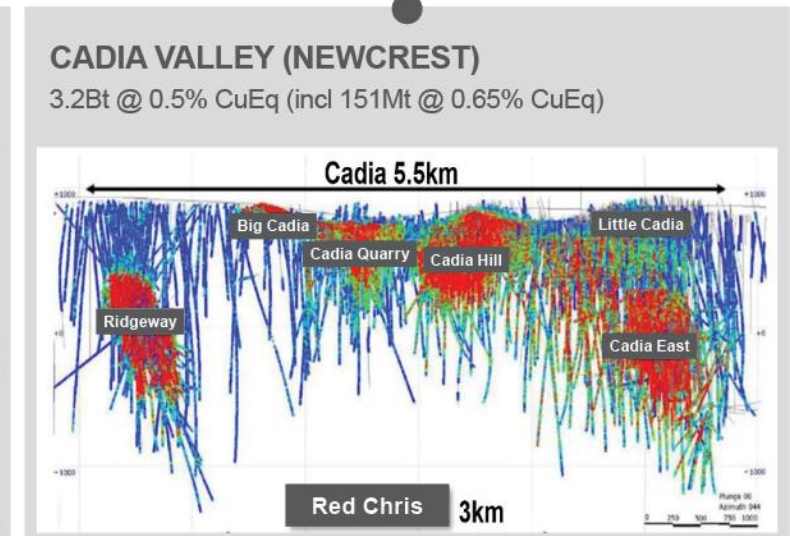
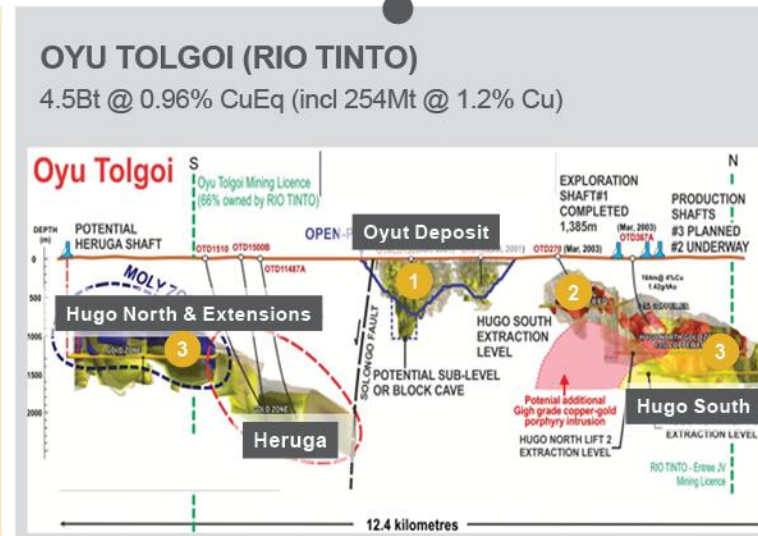
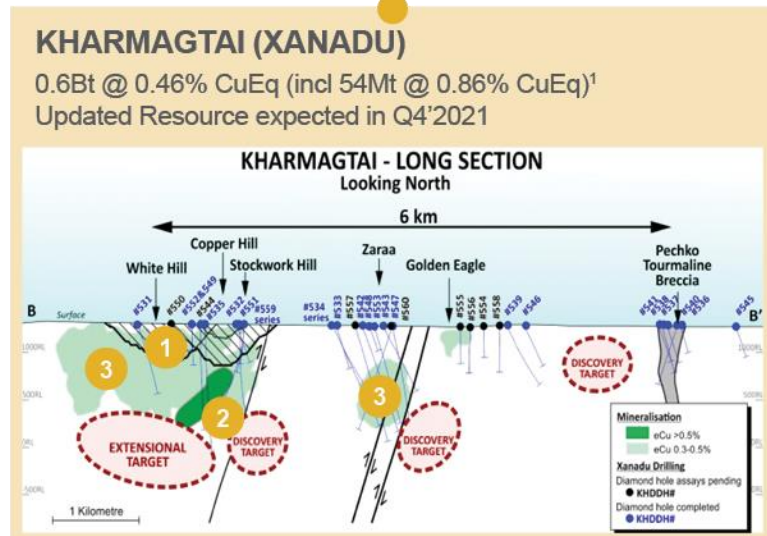
- Significant metallurgical test work completed
- Strong Cu & Au recoveries
- Saleable Cu concentrate with no deleterious elements

# Following a proven porphyry development path

## Possibly a similar approach as other global Tier 1 operations

### DEVELOPMENT STEP:

	KHARMAGTAI	OYU TOLGOI	CADIA VALLEY
01 OPEN PIT GENERATES EARLY CASH	Stockwork Hill, Copper Hill, White Hill	Oyut Deposit	Cadia Pit
02 SUB-LEVEL CAVE MAY BRING FORWARD CASH FLOW	Stockwork Hill	Hugo South	Ridgeway
03 BLOCK CAVE GENERATES CASH 30+ YEARS	White Hill, Zaraa	Hugo North, Heruga	Cadia East



<sup>1</sup> ASX/TSX Announcement 31 October 2018 – Major Increase in Kharmagtai Open-Cut Resource to 1.9Mt Cu & 4.3Moz Au

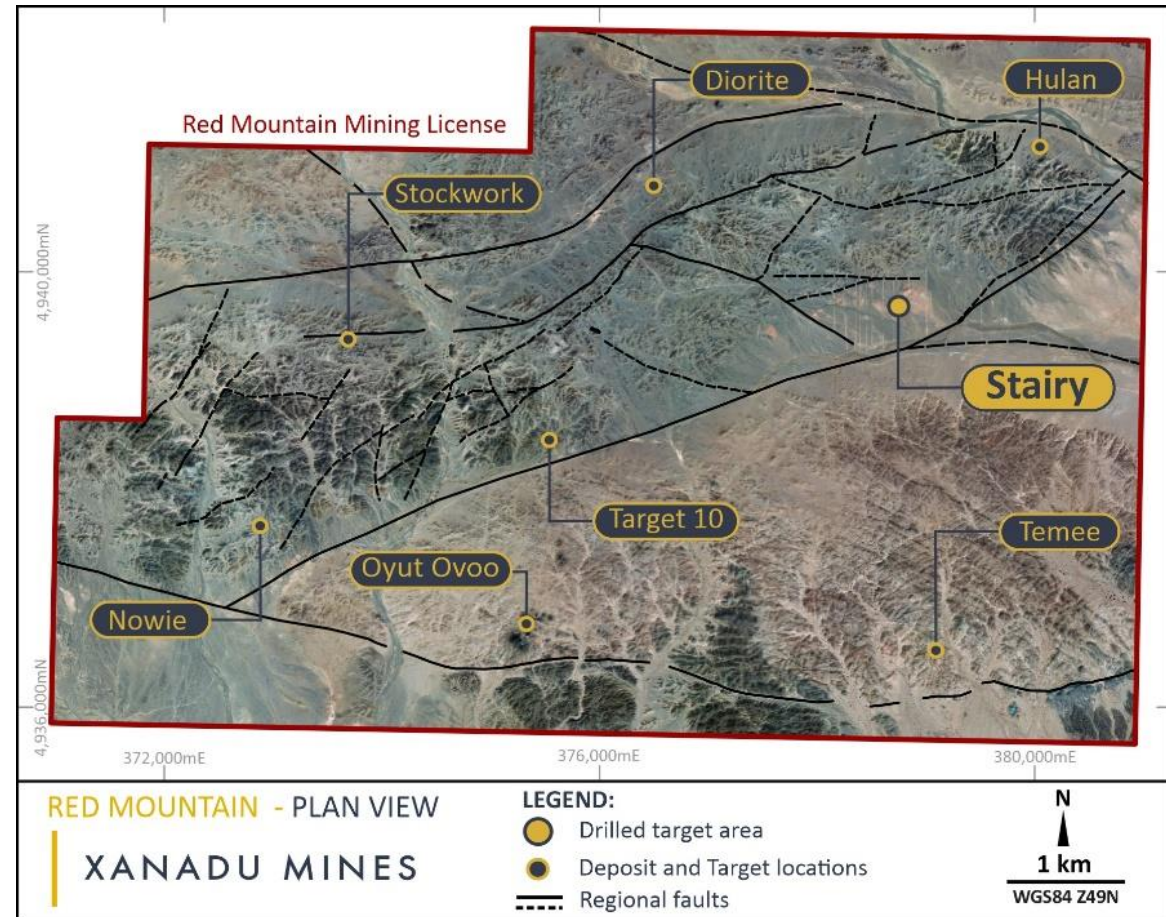


# Red Mountain – a discovery project

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Early stage & highly prospective, with JOGMEC<sup>1</sup> on board as our partner

