



# Kharmagtai copper-gold project

February 2014

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The information in this report relating to Exploration Results and Exploration Targets is based on information compiled or reviewed by Dr. Andrew Stewart, who is an employee of Xanadu Mines and is a Member of the Australasian Institute of Geoscientists. Dr. Andrew Stewart 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”. Dr. Andrew Stewart consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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# Kharmagtai highlights

## ► Advanced copper-gold project with excellent potential for new discoveries

<b>Porphyry district</b>	<ul style="list-style-type: none"><li>▪ High-grade, gold-rich porphyry copper mineralisation</li><li>▪ Significant prospects defined by extensive exploration</li></ul>
<b>Exploration Target<sup>1</sup></b>	<ul style="list-style-type: none"><li>▪ 250-400Mt @ 0.25-0.30% Cu &amp; 0.25-0.30g/t Au</li><li>▪ 50-80Mt @ 0.40-0.50% Cu &amp; 0.6-0.8g/t Au</li></ul>
<b>New discoveries</b>	<ul style="list-style-type: none"><li>▪ Numerous drill-ready targets</li><li>▪ Large licence only partially explored</li></ul>
<b>Strategic location</b>	<ul style="list-style-type: none"><li>▪ South Gobi power and rail infrastructure</li><li>▪ Adjacent to key Chinese copper market</li></ul>
<b>Value proposition</b>	<ul style="list-style-type: none"><li>▪ Low cost, high impact exploration program</li><li>▪ Aspirations to be next Asian mid-tier copper operator</li></ul>

**Kharmagtai is one of the most advanced, undeveloped copper projects in Mongolia**

<sup>1</sup> Refer to slide 8 in relation to the Exploration Target under the JORC 2012 code.

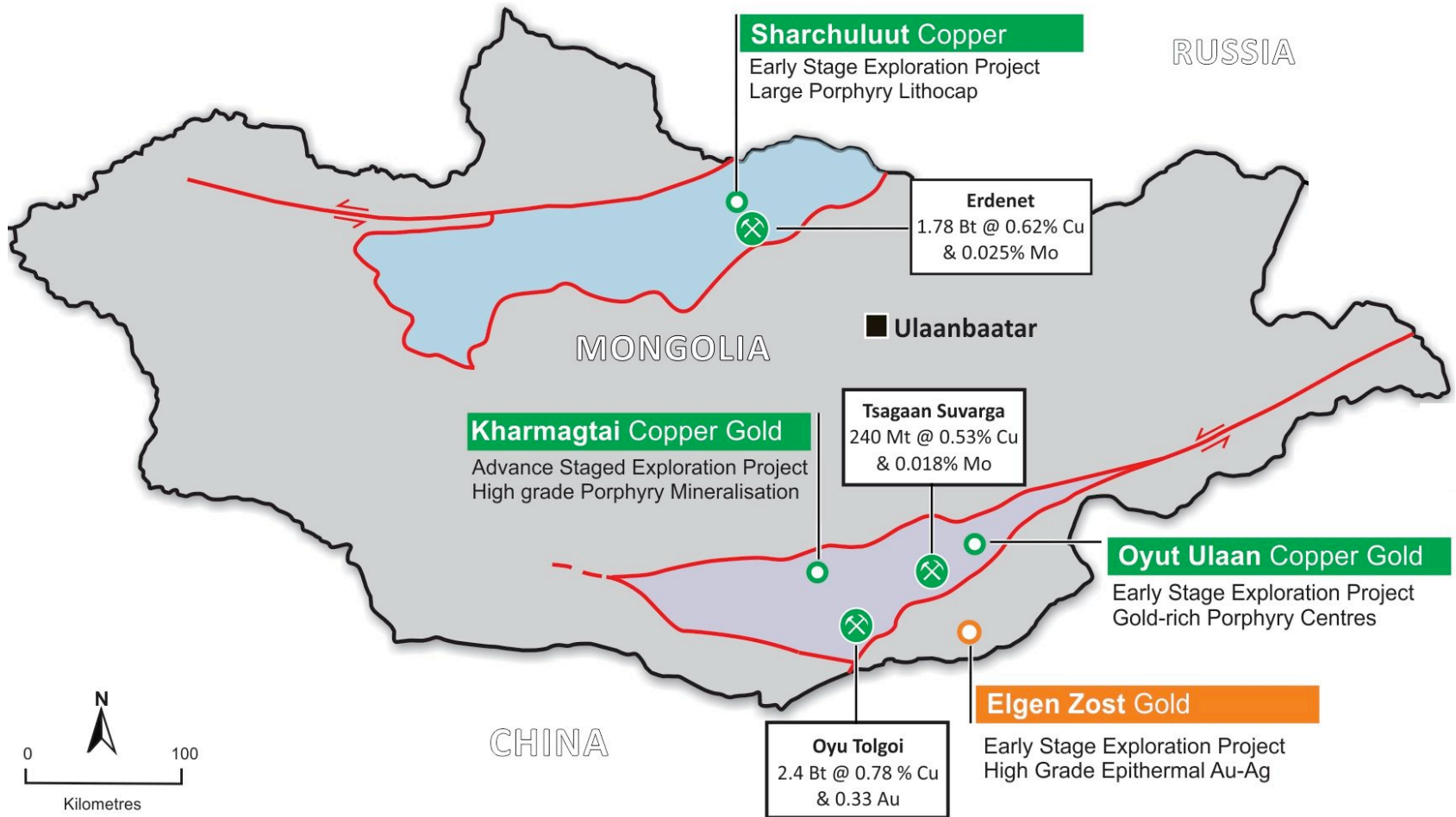




# Strategy

# Project portfolio

► Xanadu is at the forefront of unlocking Mongolia's porphyry copper belts



# Kharmagtai history

## ► Extensive exploration undertaken over 2002 – 2011 period

- 171 diamond drill holes (63,893m) as set out in adjacent table
- 208 regional RC drill holes (27,747m)
- 119 trenches (65,636m) completed
- Geophysics includes:
  - gradient array IP (289 km<sup>2</sup>)
  - ground magnetics (589 km<sup>2</sup>)
  - ground gravity (39 km<sup>2</sup>)
  - aerial magnetics and aerial gravity
- Detailed geological mapping
- Rock-chip geochemistry (2,960 samples)
- Refer to JORC 2012 Table 1 in 3 Feb release

