

TSX:ERD | MSE:ERDN | OTC:ERDCF

# DEVELOPING THE HIGH-GRADE KHUNDII MINERALS DISTRICT

Unlocking Treasures - Sharing Benefits

**Precious Metals Summit – Beaver Creek** 

www.erdene.com

# FORWARD LOOKING STATEMENTS

This presentation contains certain forward-looking information and statements which may not be based on fact, including without limitation, statements regarding the Company's expectations in respect of its future financial position, business strategy, timing of production at Bayan Khundii, construction and commissioning timelines and expectations that address reserve potential, exploration drilling, exploitation activities, budgeted financial results, and events or developments that the Corporation expects to take place in the future. All statements, other than statements of historical facts, are forward-looking information and statements. The words "believe", "expect", "anticipate", "contemplate", "target", "plan", "intends", "continue", "budget", "estimate", "may", "will" and similar expressions identify forward-looking information and statements. In addition to the forward-looking information and statements noted above, this presentation includes those that relate to: the expected results of exploration activities; the estimation of mineral resources; the ability to identify new mineral resources and convert mineral resources into mineral reserves; ability to raise additional capital and complete future financings; capital expenditures and costs, including forecasted costs; the ability of the Company to comply with environmental, safety and other regulatory requirements; future prices of precious metals; the ability of the Company to obtain all necessary approvals and permits in connection with the development of the Bayan Khundii Gold Project.

Such forward-looking information and statements are based upon a number of estimates and assumptions that, while considered reasonable by the Company as of the date of such information and statements, are inherently subject to significant business, economic and competitive uncertainties and contingencies. These estimates and assumptions relate to, among other things, the continuance of the Company and its subsidiaries as a going concern, general economic and market conditions, gold prices, the accuracy of mineral resources and mineral reserve statements, and the other estimates and assumptions contained in the Bankable Feasibility Study.

Readers are cautioned that forward-looking information and statements are not guarantees of future performance. There can be no assurance that such information and statements will prove to be accurate and actual results and future events could differ materially from those presented in such information and statements. Forward-looking information and statements is subject to a variety of risks and uncertainties which could cause actual events or results to differ from those reflected in the forward-looking information and statements. Such risks include, but are not limited to, the volatility of the price of gold, uncertainty of mineral resources, exploration potential, mineral grades and mineral recovery estimates, delays in exploration and development plans, insufficient capital to complete development and exploration plans, risks inherent with mineral acquisitions, delays in obtaining government approvals or permits, financing of additional capital requirements, commercial viability of mineral deposits, cost of exploration and development programs, risks associated with competition in the mining industry, risks associated with the ability to retain key executives and personnel, the impact of COVID-19, title disputes and other claims, changes in governmental regulation that results in increased costs, cost of environmental expenditures and personnel, the described in forward-looking information and statements. Please see the Company's Annual Information Form dated March 27, 2024 available on the Company's website at www.erdene.com or on the Company's SEDAR+ profile at www.sedarplus.ca, for details of other risks facing the Company. The Company disclaims any intention or obligation to update or revise any forward-looking information and statements.

The Company has included certain non-IFRS financial measures in this presentation, such as Earnings before Interest, Taxes, Depreciation and Amortization ("EBITDA"), Initial Capital Costs, Total Cash Cost, All-In Sustaining Cost, and Effective Cash Tax Rate which are not measures recognized under IFRS and do not have a standardized meaning prescribed by IFRS. As a result, these measures may not be comparable to similar measures reported by other corporations. Each of these measures used are intended to provide additional information to the user and should not be considered in isolation or as a substitute for measures prepared in accordance with IFRS.

Peter Dalton, P.Geo. (Nova Scotia), Senior Geologist for Erdene and a "Qualified Person" under National Instrument 43-101, has reviewed and approved the scientific and technical information in this presentation. All currencies are reported in Canadian dollars unless otherwise specified.



# DEVELOPING THE HIGH-GRADE KHUNDII MINERALS DISTRICT

Investment Thesis

# First mover in an unexplored portion of a World Class Mineral Belt

• Unparalleled discovery potential for large, high-grade gold and copper deposits

# High-grade gold development

• Bayan Khundii Gold Project moving to production in mid-2025

# **Multimillion ounce potential**

• Multiple high-grade gold discoveries adjacent to the Bayan Khundii Gold Project and significant exploration upside in district

# **Powerful Alliance**

• Uniting Erdene and Mongolia's leading miner backed by one of the Country's largest conglomerates

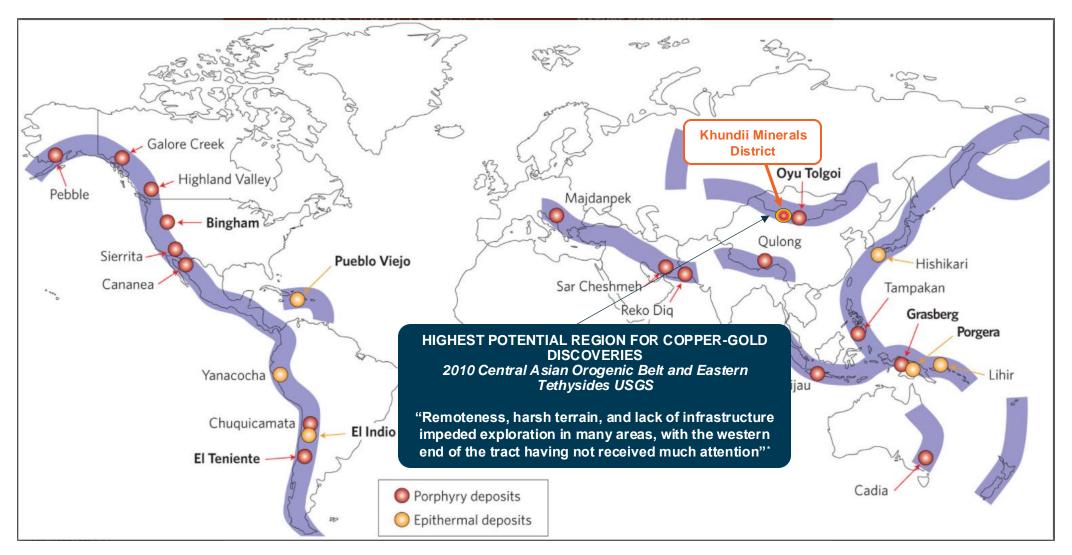
# A sleeping giant

 Zuun Mod Molybdenum-Copper Porphyry Complex is one of Asia's largest undeveloped projects



# **GLOBAL DISTRIBUTION OF GIANT ARC RELATED GOLD AND COPPER DEPOSITS**

Khundii Minerals District: A window of opportunity – Limited exploration in a highly prospective belt



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Locations of giant ore deposits discussed in this paper and significant arc-related metallogenic belts (purple lines). Base map modified from World of Maps<sup>™</sup> (© Bruce Jones Design, 2010).

# **EXPANDING INFRASTRUCTURE IN A GROWING MINING JURISDICTION**

Less than 200km from the Chinese border, multiple mines in vicinity



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# MAKINGS OF A MULTI-MINE, MULTI-COMMODITY DISTRICT

Multiple deposits in close proximity to be developed in sequence – more than 20 additional prospects in district





### THE EMERGING KHUNDII MINERALS DISTRICT – FIVE-YEAR EXPLORATION AND DEVLOPMENT PLAN

Makings of a multi-mine, multi-commodity mining district



THE FUTURE: GOLD, COPPER, MOLYBDENUM, SILVER, LEAD & ZINC PRODUCTION

# STRATEGIC ALLIANCE WITH MONGOLIAN MINING CORPORATION

Mongolia's largest independent miner

- Mongolian Mining Corporation ("MMC") is the country's largest publicly traded miner
  - Listed on the Hong Kong Stock Exchange (HKEX: 0975)
  - ~US\$1B Market Cap (Q3 2024)
  - MCS Group, one of Mongolia's largest conglomerates, owns 40%
- Investment in ERD part of MMC's diversification strategy
  - Owns and operates two high-quality coking coal mines: Ukhaa Khudag (UHG) and Baruun Naran (BN)
- Brings operational expertise
  - 15-year operating history (+2,000 employees)
  - Strong safety culture 0.8 LTI per million-man hours
  - Major contributor to local economy procuring US\$14.1 billion in 2023 and almost 40% of employees hired locally









# **MCS GROUP – LARGEST SHAREHOLDER OF MMC**

Mongolia's leading diversified business

#### MCS is one of Mongolia's largest conglomerates

- 30-year history operating in Mongolia; owns 40% of MMC
- Businesses in mining, engineering, energy, communications, property, consumer goods, healthcare and hospitality
- Employs 13,000 Mongolians
  - Contributes ~US\$500 million to the Mongolian economy annually
  - One of the Country's largest taxpayers
- Committed to developing and enriching the Mongolian economy through responsible corporate excellence and progressive technology
  - Strives to ensure operations benefit communities where it operates
  - Provides transparent sustainability reporting

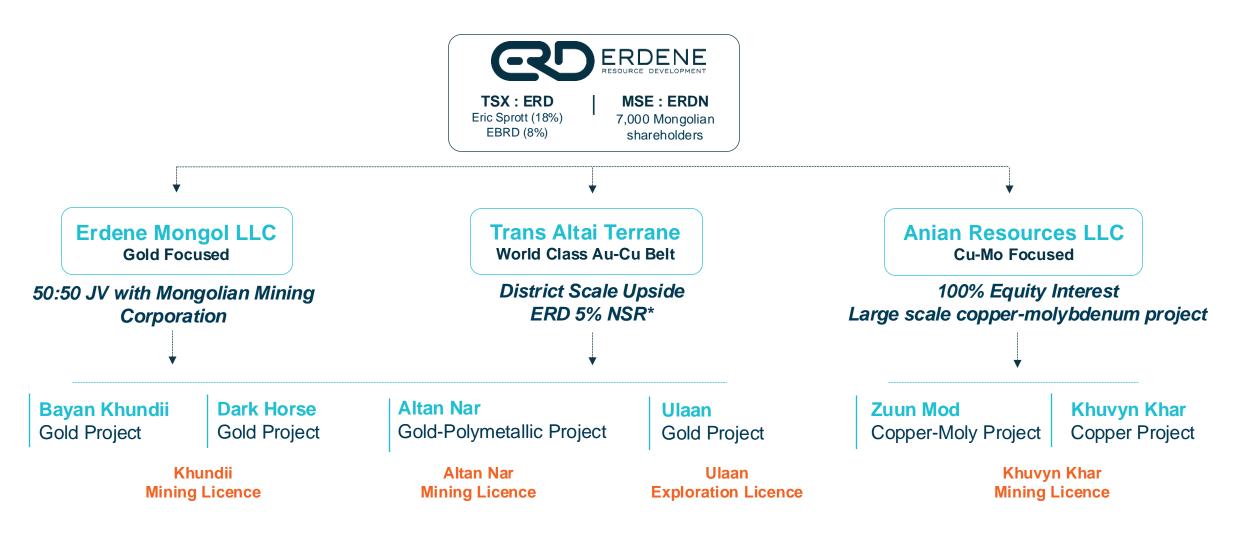




Source: <u>www.mcs.mn</u>

# STRATEGIC PARTNER BRINGS CAPITAL AND OPERATIONAL EXCELLENCE

Uniting Mongolia's leading explorer and miner





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\*After initial 400,000oz Au production; includes properties acquired within 5km of the licenses