- Advanced exploration project
  - Outcropping at surface
  - 4 mineralised Cu-Au systems
  - 2 epithermal Au-Ag systems
  - High-grade, shallow diamond drill intersections and trench assays
- Located 265km east of Kharmagtai
- Tenement size 57km<sup>2</sup>
- Already has a 30-year, extendable mining license
- JOGMEC spends US\$7.2m to earn 51% of the project



<sup>1</sup> Japan Oil, Gas and Metals National Corporation



# Red Mountain has multiple known targets

Many already have high-grade drill intercepts; Stairy is priority

## STOCKWORK TARGET



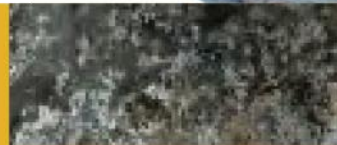
- Quartz-chalcopyrite-bornite stockwork
- Historical drilling:<sup>3</sup>  
18m @ 0.87% Cu & 0.40 g/t Au (from 64 m)  
22m @ 0.59% Cu & 0.14 Au (from 156 m)

## DIORITE HILL TARGET



- Quartz-chalcopyrite-bornite stockwork
- Historical drilling:<sup>3</sup>  
**OUDDH087 intercepted 184.0m @ 1.06% CuEq from surface**

## BRECCIA PIPE TARGET



- Tourmaline Breccia Pipe
- Previous drilling includes:<sup>2</sup>  
**OUDDH088: 66m @ 1.8% Cu (from 20.4m Inc. 2m@ 10.25% Cu (from 28m))**

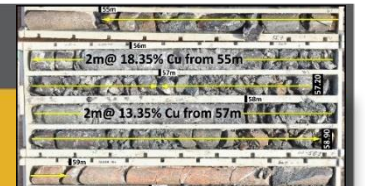
## TEMEE TARGET



- Anomalous geochemistry

## PRIORITY:

### STAIRY TARGET



- Bornite and chalcopyrite sulphide with quartz carbonate fill
- Previous drilling includes:<sup>4</sup>  
**OUDDH110 intercepted 16m @ 4.09% Cu from 54m including 4m @ 15.89% Cu from 55m**

<sup>1</sup> ASX/TSX Announcement 28 Jun 2017 - Oyut Ulaan Exploration Update

<sup>2</sup> ASX/TSX Announcement 19 July 2017 - Oyut Ulaan Exploration Update

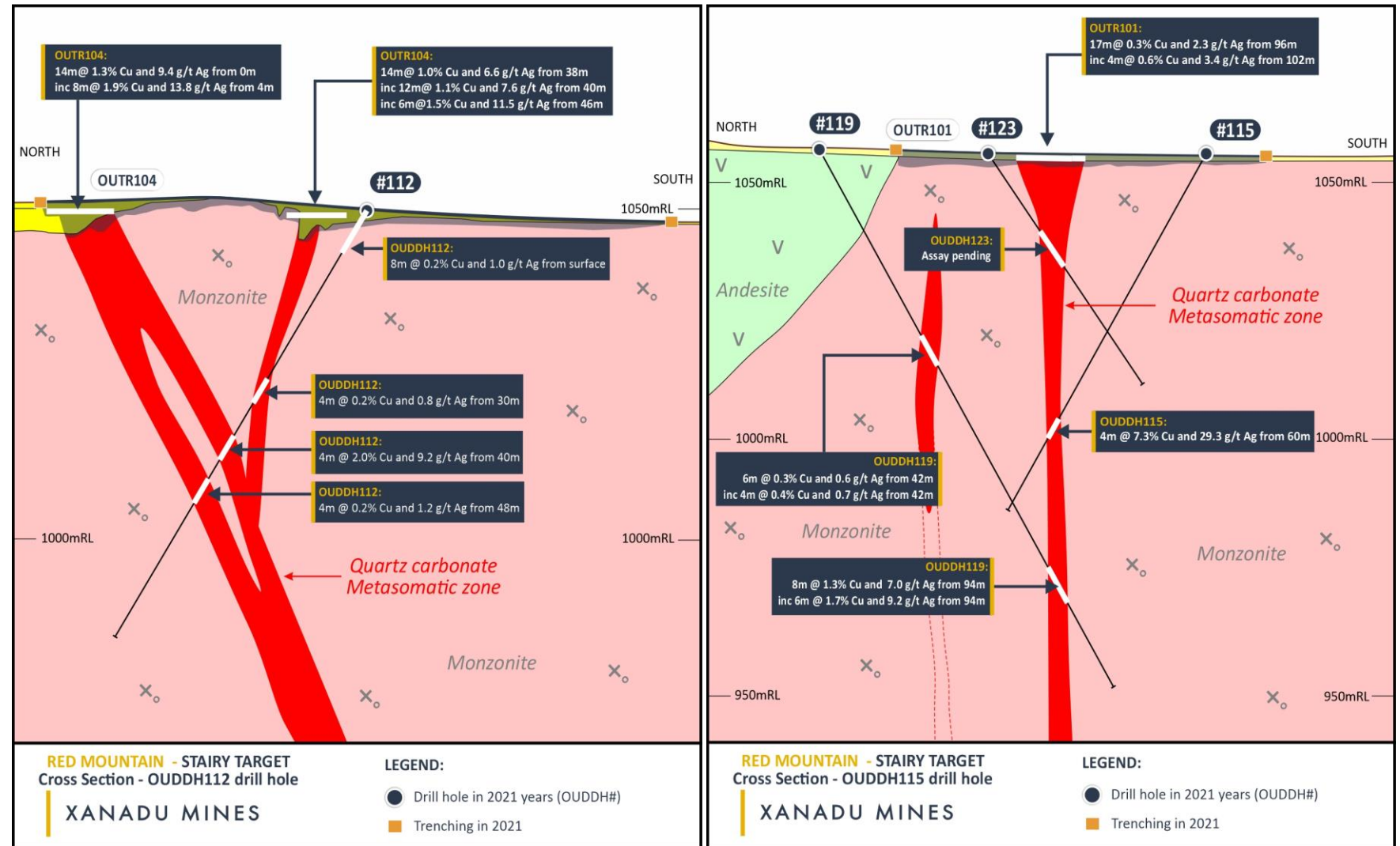
<sup>3</sup> Oyut Ulaan project presentation dated June 2013

<sup>4</sup> ASX/TSX Announcement dated 22 Mar 2021S - hallow Bornite-Rich Copper Mineralisation at Red Mountain

# Stairy shaping up as an attractive exploration project

## Outcropping veins of silver-rich bornite

- Recent diamond drilling **expands** mineralised zones in historic trenches
- Potential linkage to large-scale **porphyry system at depth**
- Identified sub-vertical structures up to 24m wide, extending to >1km
- Follow-up targeting program being developed

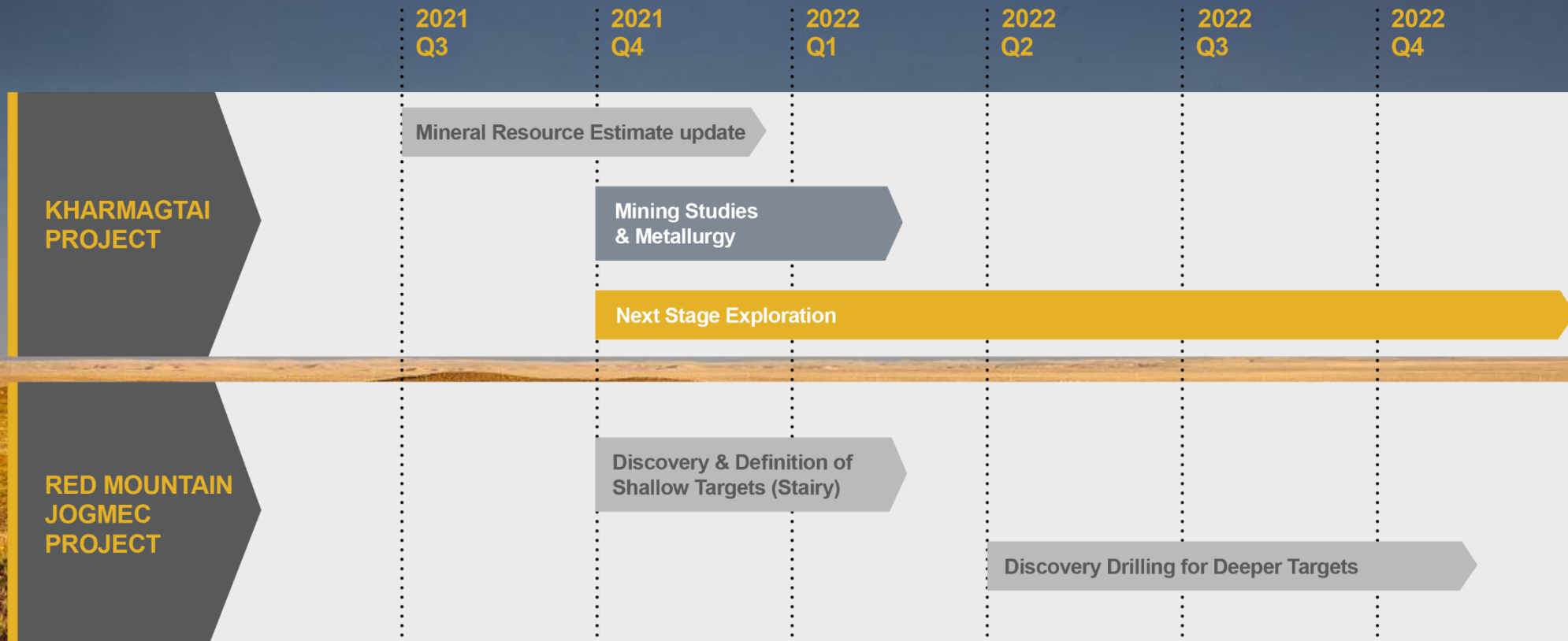




# Focus is exploration & discovery at both projects

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Aiming for a partner to progress Kharmagtai to next stage





