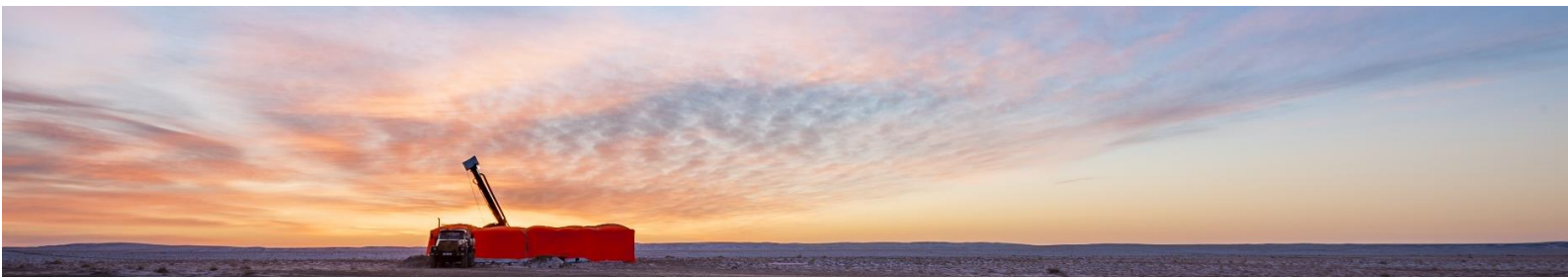


# XANADU MINES



## Kharmagtai Pre-Feasibility drilling off to a flying start

13 April 2023

Xanadu Mines Ltd (ASX: XAM, TSX: XAM) (Xanadu, XAM or the Company) is pleased to announce a **30,000-metre** infill diamond drill programme to support the Pre-Feasibility Study (PFS) is well-underway at the Kharmagtai copper-gold project (**Figure 1**). A key objective of drilling program is to upgrade the current open-pit Mineral Resource<sup>1</sup> areas to at least Indicated classification and to inform the geometallurgical and geotechnical models needed to complete the PFS and support delivery of a Maiden Ore Reserve estimate for Kharmagtai.

### Highlights

- Kharmagtai PFS drill programme has commenced, comprising ~30,000-metres of diamond drilling, initially with four drill rigs to conduct step-out and infill drilling.
  - Step-out & infill drill program primarily targets shallow open pit Mineral Resource areas for upgrade to Indicated Resource classification and to extend strike length.
  - An updated Mineral Resource Estimate incorporating the current resource is due for completion in Q4 CY23.
  - Detailed PFS geometallurgical, geotechnical, open-pit mining and infrastructure studies have commenced.
- Separate Kharmagtai Exploration discovery drill program is underway with one diamond drill rig, targeting significant exploration upside remaining on the tenement.
  - Initially targeting for new, high-grade, shallow open pit resources.
  - To be followed by a program aiming for deeper exploration targets.
- Funded by US\$35 million cash at the Kharmagtai JV level, funding the PFS drilling programme, Exploration drilling, PFS delivery and Maiden Ore Reserve, and a decision to mine.

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**Xanadu's Executive Chairman and Managing Director, Mr Colin Moorhead, said** *"The Kharmagtai Joint Venture is off to a flying start with infill and exploration diamond drilling well underway, targeting infill, near mine extension and discovery exploration. We have four rigs executing ~30,000-metres of diamond drilling designed to upgrade, improve and grow the large Kharmagtai open-pit resource, supporting delivery of our PFS and a Maiden Ore Reserve.*

*The PFS is scheduled for completion during H2 CY24. This study will incorporate updated deposit knowledge models and will test our significant upside opportunities, including but not limited to oxide processing, coarse particle flotation, bulk ore sorting and electrical haulage. It will define key enablers including power, water and infrastructure, and it will provide a single go-forward business case.*

*Importantly Kharmagtai still has significant new discovery potential, and we continue to explore with one diamond drill rig testing shallow higher-grade targets and potential high-grade resource extensions at depth as part of our on-going exploration discovery strategy.*

*The Company is very pleased our strategic partnership with Zijin Mining has started strongly. In March we hosted our new partners for a Kharmagtai site visit and were fortunate to be able to visit the famous Zijinshan Au-Cu Mine in Fujian Province, where we gained a greater appreciation of Zijin's significant capabilities.*

*We look forward to providing regular updates as Kharmagtai project work advances over the next 18 months".*

## **Infill and Extension Drilling Programme**

Kharmagtai currently has an Inferred and Indicated Resource of 1.1Bt containing 3Mt Cu and 8Moz Au<sup>1</sup>.

