



The Large Alkalic Gold-Copper Porphyry at Boda-Kaiser in Central West NSW

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**SYDNEY MINING CLUB
LEADING EDGE**

7 March 2024



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Previously reported information

The information in this report that relates to the combined mineral resources and ore reserves is drawn from the Company's ASX announcement dated 7 September 2021. The Tomingley Life Of Mine Plan is extracted from the Company's ASX announcement dated 3 June 2021. Exploration results are extracted from the Company's ASX announcements noted in the text of the document and are available to view on the Company's website. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcement(s); in the case of estimates of mineral resources or ore reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed; and that the form and context in which the Competent Person's findings are presented have not been materially altered.

Competent person

Unless otherwise advised above or in the Announcements referenced, the information in this presentation that relates to exploration results, mineral resources and ore reserves is based on information compiled by Mr D I Chalmers, FAusIMM, FAIG, (director of the Company) who 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 Chalmers consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.

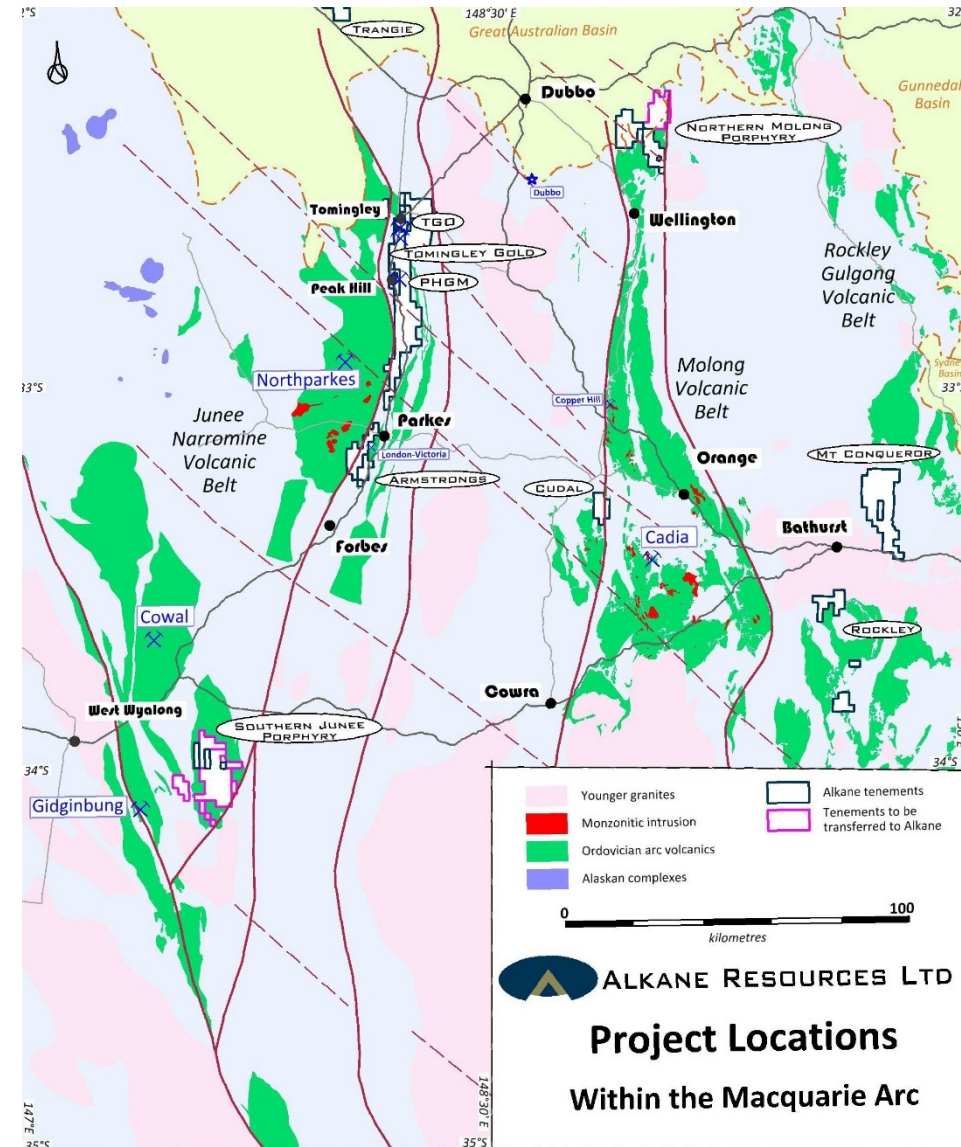
Acknowledgements

The significant contribution to this discovery by David Meates, Rod Dean, Dr Alan Wilson and the Alkane Exploration Team is acknowledged. The petrological input by Dr Tony Crawford and other external consultants is also acknowledged.