# Why invest in Xanadu?

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## The Right Projects

### MAJOR COPPER RESOURCE <sup>1</sup>

Kharmagtai Resource of 0.6Bt containing 1.9Mt Cu & 4.3Moz Au, including 54Mt at >0.8% CuEq. Update planned in Q4 2021.

### GROWTH POTENTIAL

Kharmagtai open & growing in both tonnes & grade. Red Mountain highly prospective with multiple targets.

### LOW TECHNICAL RISK

Kharmagtai should be amenable to conventional bulk mining & ore processing yielding a clean Au rich Cu con.

### FAVOURABLE JURISDICTION

Mongolia is a stable democracy; mining driven economy; low ESG risk, great people; established infrastructure

### AMBITIOUS EXPLORATION

Targeting >1Bt incl. >100Mt high grade at Kharmagtai; new discoveries at Red Mountain. Low-cost discovery ~\$0.01/lb Cu.

### EXCELLENT LEADERSHIP

Highly credentialed Management & Board with a track record of discovery; world class Advisory Team

### FUNDED TO EXECUTE STRATEGY

\$10.8m cash in bank; but open to partnership with a major to accelerate Kharmagtai project

### ESG FOCUS

Operations conducted to high ESG standards; Kharmagtai has potential to be long life, low cost & high tech modern Cu mine

## The Right Company

<sup>1</sup> ASX/TSX Announcement 31 October 2018 – Major Increase in Kharmagtai Open-Cut Resource to 1.9Mt Cu & 4.3Moz Au

# APPENDIX

XANADU MINES



# Competent Person's Statement

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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.

The information in this announcement that relates to Mineral Resources is based on information compiled by Dmitry Pertel who is responsible for the Mineral Resource estimate. Mr Pertel is a full-time employee of CSA Global and is a Member of the Australian 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 "Qualified Person" as defined in the CIM Guidelines and National Instrument 43-101. Mr Pertel consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

The information in this report that relates to the Scoping Study is based, and fairly reflects, information compiled by Gordon Zurowski, P.Eng is a registered Professional Engineer in Ontario, Canada. Mr Zurowski is employed by CSA Global, independent resource industry consultants. Mr Zurowski 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 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Zurowski 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 announcement that relates to metallurgical test work is based on a summary of results compiled by Andrew Holloway who is responsible for metallurgical and process engineering aspects of the project. Mr. Holloway, who is a principal of AGP Mining Consultants Inc. (Toronto, Canada) and is a Professional Engineer in Ontario, Canada, 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. Mr Holloway consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

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. on that date (Prospectus).

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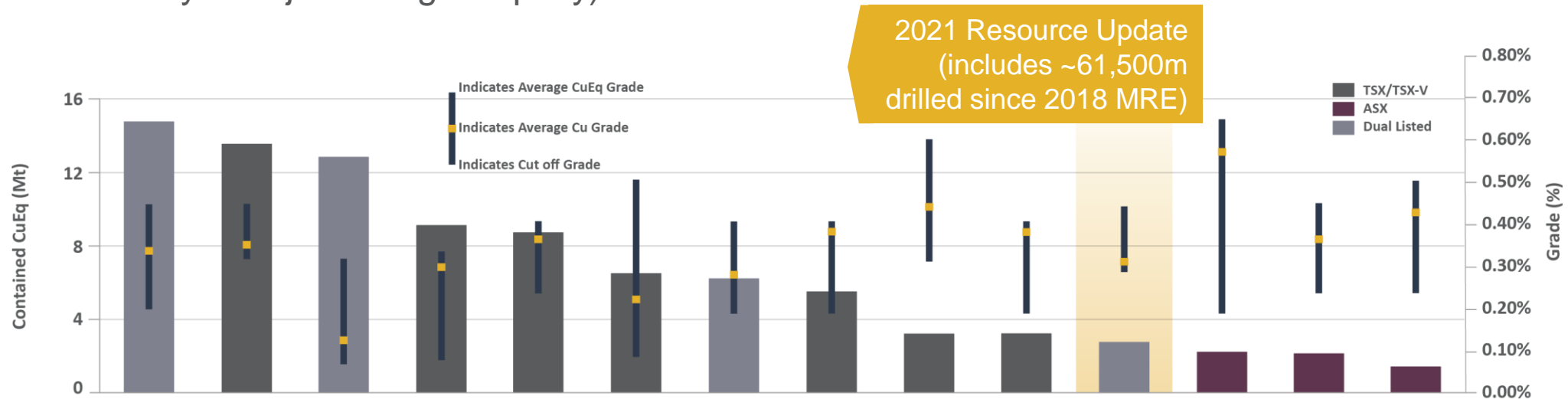
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# Moving up the global ranks

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Already ranks among the largest undeveloped Cu mineral resources in the world  
(not controlled by a major mining company)

