ASX and MEDIA RELEASE

29 April 2024

ALKANE RESOURCES LTD
ABN 35 000 689 216

Revised Kaiser Resource Estimate Improves Confidence and Grade of Resource Base at Boda District

- **Following an extensive infill drilling program, the Mineral Resource Estimate (Indicated and Inferred) for the Kaiser Deposit has been revised to:**

  213 Mt at 0.55g/t AuEq* for 3.74Moz AuEq* (0.28g/t Au, 0.20% Cu, 1.90Moz Au, 0.42Mt Cu)

- **The drilling has improved confidence, revising the Kaiser MRE with 89% of the resource now classified as Indicated and lifting gold grade by 15% and copper grade by 10%.**

- **Including Kaiser, the Boda District has a global resource now of:**

Indicated:	**537Mt at 0.32g/t Au, 0.19% Cu (5.6Moz Au, 1.0Mt Cu)**
Inferred:	**258Mt at 0.33g/t Au, 0.18% Cu (2.7Moz Au, 0.5Mt Cu)**
Total:	**796Mt at 0.58g/t AuEq* for 14.7Moz AuEq* (0.33g/t Au, 0.18% Cu, 8.3Moz Au, 1.5Mt Cu)**

- **Substantial metallurgical testwork** established a viable and simple flowsheet with overall recoveries at Kaiser of 81% for copper and 71% for gold and at Boda of 87% for copper and 81% for gold with a saleable concentrate.**

- **The recently revised Boda District resources will be used in a scoping study for potential development. The scoping study is expected to be released in Q2 CY2024.**

- **Drilling continues to define the overall system, with extensions being tested at depth at Boda 2-3 and across several regional targets.**

The equivalent calculation formula is AuEq(g/t) = Au(g/t) + Cu%/100*31.1035*copper price($/t)/gold price($/oz). The prices used were 12-month averages of US$1,950/oz gold and US$8,600/t copper, and A$:US$0.67. Recoveries are estimated at 87% Cu and 81% Au for Boda, and 81% Cu and 71% Au for Kaiser from metallurgical studies. Alkane considers the elements included in the metal equivalents calculation to have a reasonable potential to be recovered and sold.

***** See ASX announcement dated 14 November 2023.***

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Alkane Resources Limited (**ASX: ALK**) is pleased to provide an updated Kaiser Mineral Resource Estimate following its extensive drilling program at the Company's Northern Molong Porphyry Project in central New South Wales. The program extended over three kilometres from Kaiser to Boda and down to Boda 2-3. The Company believes this system has the potential to be a large, tier-one gold-copper project.

Alkane also operates the nearby Tomingley Gold Operations ('Tomingley').

Alkane Managing Director Nic Earner said:

"The Kaiser resource update gives even greater confidence in the significant potential of the Northern Molong Porphyry Project.

"The definition has increased from Inferred to Indicated with increases in the gold and copper grades. The total resource contains approximately 8 million ounces of gold and 1.5 million tonnes of copper, with two-thirds classified as Indicated. This updated resource has been delivered at an overall discovery cost of less than A$4 per equivalent ounce. This compares favourably to industry averages and is a credit to the hard work of the exploration team

***"**We're finalising the scoping study that outlines the economics of the Boda & Kaiser District, with potential mine plans currently being developed from the updated resources. We're on track to have that completed in the current quarter."*