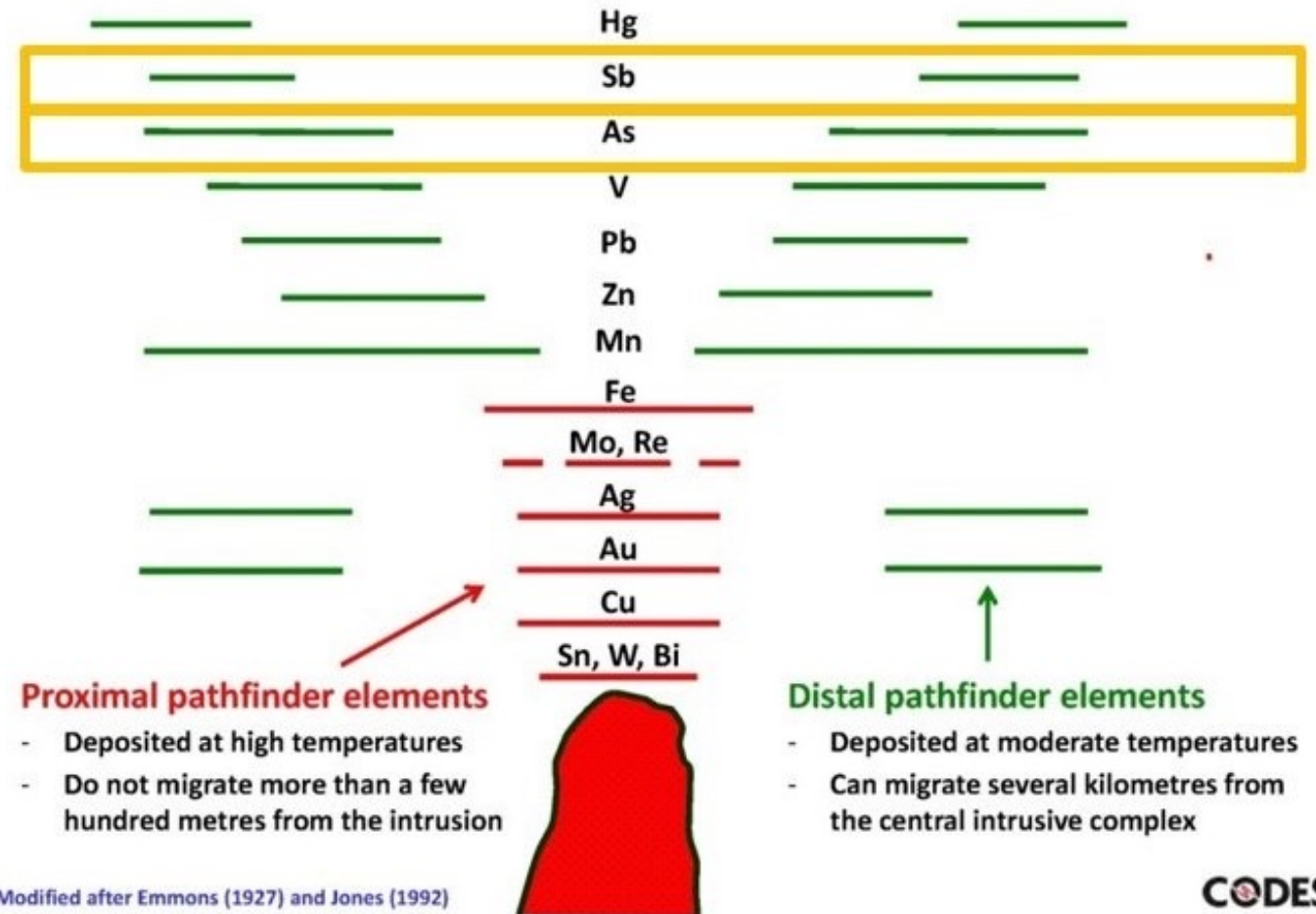
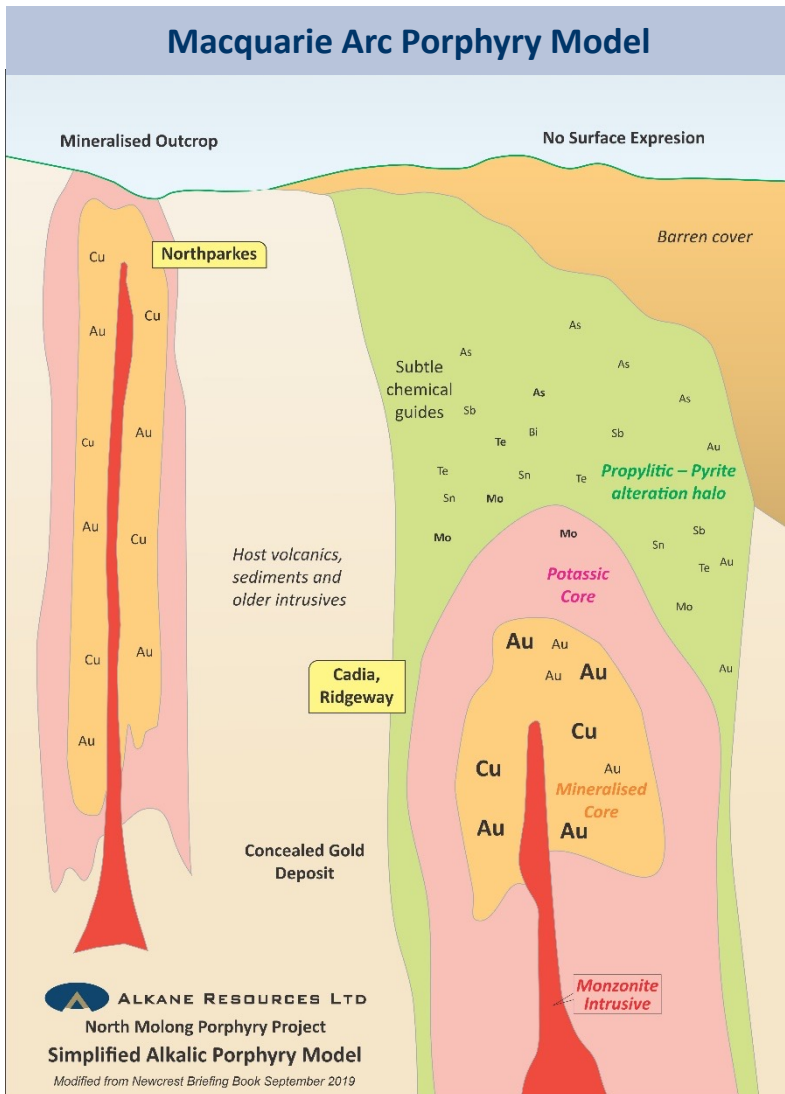
Background: The Macquarie Arc



