



20 March 2015

Dr Andrew Stewart, CEO Xanadu, Presents Kharmagtai Project Exploration Success and Maiden Mineral Resource at PACRIM Conference, Hong Kong, 19 March 2015

Xanadu Mines Ltd (ASX: XAM, "Xanadu") is pleased to release a technical presentation made by Dr Stewart last evening at the prestigious PACRIM 2015 conference. The presentation highlights the progress of exploration over the last 12 months at the Kharmagtai Project in Southern Mongolia including the announcement of a Maiden Mineral Resource.



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ASX XAM

Xanadu Mines Ltd (ASX: XAM) is an exploration company that has assembled a significant exploration portfolio across Mongolia's porphyry belts. These belts are part of the larger Central Asian Orogenic Belt – one of the last great exploration frontiers known to host large copper porphyry deposits – and Mongolia is emerging as a globally significant copper province.



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THE KHARMAGTAI PORPHYRY BRECCIA COMPLEX

A L Stewart & M Baatar

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PACRIM 2015 CONGRESS | HONG KONG MARCH 2015



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The information in this presentation relating to Results is based on information compiled or reviewed by Dr. Andrew Stewart, who is an employee of Xanadu 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 presentation of the matters based on his information in the form and context in which it appears.





Presentation Outline

1. Location
2. Exploration History
3. District Geology
4. Alteration & Mineralisation
5. Key exploration criteria
6. Conclusions

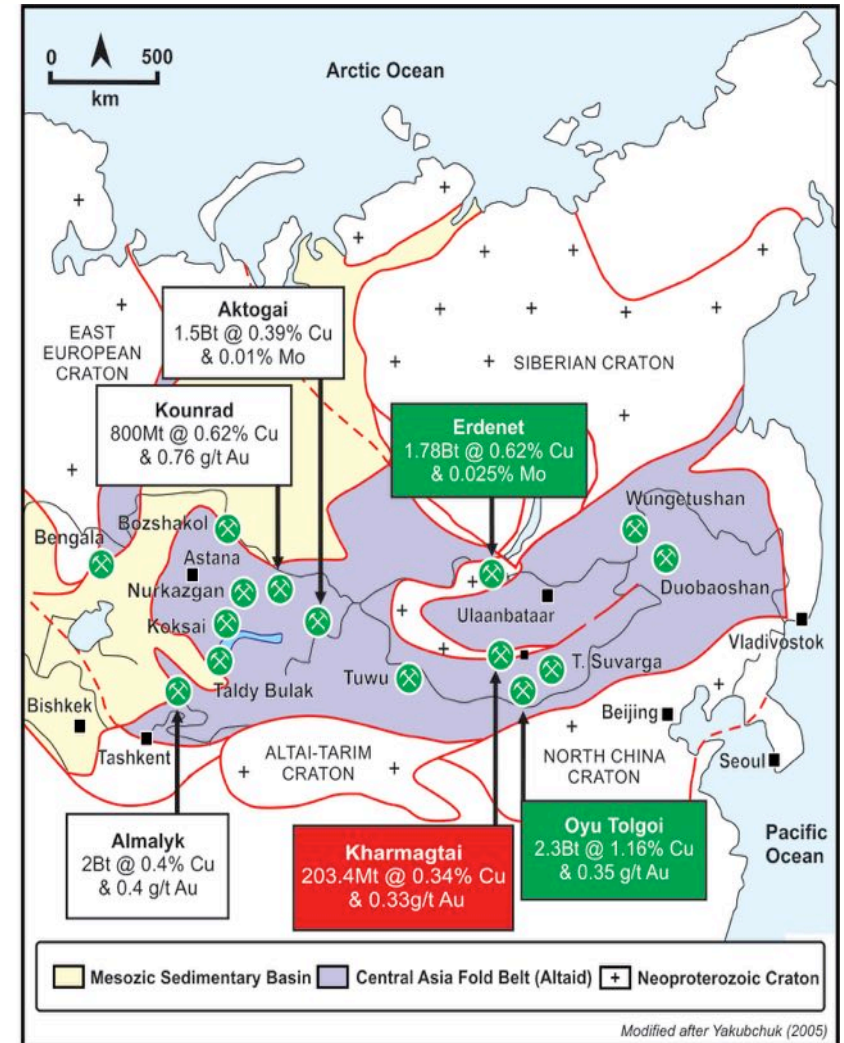




One of the last great exploration frontiers

Central Asian Fold Belt

- Highly mineralised and vastly underexplored mineral belts known to host large deposits;
- Fourth most endowed PCD province;
- Giant porphyry-related copper and/or gold deposits are related to a range of magmatic events;