As part of the Kharmagtai PFS, this Resource will be upgraded to indicated classification and will enable reporting of a JORC compliant, Maiden Ore Reserve. To achieve this, the infill drilling programme has been designed to upgrade and extend strike length of the shallow open pit Resource areas and selected deeper high-grade (**Figure 1**). This will include investigation of near-mine, higher-grade extensions.

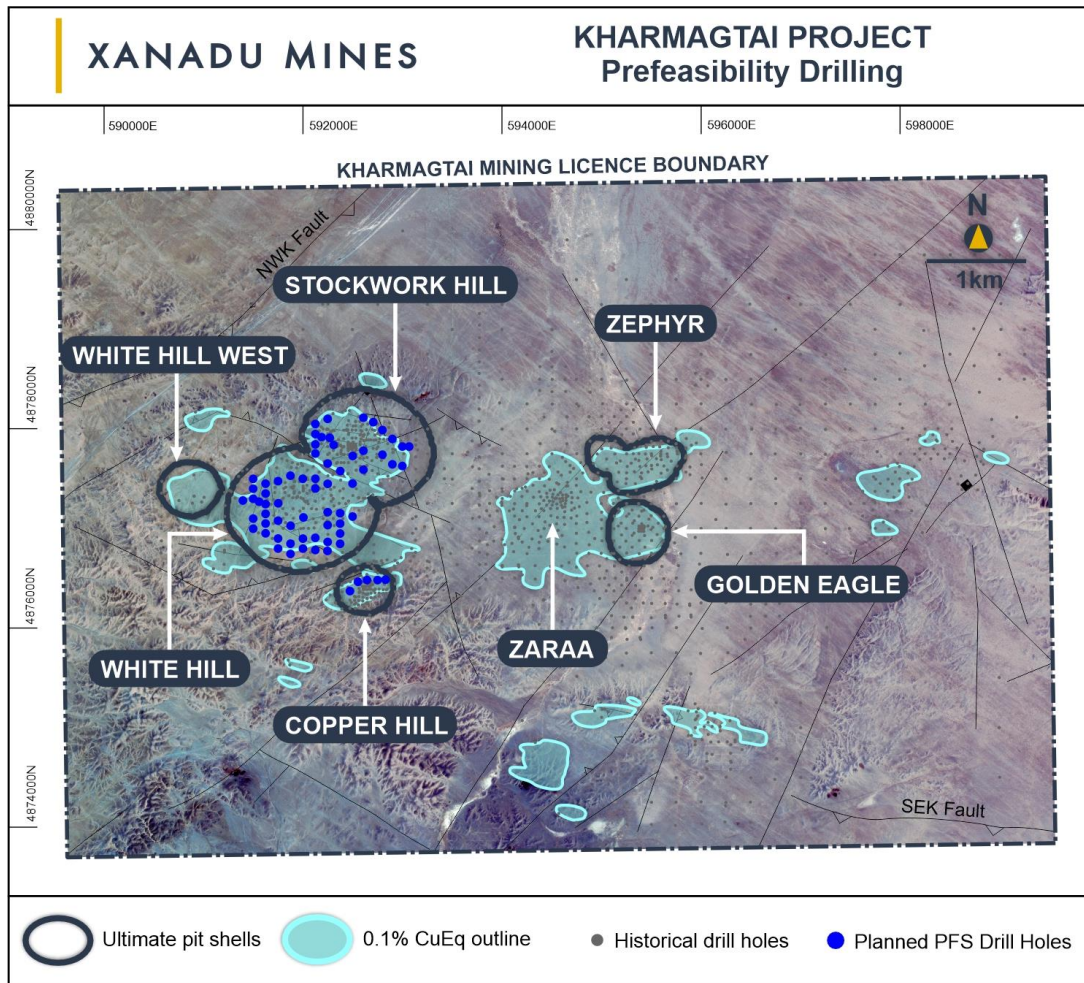
Four diamond drill rigs are now in operation at Kharmagtai with a primary strategy to target areas with potential for future Mineral Resource to Ore Reserve conversion. A total of ~30,000 metres of infill drilling is planned to be completed specifically targeting areas of indicated resource.