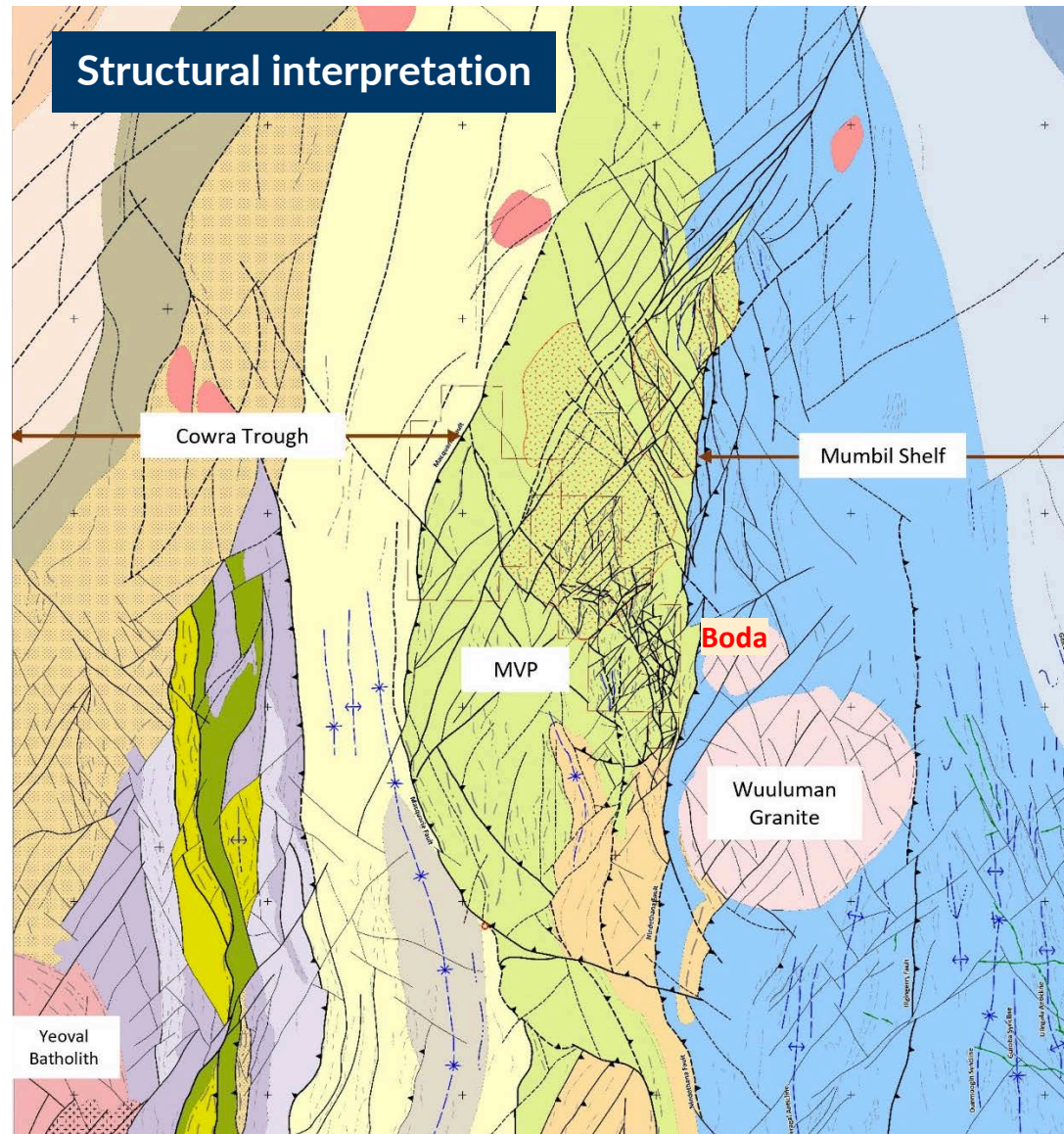
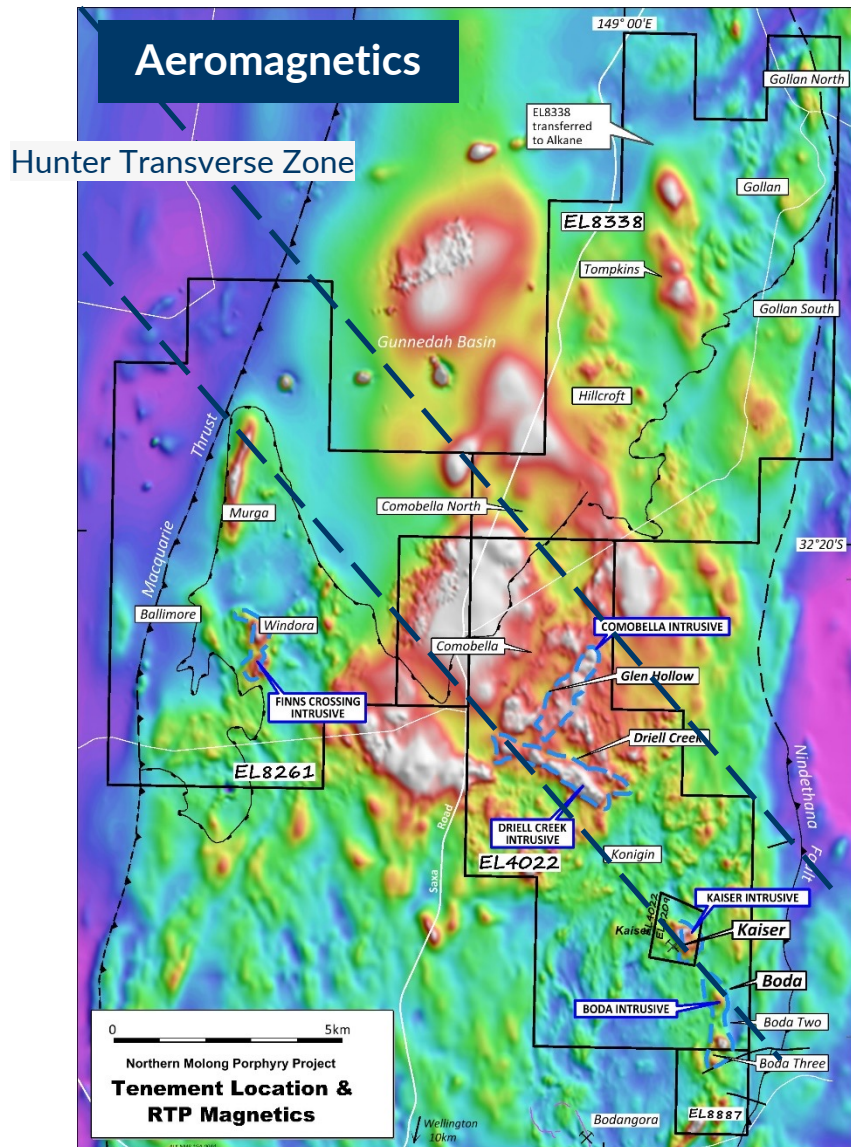
- The Macquarie Arc within the Central West of NSW is a long-lived Ordovician to Early Silurian aged (480 – 400 million years from present) oceanic volcanic island arc.
- It is remarkably well preserved, gently folded volcanic and intrusive sequence, often bounded by major north-south structures.
- The volcanic-intrusive sequences are of “alkalic” affinity, similar to modern day oceanic island arcs (PNG, Indonesia, Philippines and parts of British Columbia, Equador, Peru, Chile and Argentina).
- Significant regional lithogeochemistry characterisation / prospectivity by CODES (UTAS) and GSNSW.
- It hosts a number of global significant porphyry – epithermal gold-copper deposits such as:
 - Cadia 50Moz Au and 10Mt Cu;
 - Northparkes 5.5Moz Au and 4.5Mt Cu; and
 - Cowal 14Moz Au.