# **PROJECT FINANCE PARTNERS**

Backing of leading international and domestic institutions



#### Mongolian Mining Corporation – Equity

- US\$40M equity investment in Erdene's subsidiary
- Forecast ~US\$500M EBITDA annually,

#### **Mongolian Mining Corporation – Loan**

- US\$80 million, 5-year shareholder loan repayable in full upon maturity
- Interest rate of 13.8%, with option to capitalize the first four interest payments
- Erdene has the right to purchase 50% of the loan and participate on the same terms as MMC





# **Eric Sprott**



#### **Central Bank of Mongolia and Mongolian Commercial Banks**

- Government programs provide financial incentives, tax stability agreements and loans to the gold mining sector
- Discussions with Mongolian commercial banks on working capital financing for up to US\$40M

#### **European Bank for Reconstruction and Development**

- Major shareholder (8%) following loan conversion in Q4 2020
- Largest foreign direct investor in Mongolia with €2.4 invested, including senior lender to Oyu Tolgoi

#### **Eric Sprott**

Erdene's largest shareholder (18%)

#### **Mongolian Stock Exchange**

- Sharing benefits with more than 7,000 Mongolian shareholders
- Erdene is first company cross-listed on both Mongolian and Toronto Stock Exchanges
- Per Fitch Ratings report



# THE BAYAN KHUNDII (RICH VALLEY) GOLD MINE



# BAYAN KHUNDII SITE LAYOUT /Q3 2024/ Topsoil Stockpile HV Workshop

Ultimate Pit Design

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Earth Works Rejects Area

Admin Building

Heating Station

Process Plant, Lab, Warehouse, Chemical Warehouse

**Backfill Material** 

Laydown Area

Substation and backup power area

Concrete Batch Plant

**Crushing Station** 

**Temporary Facilities** 

Laydown Area EPC

Temp. Fuel Station

## **BAYAN KHUNDII DEPOSIT – RESOURCE AND RESERVES**

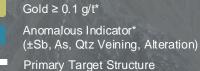
Utilizing US\$1800 gold price for reserve cut-off grades and US\$2000 gold price for Whittle Pit resource shells

				ALC: A PROPERTY	and the second
Indica	ted Mineral	Resource	Inferred Mineral Resource		
Tonnage	Au Grade	Contained Au	Tonnage	Au Grade	Contained Au
(kt)	(g/t)	(oz)	(kt)	(g/t)	(koz)
578	3.0	56.2	75	1.1	2.7
99	1.5	4.8	109	1.2	4.1
<b>682</b>	2.8	61.7	184	1.2	6.8
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erves	Т	onnage	Au Grade	e Co	ntained Au
cation	ation (Mt)		(Mt) (g/t)		(koz)
able		0.2		48.8	
al		0.2	7.0		48.8
	Tonnage (kt) 578 99 <b>682</b> erves cation	Tonnage         Au Grade           (kt)         (g/t)           578         3.0           99         1.5           682         2.8           erves         T           cation         T	(kt)         (g/t)         (oz)           578         3.0         56.2           99         1.5         4.8           682         2.8         61.7           erves         Tonnage           cation         (Mt)           ble         0.2	Tonnage         Au Grade         Contained Au         Tonnage           (kt)         (g/t)         (oz)         (kt)           578         3.0         56.2         75           99         1.5         4.8         109           682         2.8         61.7         184           erves         Tonnage         Au Grade           cation         (Mt)         (g/t)           ble         0.2         7.0	Tonnage         Au Grade         Contained Au         Tonnage         Au Grade           (kt)         (g/t)         (oz)         (kt)         (g/t)           578         3.0         56.2         75         1.1           99         1.5         4.8         109         1.2           682         2.8         61.7         184         1.2           erves         Tonnage         Au Grade         Contained           cation         (Mt)         (g/t)         1.2

				A CONTRACTOR OF A CONTRACTOR O	
BK Resources	Tonnage	Au Grade	Contained Au	Ag Grade	Contained Ag
Classification	(Mt)	(g/t)	(koz)	(g/t)	(koz)
Measured	4.0	3.03	394	1.44	187
Indicated	3.3	2.04	219	1.22	131
M&I	7.4	2.58	613	1.34	319
Inferred	0.2	1.08	6	1.32	8
				1080 118 1	Sar Er Stall

<b>BK Reserves</b>	Tonnage	Au Grade	Contained Au	Ag Grade	Contained Ag
Classification	(Mt)	(g/t)	(koz)	(g/t)	(koz)
Proven	2.7	4.1	360.2	1.7	159.4
Probable	1.1	3.0	104.7	1.7	61.1
Total	3.8	3.8	464.9	1.7	220.5

Initial Open Pit Reserves 514,000 Ounces at 4 g/t Au



\*Based on drill result interpolation only

Secondary Structure or Splay

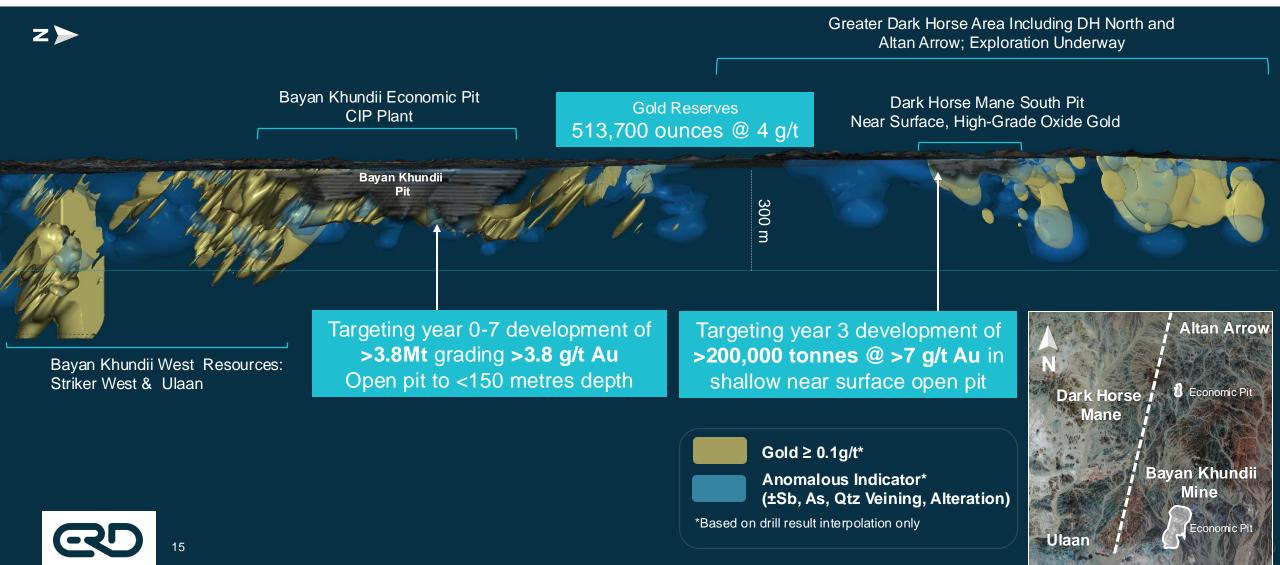
See appendix for additional details

2000 m

# **BAYAN KHUNDII DEPOSIT – EXPANSION ALONG STRIKE AND AT DEPTH**

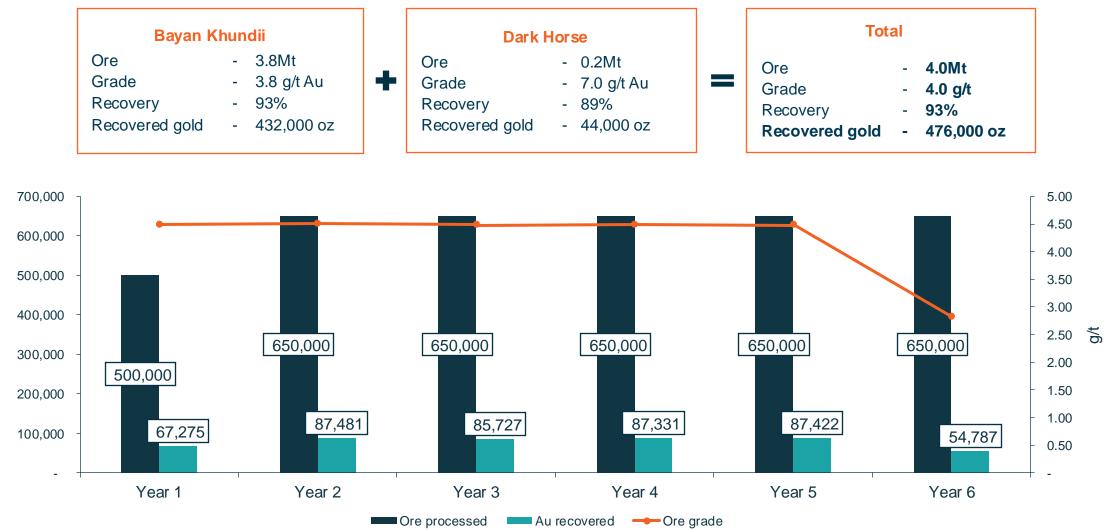
Current economic pit comprises only a portion of the mineralized envelopes

Shallow (150m max. depth), open-pit mine with six-year reserve life, significant resource expansion potential and 93% recovery using Carbon in Pulp



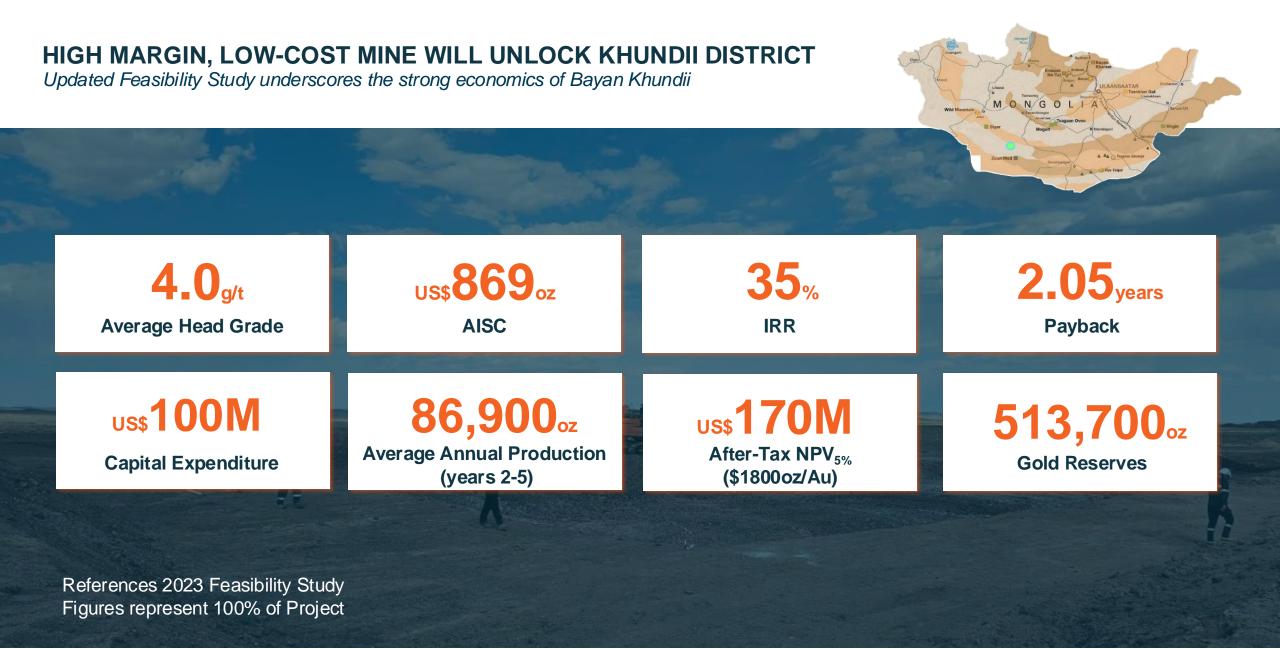
# **BAYAN KHUNDII GOLD PROJECT UPDATED FEASIBILITY STUDY**