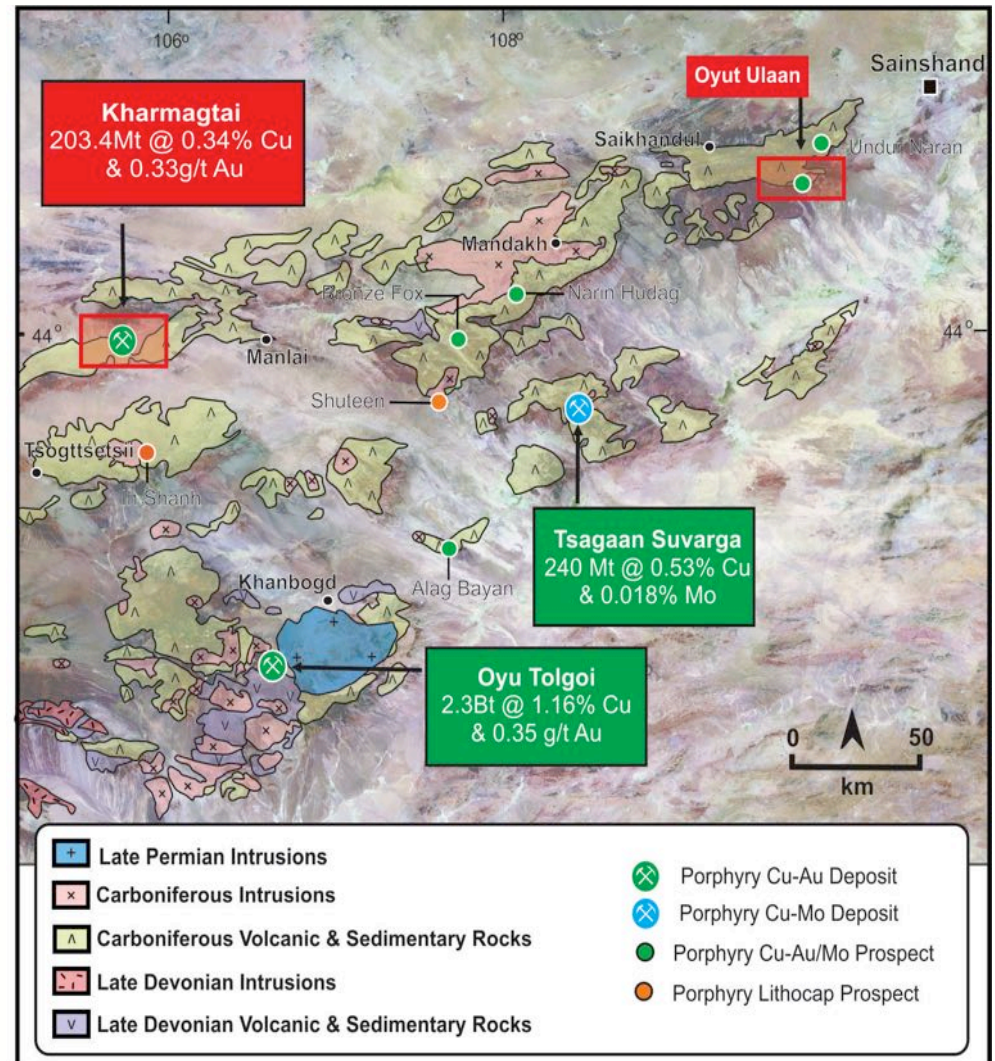
Middle Paleozoic Gurvansaikhan Belt

Southern Mongolia

- Significant emerging porphyry copper belts;
- Long-lived & episodic development;
- Porphyry deposits

Late Devonian (~370 Ma)

Early Carboniferous (~320 Ma)





Exploration History



Quartz stockwork: 2 m @
1.63% Cu & 6.9 g/t Au

Potential only recognised in the last 30yr

- **1960-1975:** Numerous joint Mongolian / former Eastern Block exploration programmes;

First porphyry Cu mineralisation & tourmaline-related Au mineralisation

- **1995-1998:** Detailed exploration by **QGX Gold**;

Early exploration focused on the shallow replacement-style gold mineralisation;

- **2002-2013:** Detailed work by **Ivanhoe & Asia Gold** focused on outcropping porphyry mineralisation.

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2014 Work Program

Xanadu in the last 12 months

- **2014** – Kharmagtai Project acquired;
- Approximately 12,500m of diamond drilling completed;
- Potential for a large scale copper-gold system with a multiple near-surface & gold-rich centres;
- Drilling intersected the first significant copper-gold (>1% CuEq) mineralisation associated with tourmaline breccia mineralisation;
- Maiden Mineral Resource estimate complete;



Tourmaline breccia: 2 m
@ 2.86% Cu & 2.13 g/t Au

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Kharmagtai resources – March 2015

Project Resource

Deposit	Mining	Cut-Off	Resource	Material	Grade			Metal	
	Method	CuEq(%)	Category	(Mt)	Cu(%)	Au(g/t)	CuEq(%)	Cu(Mlb)	Au(Koz)
All	OC	0.3	Indicated	23	0.41	0.55	0.76	203	401
			Inferred	107	0.27	0.24	0.42	641	833
			Subtotal	129	0.30	0.30	0.48	844	1,234
	UG	0.5	Indicated	24	0.43	0.47	0.73	225	359
			Inferred	51	0.42	0.36	0.64	463	591
			Subtotal	74	0.42	0.40	0.67	688	950
	Combined		Indicated	46	0.42	0.51	0.74	428	759
			Inferred	157	0.32	0.28	0.49	1,104	1,424
			Total	203	0.34	0.33	0.55	1,533	2,184

High-grade Resource

Deposit	Mining	Cut-Off	Resource	Material	Grade			Metal	
	Method	CuEq(%)	Category	(Mt)	Cu(%)	Au(g/t)	CuEq(%)	Cu(Mlb)	Au(Koz)
All	OC	0.6	Indicated	9	0.52	0.87	1.08	102	248
			Inferred	1	0.38	0.82	0.92	11	34
			Subtotal	10	0.50	0.86	1.06	113	282
	UG	0.6	Indicated	20	0.46	0.57	0.83	203	368
			Inferred	26	0.46	0.50	0.78	263	418
			Subtotal	46	0.46	0.53	0.80	465	786
	Combined		Indicated	29	0.48	0.66	0.91	305	616
			Inferred	27	0.46	0.52	0.79	274	452
			Total	56	0.47	0.59	0.85	578	1,068