Macquarie Arc: Porphyry Model and Geochemical Signature

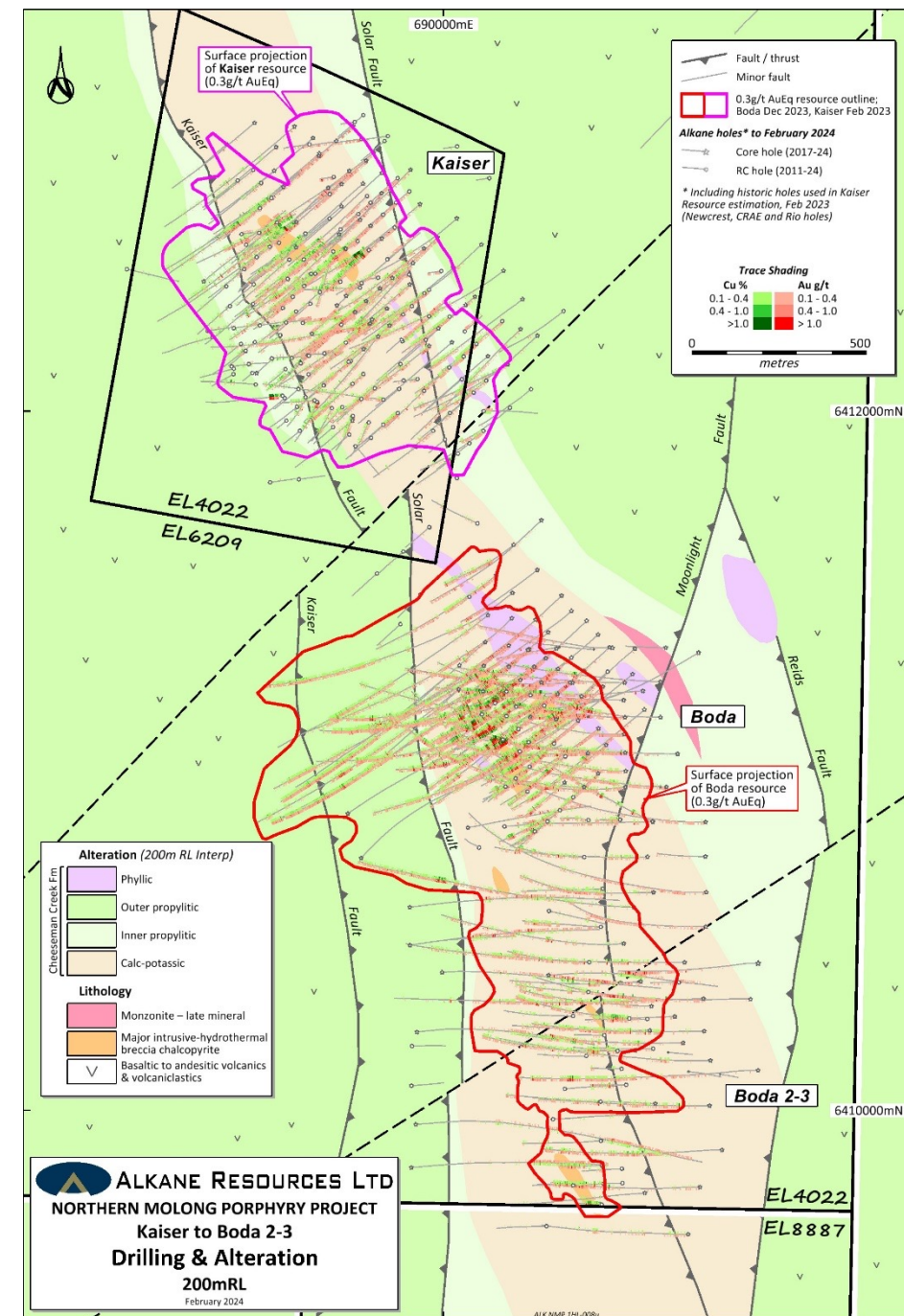


NMPP Regional Geology



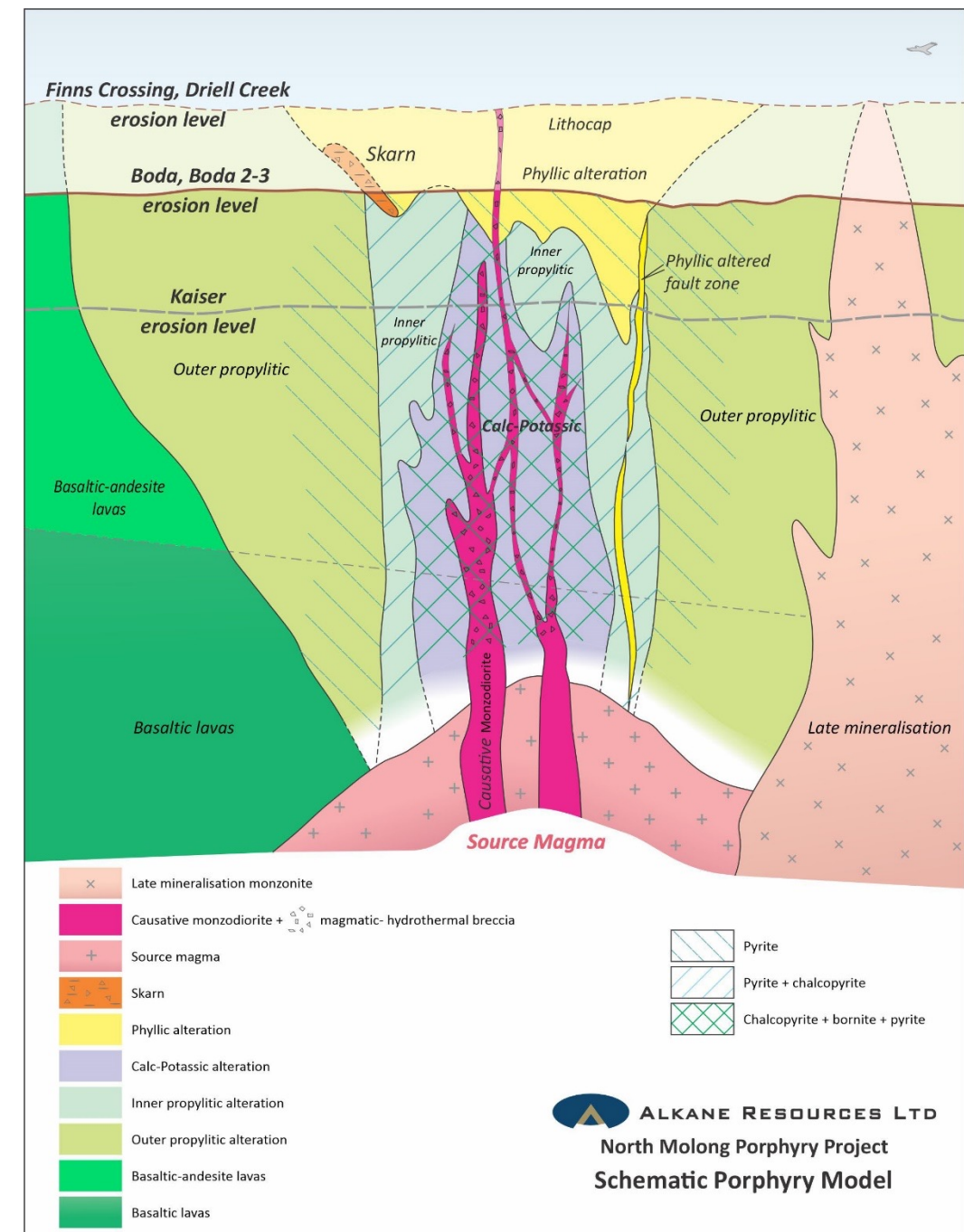
Boda-Kaiser Deposits

- At the end of February 2024, Alkane has completed approximately 200,000 metres of drilling within the Boda-Kaiser area.
- Drilling has defined more than 3km of continuous calc-potassic alteration with Au-Cu mineralisation from Kaiser to Boda 2-3.
- Potassic pyrite zone (gold rich) occurs on the east and northeast flanks of the calc-potassic core.
- Phyllic alteration overprints the northeast shoulder of Boda.
- Imbricated west dipping thrusts (faults) and lesser east dipping structures dislocate the porphyry system.