25% increase in recovered gold compared to 2020 study





t, oz





# **GOOD TORQUE TO GOLD**

Higher gold prices materially enhance economics

#### AFTER-TAX NPV5% SENSITIVITY TO GOLD PRICE



#### AFTER-TAX IRR SENSITIVITY TO GOLD PRICE



**ED** 

Reference 2023 Feasibility Study Figures represent 100% of Project

# **MEANINGFUL CASH FLOW TO FUND GROWTH STARTING IN 2025**

Average annual cash flow of \$60M at US\$2,000/oz Au and over \$100M at the current gold price



**Projected Annual After-Tax Unlevered Cashflow** 



Reference 2023 Feasibility Study Figures represent 100% of Project

# BAYAN KHUNDII GOLD PROJECT: PROCESS PLANT /Q3 2024/

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# THE BAYAN KHUNDII PROJECT SITE /Q3 2024/



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# CONSTRUCTION, EQUIPMENT AND POWER CONTRACTS

Major construction works and logistical activities are progressing steadily

MCSP

MCS

Mechanica equipment Engineering, Procurement & Construction contract executed with MCS Property LLC

- One of the country's largest construction firms with a 25-year history, +1,500 employees and +225 engineers
- Major contractor to the mining industry including projects for Rio Tinto's Oyu Tolgoi and MMC's Ukhaa Khudag operations
- EPC scope includes process plant (all disciplines) and the majority of critical site infrastructure
- Zero LTIs to date at the BK Project

#### Power Purchase Agreement signed with MCS International LLC

- Over 30 year history in the power business, including design, construction, and operation of generation and distribution assets, 500+ employees
- Under the PPA, MCSI will build and operate the necessary infrastructure to supply power to the project via a 110kV overhead transmission line connected to the closest substation in South Gobi province
- Installation of the transmission line has commenced, in anticipation of supplying power to the project beginning in Q2 2025

#### All key processing equipment secured

- Major equipment vendors include CITIC (mills), Como Engineering (elution plant), Hot Chengdu (pressure filters) and Weir Minerals (cyclones, pumps)
- Mix of specialist vendors selected to optimize performance per circuit
- All major equipment is now on site with installation scheduled to be complete by year end



### Oyu Tolgoi Underground Conveyor – MCSP



#### 18MW UHG Power Plant – MCSI



# **FIRST GOLD SCHEDULED IN MID-2025**

Construction on schedule for substantial completion by end of 2024

MILESTONE	2023			2024			2025					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Approval and Permits To Proceed To Construction												
Construction Early Works & Camp Establishment				l i								
Earthworks and Civils												
Detailed Engineering and Procurement												
Process Plant Structure, Equipment Delivery and Construction												
Non-process Infrastructure Construction								🤡				
HVAC and Electrical									=====			
State Commission Approvals												
First Ore Processed										<b></b>		
First Gold Production										C		

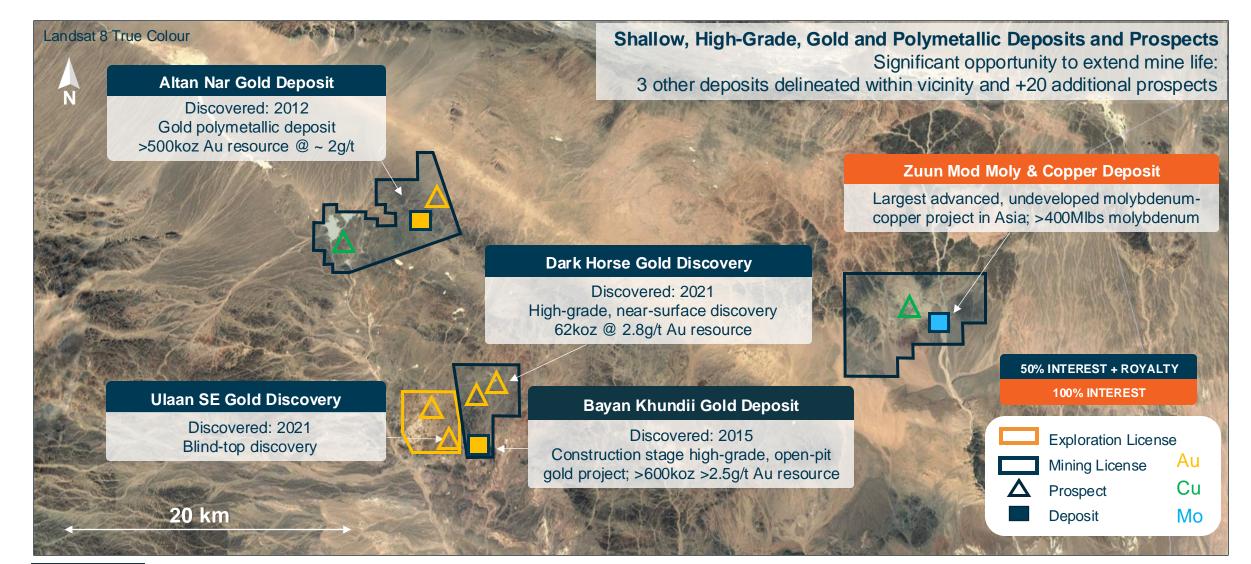
Complete Complete





# THE PIPELINE – MULTIPLE HIGH-QUALITY DEPOSITS AND PROSPECTS

Four gold discoveries, molybdenum-copper deposit and +20 high priority targets





# **BAYAN KHUNDII DEPOSIT – EXCEPTIONALLY HIGH-GRADE DISCOVERIES**

2000 m

268

230

Over 10km of mineralized structures with limited exploration below 150 meters

#### DARK HORSE DEPOSIT Top Gold Intersections From То Μ Au g/t G\*M 10 55 45 6.0 24 E 1 E 26

	1.5	20	24.5	3.4	230
AAD-146	15	32	17	16.6	283
AAD-177	1	24	23	11.4	262
AAD-178	11	26	15	42.8	643

#### **BK DEPOSIT** Top Gold Intersections

	G*M	Au g/t	М	То	From	Drill Hole
240	442	20.0	22.1	23	0.9	BKD-292
	508	3.9	131.5	170.5	39	BKD-98
	661	5.9	112	125	13	BKD-261
ALL N	692	125.9	5.5	17	11.5	BKD-288
	2216	158.3	14	207	193	BKD-231

#### ULAAN Deposit Top Gold Intersections

	_				1
Drill Hole	From	То	Μ	Au g/t	G*M
UDH-10 (D)	99	139	40	3.8	151
UDH-14	192	226	34	5.4	185
UDH 22	85	150	65	3.1	202
UDH-21	115	192	77	3.2	246
UDH-35	187	228	41	8.1	332



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Drill Hole

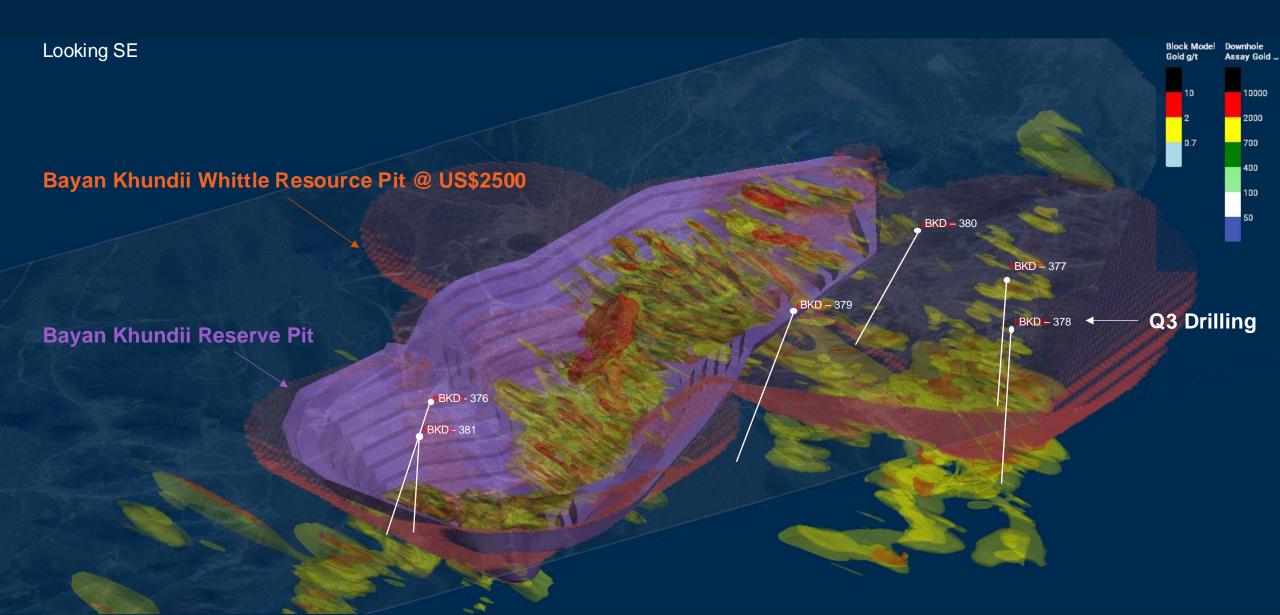
AAD-58

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Gold  $\geq 0.1 \text{ g/t}^*$ Anomalous Indicator\* (±Sb, As, Qtz Veining, Alteration) Primary Target Structure Secondary Structure or Splay \*Based on drill result interpolation only