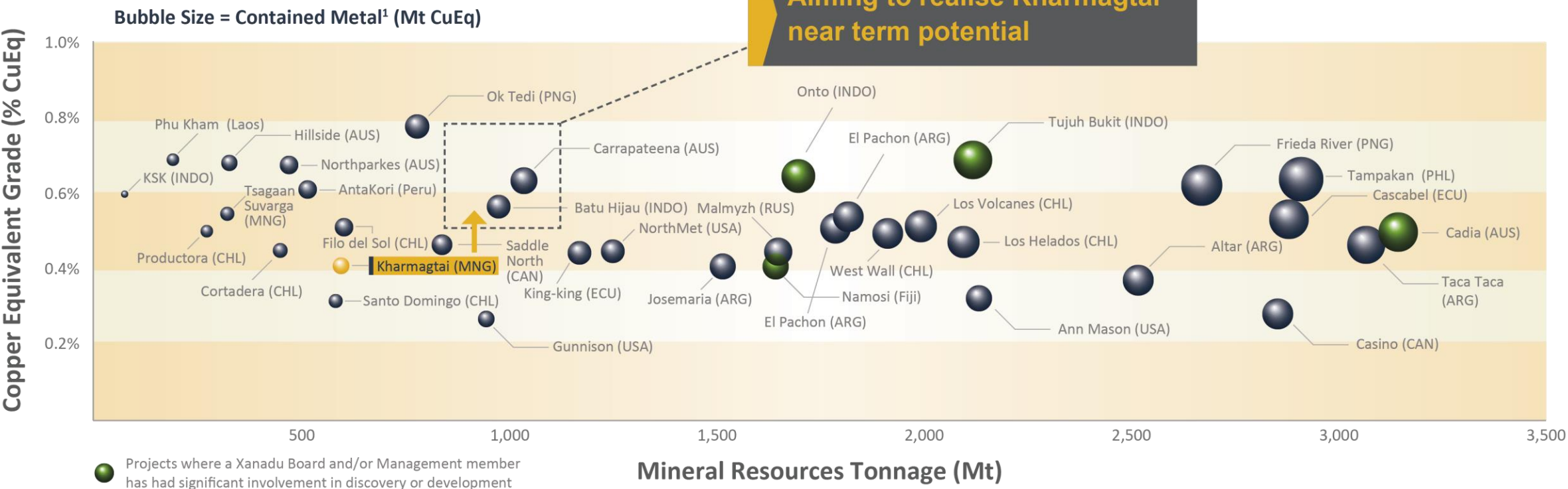


Project Name	Cascabel	Los Helados	Casino	Altar	Vizcachitas	NorthMet	Josemaria	Canariaco Norte	Antakori	La Verde	Kharmagtai	Hillside	Cortadera	Productora
Location	Ecuador	Chile	Canada	Argentina	Chile	USA	Argentina	Peru	Peru	Mexico	Mongolia	Australia	South America	South America
Stage	PEA	PEA	PEA	PEA	PEA	PEA	FS	PFS	PEA	PEA	SS	FS	PFS	PFS
Resource (Mt CuEq)	14.7Mt CuEq	13.5Mt CuEq	12.8Mt CuEq	9.1Mt CuEq	8.7Mt CuEq	6.5Mt CuEq	6.2Mt CuEq	5.5Mt CuEq	3.20Mt CuEq	3.2Mt CuEq	2.7Mt CuEq	2.2Mt CuEq	2.1Mt CuEq	1.4Mt CuEq
Grade (% CuEq)	0.46%	0.46%	0.33%	0.35%	0.42%	0.52%	0.42%	0.42%	0.61%	0.42%	0.46%	0.66%	0.46%	0.52%
Operator	SolGold	NGEx Minerals	Western Copper	Aldebaran Res.	Los Andes Copper	PolyMet Mining	Josemaria Res.	Candente Copper	Regulus Resources	Solaris Resources Inc	Xanadu Mines	Rex Minerals	Hot Chilli	Hot Chilli
Exchange Listing	LSE & TSX	TSX-V	TSX & NYSE	TSX-V	TSX-V	TSX	TSX & NYSE	TSX	TSX-V	TSX-V	ASX & TSX	ASX	ASX	ASX
EV (\$m)	1155.2	84.1	325.3	79.9	212.2	463.0	369.8	32.9	80.4	1640.6	32.0	142.4	94.0	94.0
EV/Resource (t CuEq)	78.6	6.2	25.4	8.8	24.4	71.2	59.6	6.0	25.1	512.7	11.7	63.8	44.9	66.0
Project CAPEX	2538.0	4301.0	3250.0	2000.0	1300.0	1095.0	2485.0	1437.0	476.0	1160.0	NA	410.0	725.0	725.0
Key Shareholder(s)	BHP Group, Newcrest	Lundin Family	Rio Tinto Canada, FMR LLC, Dale Corman	Route One Investment Corp	Turnbrook Corporation, Resource Capital Fund	Glencore	Lundin Family	Fortescue	Route One Investment Corp	Richard Warke, Equinox Gold	ACA, SSI	Grand South Development, BT Portfolio Services	Kas & Blue Spec Group, GS Group, Taurus	Kas & Blue Spec Group, GS Group, Taurus

# Joining an elite club of global projects

Kharmagtai moving to a significant position among global peers

Aiming to realise Kharmagtai near term potential



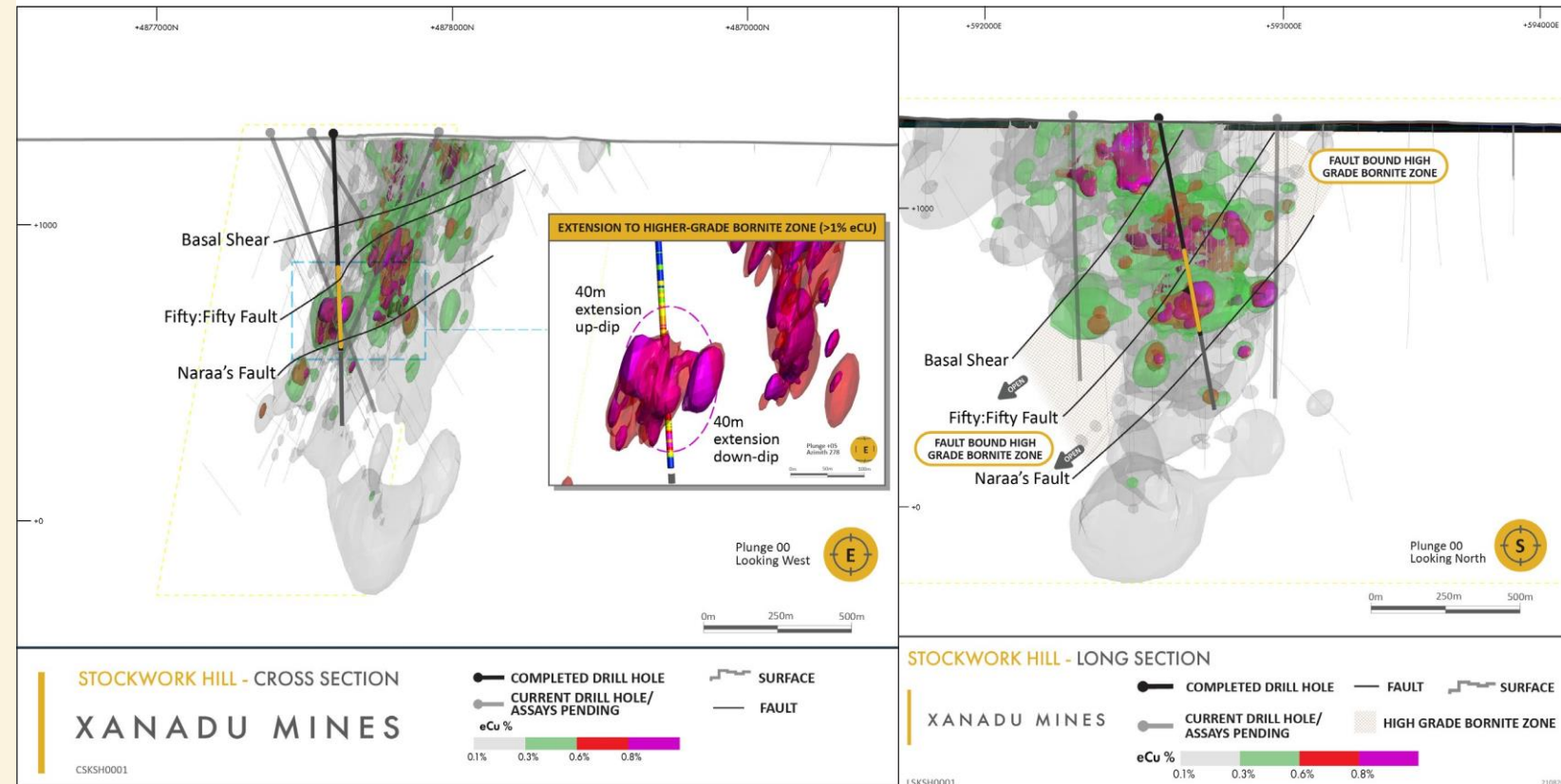
Source: S&P Market Intelligence, Company Disclosure, CuEq calculations in Appendix 6

# Targeting the high-grade core

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Gold-rich, bornite zones are key to accelerating cash generation

- High-grade zone exploration targeted to nearly double:
- 2018 MRE high grade zone = 54Mt grading +0.8% CuEq<sup>1</sup>
- Mining Block objective of 100Mt grading +0.8% CuEq
- Current drill program targets high-grade, gold-rich bornite core at Stockwork Hill
- Recent high grade success at KDDH573:<sup>2</sup>
  - 240m grading 1.36% CuEq, from 474m
  - Extended high grade zone 40m up-dip & 40m down-dip at Stockwork Hill.
  - Represents best CuEq%.m intersected below 400m since Xanadu took control



<sup>1</sup> ASX/TSX Announcement 31 October 2018 – Major Increase in Kharmagtai Open-Cut Resource to 1.9Mt Cu & 4.3Moz Au

<sup>2</sup> ASX/TSX Announcement 16 August 2021 – Vertical Extension of High-Grade Bornite Zone at Stockwork Hill