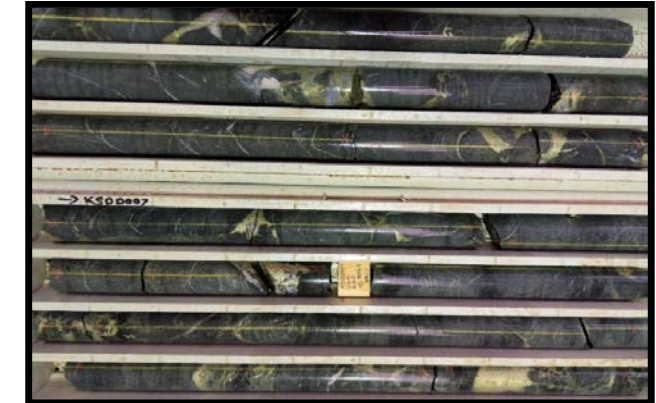
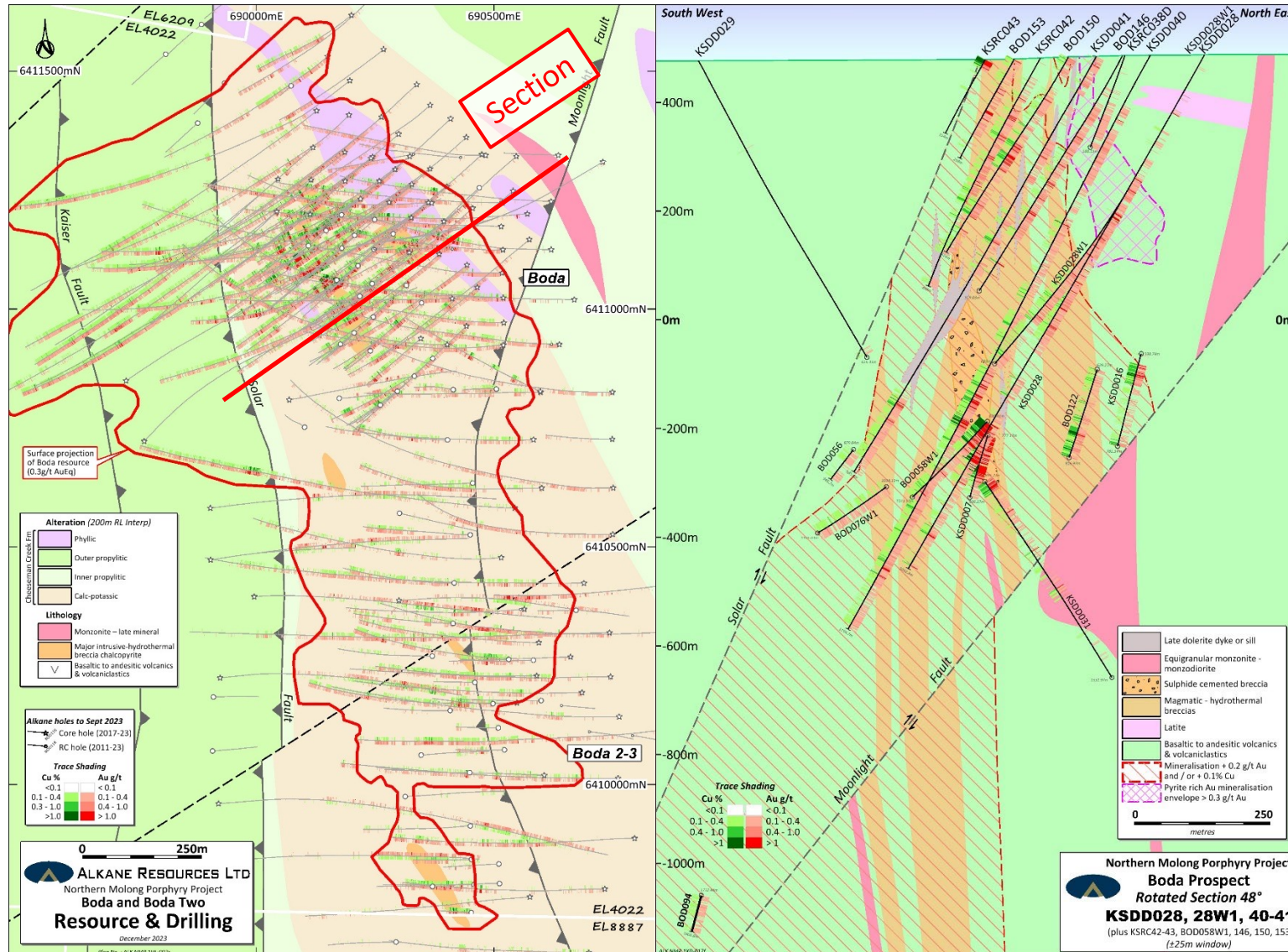


NMPP Boda Geological Model

- Through extensive drilling of the area, Alkane has developed a conceptual geological model for the Boda – Kaiser intrusive and alteration system.
- The host rocks are shallow to moderately west dipping sequence of shoshonitic basaltic andesite lavas with lesser volcanoclastics. The volcanic sequence is cut by near vertical monzogabbro to monzonitic dykes and intrusive breccias
- Positioned beneath a submarine stratovolcano.
- Alteration of host sequence is extensive calc-potassic with gold-copper mineralisation centred around intrusive breccias, zoning out to inner and outer propylitic alteration overprinted by a significant gold-rich phyllic alteration blanket.
- Metal zonation indicates several separate hydrothermal cells defined within the 5km NW corridor at Boda, Boda 2-3 and Kaiser.
- As a silica undersaturated system, there is limited quartz veining.
- Litho-geochemistry and age-dating place Boda in Late Ordovician – Early Silurian shoshonitic volcanic - intrusive event (443 – 436Ma) of the Molong Volcanic Belt that hosts the giant Cadia deposit.



Boda Deposit

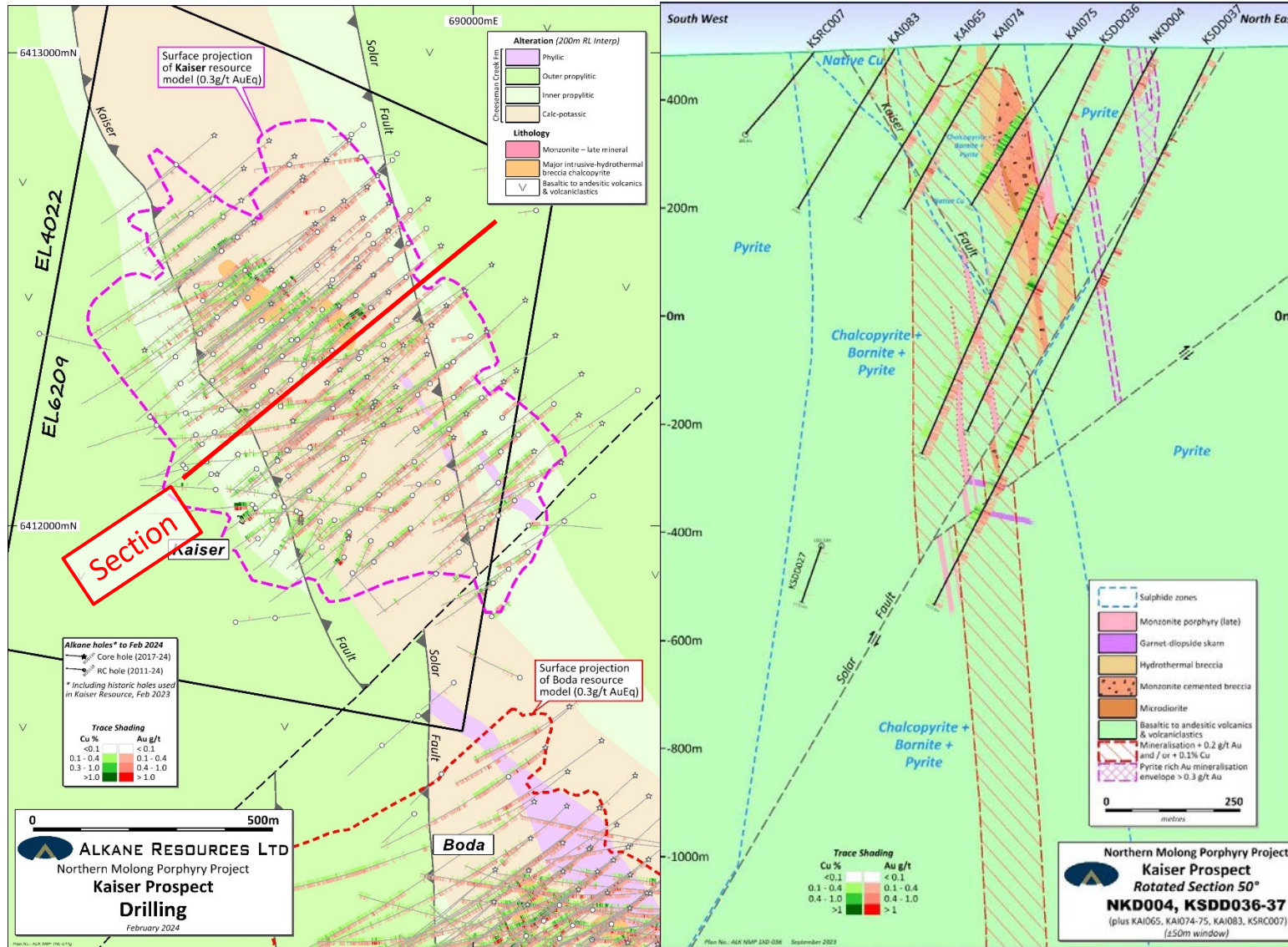


KSD0007 - 96.8m @ 3.97g/t Au and 1.52% Cu
Chalcoppyrite cemented breccia
within calc-potassic alteration of 1,167m @
0.55g/t Au and 0.25% Cu from 75 metres