	Prospect	# Holes	Meters
<b>2002</b>	AT	18	6,235
	TS	17	6,234
	ZU	41	10,176
	Regional	7	2,430
<b>2003</b>	AT	18	5,127
<b>2004</b>	AT	22	8,519
	Regional	6	2,234
<b>2005</b>	AT	2	496
	TS	4	1,415
	ZU	2	844
<b>2007</b>	AT	4	1,538
	TS	1	496
	ZU	1	300
	Regional	9	2,804
<b>2011</b>	AT	7	5,891
	TS	2	1,781
	ZU	1	550
	Regional	9	6,824
<b>Total</b>		<b>171</b>	<b>63,893</b>

# Exploration Target

► **Global:**                **250-400Mt @ 0.25-0.30% Cu & 0.25-0.30g/t Au**

► **High-grade:**        **50-80Mt @ 0.40-0.50% Cu & 0.6-0.8g/t Au**

	Scale	Representative intersections
<b>Altan Tolgoi</b>	South: 550m long x 600m deep North: 250m long x 150m wide x 350m deep	KHDDH240 - 245m grading 0.75% Cu and 2.48 g/t Au (from 3m) KHDDH259 - 203m grading 0.45% Cu and 2.45 g/t Au (from 3m) KHDDH281 - 210m grading 0.63% Cu and 1.61 g/t Au (from 28m)
<b>Zesen Uul</b>	350m long and 100m wide body that plunges to the southeast	KHDDH006 - 182m grading 0.47% Cu 0.52 g/t Au (from 108m) KHDDH004 - 94m grading 0.65% Cu 2.06 g/t Au (from 98m) KHDDH021 - 88m grading 0.85% Cu 1.30 g/t Au (from 50m)
<b>Tsagaan Sudal</b>	At least 850m long, 550m wide and 500m deep	KHDDH301 - 527 m grading 0.32% Cu 0.34 g/t Au (from 22m) KHDDH324 - 528 m grading 0.36% Cu 0.22 g/t Au (from 148m)
<b>Tourmaline</b>	Below 200m depth, and are open to the east and at depth	KHDDH283 – 562m @ 0.36% Cu & 0.34g/t Au (from 194m) KHDDH263 – 354m @ 0.48% Cu & 0.50g/t Au (from 304m) KHDDH275 – 298m @ 0.45% Cu & 0.58g/t Au (from 358m)

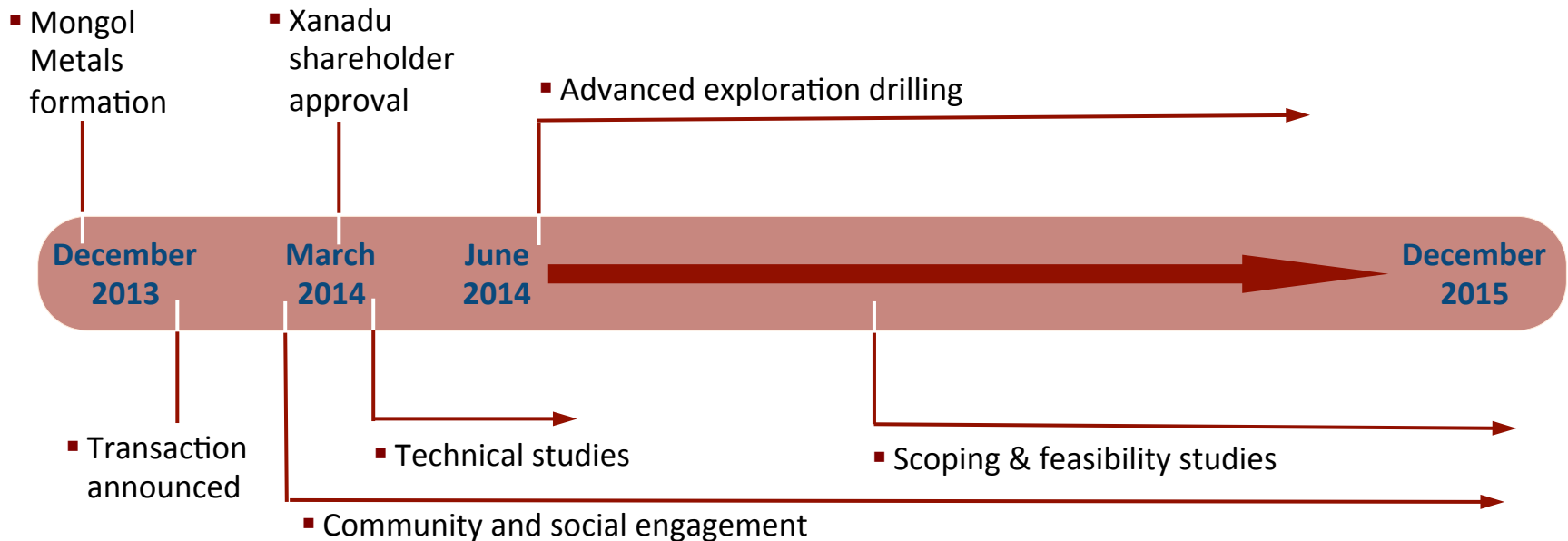
The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource under the JORC 2012 code and it is uncertain if further exploration will result in the estimation of a Mineral Resource.