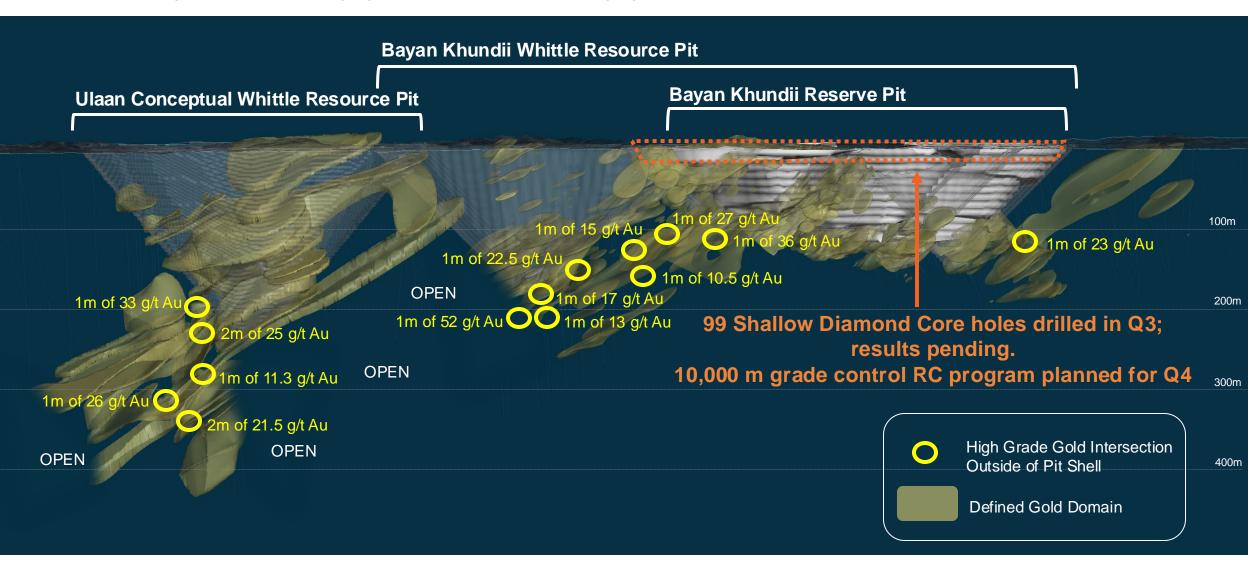
# **BAYAN KHUNDII DEPOSIT – RESOURCE EXPANSION OPPORTUNITIES**

Q3 2024 drilling targeting resource expansion – Results pending



# **BAYAN KHUNDII DEPOSIT – ADDITIONAL HIGH-GRADE OPPORTUNITIES**

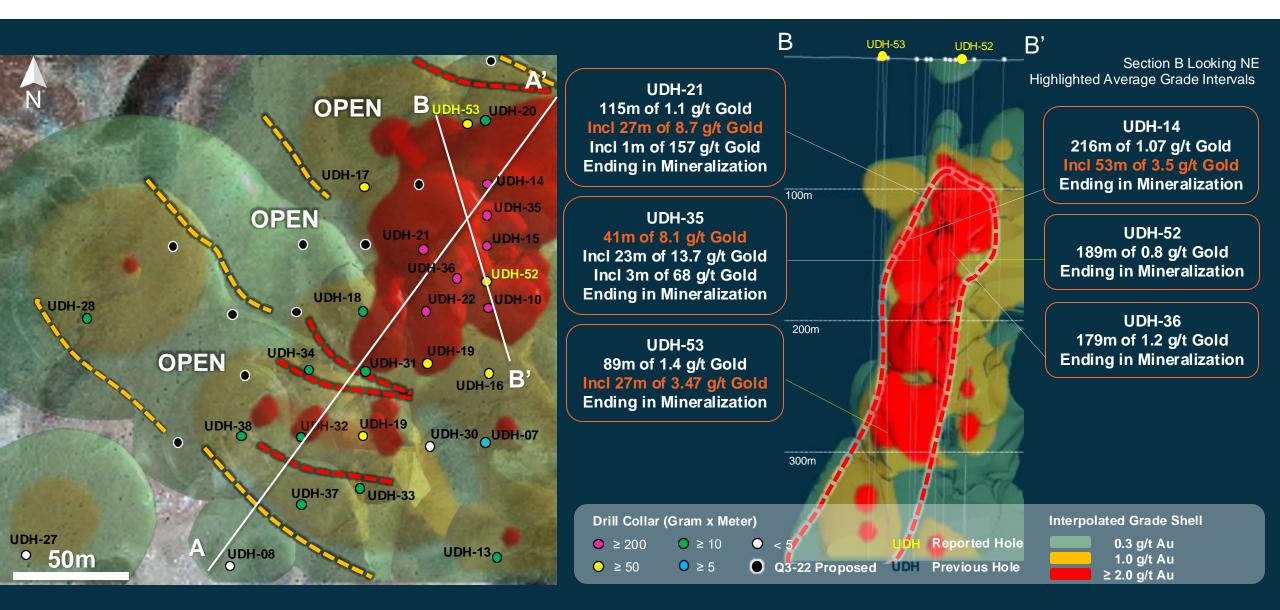
Grade control drilling to further define high grade zone with numerous high-grade intersections below planned pits





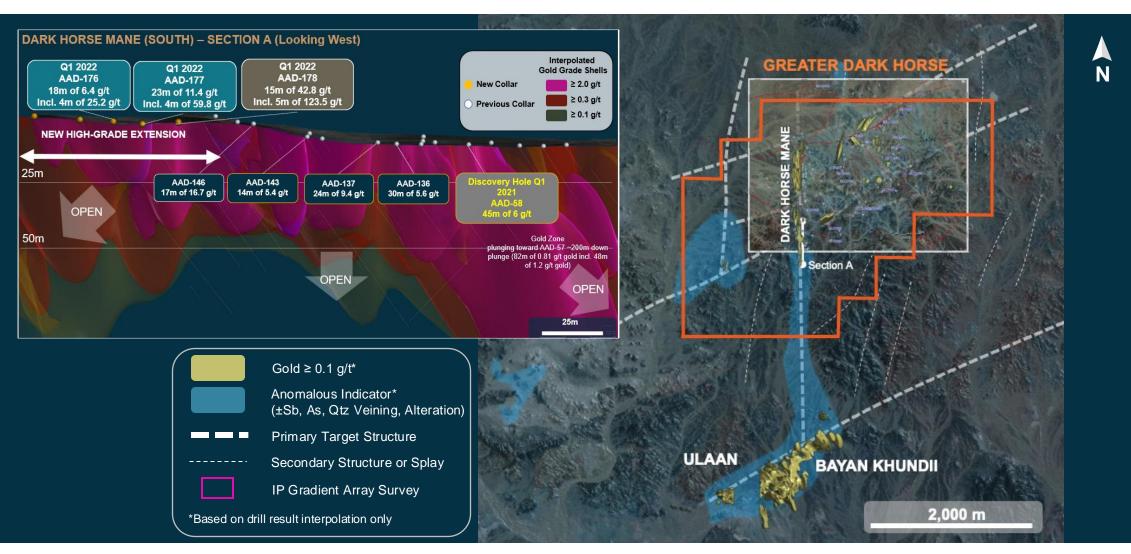
# **ULAAN SE DEPOSIT – EXCEPTIONAL GRADES ADJACENT TO BAYAN KHUNDII**

High-grade structure 300 meters west of Bayan Khundii



## **GREATER DARK HORSE – ULTRA HIGH-GRADE DEPOSIT**

Shallow, oxide resource with grades averaging 7g/t Au; significant upside





# ALTAN NAR – 5.6KM MINERALIZED SYSTEM

High grade deposit just 16km north of Bayan Khundii

2019 Resource	Category	Au Oz (1.9g/t)	Ag Oz (~10g/t)	Pb lbs (~0.6%)	Zn lbs (~0.6%)
Altan Nar	Indicated	318,000	2,350,000	63,800,000	69,520,000
0.7g/t AuEq cut-off	Inferred	186,000	866,000	49,060,000	52,140,000

# Carbonate base metal-intermediate sulfidation epithermal deposit similar to some of the world's largest:

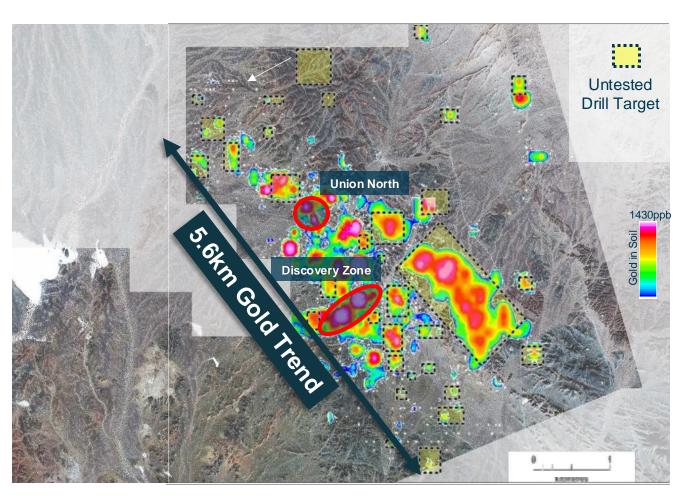
- Fruta del Norte (Ecuador): 6.7Moz Au
- Porgera (Papua New Guinea): >25Moz Au
- Kelian (Indonesia): 5.7Moz Au
- Montana Tunnels (USA): 36Moz Ag
- Roșia Montană (Romania): 17Moz Au

# Tremendous potential to materially increase resources with minimal drilling

- Resources are focused in two zones within a 5.6km x 1.5km mineralized corridor
- +20 mineralized target areas along trend

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• Extremely shallow – 90% of resources are within 150 meters of surface with system open at depth





# ZUUN MOD – ONE OF ASIA'S LARGEST UNDEVELOPED MO-CU DEPOSITS

Moly market set to enter deficit – prices reached all time highs in 2023

OWNERSHIP	<ul><li>100% owned by Erdene</li><li>30+ year Mining License secured</li></ul>	Z L Ir
LOCATION	<ul> <li>180km from China, the world's largest stainless steel producer and biggest consumer of the metal</li> </ul>	ĸ
	<ul> <li>30km east of the Bayan Khundii Gold Project</li> </ul>	
MOLYBDENUM	<ul> <li>Molybdenum prices are elevated due to depleting supply and increased demand from renewable power on top of stainless steel</li> </ul>	-
MARKET	<ul> <li>US\$20-\$40/lb price range in the past two years, equivalent to 5-10x current copper prices – higher than Cobalt</li> </ul>	

ZUUN MOD IS LOCATED ON THE DOORSTEP OF ONE OF THE WORLDS LARGEST STEEL PRODUCER AND MOLYBDENUM CONSUMER

In 2022, China alone ran a molybdenum deficit of 20 Mlbs

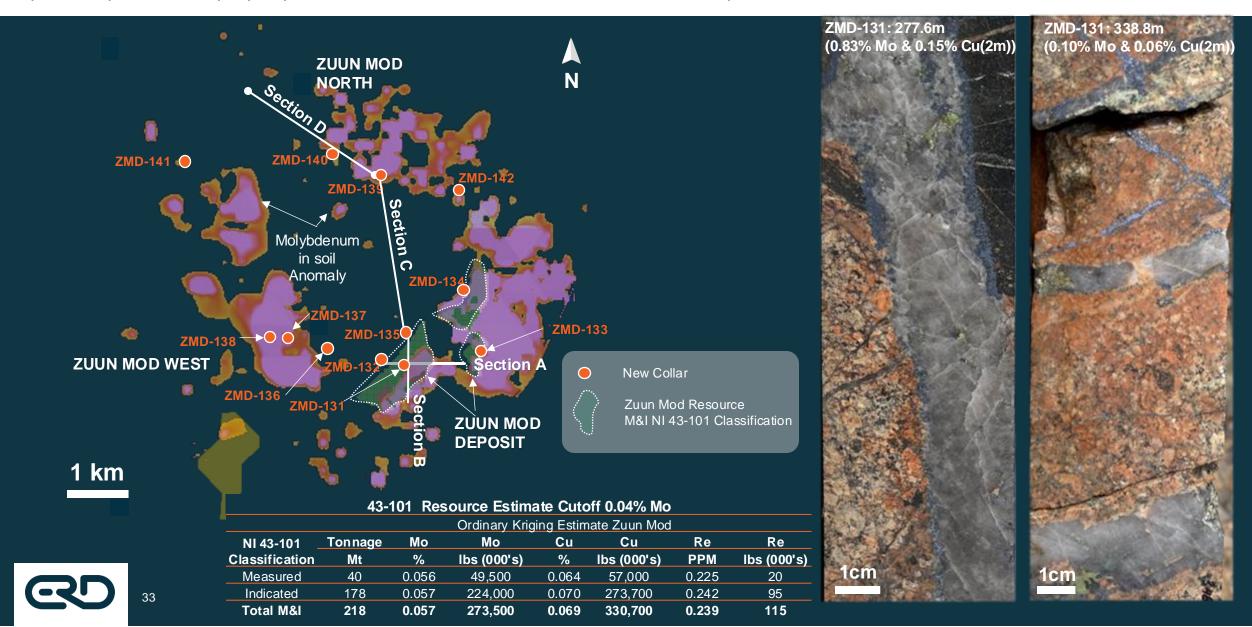


Sandbox Royalties Corp. holds a 1.5% net smelter return royalty on the Zuun Mod License, subject to a buy-down provision. NI 43-101 Technical Report, Zuun Mod Porphyry Molybdenum-Copper Project, Minarco-MineConsult, June 2011