BOD072 - 404m @ 0.31g/t Au from 334m phyllic
alteration zone

Kaiser Deposit



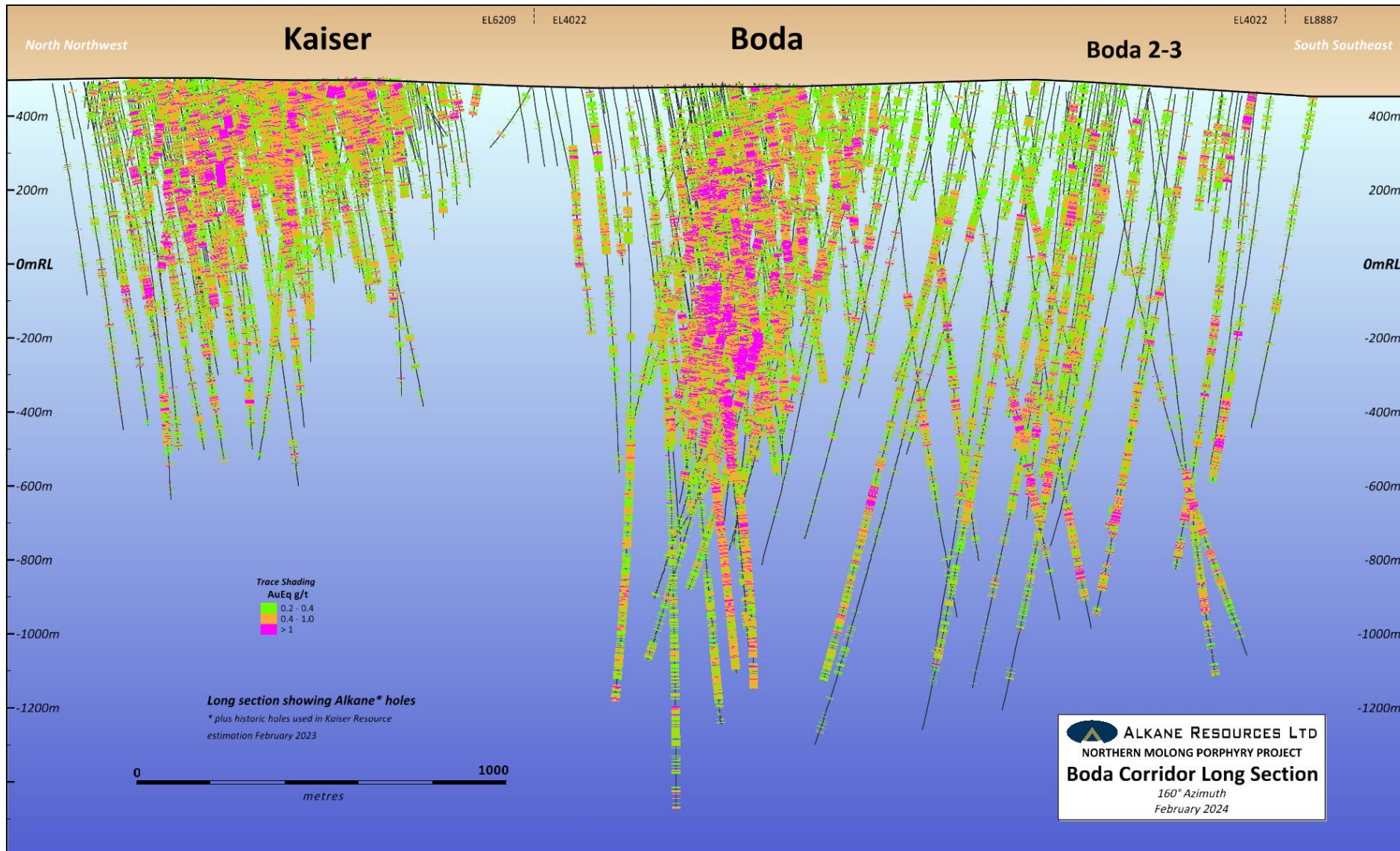
Hydrothermal (bornite-chalcopyrite-magnetite-actinolite-calcite) cemented breccia at Kaiser
KAI -161m @ 0.38g/t Au, 0.47% Cu incl 27m @ 1.29g/t Au, 1.20% Cu and 7m @ 0.49g/t Au, 0.74% Cu%



Monzodiorite with miarolitic cavities of calcite-actinolite-chalcopyrite

Intrusion in BOD094 assayed 5.5m @ 1.62% Cu, 0.82g/t Au from 1249.9m within a hydrothermally brecciated interval of 58m @ 0.74% Cu, 1.28g/t Au from 1223m.

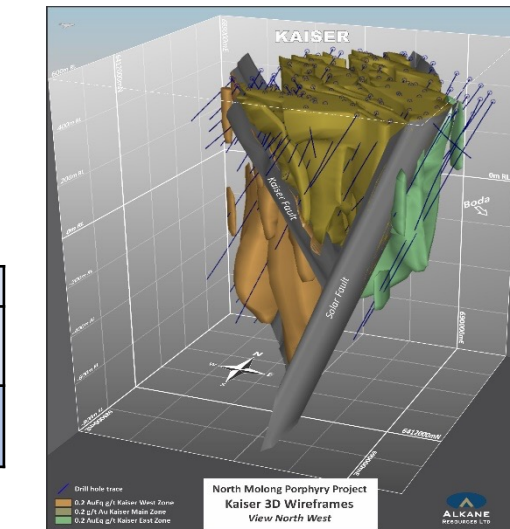
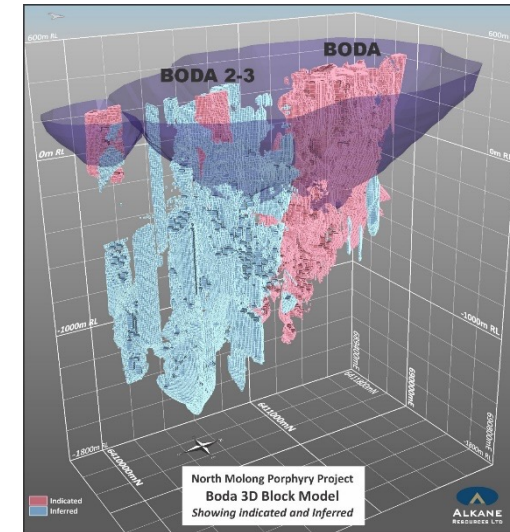
Resources: Boda-Kaiser Long Section