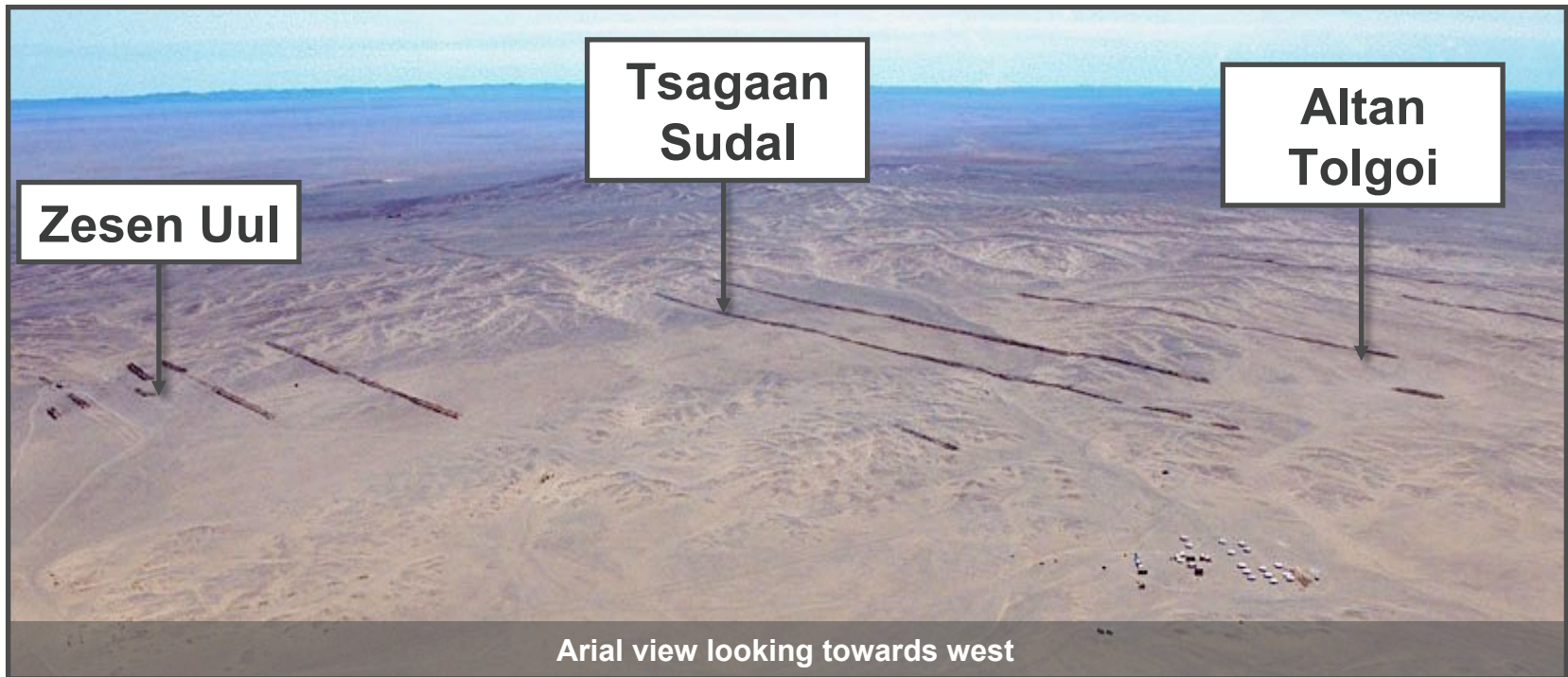
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Kharmagati Intrusive Complex

Panorama of Kharmagtai

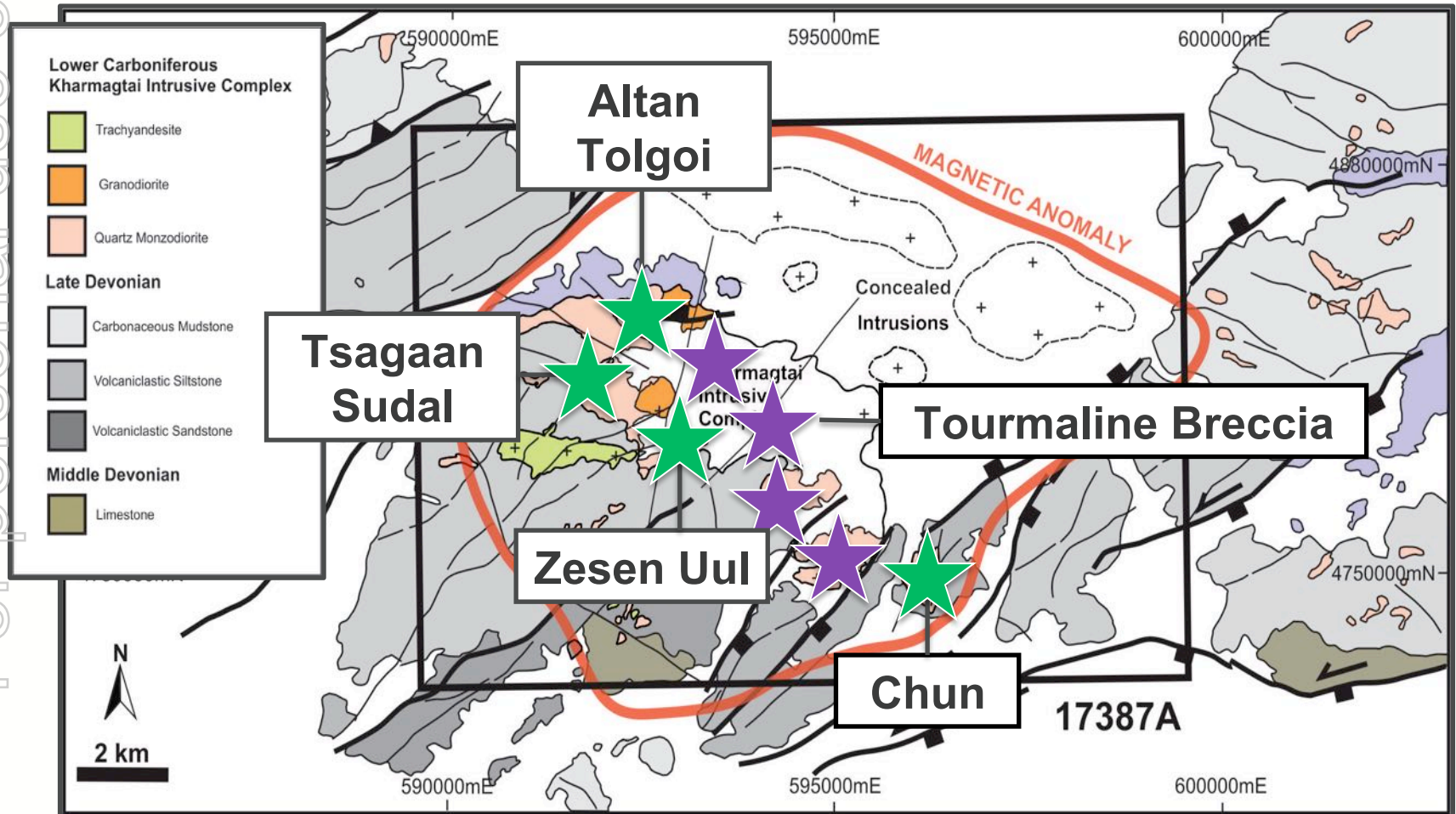
Outcrop throughout the Kharmagtai district is sparse
Quaternary sand forming a thin cover over most of the KIC