# Exploration activities

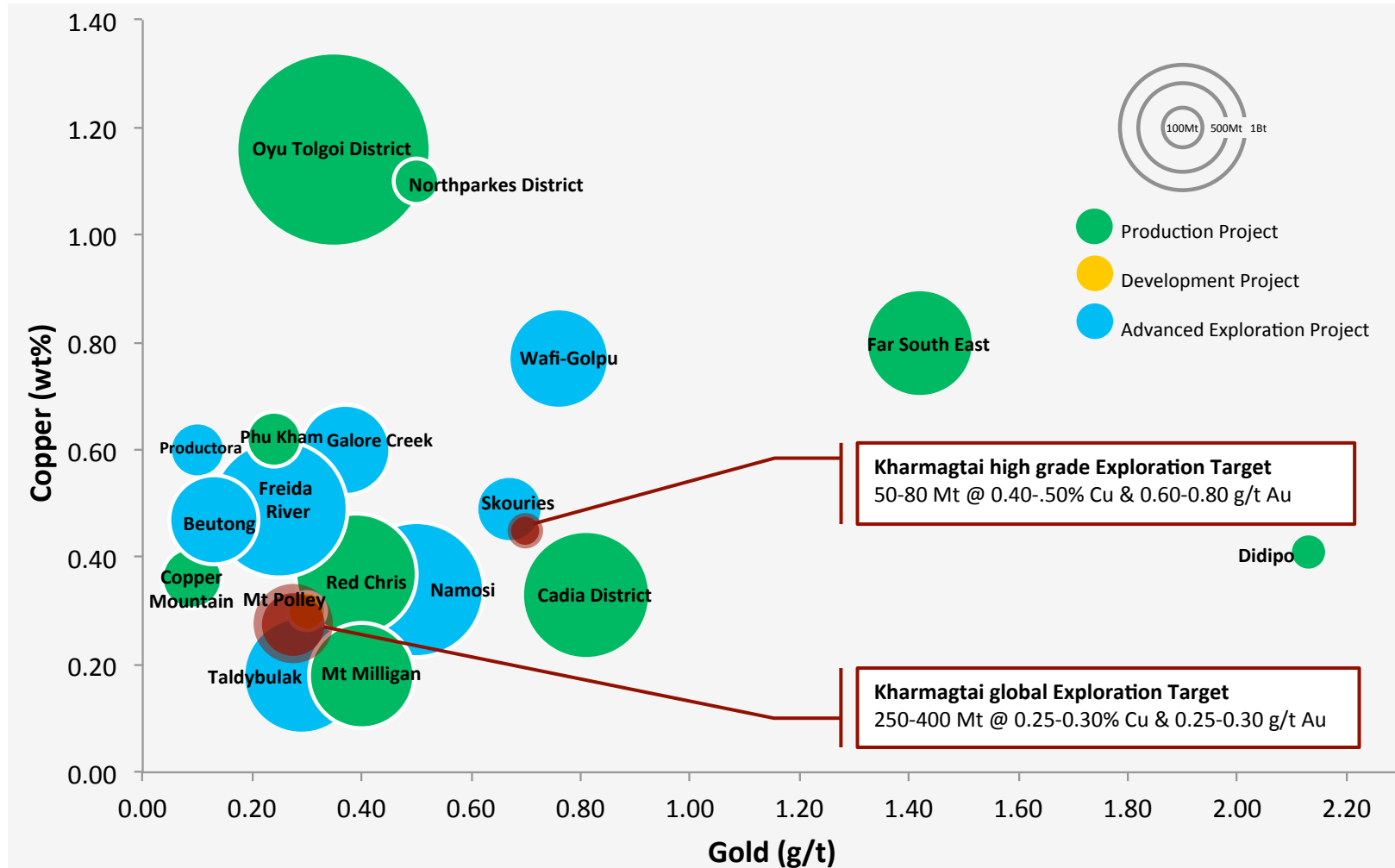
## ► Xanadu has defined a plan to add value to the Kharmagtai project

- Exploration activities underway to advance current understanding of mineralisation
- Ready to implement drilling program to test the Exploration Target



# Gold-rich porphyries

- Gold-rich porphyry deposits can be economically developed at smaller scales



# Mongolia profile

## ► Mongolia ranks highly against other minerals frontiers across broad criteria

### Security

- Stable environment
- Robust democracy

### Regulatory

- Supportive new investment law
- Experienced regulators

### Geography

- South Gobi power and rail infrastructure
- Favourable development environment

### Economy

- Open economy
- Established mining services sector

### Markets

- Strategic location
- Adjacent to north Asia copper markets

**Mongolia's  
investment  
risk is  
oversold & it  
ranks highly  
against other  
minerals  
frontiers**

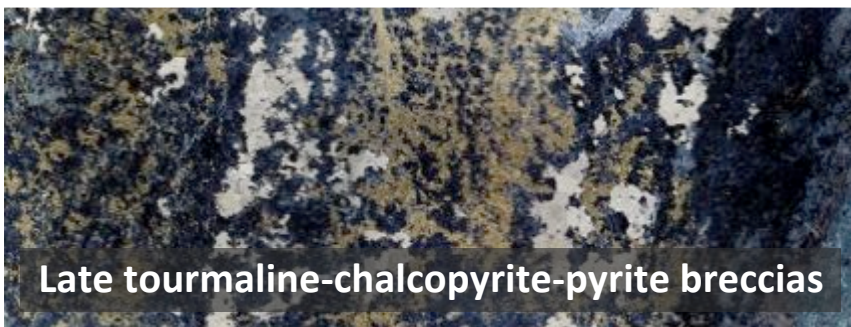
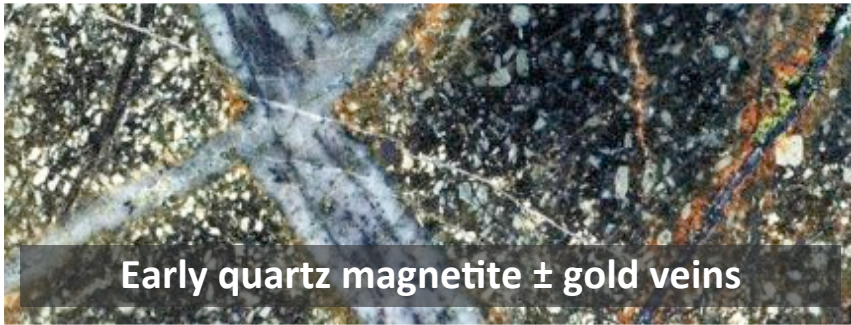