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<sup>1</sup> ASX/TSX Announcement 08 December 2021 - Kharmagtai resource grows to 1.1 billion tonnes, containing 3Mt Cu and 8Moz Au

An upgraded Resource is expected to be released in Q4 of CY23 once all assays have been received and resource modelling has been completed. The Indicated Resource will enable Xanadu to start economic studies and will be supplemented by subsequent PFS study scheduled for completion during Q4 CY24.

High-grade mineralisation at Kharmagtai outcrops at surface with potential to establish multiple open pits which could later lead into underground development in the future, with further exploration discovery drilling success.



**Figure 1:** Kharmagtai copper-gold district showing currently defined mineral deposits and planned resource infill drill holes.



**Figure 2:** Three diamond drill rigs drilling at Stockwork Hill.

## Comprehensive geometallurgical program

Detailed geo-metallurgical studies are now underway. This work includes sulphide flotation for the bulk of the orebody, ore comminution, gold deportment and oxide leaching test work. The key objective of this work is to explore opportunities to increase recoveries, optimise crushing and grinding, and deliver the most economic ore processing flowsheet.

The extensive program of sulphide floatation test work is based on high-resolution 3D geometallurgical models for the Kharmagtai deposits. These models define the key geological parameters effecting metallurgical processing such as sulphide mineralogy, grain sizes and distribution, obtained from cutting-edge machine learning algorithms specifically designed for the Kharmagtai mineral systems.

In conjunction with the sulphide flotation test work, an extensive comminution test program designed to characterise the crushing and grinding characteristics of the Kharmagtai mineralisation, including power consumption requirements and optimum crushing, and grinding technology.

The program of gold deportment studies is designed to understand the location and grain size of gold within each of the mineralisation styles at Kharmagtai, aimed at maximising gold and silver recovery.

Oxide leaching test work is also underway for near-surface mineralisation currently classified as pre-strip due to poor flotation recovery. The key objective of this work is to maximise copper and gold recoveries of the shallow oxidised material through leaching. This work compliments the successful glycine and cyanide leach test results reported to date<sup>2</sup>.

## Aggressive growth exploration plan

Exploration drilling is continuing at Kharmagtai, with one diamond rig dedicated to targeting new sources of shallow high-grade open pit potential and high priority, deeper, high-grade sulphide targets across the Kharmagtai mining lease.

Initial stages of this exploration program will focus on early testing of new shallow, high-grade exploration targets, allowing any discoveries to expand the known Mineral Resource during the PFS stage and as quickly as possible. This will be followed by deeper drilling.

## About Xanadu Mines

Xanadu is an ASX and TSX listed Exploration company operating in Mongolia. We give investors exposure to globally significant, large-scale copper-gold discoveries and low-cost inventory growth. Xanadu maintains a portfolio of exploration projects and remains one of the few junior explorers on the ASX or TSX who jointly control a globally significant copper-gold deposit in our flagship Kharmagtai project. For information on Xanadu visit: [www.xanadumines.com](http://www.xanadumines.com).

For further information on Xanadu, please visit: [www.xanadumines.com](http://www.xanadumines.com) or contact:

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

## Forward-Looking Statements

Certain statements contained in this Announcement, 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

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<sup>2</sup> ASX/TSX Announcement 1 August 2021 - Positive Metallurgical Test Results for Oxidised Material at Kharmagtai



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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 Announcement 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 Announcement are qualified by the foregoing cautionary statements. Investors are cautioned that 'forward-looking statements' are not guarantees of future performance and accordingly investors are cautioned not to put undue reliance on 'forward-looking statements' due to the inherent uncertainty therein.

For further information please visit the Xanadu Mines' Website at [www.xanadumines.com](http://www.xanadumines.com).