Boda – Kaiser Resource Estimates Feb 2024



DEPOSIT	INDICATED			INFERRED			TOTAL				METAL		
	Tonnes (Mt)	Au (g/t)	Cu (%)	Tonnes (Mt)	Au (g/t)	Cu (%)	Tonnes (Mt)	AuEq* (g/t)	Au (g/t)	Cu (%)	AuEq* (Moz)	Au (Moz)	Cu (Mt)
Open Pittable Resource (cut-off 0.3g/t AuEq)													
Boda	191	0.36	0.17	42	0.29	0.16	233	0.58	0.35	0.17	4.31	2.60	0.39
Kaiser	-	-	-	270	0.24	0.18	270	0.54**	0.24	0.18	4.72**	2.05	0.48
Subtotal	191	0.36	0.17	311	0.24	0.18	503	0.56	0.29	0.17	9.03	4.65	0.87
Underground Resource (cut-off 0.4g/t AuEq)													
Boda	151	0.34	0.20	198	0.34	0.18	350	0.59	0.34	0.18	6.63	3.78	0.65
TOTAL	343	0.35	0.18	510	0.28	0.18	853	0.57	0.31	0.18	15.7	8.43	1.52



*The equivalent calculation formula is $AuEq(g/t) = Au(g/t) + Cu\%/100 * 31.1035 * \text{copper price } (\$/t) / \text{gold price } (\$/oz)$. 12-month average metal prices were used of US\$1,950/oz gold and US\$8,600/t copper, and A\$:US\$0.67. Recoveries are estimated at 87% for Cu and 81% for Au from metallurgical studies. ** AuEq calc using rates from Kaiser Resource ASX announcement dated 27 February 2023. Details ALK.ASX 12 December 2023.

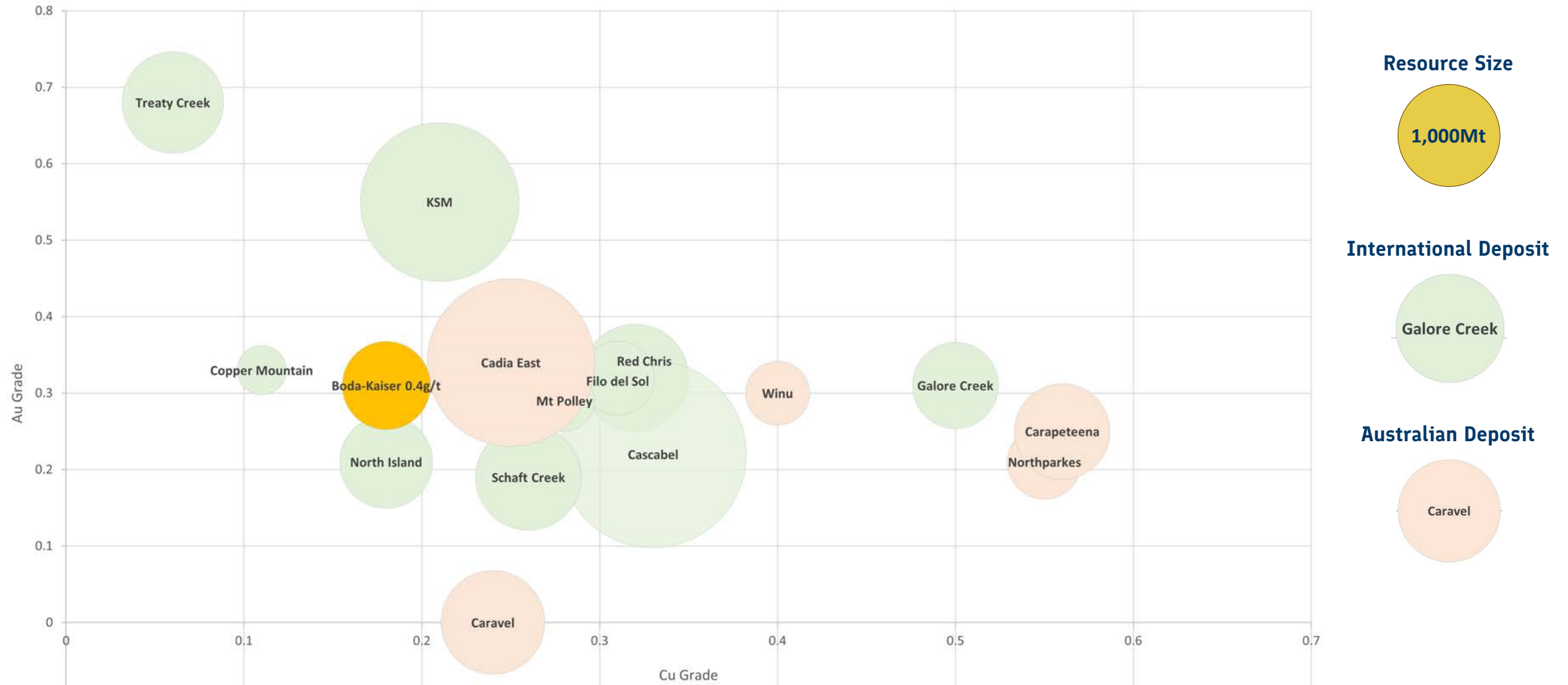
Newmont Corporation Cadia Operation – Underground Resources

DEPOSIT	INDICATED				INFERRED				TOTAL				CONTAINED METAL		
	Ore (Mt)	AuEq (g/t)	Au (g/t)	Cu (%)	Ore (Mt)	AuEq (g/t)	Au (g/t)	Cu (%)	Ore (Mt)	AuEq (g/t)	Au (g/t)	Cu (%)	AuEq (Moz)	Au (Moz)	Cu (Mt)
Cadia UG	1,596		0.32	0.23	497		0.24	0.17	2,093		0.30	0.22		20.26	4.52