# Geology



# Gold-rich mineralisation

## ► High-grade mineralisation characterised by high gold (ppm) to copper (wt%) ratios

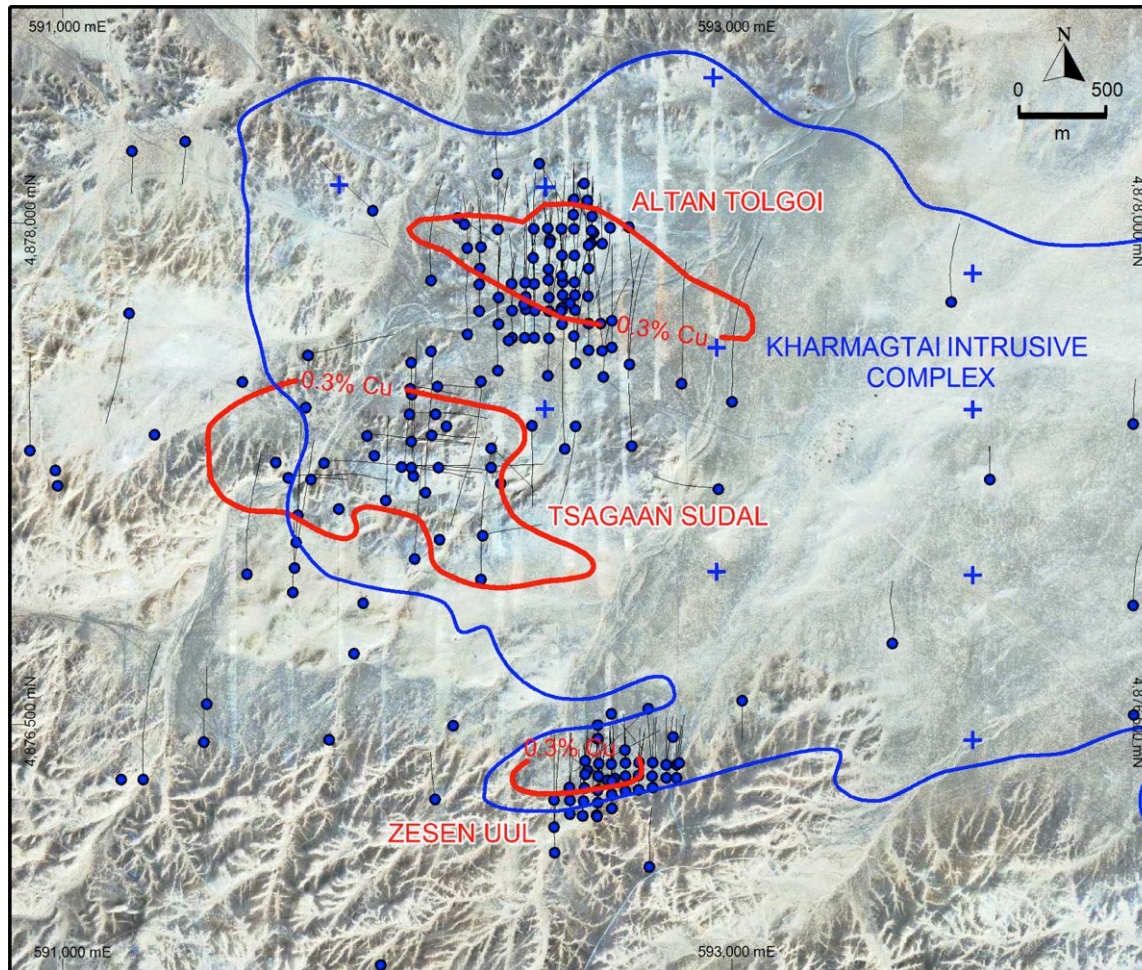


- Many of the classical elements of porphyry-related hydrothermal alteration
  - Early albite-biotite alteration
  - Quartz-chalcopyrite stockwork associated epidote-magnetite albite alteration
  - Local high grade quartz-bornite-chalcopyrite stockwork; with chlorite-magnetite alteration and trace native gold
  - Late stage phyllic overprint associated with tourmaline breccias
- High-grade mineralisation characterised by high gold (ppm) to copper (wt%) ratios
- Mineralisation similar to the Lachlan Fold Belt porphyries (Cadia-Ridgeway)



# Defined prospects

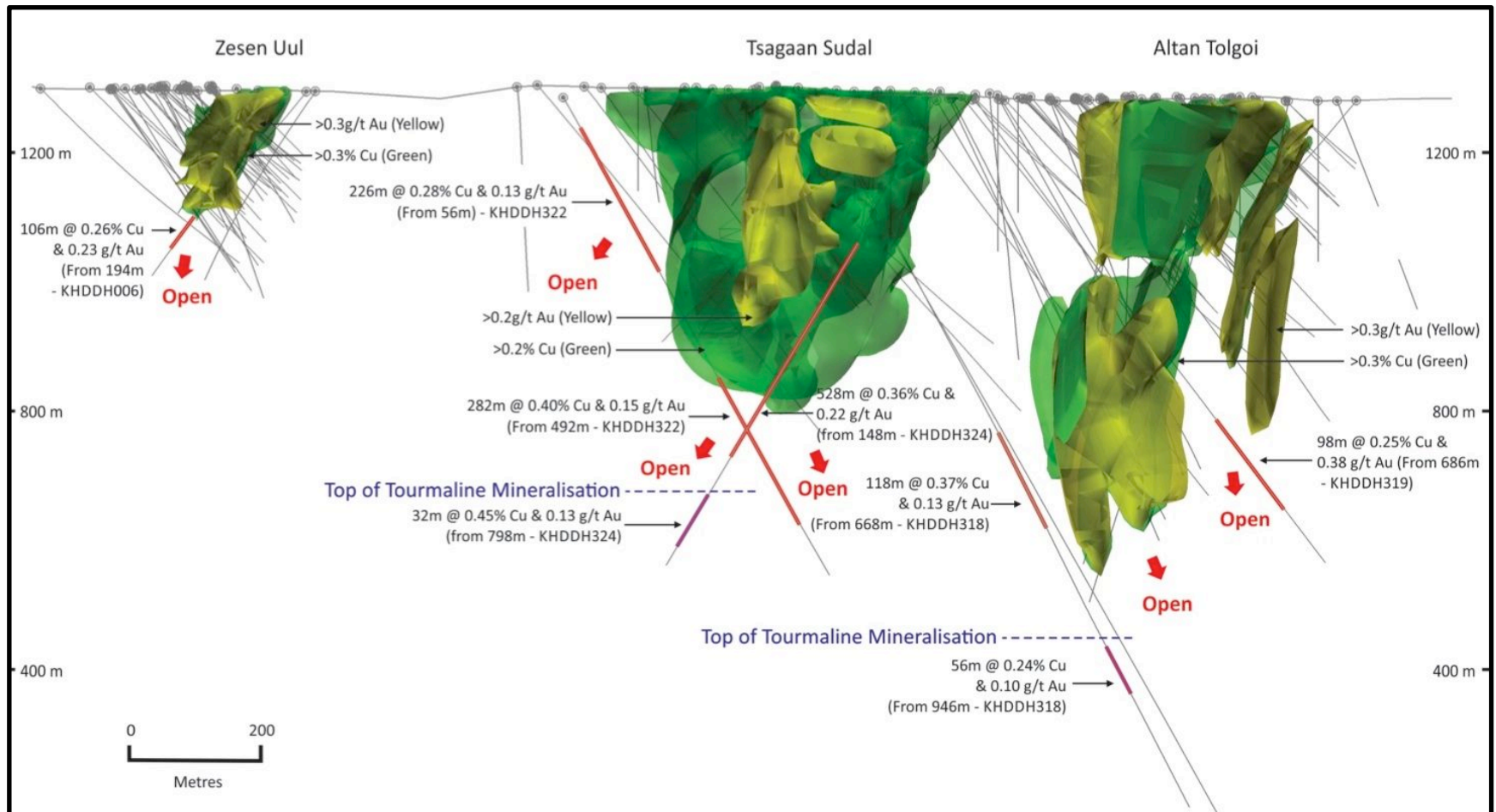
## ► Three significant prospects defined by extensive exploration activity