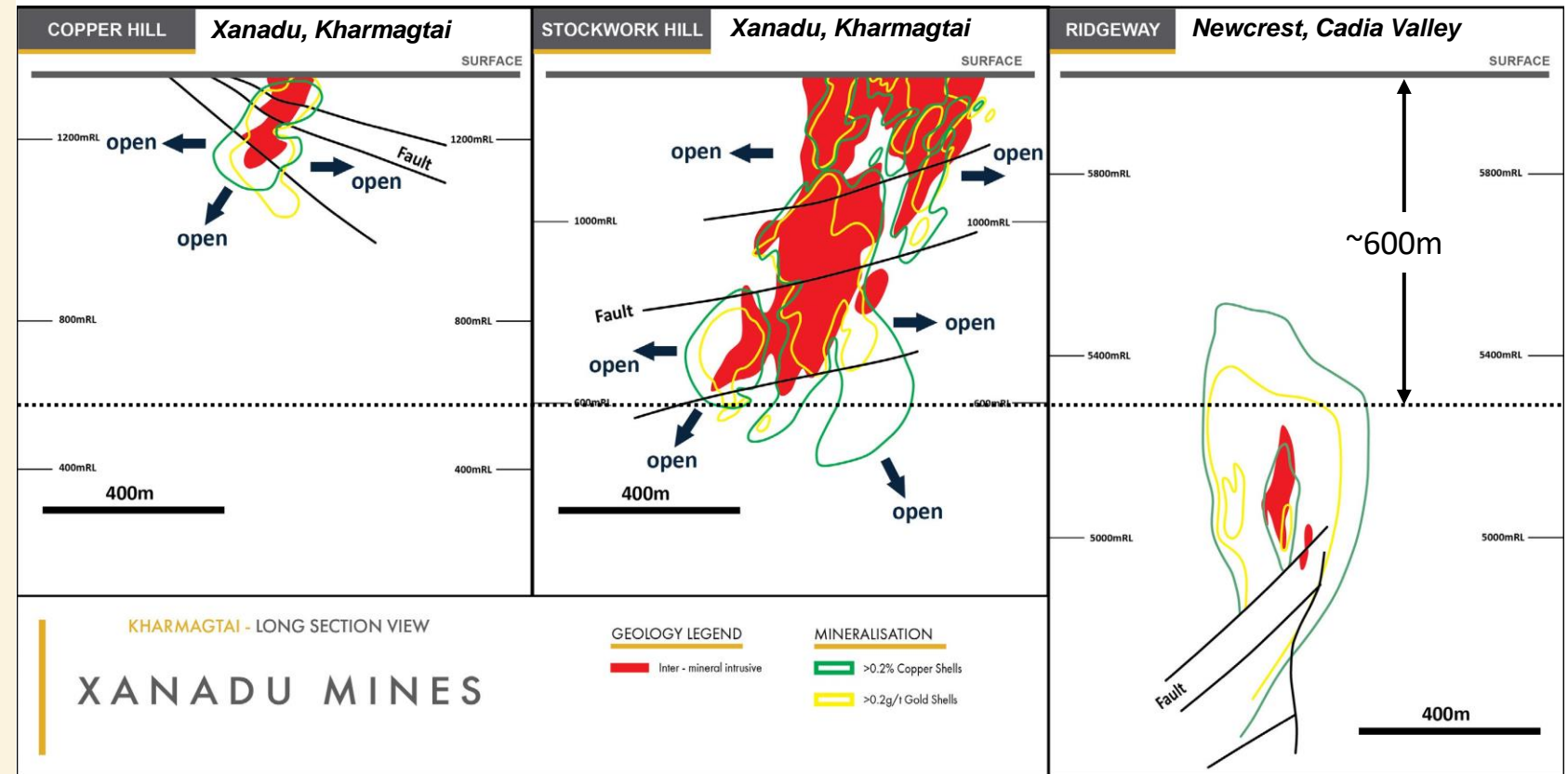
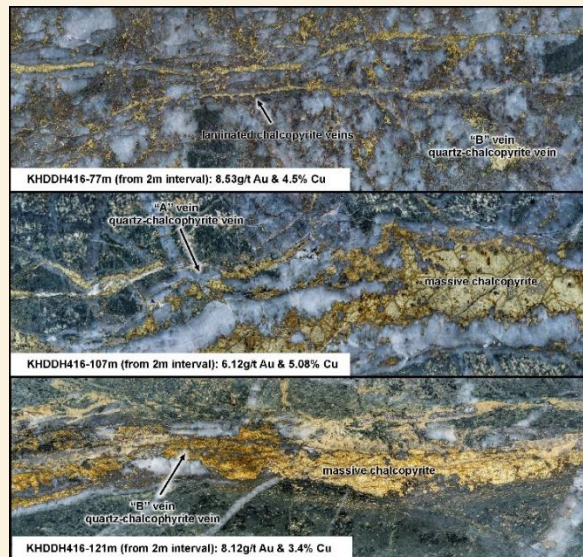


# Significant potential to define more high-grade at depth

Strong growth upside beneath current bornite zones

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- ▶ Mineralised intrusive indicates still in shallow levels of system
- ▶ Bornite zones starting to be uncovered
- ▶ Open in all directions, with significant upside at depth



# Drilling for growth & de-risking a future development

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23km diamond drill program underway, focused on high grade