Newmont 2023 Reserves – NEM.ASX 22 February 2024

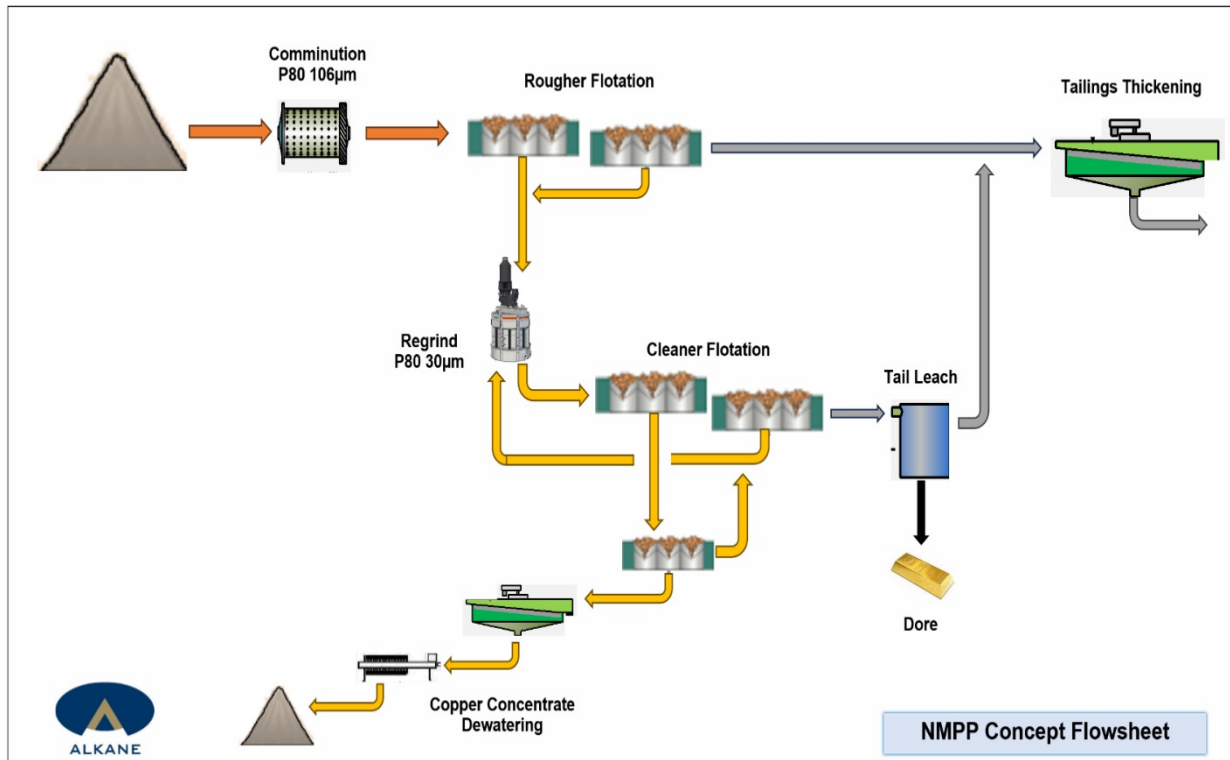
Cut-off based on \$ value of Au, Cu, Ag and Mo.

Comparative Porphyry Deposits



Data sourced from multiple company publications

Program 2024



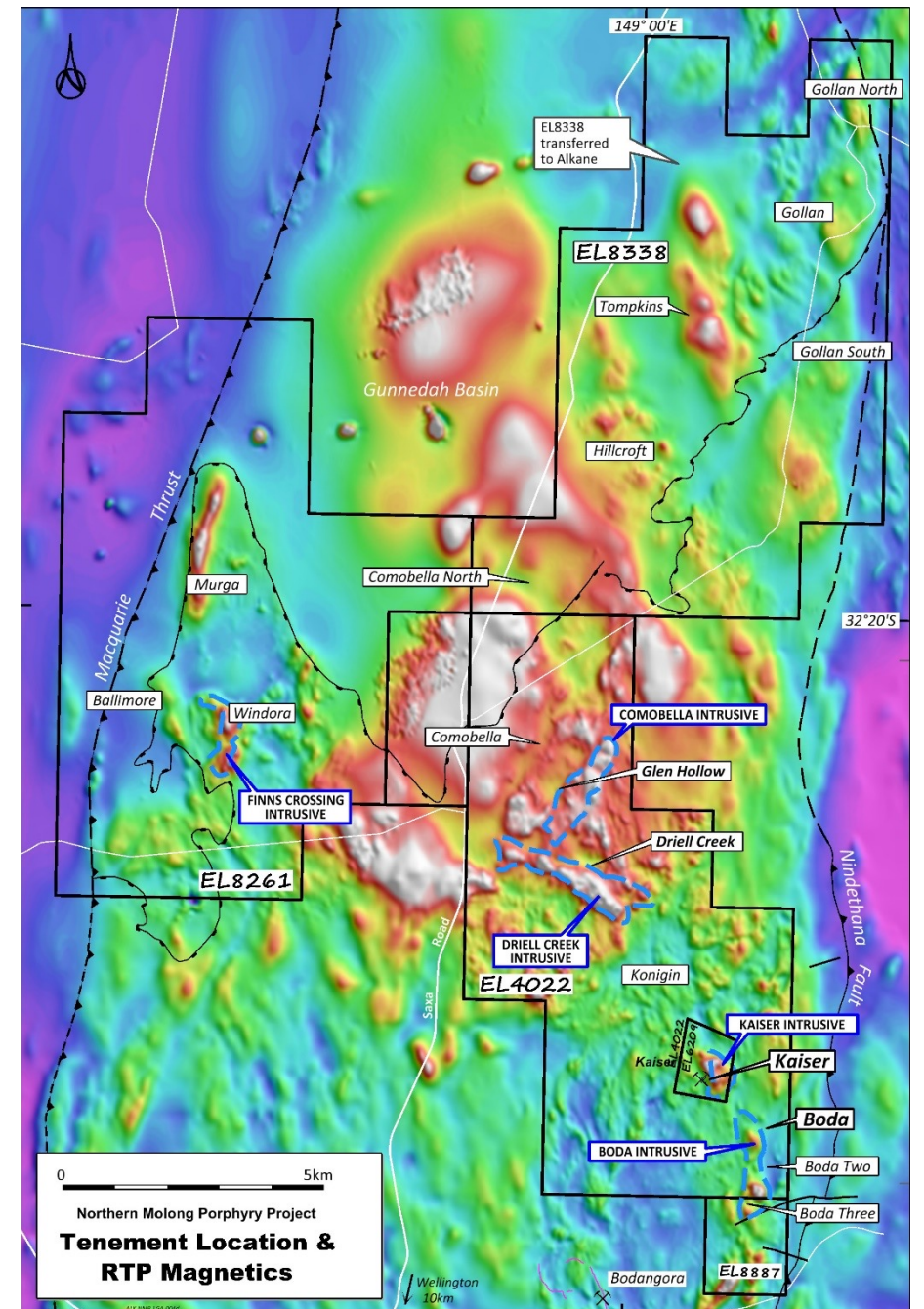
- Kaiser Resource update in April.
- Initial very positive metallurgical work completed confirms simple flowsheet.
- Estimate of plant design and associated costs in progress.
- Scoping level economic assessment Q2 2024.
- Testing other exploration targets.
- Investigation of access and infrastructure, including power and water, requirements.
- Commenced base line environmental data.

The overall recovery for Boda is estimated at 87.4% of copper and 80.9% of gold in the plant feed to saleable products. The overall recovery for Kaiser is estimated at 79.6% of copper and 70.7% of gold in the plant feed to saleable products.

Concentrate products Boda 24.7% Cu and 48.9g/t Au; Kaiser 24.3% Cu and 23.7g/t Au.

Regional Targeting

- Targets rated on litho-geochemistry background developed during definition of the Boda-Kaiser porphyry system, and ground access. Combined with magnetic, induced polarisation (IP) and gravity characteristics.
- Initial testing programmes scheduled to commence Q1 2024.
 - **Konigin** – strong IP chargeability anomaly.
 - **Finns Crossing** – Murga skarn prospect and intrusive monzodiorite – float of 6.4g/t Au 7.6% Cu and 3.8g/t Au, 0.12% Cu and limited Aircore drilling. Windora and Bellmore intrusive complexes.
 - **Comobella** – 21km² magnetic complex. Drilling intercept hosted in monzonite of 46m @ 0.9g/t Au, 0.25% Cu (COMRC009).
 - **Driell Creek** – 6km² magnetic complex with a 0.2km² phyllic alteration zone (lithocap?).
 - **Comobella North** – recent acquisition. Gravity survey completed and data review in progress.





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