- Gold-rich porphyry mineralisation as quartz-chalcopyrite-pyrite stockwork zones
- Extensive exploration has identified significant porphyry mineralisation at:
  - Altan Tolgoi
  - Tsagaan Sudal
  - Zesen Uul
- Shallow mineralisation outcropping at surface
- Potential to be connected (amalgamate) at depth

# Exploration potential

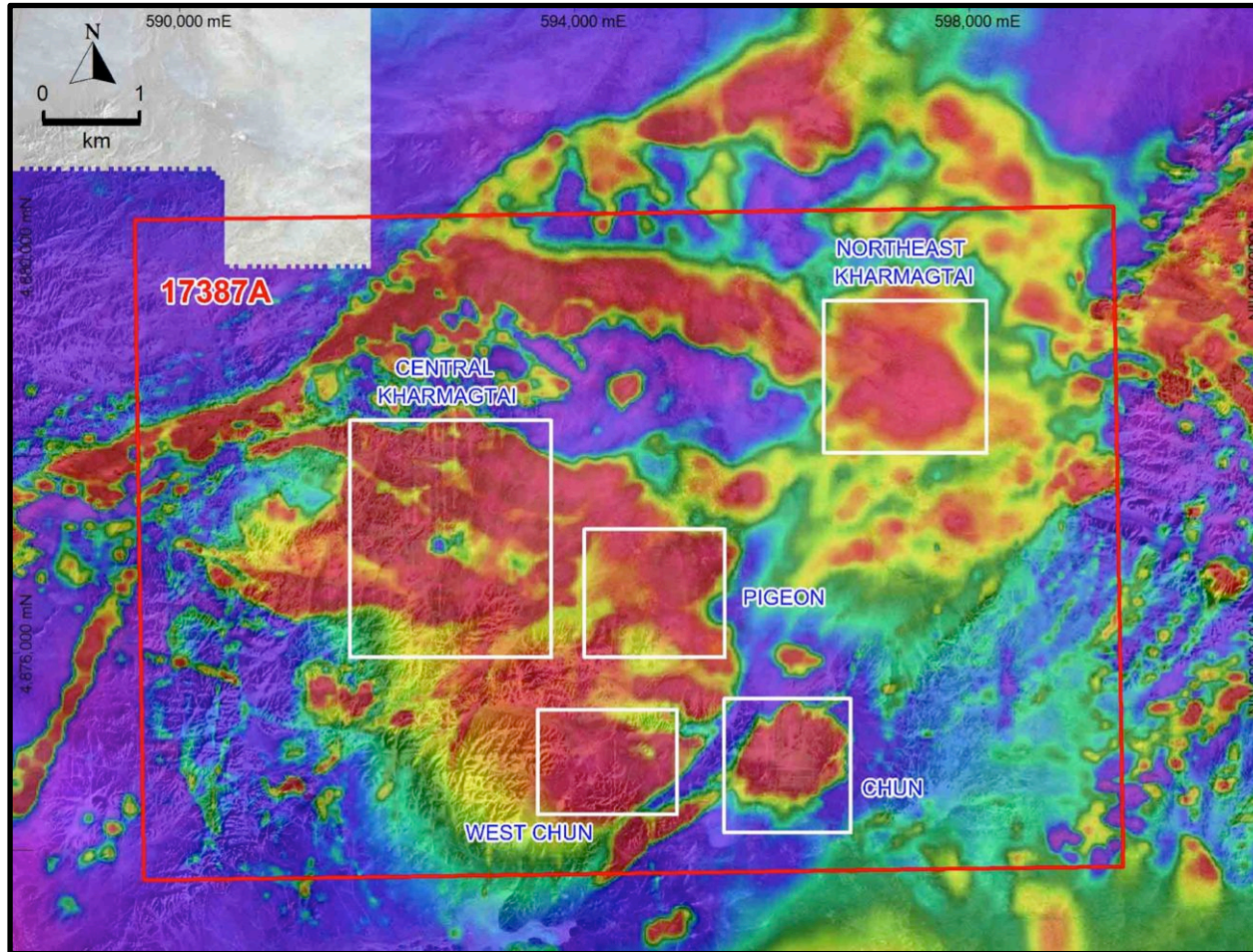
## ► Shallow, clustered prospects that remain open in several directions





# Discovery potential

## ► Identified drill targets with excellent potential for new discoveries



- Strongly mineralised porphyry complex lies under unexplored shallow post-mineral sediments
- Mineralisation associated with magnetite alteration
- Numerous distinct circular magnetic anomalies
- The large licence area has only been partially explored
- Potential for further discoveries remains high