Kharmagati Intrusive Complex

Multiple porphyry & late-stage breccia centres





Porphyry Related Mineralisation

Multiple porphyry & breccia centres

- Contrasting styles of porphyry Cu-Au mineralisation;

Early Au-rich porphyry mineralisation &

Late magmatic-hydrothermal tourmaline breccia mineralisation;

- Complex overprinting relationships.



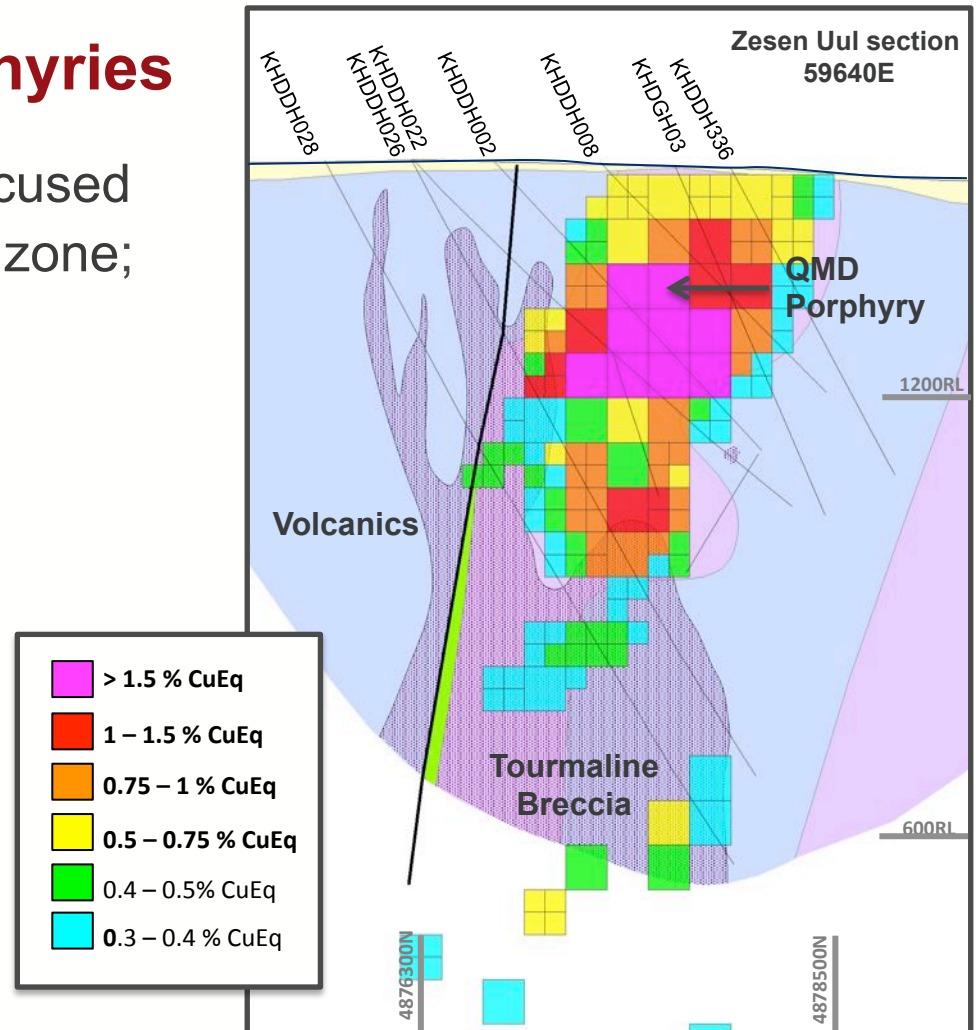
Early laminated quartz-magnetite veins (Zesen Uul): 2 m @ 0.87 % Cu & 1.44 g/t Au



Early Au-rich porphyry mineralisation

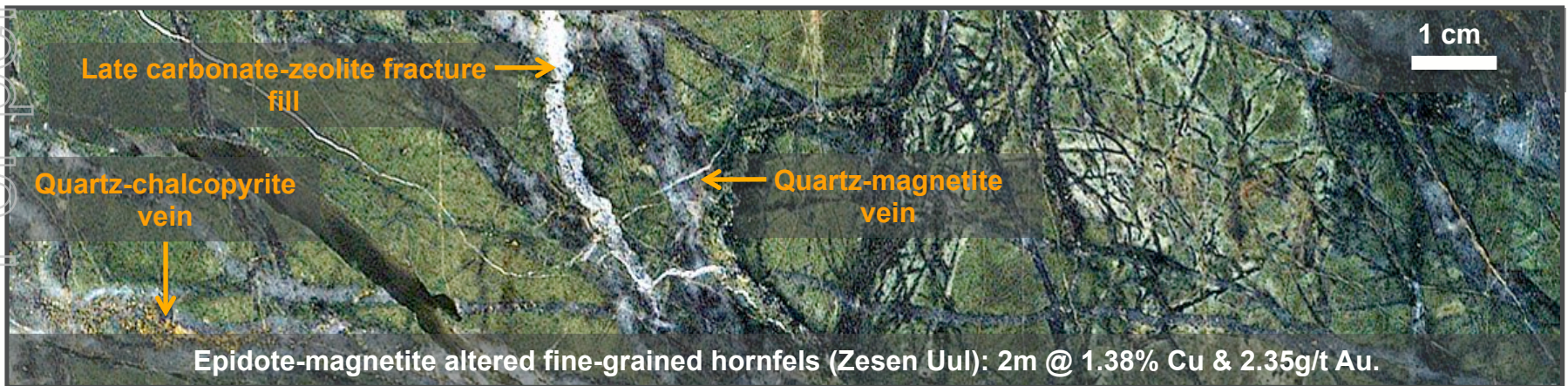
High-grade 'pencil' porphyries

- Core of quartz veins tightly focused within the pipe-like stockwork zone;
- Sulfide mineralisation zoned;
 1. Bornite-rich core
 2. Chalcopyrite-rich
 3. Outer pyrite-chalcopyrite