## HIGH-GRADE DEFINITION

High grade core drives capital  
payback, free cash flow

Gold-rich, bornite zones under  
current resource

Conceptual pit and cave design

## RESOURCE UPGRADE

Scale & growth from extension drilling

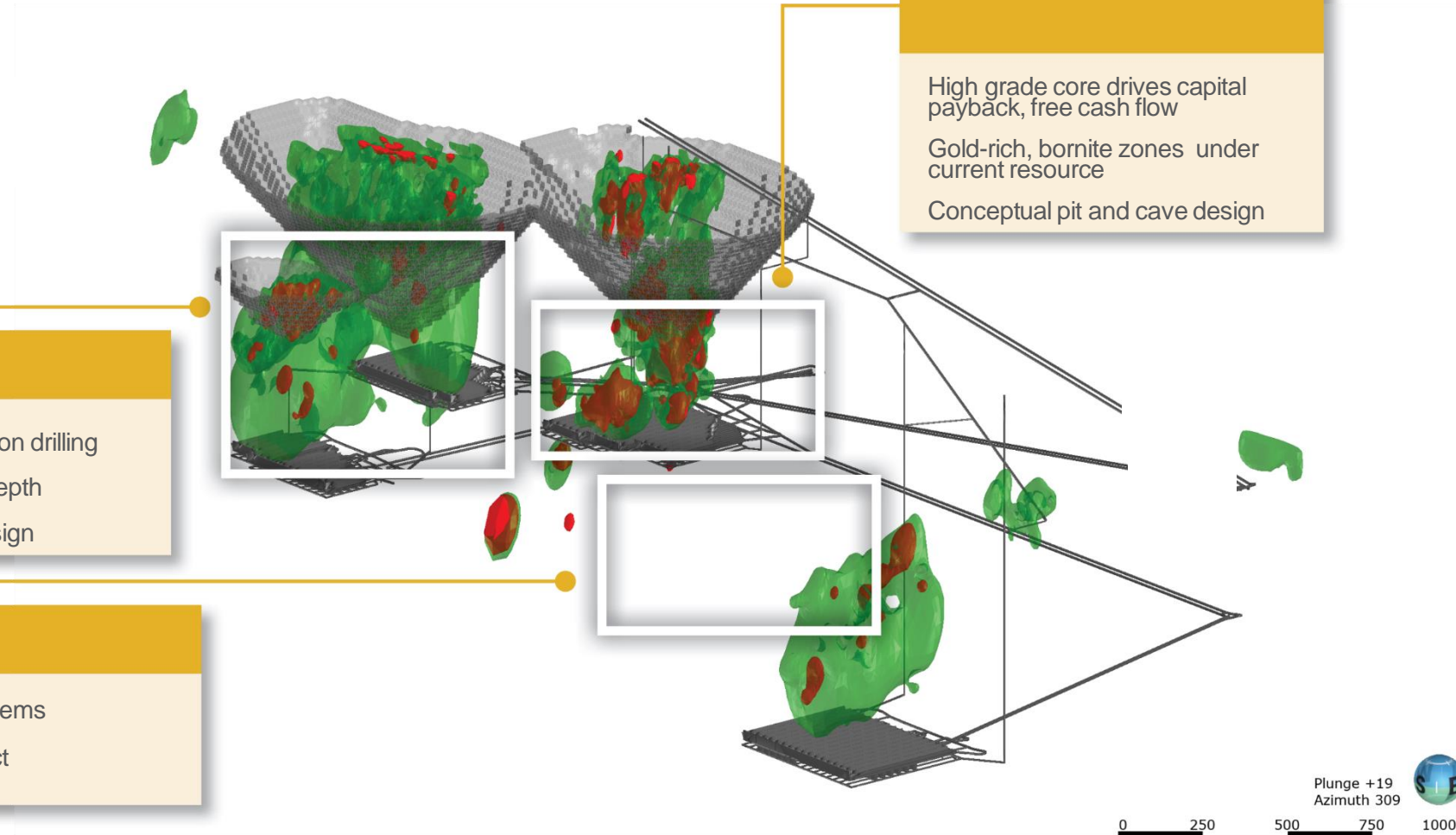
New mineralised zones at depth

Conceptual pit and cave design

## DISCOVERY DRILLING

Define new mineralised systems

Link up systems in the district



0 250 500 750 1000

Plunge +19  
Azimuth 309



## Example – how Kharmagtai could be mined

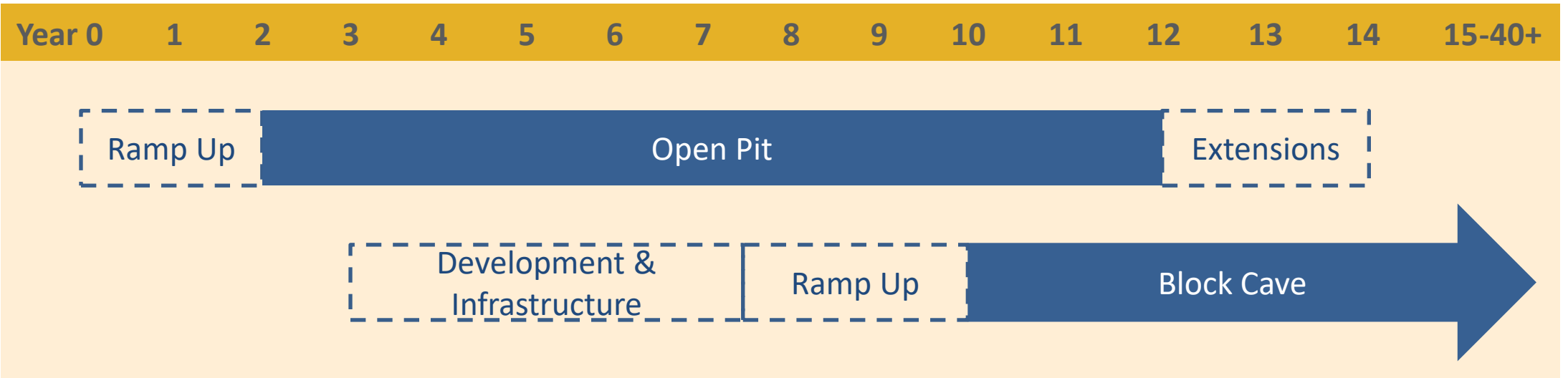
Staged, low risk, conventional bulk mining

### Approach

- Mine outcropping ore via open pit
- Develop underground block cave to replace open pit production
- Consider targeted sub-level caving to bring forward cash

### Rates

- Mining 10-20Mtpa, to be optimised in studies
- Processing rates aligned to mining
- Future plant expansion after start-up capex is paid back





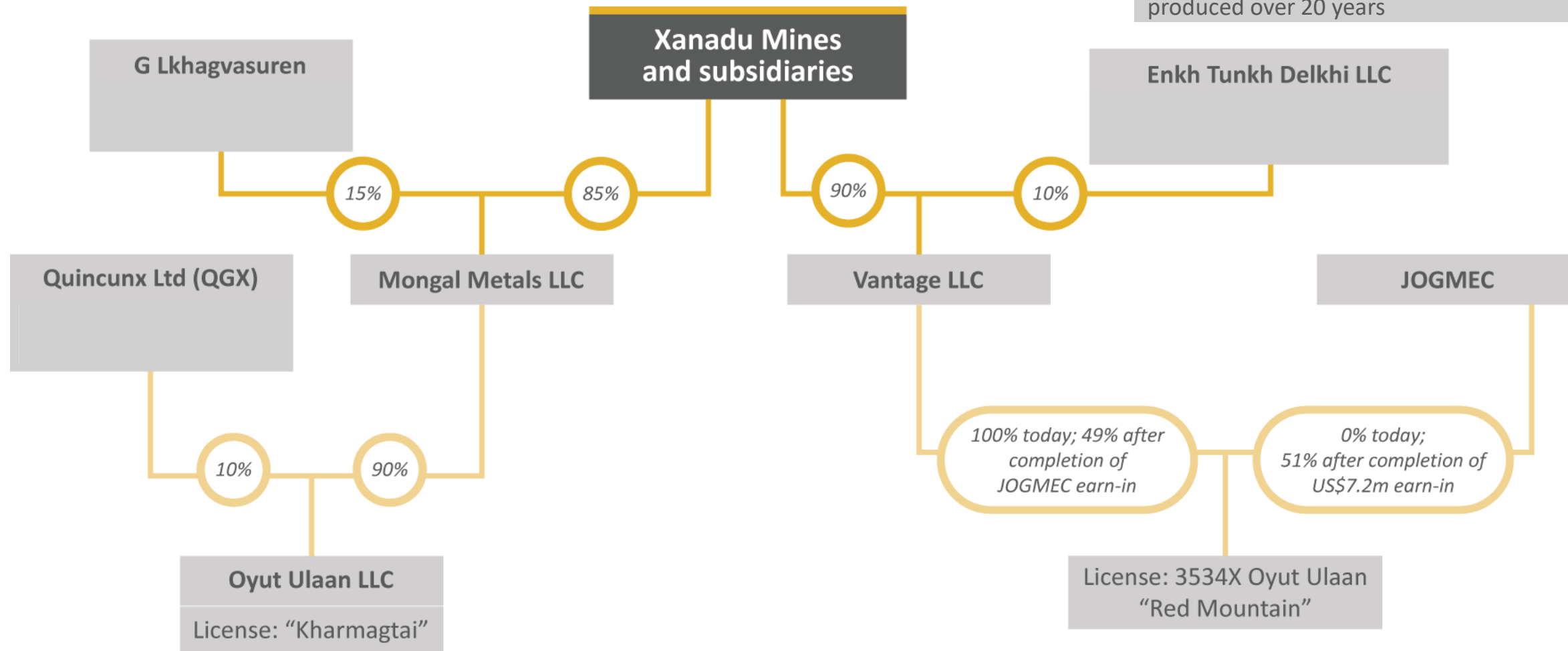
# Clear ownership structure

Working to further simplify

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## Other: Marketing Agency Agreement

Noble Resources right to be marketing agent for 30% of annual copper concentrate produced over 20 years



# Clear permitting steps for development

STEP	PERMITS AND DOCUMENT FILING	GOVERNING AUTHORITIES	KHARMAGTAI	RED MOUNTAIN	GOVERNING LEGISLATION
1	Agreement to compensate state exploration expenditure (if any)	Minerals Authority	Complete and paid back	Not in place	Minerals Law 60.1 clause requires this agreement needs to be in place at least 60 days prior to a mining operations
2	Feasibility study update	Minerals Authority	next update due 2024	next update due 2024	Mineral law 48.6.1 clause - update required every 5 years
3	Comprehensive environmental impact assessment	Ministry of Environment, Minerals Authority	2024	2024	Minerals law 39.1.5, Environmental law Section 8 - update required every 5 years
4	Resource update with mining license granted	Minerals Authority	pre-mining	pre-mining	Minerals law 48.6.3 clause
5	Land usage agreement and land usage licenses	Local Governors /aimag, soum/	pre-mining	pre-mining	Following a decision by respective local governors
6	Water usage agreement and water usage license	Ministry of Environment and agencies	pre-mining	pre-mining	Minerals law 27.1.11, 35.3.7. Based on water usage feasibility
7	Cooperation agreement with local governors	Local Governors	pre-mining	pre-mining	Minerals law 42.1, Government resolution 179 from 2016. Assess prior performance as basis.
8	Mine and plant commissioning permit	Ministry of Mining & Heavy Industry	pre-mining	pre-mining	Minerals law 35.4
9	Engineering drawings of concentration plants and auxilliary plants, buildings and tailings	Ministry of Mining & Heavy Industry	pre-mining	pre-mining	Minerals law 39.1.4.3, Environmental law 21.3, Construction law 4.1.30.
10	Emergency operations plan	Special emergency authority	14 days before mining	14 days before mining	Emergency law 8.1 clause