# Transaction

# Acquisition terms

## ► Mongol Metals JV company to acquire Kharmagtai for US\$14.0 million

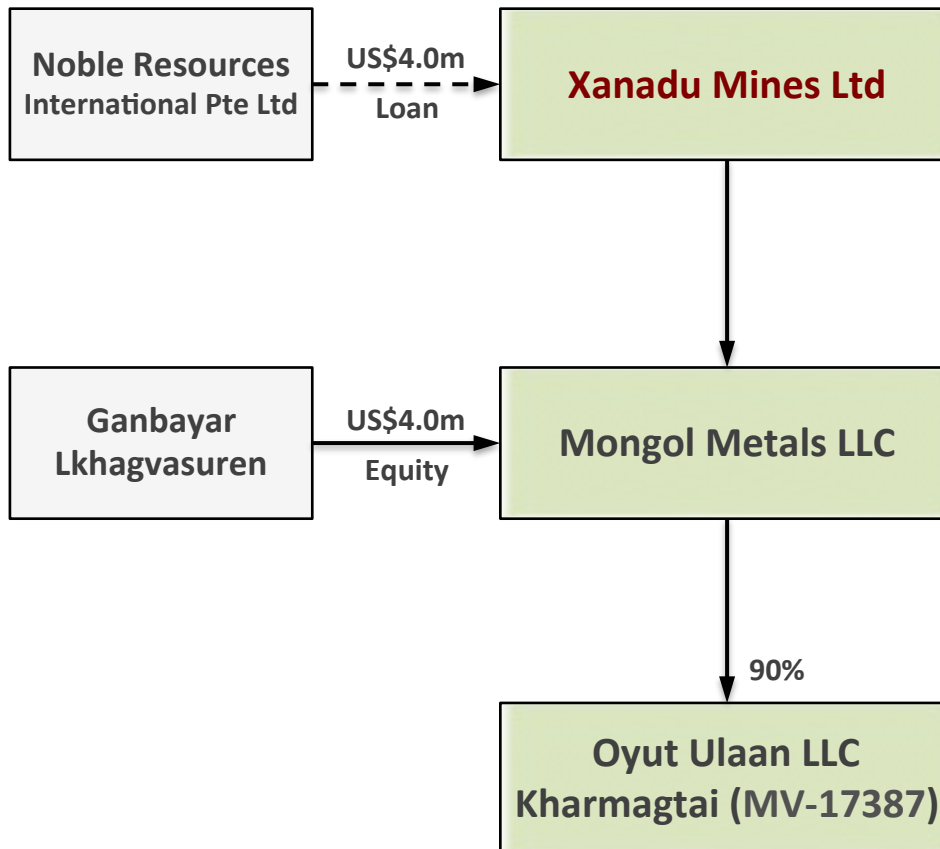
- JV company to acquire 90% interest in:
  - the Kharmagtai Mining License
  - associated data and materials
  - PP&E including the mine camp
- Xanadu will be granted an option to purchase the 3% net smelter royalty
- US\$14.0m total consideration including:
  - a US\$500,000 deposit
  - US\$3,500,000 upon completion
  - US\$10.0m deferred for 18 months
- Xanadu shareholder approval is a condition precedent





# Transaction structure

## ► Unlocking value through partnership with Mongol Metals and Noble Group



- Transaction demonstrates the strength and value of Xanadu's strategic partnerships
- Xanadu project equity of around US\$0.9m for 18% by completion
- US\$8.0m new funds arranged:
  - US\$4.0m Mongol Metals equity
  - US\$4.0m Noble 3-year loan
- Xanadu appointed to Manage exploration and development
- Noble to be appointed marketing agent of copper concentrates



## Xanadu profile

# Corporate snapshot

## ► Unlocking Mongolia's porphyry copper belts

- Strategic position in emerging copper province
- First-principles exploration by experienced geoscientists
- Identified mineral targets with low exploration costs
- Experience running exploration programs in Mongolia
- Favorable development conditions close to infrastructure
- Commercially strong and senior-credentialed Board

### Capital Structure (A\$)

Share price <sup>(1)</sup>	7.0 c
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Issued shares <sup>(2)</sup>	205.3 m
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<b>Market capitalization</b>	<b>14.4 m</b>
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Cash <sup>(3)</sup>	2.8 m
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<b>Enterprise Value</b>	<b>11.5 m</b>
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(1) as at 7 February 2014

(2) as at 21 January 2014

(3) as at 31 December 2013

### Leadership

<b>Chairman</b>	Mark Wheatley
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<b>Managing Director</b>	George Lloyd
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<b>Exec. Director</b>	Ganbayar Lkhagvasuren
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<b>CFO</b>	Mark Langan
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<b>Chief Geologist</b>	Andrew Stewart
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### Strategic Investors

<b>Sakari Energy (PTT)</b>	12.4%
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<b>The Noble Group</b>	9.3%
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# Non-executive directors

## ► Broad technical, commercial and corporate experience in the natural resources sector

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### **Mark Wheatley**

*Independent Chairman*

- Independent non-executive board roles have included Chair of Gold One International Limited, Norton Goldfields Limited and Goliath Gold as well as directorships of St Barbara Mines Limited and Uranium One Inc. Currently a director of Uranium Resources Inc.
- CEO/Chair of Southern Cross Resources and CEO BMA Gold.
- Executive roles with BHP, BT, Goldfields, AurionGold.
- Chemical engineer and MBA.

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### **Darryl Clark**

*Non-exec Director*

- Vice President of Exploration for Cameco Corporation.
- Exploration geologist with over 20 years of experience in Australia, Central Asia and South East Asia.
- Corporate experience with both Vale and BHP Billiton, and in consulting roles including SRK.

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### **Hannah Badenach**

*Non-exec Director*

- VP of Asset Development & Operations at Noble Resources Limited.
- A lawyer with several years experience in Asia.
- Prior roles include MD of QGX Mongol LLC from 2006 until the company was sold in 2008.

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### **Brian Thornton**

*Non-exec Director*

- Co-founder of Xanadu and a director since 2005.
  - 25 years experience as an adviser to the mining sector in Australia, Indonesia, Papua New Guinea and the Pacific Rim.
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# Management team

## ► Deep corporate, porphyry exploration and emerging market experience

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**George Lloyd**

*Managing Director*

- Corporate and direct investment experience in the natural resources sectors.
- Mongolian experience including transactions in coal, copper and mining services.
- Prior roles include investments at a Singapore-based hedge fund, business development at Wesfarmers Limited and corporate finance with Grant Samuel.

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**Ganbayar L.**

*Executive Director*

- Co-founder of Xanadu and a director since August 2006.
- Extensive Mongolian business experience and perspective.
- Corporate development and managing the day-to-day operations.