Early Biotite-Magnetite Alteration (Hornfels)

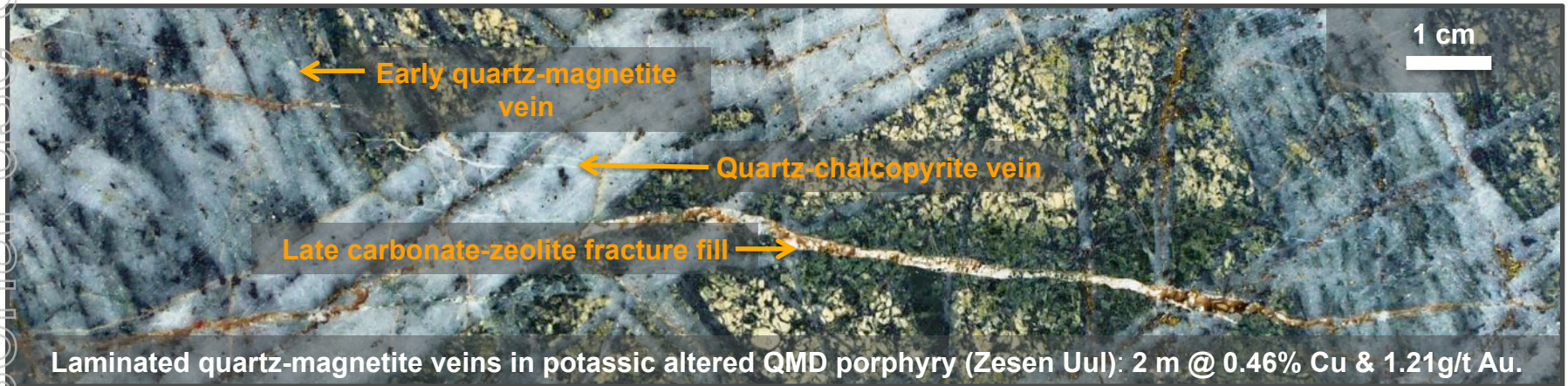
Hornfels create a 'pressure cooker' effect





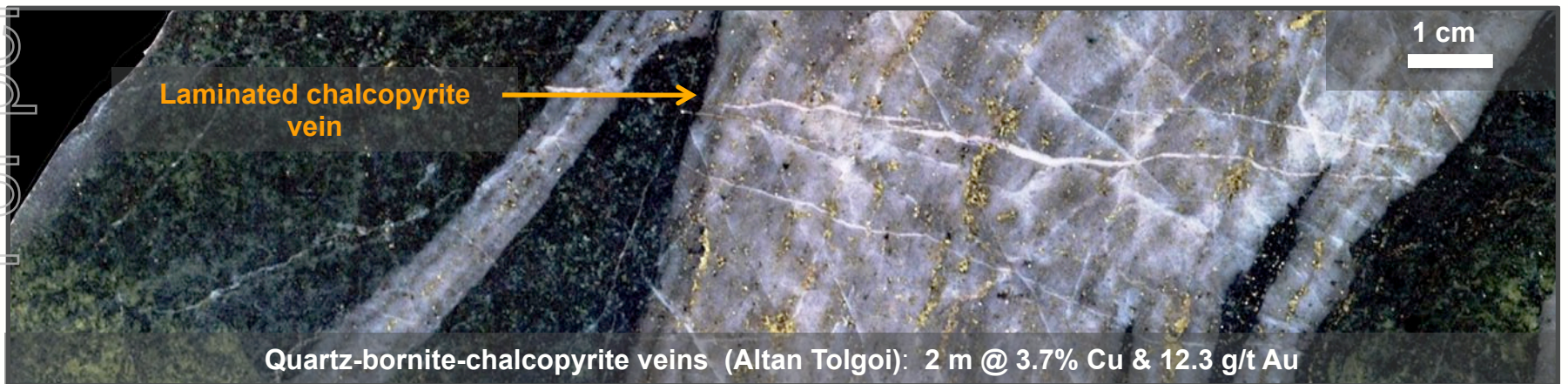
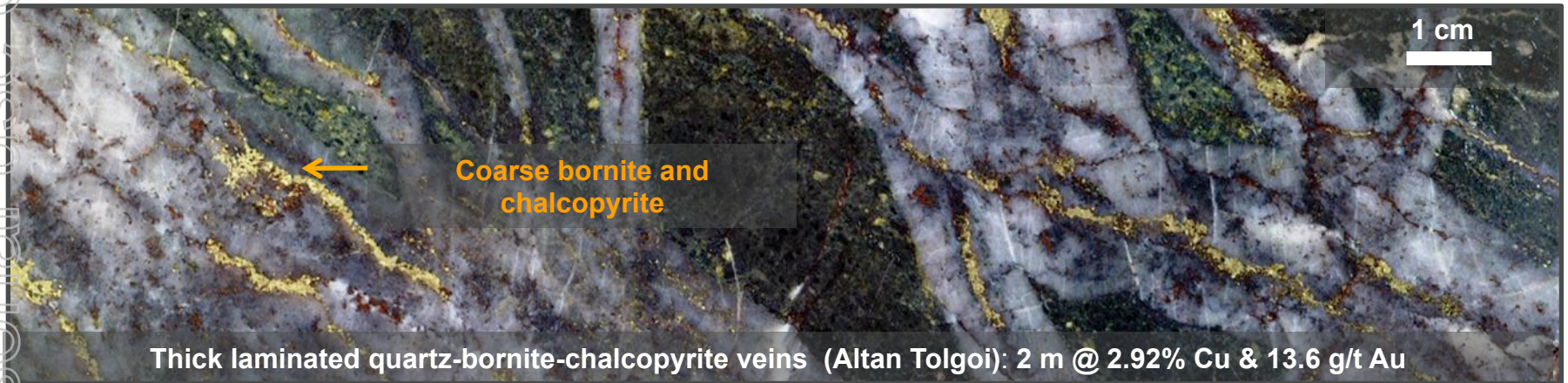
Early Magnetite Veins (M Veins)