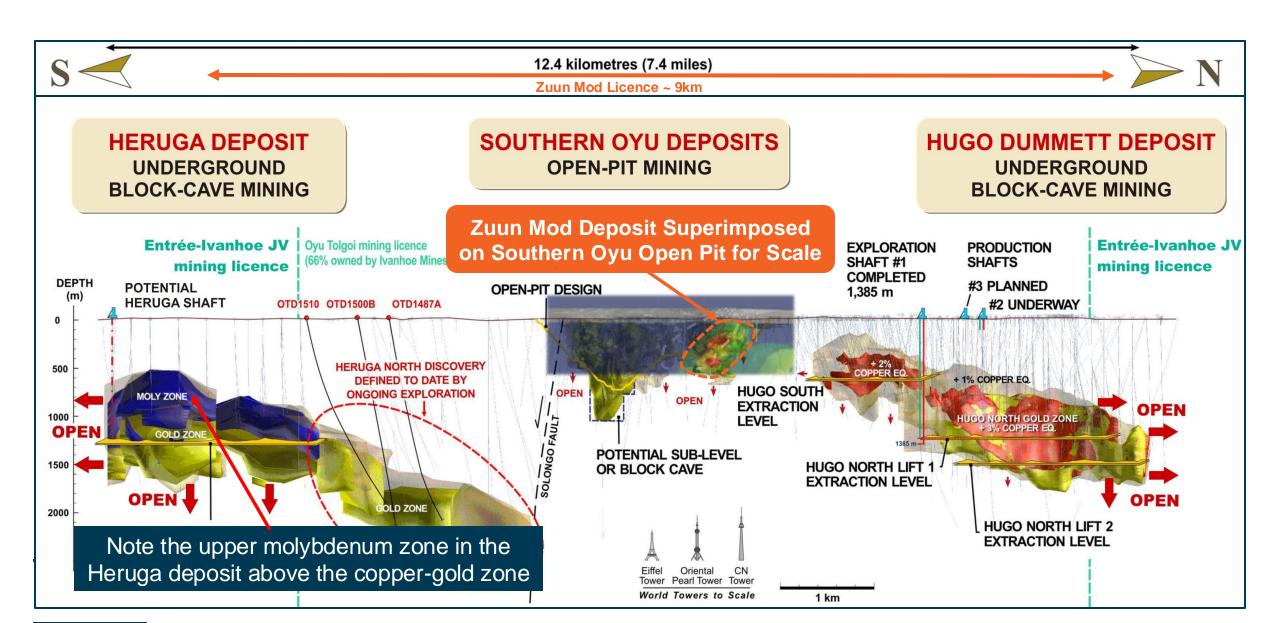
# **ZUUN MOD – GEOCHEMICAL COPPER FOOTPRINT 16KM IN CIRCUMFERENCE**

Open at depth with multiple prospects within and outside of current mineralized envelope



# ZUUN MOD COMPARED TO OYU TOLGOI

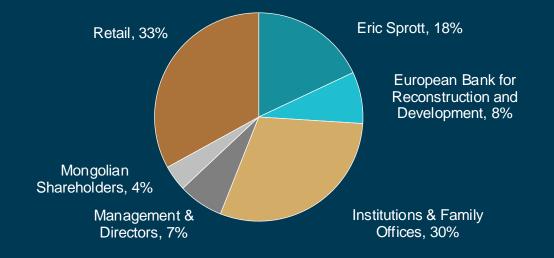
Land package remains largely untested outside the Zuun Mod deposit



### **STRONG SHAREHOLDER BASE**

Majority of shares held by institutions, banks and accredited investors

Shares issued and outstanding	349 M
Options	23 M
Warrants	13 N
DSUs	10 N
Fully diluted	395 N
Market capitalization (C\$M)	164 N
52-week range	0.27-0.52
Average daily trading volume (3 month)	120,913



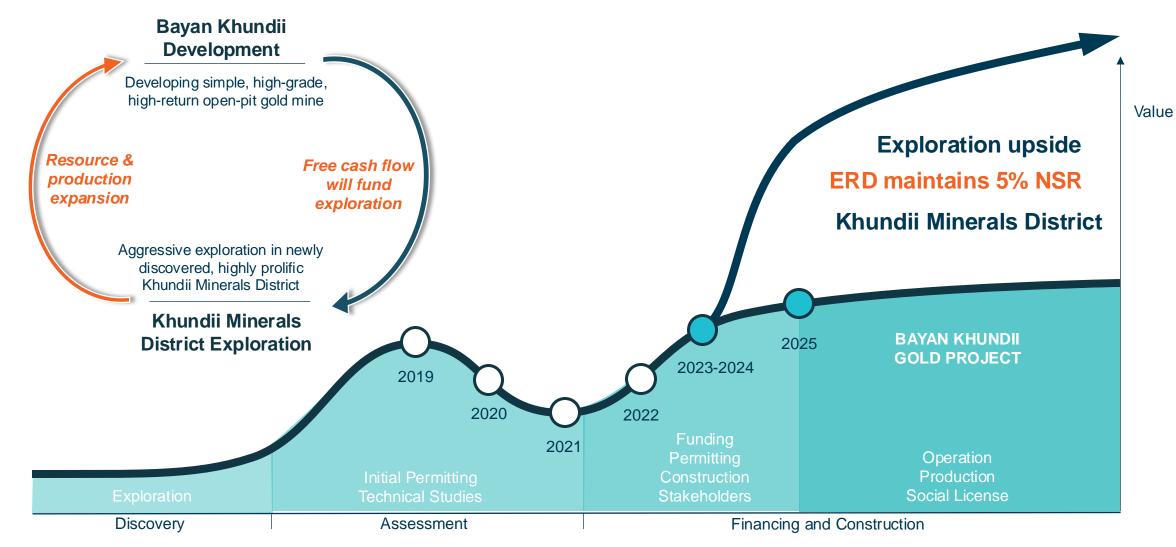
**RELATIVE SHAREHOLDER RETURNS** 





# **POISED FOR GROWTH**

Cashflow from the Bayan Khundii Gold Project will unlock the value of the Khundii Minerals District





# **COMMITTED TO MONGOLIA**

Our home for 25 years



- We have been supporting our host communities for +10 years before the construction decision
- We have invested ~US\$100M in Mongolia since inception
- The Bayan Khundii Gold Project is forecasted to contribute over \$100M in direct taxes & royalties to the Mongolian Government over 6 years and support 400 direct jobs<sup>1</sup>
- Longstanding, deep relationships at all levels of government and well respected within the Mongolian business community
- Peter Akerley awarded the Order of the Polar Star (highest civilian award Mongolia presents to foreign citizens)
- Erdene is the first cross listed company on the Mongolian and Toronto Stock Exchanges
- 70% of the executive team reside in Mongolia and we have ~7,000 Mongolian shareholders









# **EXECUTIVE & MANAGEMENT TEAM**

Experienced in Mongolian Exploration and Development

#### Geology



Peter Akerley
President & CEO; Director

Mining executive and geologist with 30 years experience in exploration, corporate finance, project development & management of public resource companies.



Michael X. Gillis Vice President, Operations

Geologist with over 30 years of experience in the mineral exploration industry in increasingly senior project and corporate management positions.



G.Bat-Erdene Senior Geologist

Respected Mongolian geologist with over 25 years experience in the Country's resource exploration industry.

#### Mining Operations



#### Paul Korpi Senior Technical Advisor

Metallurgical Engineer & Mining Consultant with over 40 years experience including role as President and Executive Director of the Boroo Gold Mine in Mongolia.



Jon M.L.Lyons Vice President; CDO of Erdene Mongol LLC

Executive with over 15 years experience in sustainability development, community relations and corporate responsibility in Mongolia.



Based in Mongolia





Robert Jenkins Chief Financial Officer

Chartered Professional Accountant with 20 years experience working with public companies focused on corporate finance, operations and project management.



B.Bayarmaa Chief Administrative Officer

Administrative executive with over 15 years experience in the Mongolian resources industry.



Bilguun Ankhbayar Vice President; CEO of Erdene Mongol LLC

Mining finance professional with over 15 years experience advising TSX and ASX listed companies and working for a Canadian investment bank.



# **UNIQUELY QUALIFIED BOARD & MANAGEMENT**

#### Pioneers in Mongolia's Modern Mining Era

## **MONGOLIA**



Dr. Anna Biolik 1,3 Director

Diplomat with over 30 years of experience including acting as Canada's first Ambassador to Mongolia, Kazakhstan, Kyrgyzstan & Tajikistan.

Cameron McRae<sup>4</sup>

Director



#### Layton Croft <sup>1,3,5</sup> Chairman

27 years of leadership experience in Mongolia,16 years of global mining experience with lvanhoe Mines, Rio and Tinto, Peabody Energy Pancontinental Resources.



Kenneth MacDonald 1,2,5 Director

Chartered Professional Accountant with over 40 years of mining finance experience, including 17 vears as Executive VP and CFO of Erdene.



# **COMBINED EXPERIENCE**

- > 50 Years in Mongolia
- > 50 Years in Capital Markets
- > 100 Years Mining/Exploration

88% Independent



Mongolia.

Peter Akerley<sup>4</sup> President & CEO; Director

Mining executive and geologist with 30 years experience in exploration, corporate finance, project development & management of public resource companies.



David Mosher<sup>2</sup> Director

Mining executive and geologist with 35 years experience. Former President & CEO of High River Gold Mines where he developed gold mines in Burkina Faso and Russia.

#### **TECHNICAL**



Hedley Widdup <sup>2,4,5</sup> Director

Geologist and investment manager with 20 years experience in the evaluation and development of mining projects.