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**Andrew Stewart**

*Chief Geologist*

- 15+ years experience in minerals exploration throughout Asia and Eastern Europe.
- Expertise in porphyry copper and a Phd in Economic Geology.
- Prior roles include senior technical positions at Ivanhoe Mines and Vale

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**Mark Langan**

*Chief Financial Officer*

- Chartered Accountant with over 25 years experience in public practice and commerce.
- Substantial listed company and Asian operations experience.
- A member of the Institute of Chartered Accountants of Australia.

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**Janine Rolfe**

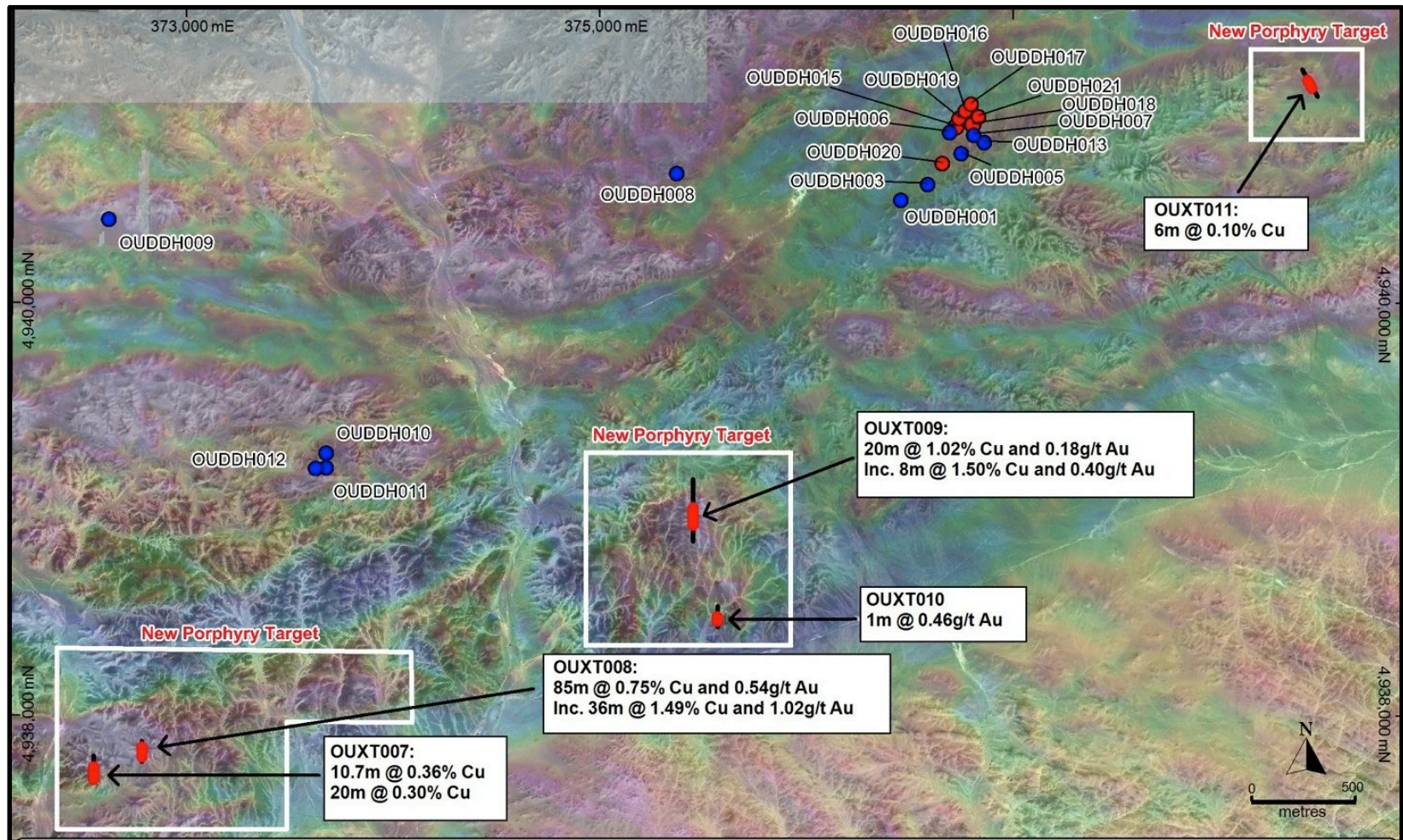
*Company Secretary*

- 15+ years experience as a corporate lawyer and company secretary.
  - Janine established Company Matters advising clients on governance and legal matters.
  - Prior roles include Company Secretary at Qantas Airways Limited and a Solicitor at Mallesons Stephen Jaques (now King Wood Mallesons) in M&A and corporate advisory.