Early laminated & simple M veins



Quartz-bornite-chalcopyrite veins ('A' veins)

Early laminated & irregular high-temperature veins





Quartz-chalcopyrite veins ('B' veins)

Centre-line quartz-chalcopyrite stockwork & sheeted veins

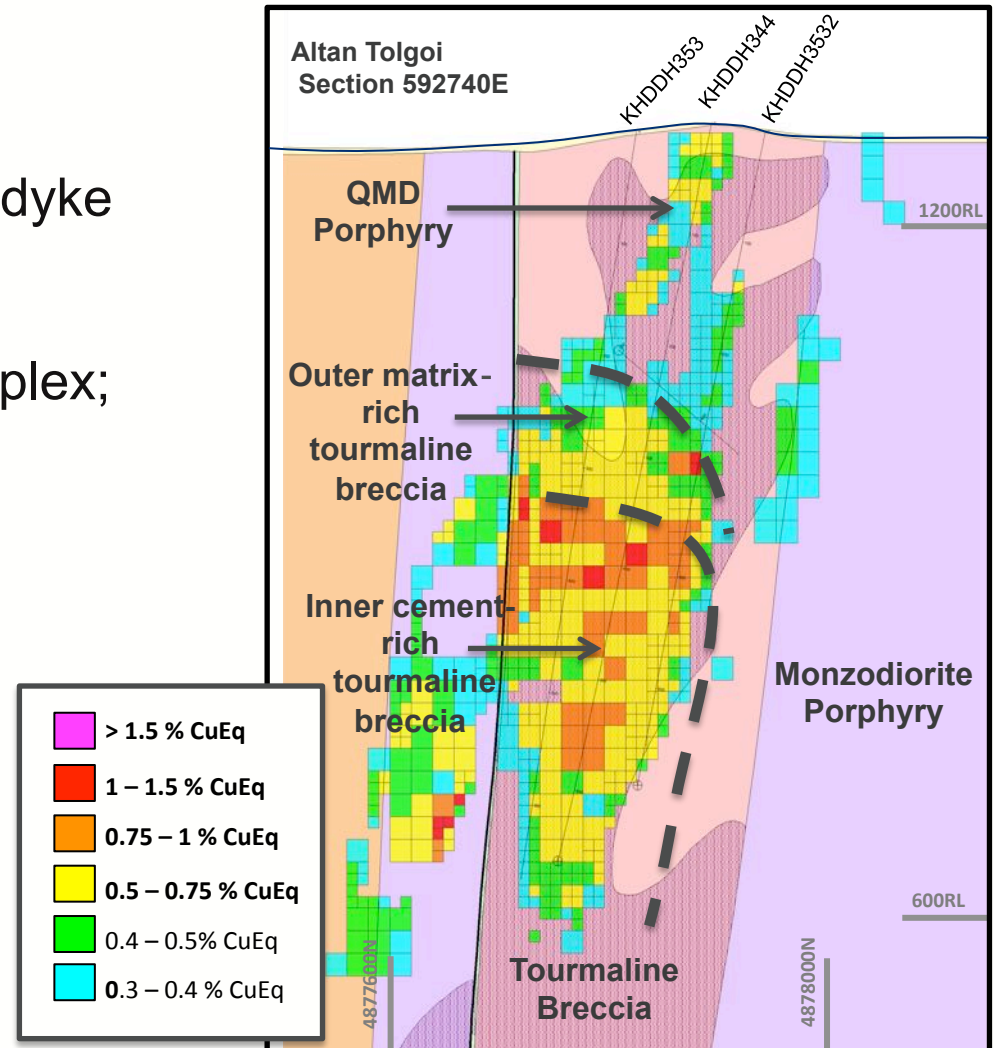




Late tourmaline breccia mineralisation

Breccia dyke complex

- Variably mineralised breccia dyke complex;
- Vertically zoned breccia complex;
 1. Outer matrix-rich tourmaline breccia (chlorite-illite alteration)
 2. Inner cement-rich tourmaline breccia (K-feldspar-hematite alteration)