- 1. Audit and Risk Management Committee
- 2. Compensation Committee
- Corporate Governance and Disclosure Policy Committee 3.
- 4. Technical Committee
- 5. Special Committee



# **MONGOLIA – A MINING FOCUSED ECONOMY**

Government focused on economic growth through leveraging the mining sector

#### **Emerging mining region**

- +60,000 mining employees
- ~ 97% of Oyu Tolgoi's ~19,000 staff are Mongolian
- 70% of the country's land is underexplored
- Government investing in mining related infrastructure

#### Competitive regulatory regime

- 5% gold royalty rate and 25% corporate income tax
- · Stabilization certificates provide certainty of current tax rates for seven years
- Double tax treaty with Canada and ~20 other nations
- Canada-Mongolia Foreign Investment Promotion and Protection Agreement (FIPA)

#### Growing democracy located on China's doorstep

- Low population density: Only 3.5M people in the world's 18th largest country; 52% of population have higher education
- World Bank forecasts GDP growth to reach 6.2% in 2024; and 6.4% in 2025
- 30-year history of democratic elections
- Well educated, young population with 98% literacy rate





# **MONGOLIAN MINERALS PRODUCTION**

Emerging Hard Rock Copper & Gold Mining Industry



# LOCATED IN THE GOLD AND COPPER RICH CENTRAL ASIAN OROGENIC BELT

In the underexplored, highly prospective Trans Altai Terrane in Southwestern Mongolia

#### **≥USGS** A WINDOW OF OPPORTUNITY – MAJOR STRUCTURES AND HOST TERRAINS Paleozoic Island Arcs of Southern Mongolia **Global Mineral Resource Asses** Porphyry Copper Assessment of the Central Asian Orogenic Belt and Eastern Tethysides—China, Mongolia, Russia, Pakistan, Kazakhstan, Tajikistan, and India Vasilkovskoye **OYU TOLGOI** KHUNDII MINERALS DISTRIC Boshcheku Nurazagan Boroo Bakirchik Prepared in cooperation with the China Geological Survey, the Centre for Russian and Central EurAsian Minera Studies, and the Russian Academy of Sciences MONGOLIA KAZAKHSTAN Scientific Investigations Report 2010-5090-X Projected to be the fourth-largest Nounrad U.S. Department of the Interior U.S. Geological Survey Epithermal gold deposit copper mine globally by 2030 Resources of 39Mt Contained Cu and Copper deposit 53Moz Contained Au<sup>1</sup> Trans Altai USGS concluded the Trans Altai Copper - Gold deposit Tsagaan Suvarga 👘 shows the greatest potential for Terrane Orogenic gold deposit . porphyry / epithermal copper-gold Kharmagtai 📘 discoveries on the CAOB Tian Shan Mount Khundii Minerals Oyu Tolgoi 📐 Tuwu Muruntau Notes: District Kochbulak. Contained gold = ~53Moz including Inferred (175 Moz Au) Contained copper = ~39Mt including Inferred umto Source: Rio Tinto 2022 Annual Report Zarmitan Almalyk CHINA (11 Moz Au) 500 km

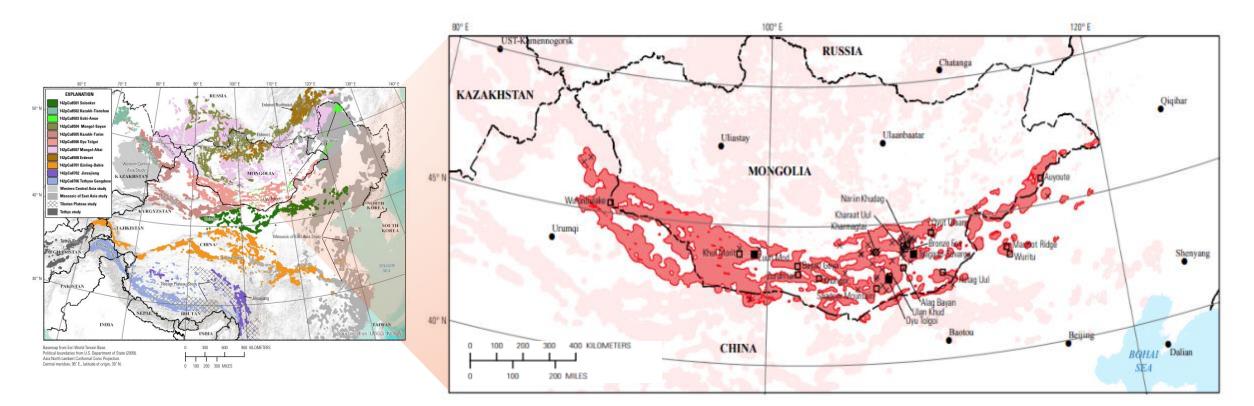
#### HOST TO MULTIPLE MAJOR GOLD-COPPER DEPOSITS INCLUDING MURUNTAU (175MOZ AU) AND OYU TOLGOI

1.

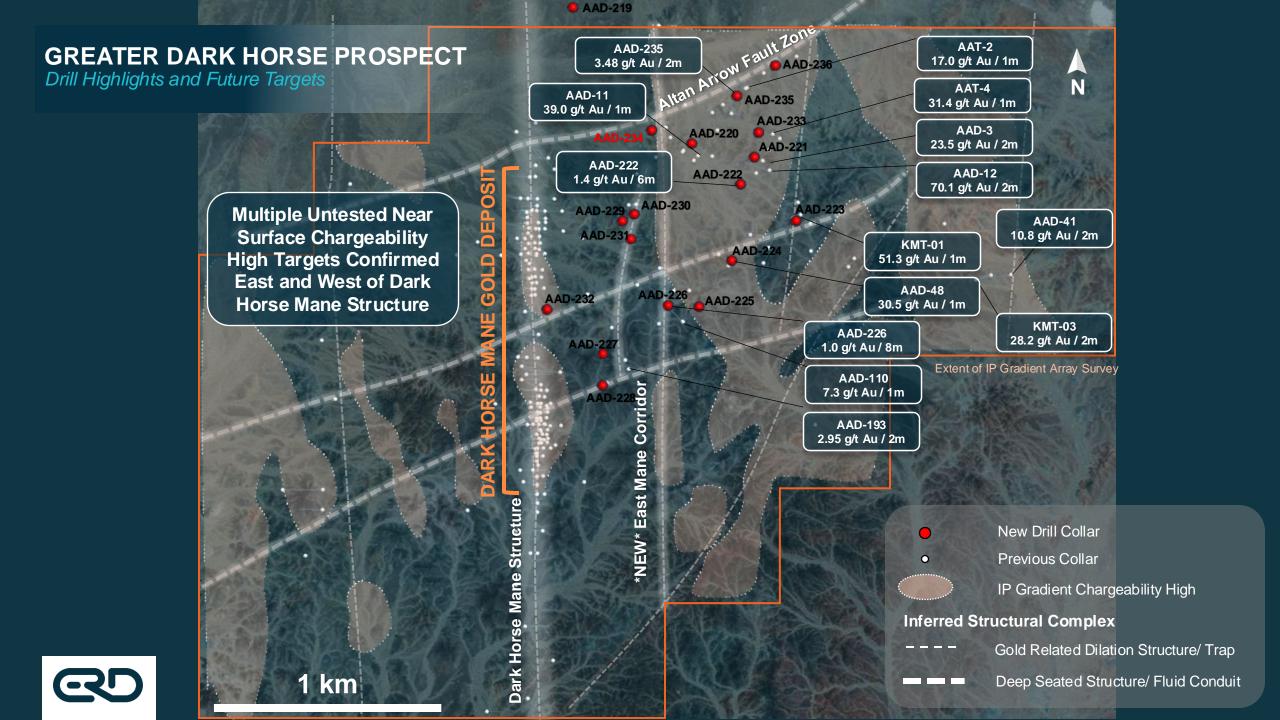
## **HIGHEST POTENTIAL REGION FOR COPPER-GOLD DISCOVERIES**

Central Asian Orogenic Belt and Eastern Tethysides - USGS

"Remoteness, harsh terrain, and lack of infrastructure impeded exploration in many areas, with the western end of the tract having not received much attention"\*







# **ALTAN NAR DEPOSIT – DISCOVERY ZONE**

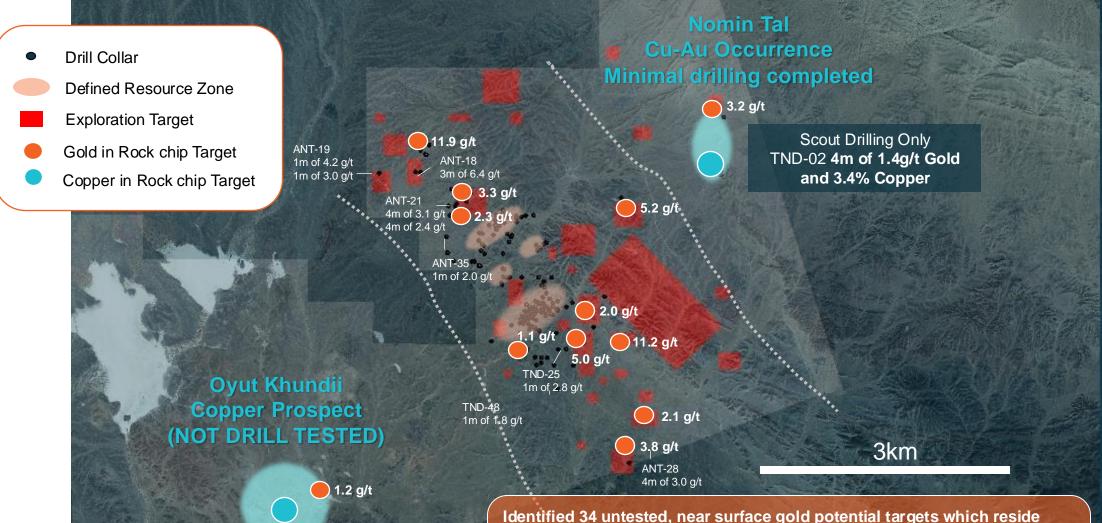
Deposit remains open at depth with multiple holes ending in mineralization

#### 100M THICK SECTION-Looking NE

			From	То	Width	Au g/t	Au Eq g/t
		<b>TND-69</b>	47	91	44	2.3	3.2
		TND-90	91	131	40	2	2.8
Llink Crede Discovery Zene		TND-91	78	81	3	0.92	1.8
High Grade Discovery Zone		TND-101	39	82	43	4.6	5.70
		incl.	76	78	2	56.3	59.8
TND-101:		and	94	140	46	17.5	19.2
-		incl.	96	111	15	52.3	56.9
4m of 104 g/t Au, 108 g/t Ag,			158	170	12	2.8	3.3
3.7% Pb and 5.9% Zn		TND-104 TND-105	126 100	<u>    163   </u> 114	<u> </u>	2.2 7.9	2.50
		TND-105	97	114	20	10.3	10.20
		TND-134	101	111	10	12.2	13.4
TND-135:		TND-135	97	120	23	17	18.8
7m of 45.7 g/t Au, 93 g/t Ag, 1.5%		incl.	105	112	7	45.7	49.70
Pb, 3.4% Zn				18.51	The second by		Conversion of the
FD, 3.4 /0 ZII		106	17371				
		106		and the second of the		ALL F	TOT
		106.7	Start->07   1	27843	A Star	->END	ADL7
		(Alexandre			-		
Discovery Zone mineralization		A second s	A N				
is formed at the contact of a	Plunge - 02	s Est	1 - C	109 2	127875		
volcanic breccia and andesite	Azimuth D46 0 25 50 75	100		110	3	1	A A
						TEND	

Mineralized epithermal and hydrothermal breccia (black/red) surrounded by phyllic alteration utilizing the contact between volcanic breccia and andesite