<sup>1</sup> Source: Xanadu Annual Reports & 2018 technical report

# Copper equivalent benchmarking

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Global Project	Resource Date	Resource Mt				Au g/t			Cu %			Au Moz			Cu Mt			CuEq	
		Meas	Ind	Inf	Total	Meas	Ind	Inf	Meas	Ind	Inf	Meas	Ind	Inf	Meas	Ind	Inf	%	Mt
Altar	1/07/2018	995	1,049	556	2,600	0.08	0.07	0.06	0.36%	0.31%	0.33%	2.6	2.2	1.1	3.6	3.3	1.9	0.37%	9.6
Ann Mason	3/03/2017	412	988	623	2,023	0.03	0.03	0.03	0.33%	0.31%	0.29%	0.4	0.9	0.6	1.4	3.1	1.8	0.32%	6.5
AntaKori	1/03/2019	0	250	267	517	0.00	0.29	0.26	0.00%	0.48%	0.41%	0.0	2.3	2.2	0.0	1.2	1.1	0.58%	3.0
Batu Hijau	31/12/2015	340	540	69	949	0.43	0.25	0.09	0.48%	0.35%	0.30%	4.7	4.3	0.2	1.6	1.9	0.2	0.55%	5.2
Cadia East	31/12/2018	0	3,010	0	3,010	0.00	0.37	0.00	0.00%	0.26%	0.00%	0.0	35.4	0.0	0.0	7.9	0.0	0.45%	13.5
Canariaco	1/11/2010	338	414	158	910	0.08	0.06	0.06	0.48%	0.43%	0.41%	0.9	0.8	0.3	1.6	1.8	0.6	0.48%	4.4
Carrapateena	30/06/2020	140	480	340	960	0.40	0.30	0.10	0.80%	0.70%	0.30%	1.8	4.6	1.1	1.1	3.4	1.0	0.70%	6.7
Cascabel	7/11/2018	1,192	1,470	544	3,206	0.39	0.14	0.11	0.48%	0.28%	0.24%	14.9	6.6	1.9	5.7	4.1	1.3	0.46%	14.9
Casino	2013 FS	145	2,028	680	2,853	0.40	0.17	0.14	0.31%	0.14%	0.16%	1.9	11.0	3.0	0.4	2.8	1.1	0.24%	6.9
Cortadera	19/02/2016	0	183	267	450	0.00	0.15	0.12	0.00%	0.40%	0.35%	0.0	0.9	1.0	0.0	0.7	0.9	0.44%	2.0
El Pachon	31/12/2020	534	1,055	0	1,589	0.03	0.03	0.00	0.67%	0.49%	0.00%	0.5	1.0	0.0	3.6	5.2	0.0	0.57%	9.0
Filo del Sol	11/06/2018	0	425	175	600	0.00	0.32	0.33	0.00%	0.33%	0.27%	0.0	4.4	1.8	0.0	1.4	0.5	0.48%	2.9
Frieda River	10/12/2018	620	1,240	780	2,640	0.30	0.22	0.18	0.53%	0.44%	0.35%	6.0	8.7	4.5	3.3	5.5	2.7	0.55%	14.5
Gunnison	7/07/2015	201	711	241	1,152	0.00	0.00	0.00	0.36%	0.27%	0.22%	0.0	0.0	0.0	0.7	1.9	0.5	0.28%	3.2
Hillside	May 2015	72	151	114	337	0.16	0.13	0.10	0.55%	0.59%	0.60%	0.4	0.6	0.4	0.4	0.9	0.7	0.65%	2.2
Josemaria	31/12/2018	197	962	704	1,863	0.34	0.18	0.10	0.43%	0.26%	0.19%	2.1	5.5	2.3	0.8	2.5	1.3	0.34%	6.3
Kharmagtai	31/08/2018	0	129	469	598	0.00	0.36	0.19	0.00%	0.36%	0.31%	0.0	1.5	2.9	0.0	0.5	1.5	0.44%	2.6
King-king	28/02/2015	120	842	189	1,151	0.46	0.32	0.27	0.32%	0.25%	0.22%	1.8	8.5	1.6	0.4	2.1	0.4	0.41%	4.7
KSK	Jun 2019	21	29	18	67	0.00	0.00	0.00	0.70%	0.60%	0.60%	0.0	0.0	0.0	0.1	0.2	0.1	0.63%	0.4
Le Verde	30/09/2012	58	350	338	746	0.29	0.02	0.02	0.45%	0.40%	0.37%	0.5	0.3	0.2	0.3	1.4	1.2	0.41%	3.1
Los Helados	Apr 2019	0	2,099	0	2,099	0.00	0.15	0.00	0.00%	0.38%	0.00%	0.0	10.1	0.0	0.0	8.0	0.0	0.46%	9.6
Los Volcanes	31/12/2020	0	0	1,904	1,904	0.00	0.00	0.03	0.00%	0.00%	0.50%	0.0	0.0	1.8	0.0	0.0	9.5	0.52%	9.8
Malmyzh	1/05/2015	0	0	1,661	1,661	0.00	0.00	0.17	0.00%	0.00%	0.34%	0.0	0.0	9.0	0.0	0.0	5.6	0.43%	7.1
Namosi	31/12/2019	0	1,300	330	1,630	0.00	0.11	0.08	0.00%	0.35%	0.37%	0.0	4.6	0.8	0.0	4.6	1.2	0.41%	6.6
NorthMet	July 2019	237	412	509	1,158	0.35	0.32	0.37	0.27%	0.23%	0.24%	2.7	4.2	6.0	0.6	0.9	1.2	0.42%	4.9
Northparkes	31/12/2018	219	205	57	481	0.23	0.16	0.19	0.56%	0.53%	0.57%	1.6	1.0	0.3	1.2	1.1	0.3	0.65%	3.1
Ok Tedi	31/12/2017	365	372	44	781	0.53	0.50	0.71	0.47%	0.43%	0.51%	6.2	6.0	1.0	1.7	1.6	0.2	0.72%	5.6
Onto	31/12/2014	0	760	960	1,720	0.00	0.28	0.24	0.00%	0.76%	0.45%	0.0	6.8	7.2	0.0	5.8	4.3	0.72%	12.3
Phu Kham	31/12/2014	70	93	29	192	0.28	0.23	0.19	0.69%	0.59%	0.55%	0.6	0.7	0.2	0.5	0.5	0.2	0.74%	1.4
Productora	19/02/2016	0	208	67	275	0.00	0.10	0.08	0.00%	0.46%	0.38%	0.0	0.7	0.2	0.0	1.0	0.3	0.49%	1.3
Red Chris	31/03/2020	10	970	190	1,170	0.15	0.41	0.31	0.23%	0.38%	0.30%	0.0	12.7	1.9	0.0	3.7	0.6	0.57%	6.6
Saddle North	6/07/2020	0	298	543	841	0.00	0.36	0.31	0.00%	0.28%	0.25%	0.0	3.4	5.4	0.0	0.8	1.4	0.43%	3.6
Santo Domingo	31/12/2020	66	471	48	585	0.08	0.03	0.03	0.66%	0.26%	0.19%	0.2	0.5	0.0	0.4	1.2	0.1	0.32%	1.9
Taca Taca	30/11/2020	421	1,780	717	2,917	0.14	0.07	0.05	0.60%	0.39%	0.31%	1.9	4.0	1.1	2.5	6.9	2.2	0.44%	12.8
Tampakan	31/12/2014	980	1,290	670	2,940	0.28	0.16	0.21	0.69%	0.45%	0.55%	8.8	6.6	4.5	6.8	5.8	3.7	0.66%	19.4
Tsagaan Suvarga	2015	322	0	0	322	0.00	0.00	0.00	0.55%	0.00%	0.00%	0.0	0.0	0.0	1.8	0.0	0.0	0.55%	1.8
Tujuh Bukit	31/12/2019	46	91	1,984	2,120	0.65	0.34	0.42	0.00%	0.00%	0.46%	0.9	1.0	26.5	0.0	0.0	9.0	0.64%	13.6
Vizcachitas	10/05/2019	254	1,030	789	2,073	0.00	0.00	0.00	0.44%	0.39%	0.34%	0.0	0.0	0.0	1.1	4.0	2.7	0.37%	7.7
West Wall	31/12/2020	0	861	1,072	1,933	0.00	0.05	0.05	0.00%	0.51%	0.42%	0.0	1.4	1.7	0.0	4.4	4.5	0.49%	9.4

ASX Company	Resource Date	Resource Mt				Au g/t			Cu %			Au Moz			Cu Mt				
		Meas	Ind	Inf	Total	Meas	Ind	Inf	Meas	Ind	Inf	Meas	Ind	Inf	Meas	Ind	Inf	Total	Total
Hot Chili (HCH)	19/02/2016	0	391	334	725	0.00	0.12	0.11	0.00%	0.43%	0.36%	0.0	1.5	1.2	0.0	1.7	1.2	0.46%	3.3
Rex (RXM)	May 2015	72	186	145	403	0.18	0.13	0.10	0.55%	0.59%	0.60%	0.4	0.8	0.5	0.4	1.1	0.9	0.65%	2.6
Xanadu (XAM)	31/08/2018	0	129	469	598	0.00	0.36	0.19	0.00%	0.36%	0.31%	0.0	1.5	2.9	0.0	0.5	1.5	0.44%	2.6
Havilah (HAV)	5/06/2020	202	37	120	359	0.23	0.41	0.32	0.50%	0.44%	0.49%	1.5	0.5	1.2	1.0	0.2	0.6	0.63%	2.3
Caravel (CVV)	29/04/2019	0	400	262	662	0.00	0.00	0.00	0.00%	0.29%	0.27%	0.0	0.0	0.0	0.0	1.2	0.7	0.28%	1.9
Cyprium (CYM)	10/03/2020	27	55	54	135	0.00	0.01	0.00	1.66%	1.00%	0.67%	0.0	0.0	0.0	0.4	0.5	0.4	1.00%	1.4
Stavelly (SVY)	Aug 2015	0	2	31	33	0.00	0.30	0.00	0.00%	2.00%	0.40%	0.0	0.0	0.0	0.0	0.0	0.1	0.52%	0.2

Mineral Resources used in benchmarking include inferred, indicated, and measured classifications. Resource tonnes and grades are as reported by each company.