Tourmaline Breccia mineralisation

Tourmaline-pyrite
altered matrix-rich
breccia

DEPTH – 376.50m

1 cm

KHDDH346: 2 m @
0.15% Cu &
0.03 g/t Au

Tourmaline-pyrite-
chalcopryite
matrix-rich breccia

DEPTH -385.4m

1 cm

KHDDH346: 2 m @
0.83% Cu &
0.47g/t Au

Tourmaline -
chalcopryite-pyrite
cemented breccia

DEPTH – 413.5m

1 cm

KHDDH346: 2 m @
4.58 % Cu &
3.82 g/t Au

Chalcopryite-pyrite
cemented breccia

DEPTH – 415.5m

1 cm

KHDDH346: 2 m @
5.16% Cu &
3.44 g/t Au

Chalcopryite
cemented breccia

DEPTH- 598.5m

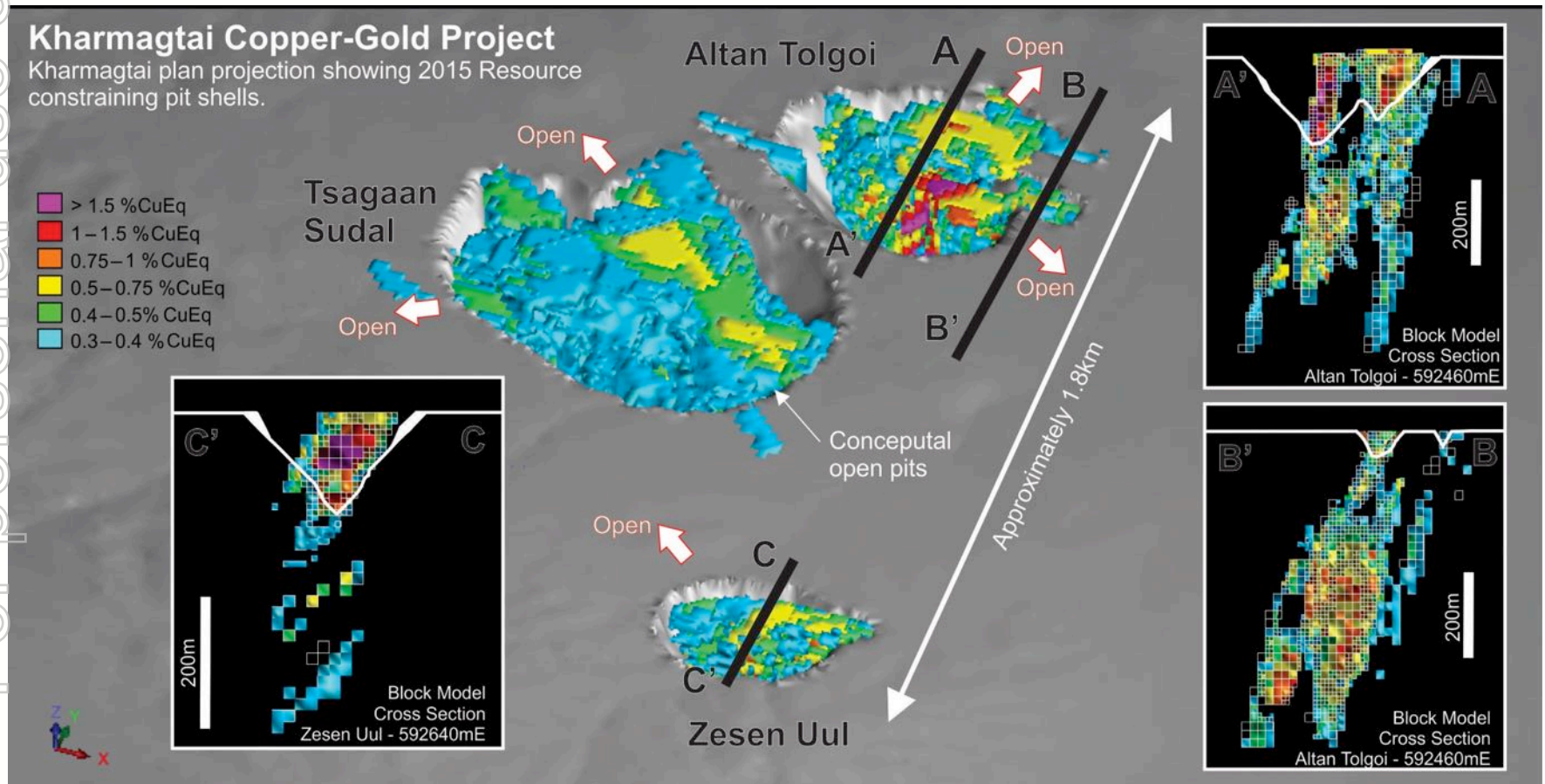
1 cm

KHDDH346: 2 m @
5.15% Cu &
6.03 g/t Au



Key exploration criteria

Kharmagtai plan projection showing 2015 Resource

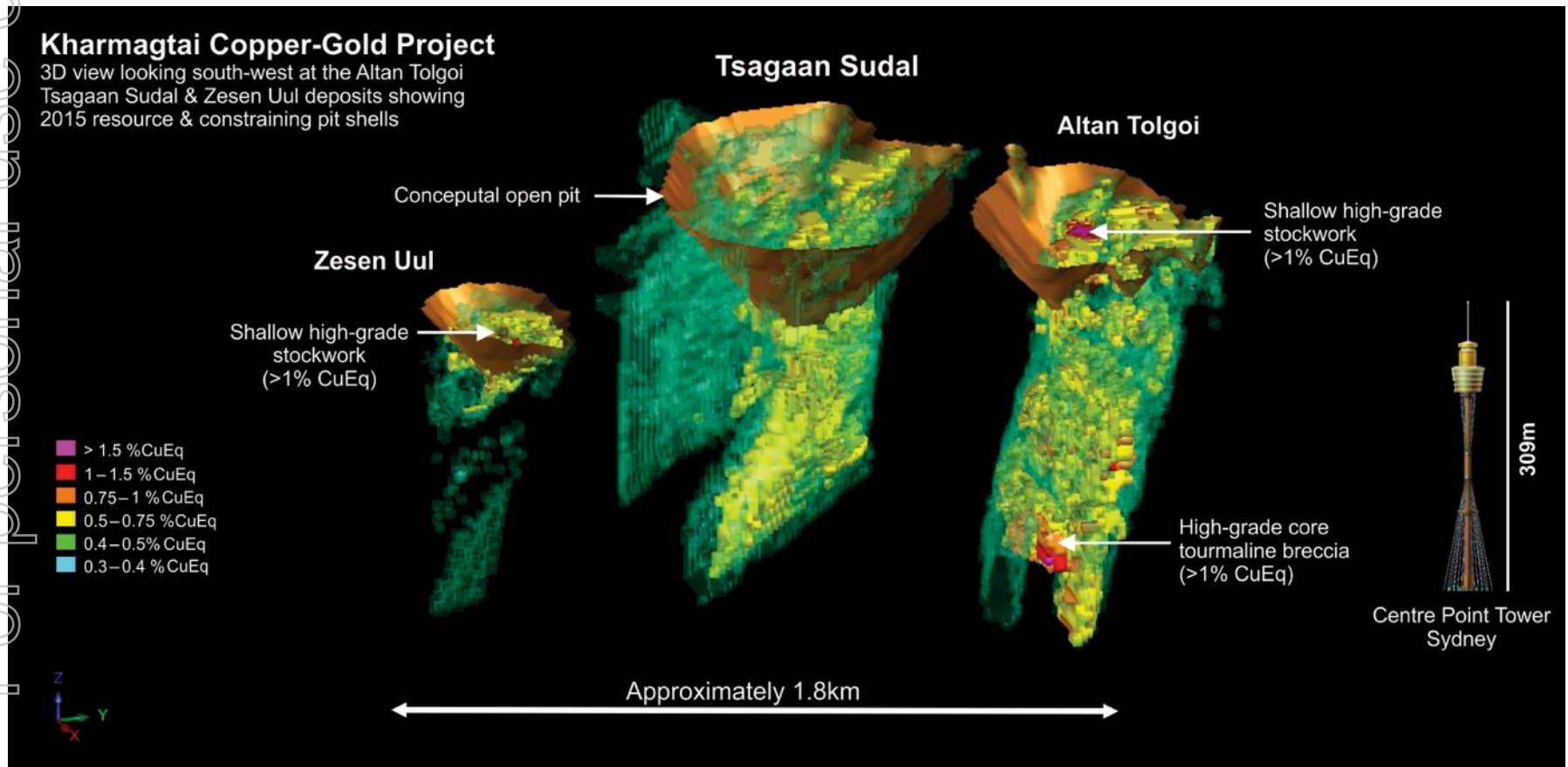


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Key exploration criteria

3D view looking south-west



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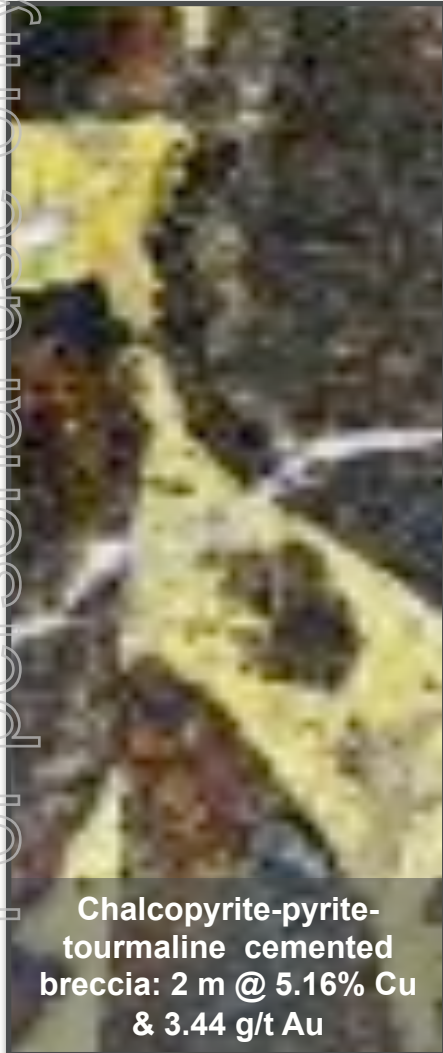
Key exploration criteria



1. Evolving understanding of alteration & mineralisation distribution and zonation;
2. Detailed reappraisal of the tourmaline breccia mineralisation – may contribute to mineralization?
3. Recognition of distribution of intrusive phases & mineralisation;
4. Detailed exploration models that integrate the range of features of the significant systems will increase the probability of success in this emerging province;
5. Willingness from all levels of the company to drill geology holes & test conceptual targets.



Conclusions



1. Early Carboniferous porphyry systems represent attractive exploration targets in terms of their high-grades and contained gold;
2. Recent exploration indicates potential for a large porphyry Cu-Au deposit at Kharmagtai similar to those seen elsewhere in Central Asia Fold Belt;
3. Early high-grade 'pencil' porphyry copper-gold deposits occur within the margins of the intrusive complex;
4. Late tourmaline mineralisation potentially represents the upper part of a large variably mineralised breccia dyke complex.



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JORC compliance

Competent Persons Statements