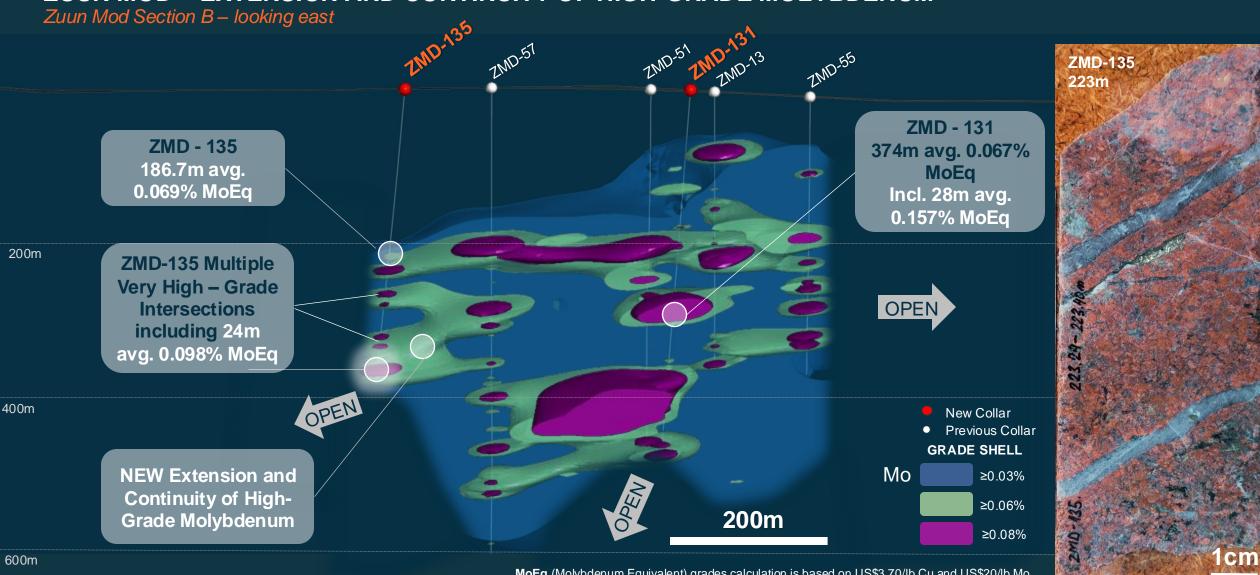
#### ALTAN NAR REGIONAL TARGETS Exploration Trenching and Drilling



outside of the Altan Nar resource

OBJECTIVE: Identify an additional 300K oz of AuEq outside the area of the current resource; Targeting +1M oz AuEq in Indicated and Measured

Highly anomalous copper in rock chip within intense phyllic alteration zone Cu Porphyry Targets up to 14%Cu



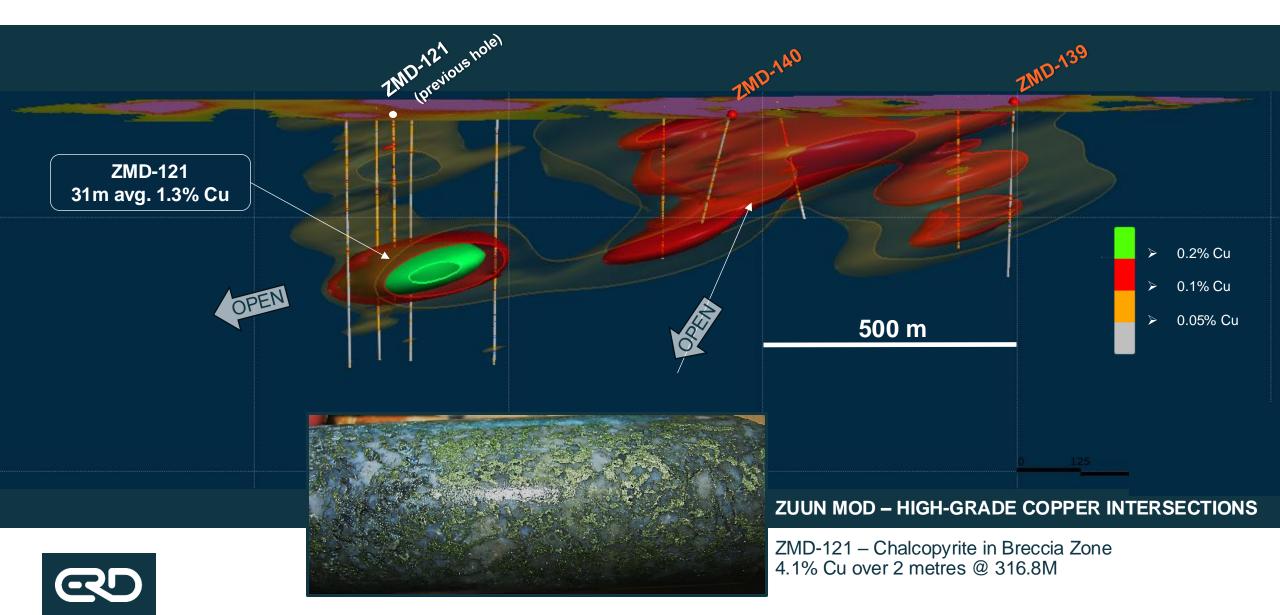
ZUUN MOD – EXTENSION AND CONTINUITY OF HIGH-GRADE MOLYBDENUM

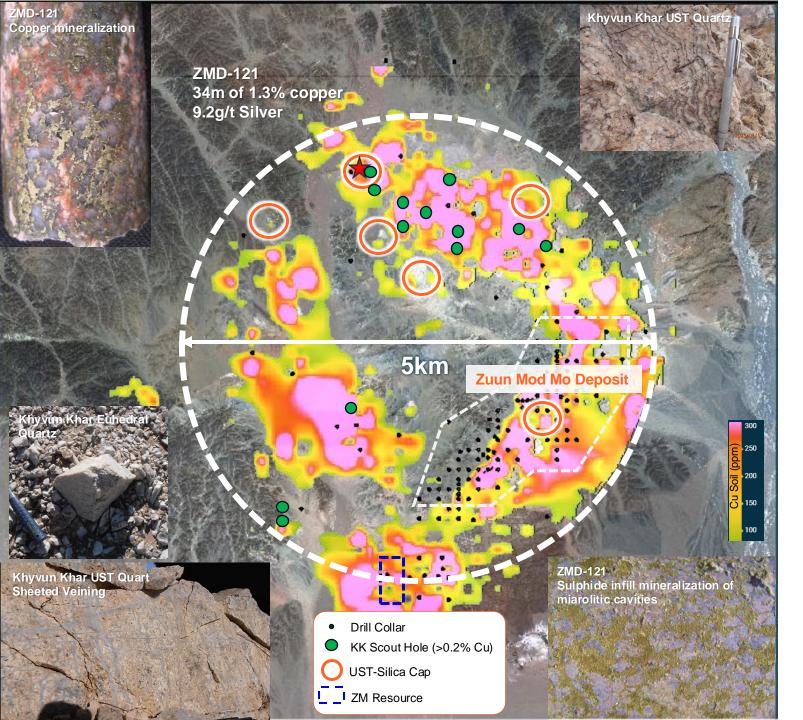
**MoEq** (Molybdenum Equivalent) grades calculation is based on US\$3.70/lb Cu and US\$20/lb Mo. A recovery factor of 75% Cu was used for MoEq values.



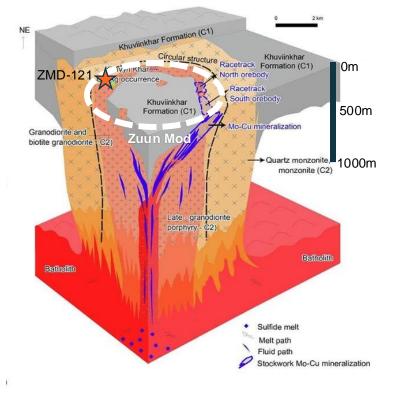
### NORTHERN ZUUN MOD COPPER ZONE – EXPANSION OPPORTUNITIES

Zuun Mod North Section D – looking north





#### ZUUN MOD COPPER PORPHYRY POTENTIAL



### **OYU TOLGOI – A WORLD CLASS COPPER-GOLD DISTRICT**

One of the world's largest copper-gold mines in southeast Mongolia

- Projected to be the fourth-largest copper mine globally by 2030
- Capable of producing 290ktpa of Cu and 260koz of Au per annum for another 30 years (peak average production of ~500ktpa of Cu)
- High grade / low cost / long life first quartile on the cost curve by 2030
- One of the most modern, safe and sustainable operations in the world; 23% of employees are female
- Resources of 39Mt copper and 53Moz gold<sup>1</sup>
  - Over 3.3Blbs of copper and almost 3Moz gold extracted since commissioning
- Underground production of block cave commenced February 2022

Notes:

Contained copper = 8.36 Mt in M&I & 30.3Mt in Inferred Contained gold = 9.11Moz in M&I & 43.8Moz in Inferred Source: Rio Tinto 2022 Annual Report and Investor Presentation







### **BAYAN KHUNDII GOLD DEPOSIT RESOURCES & RESERVES**

Low sulfidation epithermal deposit

Resources	Tonnage	Au Grade	Contained Au	Ag Grade	Contained Ag
Classification	(Mt)	(g/t)	(koz)	(g/t)	(koz)
Measured	4.0	3.03	394	1.44	187
Indicated	3.3	2.04	219	1.22	131
M&I	7.4	2.58	613	1.34	319
Inferred	0.2	1.08	6	1.32	8

#### Notes:

- 1. Mineral Resources are as of April 2023.
- Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. 2.
- Summation errors may occur due to rounding. 3.
- The effective date of the Mineral Resources is April 20, 2023. 4.
- Open pit mineral resources are reported within an optimized constraining shell. 5. 6.
  - Open pit cut-off grade is 0.3 g/t Au based on the following parameters:
    - Gold Price of US\$2.000/oz Au 1.
    - 2. Gold recovery of 95%
    - 3. Mining Costs of US\$3.00/t
    - 4. Milling Costs and G&A of \$22.00/t
    - Capping of gold grades was 200 g/t Au and 50 g/t Ag on 1m composite values. 5.
    - 6. The density varies between 2.58 g/cm3 and 2.66 g/cm3 depending on lithology.

Reserves	Tonnage	Au Grade	Contained Au	Ag Grade	Contained Ag
Classification	(Mt)	(g/t)	(koz)	(g/t)	(koz)
Proven	2.7	4.1	360.2	1.7	159.4
Probable	1.1	3.0	104.7	1.7	61.1
Total	3.8	3.8	464.9	1.7	220.5

#### Notes:

- 1. Mineral Reserves are as of August 2023.
- 2. The Statement of Estimates of Mineral Resources has been compiled under the supervision of Mr. Oyunbat Bat-Ochir who is a full-time employee of RPM and a Member of the Australian Institute of Geoscientists. Mr. Bat-Ochir has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity that he has undertaken to qualify as a Qualified Person as defined in the CIM Standards of Disclosure.
- All Mineral Resources figures reported in the table above represent estimates at November 1, 2022. Mineral 3. Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.
- Mineral Resources are reported on a dry in-situ basis. 4.
- The Mineral Resource is reported using a 0.35 g/t Au cut-off grade in oxide and transition mineralisation and 1.02 g/t Au cut-off in fresh mineralisation and is constrained above conceptual optimised pit shell. Cut-off parameters were selected based on an RPM internal cut-off calculator, assuming an open cut mining method with 5% ore loss and 10% dilution, a gold price of US\$1,723 per ounce, a mining cost of US\$3 per tonne and a processing cost of US\$16 per tonne milled and processing recovery of 90% for oxide, 87% for transitional and 30% for fresh Au mineralisation. The conceptual optimised pit shell was constructed using a gold price of US\$2,000 per ounce, which is 1.4 times the long-term consensus forecast price.
- 6. Mineral Resources referred to above, have not been subject to detailed economic analysis and therefore, have not been demonstrated to have actual economic viability.