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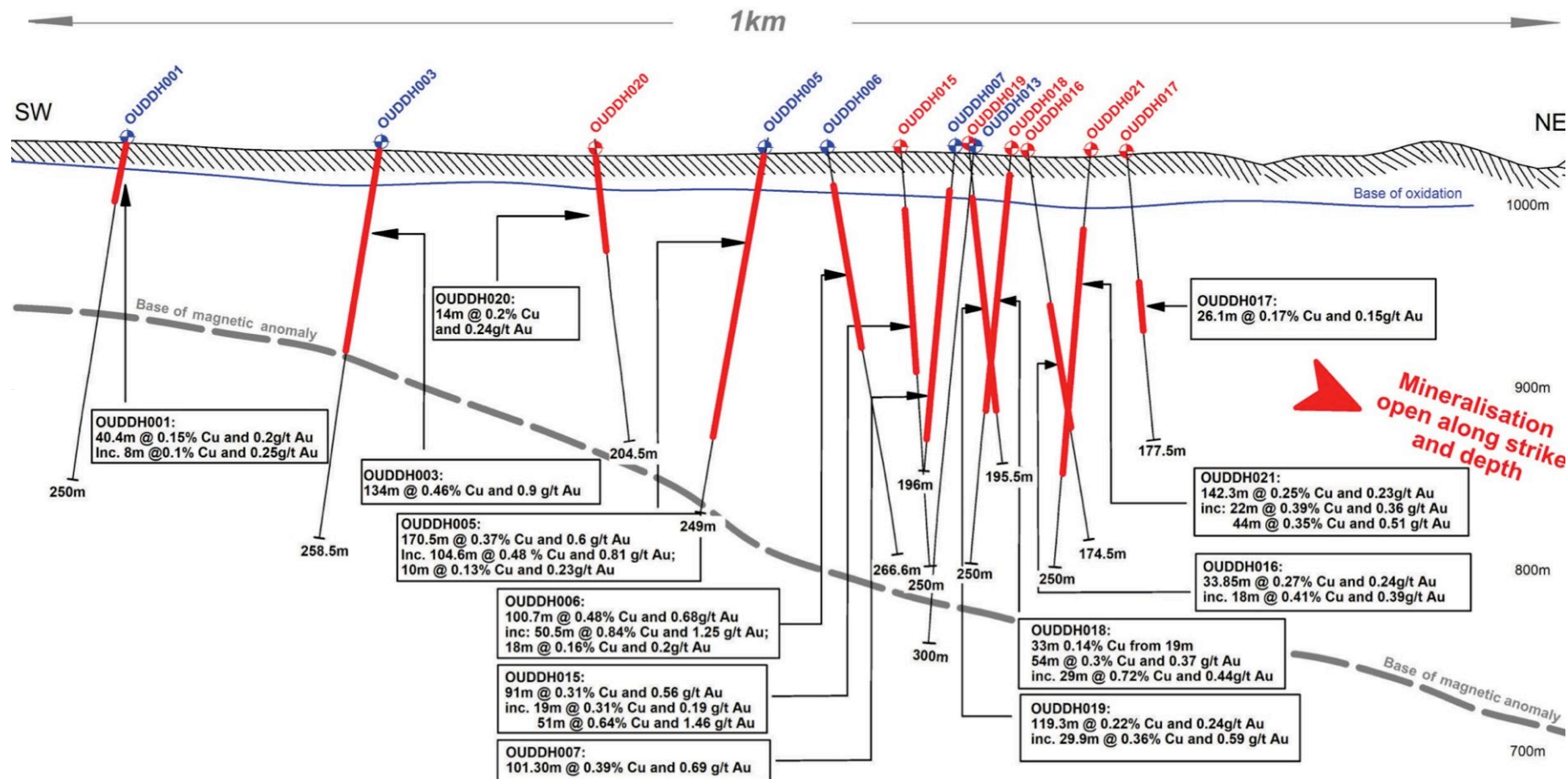
# Oyut Ulaan

## ► Trenching & drilling extend shallow gold-rich porphyry copper mineralisation



# Diorite Hill long section

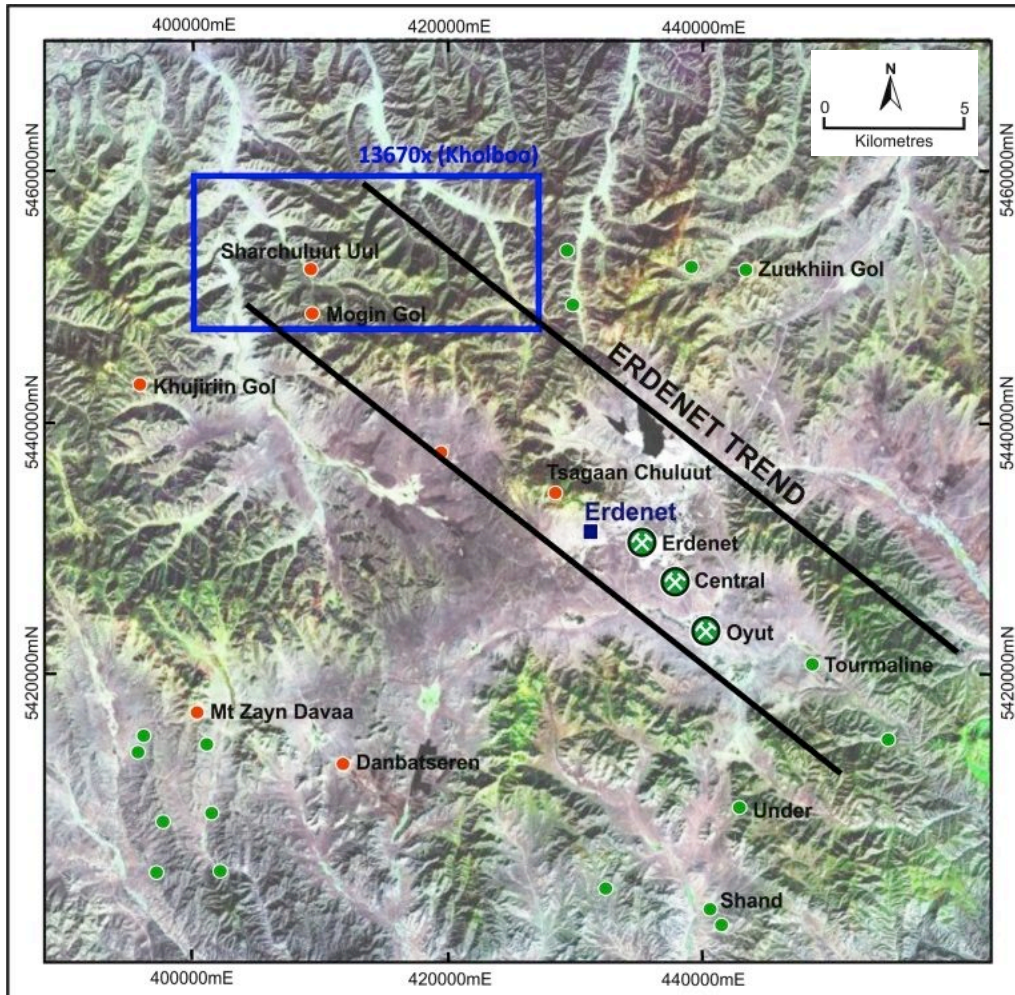
## ► Economically significant gold-rich porphyry copper intersections





# Sharchuluut project

## ► 2013 mapping and surface geochemistry identify new drill targets



- Strategically located in the Erdenet trend, 40km north west of the Erdenet porphyry copper-moly deposit
- Erdenet is a giant porphyry copper-moly deposit of 1.8Bt @ 0.62% Cu and 0.025% Mo
- License is large and relatively under-explored
- High potential to discover a large satellite deposit within the Erdenet trend
- Project comprises over 7km<sup>2</sup> of porphyry related alteration and has associated untested geophysical targets



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