The information in this report that relates to Mineral Resources is based on information compiled by Mr Andrew J. Vigar, who is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Vigar is employed by Mining Associates Limited or Hong Kong. Mr Vigar 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 Vigar consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this report 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, which is incorporated in the database that was provided to Mining Associates for undertaking the a resource estimate. Dr Stewart, who is an employee of Xanadu and is a Member of the Australasian Institute of Geoscientists. Dr. 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. 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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JORC compliance

Resource Estimation

The Mineral Resource estimate for Kharmagtai was completed by external independent consultants Mining Associates Ltd. The Mineral Resource is reported according to the principles and guidelines of JORC 2012. It is based on a database containing 64,296 records from 265 holes, with a total of 91,837.8 metres drilled that was available as of 31 December 2014.

The Mineral Resource was tested for and found to have reasonable and realistic prospects for eventual economic extraction. It represents a realistic inventory of mineralisation within a conceptual open cut and underground mine design. The base case CuEq cut-off grade assumptions for each deposit were determined using cut-off grades applicable to mining operations exploiting similar deposits. The CuEq cut-off applied for the open pit was 0.3% CuEq and CuEq cut-off 0.5% CuEq applied to the underground.

The CuEq calculation represents the total metal value for each metal, multiplied by the conversion factor, summed and expressed in equivalent copper percentage. Grades have not been adjusted for metallurgical or refining recoveries and the copper equivalent grades are intended for summarising grade. The copper equivalent calculation is intended as an indicative value only. The following copper equivalent conversion factors and long term price assumptions have been adopted: Copper Equivalent Formula ($\text{CuEq} = \text{Cu}\% + (\text{Au (ppm)} \times 0.6378)$); Price assumptions: Cu (US\$2.60/lb) and Au (US\$1,300/oz) and a gold recovery factor of 70.85%.