### DARK HORSE GOLD DEPOSIT RESOURCES & RESERVES

Epithermal oxide deposit

	Indica	ted Minera	l Resource	Inferred Mineral Resource			
Resources	Tonnage	Au Grade	Contained Au	Tonnage	Au Grade	Contained Au	
Classification	(kt)	(g/t)	(koz)	(kt)	(g/t)	(koz)	
Oxide	578	3.0	56.2	75	1.1	2.7	
Transitional	99	1.5	4.8	109	1.2	4.1	
Fresh	5	4.9	0.7				
Total	682	2.8	61.7	184	1.2	6.8	

#### Notes:

- 1. The Statement of Estimates of Mineral Resources has been compiled under the supervision of Mr. Oyunbat Bat-Ochir who is a full-time employee of RPM and a Member of the Australian Institute of Geoscientists. Mr. Bat-Ochir has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity that he has undertaken to qualify as a Qualified Person as defined in the CIM Standards of Disclosure.
- 2. All Mineral Resources figures reported in the table above represent estimates at November 1, 2022. Mineral Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.
- 3. Mineral Resources are reported on a dry in-situ basis.
- 4. The Mineral Resource is reported using a 0.35 g/t Au cut-off grade in oxide and transition mineralisation and 1.02 g/t Au cut-off in fresh mineralisation and is constrained above conceptual optimised pit shell. Cut-off parameters were selected based on an RPM internal cut-off calculator, assuming an open cut mining method with 5% ore loss and 10% dilution, a gold price of US\$1,723 per ounce, a mining cost of US\$3 per tonne and a processing cost of US\$16 per tonne milled and processing recovery of 90% for oxide, 87% for transitional and 30% for fresh Au mineralisation. The conceptual optimised pit shell was constructed using a gold price of US\$2,000 per ounce, which is 1.4 times the long-term consensus forecast price.
- 5. Mineral Resources referred to above, have not been subject to detailed economic analysis and therefore, have not been demonstrated to have actual economic viability.

Reserves	Tonnage	Au Grade	Contained Au
Classification	(Mt)	(g/t)	(koz)
Proven			
Probable	0.2	7.0	48.8
Total	0.2	7.0	48.8

#### Notes:

- 1. The effective date of the Mineral Reserve estimate is August 1, 2023. The QP for the estimate is Mr. Julien Lawrence of O2 Mining Limited;
- The Mineral Reserve estimates were prepared with reference to the 2014 Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Definition Standards (2014 CIM Definition Standards) and the 2003 CIM Best Practice Guidelines;
- 3. Reserves estimated assuming open-pit mining method;
- Waste to ore cut-offs were determined using a NSR for each block in the model. NSR is calculated using prices and process recoveries for each metal accounting for all off-site losses, transportation, smelting and refining charges;
- 5. Reserves are based on a gold price of \$1,816/oz; and
- 6. Mineral Reserves were calculated from a diluted "mining" block model which included average dilution of 10% and losses of 2.5%.



# **ALTAN NAR RESOURCES**

Intermediate sulfidation epithermal gold-silver-lead-zinc deposit

Indicated	Tonnage	Au	Ag	Zn	Pb	AuEq	Au	Ag	Zn	Pb	AuEq
Classification	(Mt)	(g/t)	(g/t)	(%)	(%)	(g/t)	(koz)	(koz)	(kt)	(kt)	(koz)
Oxide	0.6	2.0	12.7	0.6	1.0	3.1	39.3	244.3	3.8	6.3	59.6
Fresh	4.4	2.0	15.0	0.6	0.5	2.8	278.4	2,105.4	27.8	22.7	393.4
Total	5.0	2.0	14.8	0.6	0.6	2.8	317.7	2,349.7	31.6	29.0	453.0

Inferred	Tonnage	Au	Ag	Zn	Pb	AuEq	Au	Ag	Zn	Pb	AuEq
Classification	(Mt)	(g/t)	(g/t)	(%)	(%)	(g/t)	(koz)	(koz)	(kt)	(kt)	(koz)
Oxide	0.8	1.8	7.5	0.6	0.9	2.6	43.3	183.7	4.3	6.5	64.2
Fresh	2.7	1.7	8.0	0.7	0.6	2.5	142.4	682.1	19.4	15.8	212.8
Total	3.4	1.7	7.9	0.7	0.7	2.5	185.7	865.8	23.7	22.3	277.1

#### Note:

1. The State ment of Estimates of Mineral Resources has been compiled under the supervision of Mr. Jeremy Clark who is a full-time employee of RPM and a Member of the Australian Institute of Geoscientists. Mr. Clark has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity that he has undertaken to qualify as a Qualified Person as defined in the CIM Standards of Disclosure.

2. All Mineral Resources figures reported in the table above represent estimates based on drilling completed up to 7th May 2018. Mineral Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.

3. \*Au Equivalent (AuEq) calculated using long term 2023 - 2027 "Energy & Metals Concensus Forecasts" March 19, 2018 average of US\$1310/oz for Au, US\$17.91/oz for Ag, US\$1.07/pound for Pb and US\$1.42/pound for Zn. Adjustment has been made for metallurgical recovery and is based company's preliminary testwork results which used flotation to separate concentrates including a pyrite concentrate with credits only for Au and Ag. Based on grades and contained metal for Au, Ag, Pb and Zn, it is assumed that all commodities have reasonable potential to be economically extractable. a. The formula used for Au equivalent grade is: AuEq g/t = Au g/t + Ag g/t\*0.0124+Pb%\*0.509+Zn%\*0.578 with metallurgical recovery of 88.8% Au, 80.6% Ag, 80.4% Pb and 69.1% Zn. b. Au equivalent ounces are calculated by mulitplying Mineral Resource tonnage by Au equivalent grade and converting for ounces. The formula used for Au equivalent ounces is: AuEq Qz = [Tonnage x AuEq grade (g/t)]/31.1035.

4. Mineral Resources are reported on a dry in-situ basis.

5. Reported at a 0.7 g/t AuEq cut-off above pit shelland 1.4g/t AuEq below the pit shell. Cut-off parameters were selected based on an RPM internal cut-off calculator, which indicated that a break-even cut-off grade of 0.7g/t Au Equivalent above pit and 1.4g/t AuEq below pit, assuming a gold price of US\$1310 per ounce, an open mining cost of US\$6 per tonne and a processing cost of US\$20 per tonne milled and processing recovery of 88.8% Au, 80.6% Ag, 80.4% Pb and 69.1% Zn.

6. Mineral Resources referred to above, have not been subject to detailed economic analysis and therefore, have not been demonstrated to have actual economic viability



# **ZUUN MOD RESOURCES**

Porphyry complex measuring 16km in circumference

Zuun Mod Resources	Tonnage	Mo Grade	Contained Mo	Cu Grade	Contained Cu
Classification	(Mt)	(%)	(Mlbs)	(%)	(MIbs)
Measured	40	0.056	49.5	0.064	57.0
Indicated	178	0.057	224.0	0.070	273.7
M&I	218	0.057	273.5	0.069	330.7
Inferred	138	0.052	157.7	0.065	197.7

Notes:

Effective Date: May 2011.
 Cutoff grade: 0.04% Mo

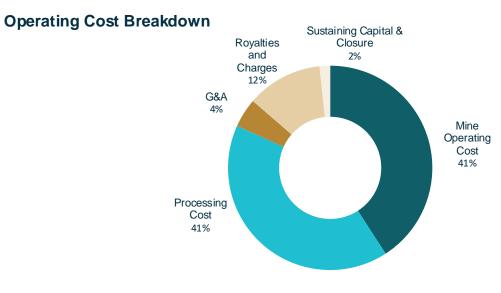
3. 1 tonne = 2204.64 lbs.

Estimates are rounded to appropriate significant figures. 4.

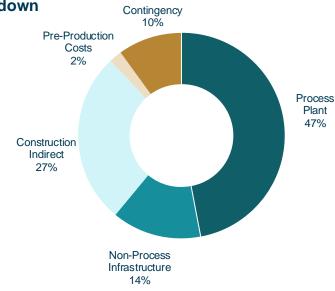


# BAYAN KHUNDII GOLD PROJECT UPDATED FEASIBILITY STUDY

Operating in a lower cost jurisdiction



**Capital Cost Breakdown** 



Operating Costs	LOM US\$ million	US\$/oz	US\$/t
Mine Operating Cost	\$165	\$347	\$41
Processing Cost	\$166	\$349	\$41
G&A	\$20	\$43	\$5
Total Site Operating Costs	\$352	\$739	\$88
Royalties and Charges	\$51	\$108	\$13
Sustaining Capital & Closure	\$10	\$22	\$3
All-in Sustaining Cost	\$414	\$869	\$103

Capital Costs	US\$ million
Process Plant	\$47
Non-Process Infrastructure	\$14
Construction Indirects	\$27
Construction Costs	\$88
Pre-Production Costs	\$2
Contingency (12%)	\$10
Total Construction Costs	\$100

## **COMMITTED TO GIVING BACK**

Holding ourself accountable to the communities we impact



# Erdene invests directly in Shinejinst / Bayankhongor community

- Erdene signed a Local Cooperation Agreement ("LCA") in 2020 to share benefits with communities
- During feasibility, readiness, and construction (2020-2024), we committed to providing ~US\$2.2M (~7B MNT) in public health and infrastructure investments through the LCA

#### Erdene prioritizes local hiring and capacity building

- We committed to training and employing local residents in at least 30% of permanent mine jobs as we reach production
- In 2023 alone, we employed over 50 local residents on the project and trained another 80 to become mine equipment operators; the population of Shinejinst is ~2,500





#### Erdene is sensitive to the unique needs of our community

- We established a water treatment facility in Shinejinst enabling clean water access for the first time in soum history
- We refurbished sanitation facilities at the public kindergarten and school
- We have cumulatively provided 100 undergraduate scholarships to Bayankhongor youth in fields essential to the local economy
- We support local herders by providing supplemental animal feed and fodder
- We collaborated with University of British Columbia ("UBC") / MITACS to research shared value in the mining sector; UBC highlighted Erdene as a leader in community development

# **COMMITTED TO SUSTAINABILITY**

Respecting the environment

#### Erdene is committed to the highest environmental standards

We are using an enclosed Carbon in Pulp leach process in combination with tailings filtration and dry stacking to maximize water recycling and efficiency; 85% of the water will be recycled. Our mine footprint is only ~200ha

#### Erdene works directly to protect the local ecosystem

Erdene established a two-hectare nursery at site to cultivate endemic plants and trees (including rare and very rare species), sowing over 10,000 seedlings to date to be used for reclamation and landscape improvement. The company committed to planting one million trees by 2030 as part of Mongolia's "Billion Trees" campaign; we proactively monitor local habitats and train local staff in monitoring and evaluation

#### Erdene holds itself accountable to international best practices

Erdene signed a Voluntary Code of Practice for water management facilitated by the International Finance Corporation. The initiative is supported by the Government of Canada, the 2030 Water Resources Group, the European Bank for Reconstruction and Development, and the International Council on Mining and Metals. We are compliant with local / international environmental codes, guidelines, standards and requirements