Copper equivalent grades were calculated by Xanadu Mines using the formula:  

$$\text{CuEq} = \text{Cu} + \text{Au} * 0.62097 * 0.8235$$

Where :

- Cu = copper grade (%)
- Au = gold grade (grams per tonne (g/t))
- 0.62097 = conversion factor (Au to Cu); and
- 0.8235 = relative recovery of Au to Cu (82.35%)

These equivalent formulas were based on the following parameters (prices in USD):

- Cu price = 3.1 \$/lb (or 6,834 \$/t)
- Au price = 1,320 \$/oz
- Cu recovery = 85%
- Au recovery = 70%; and
- Relative recovery of Au to Cu = 70%/85% = 82.35%

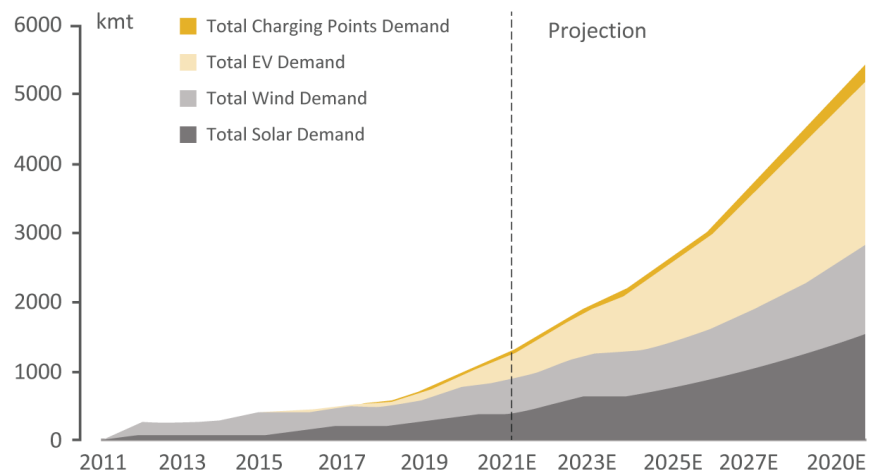
Metals prices, Au-Cu conversion factor, and Au-Cu relative recovery factors are as defined by CSA Global in the 2018 Xanadu Mineral Resource Upgrade <sup>1</sup>



# A global copper supply deficit is looming

Exponentially growing demand from green electrification & reserve depletion leading to looming copper shortage

Copper demand, per year, from green sectors



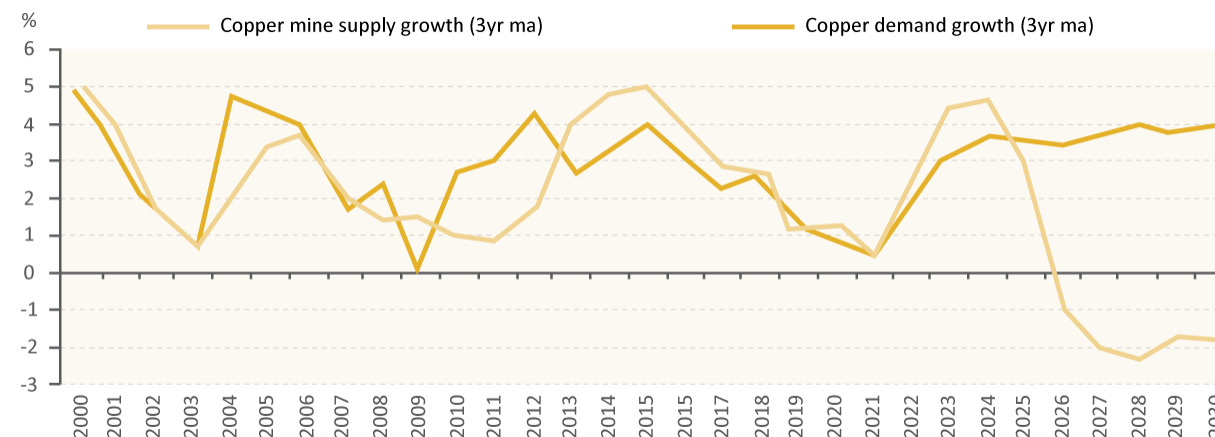
Reserve Changes per year (mm t)

	2006 - 2014	2014 - 2020	Change
New Mine Additions	5.5	5	-9%
Brownfield Reserve Additions	21	8	-62%
Production	-12	-13	8%
Net Reserve Additions	15	0	-100%

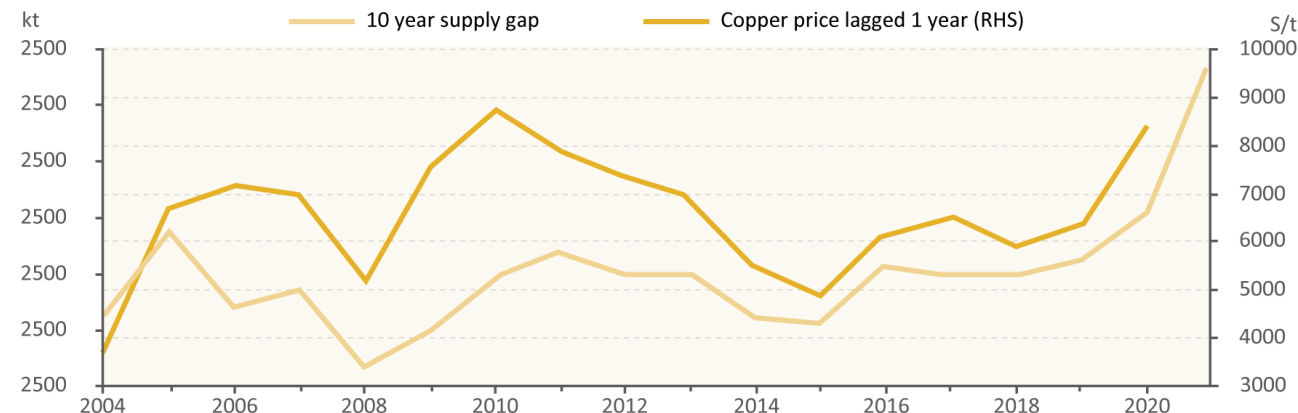
Source: Geohring & Rozencwajg – Natural Resource Commentary Q1 2021

Current prices are not high enough to incentivise further Greenfields exploration  
Deficits would generate a depletion of market inventories by early 2023/2024 & push prices higher

Copper mine supply growth vs copper demand growth



Long term supply gap and copper price



# Electrification & technology megatrends are driving increased copper demand

XANADU MINES



## ELECTRIC VEHICLES (EV)

- Government regulation drives net-zero emissions
- EVs require 2.6x the copper used for internal combustion



## POWER GENERATION

- Renewable energy growing 30-40% annually
- Requires up to 60% more copper than traditional power generation



## CONSTRUCTION

- Cities moving to smart, green infrastructure
- Increased IT systems and energy efficient design
- Requires high copper intensity heating and cooling systems

# Mongolia is a place where miners do business

## Emerging mining region

- +40,000 Mongolian mining employees, (including ~ 97% of Oyu Tolgoi's ~15,000 staff)
- 70% of the land is under-explored
- 27 projects operated by listed mining & exploration companies in country
- Low Population Density: 3M people in the world's 18<sup>th</sup> largest country

## Competitive regulatory regime

- 25% corporate income tax
- Investment stability agreements negotiated for new mine developments
- Australia-Mongolia Foreign Investment Promotion & Protection Agreement (FIPA)

## Stable, Well Educated Democracy

- 30-year history of democratic elections
- Well educated, young population with 98% literacy rate

## Mongolia's Mining Economy<sup>1</sup>

Foreign direct investment in Mongolia's extractive industries – which are based on extensive deposits of copper and other minerals has transformed Mongolia's landlocked economy from its traditional dependence on herding and agriculture.



**GDP growth 5.1% in 2019**

**Mining accounts for 88% of Export earnings**

**Copper a primary export commodity for Mongolia**

**Mining accounts for 27% of GDP**

**Exports >50% of GDP**

## On the doorstep of the world's biggest consumer

>60% of Mongolia's external trade comes from China

China accounts for ~53% refined copper consumption globally in 2020

China consumption of refined copper up 17% yoy to 3.2Mt in Q1 2021

<sup>1</sup>World Global Council. Data as of Q2 2020  
 Statista - Distribution of refined copper consumption worldwide in 2020, by region,  
 Roskil - Copper: Chinese refined consumption surged 17% y-0-y in Q1 2021



**Andrew Stewart**  
**Chief Executive Officer**  
**M: + 61 409 819 922**  
**E: [andrew.stewart@xanadumines.com](mailto:andrew.stewart@xanadumines.com)**



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