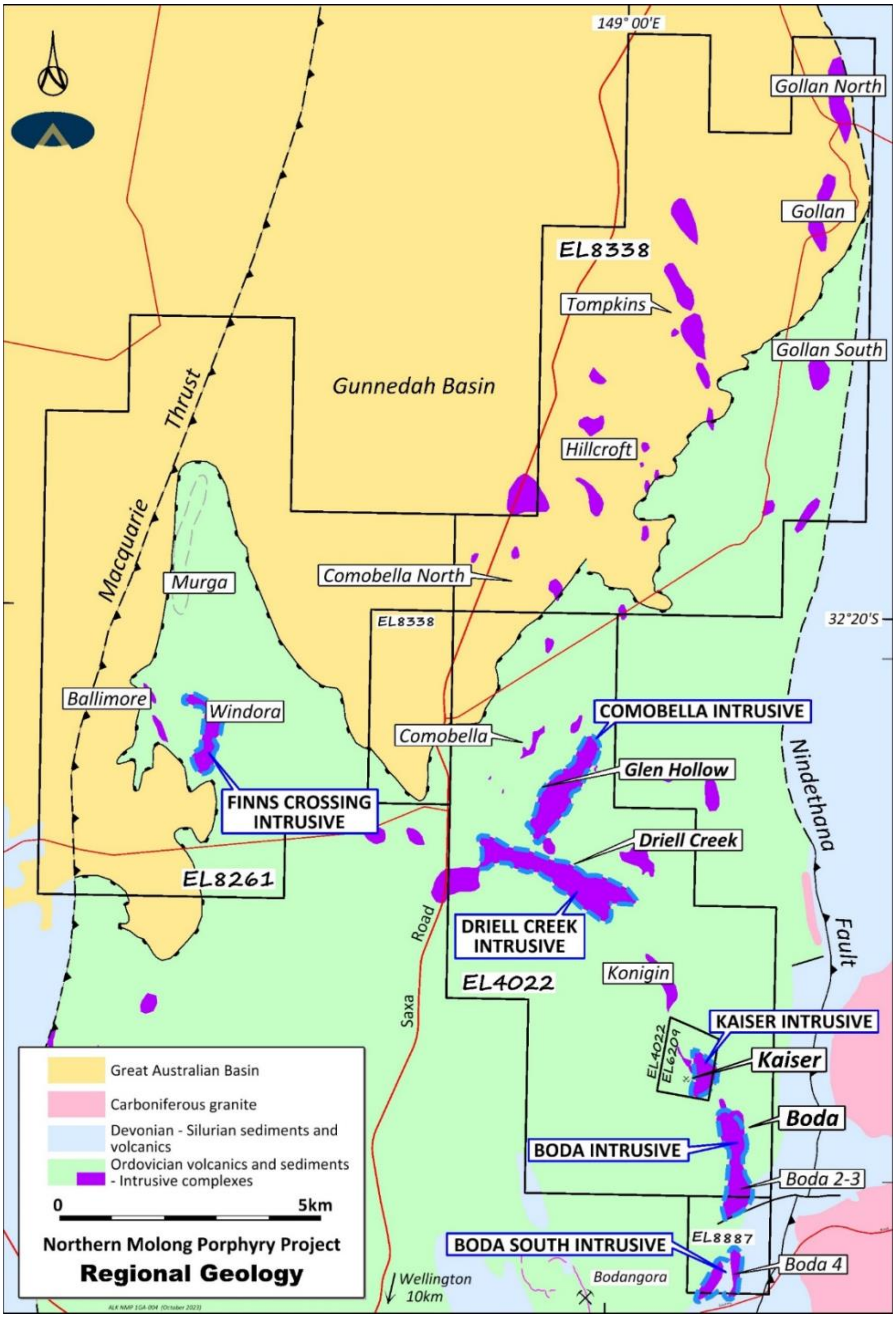
Resource drilling at Kaiser

Northern Molong Porphyry Project (NMPP)

Alkane Resources Ltd 100%

The Project is located in the Central West of NSW at the northern end of the Molong Volcanic Belt of the Macquarie Arc. It is considered highly prospective for large-scale porphyry and epithermal gold-copper deposits.

Exploration in the NMPP has identified six discrete magnetic/intrusive complexes – Kaiser, Boda, Boda South, Comobella, Driell Creek and Finns Crossing within a 15km northwest trending corridor. Intermediate intrusives, lavas and breccias, as well as extensive alteration and widespread, low-grade, gold-copper mineralisation, define the corridor. Two significant gold-copper resources have been defined within the corridor at Boda and Kaiser (ASX Announcements 14 December 2023 and this announcement). Exploration continues to define and test targets throughout the NMPP.



Kaiser Mineral Resource Estimate

The revised Mineral Resource Estimation for the Kaiser deposit is confined to a surface area of 1,100m strike length and 650m width, summarised in Table 1. The estimation uses a nominal drill hole grid of 50m by 50m to depths averaging 500m and up to 800m below the surface (~490mRL). It utilises assay results captured from 217 drill holes for a total of 94,779 metres comprising of 41,487 metres of diamond core and 53,292 metres of RC drilling. The revised estimation is based on an extra 120 drill holes for a total of 50,090 metres.

A review of feasibility and existing operating data for similar deposits in Australia (*see data sources below) was considered in determining cut-off grades of 0.3g/t AuEq and 0.4g/t AuEq as reasonable for the prospect of eventual extraction with the use of bulk tonnage mining methods of open cut or underground respectively. Using forward-looking price assumptions, processing costs and recoveries, a notional pit shell was used to determine which resources were considered mineable by open pit and the remainder allocated at 0.4g/t AuEq cut-off to be suitable for bulk tonnage underground mining techniques.

Table 1 Mineral Resource Estimate for Kaiser

Resource Category	AuEq Cutoff	Tonnes (Mt)	Grade			Contained Metal		
			AuEq* (g/t)	Au (g/t)	Cu (%)	AuEq* (Moz)	Au (Moz)	Cu (Mt)
Open Pit Resource (cut-off 0.3g/t AuEq*)								
Indicated	0.3g/t	179	0.54	0.27	0.20	3.12	1.56	0.35
Inferred	0.3g/t	10	0.48	0.29	0.14	0.16	0.10	0.01
Sub Total	**0.3g/t**	**189**	**0.54**	**0.27**	**0.19**	**3.28**	**1.66**	**0.37**
Underground Resource (cut-off 0.4g/t AuEq*)								
Indicated	0.4g/t	16	0.60	0.30	0.22	0.30	0.15	0.03
Inferred	0.4g/t	8	0.63	0.36	0.20	0.16	0.09	0.02
Sub Total	**0.4g/t**	**24**	**0.61**	**0.32**	**0.21**	**0.46**	**0.24**	**0.05**
TOTAL		**213**	**0.55**	**0.28**	**0.20**	**3.74**	**1.90**	**0.42**

The numbers used to calculate Mineral Resources are more precise than the rounded numbers shown in the tables, hence small differences may result if the calculations are repeated using the tabulated figures.

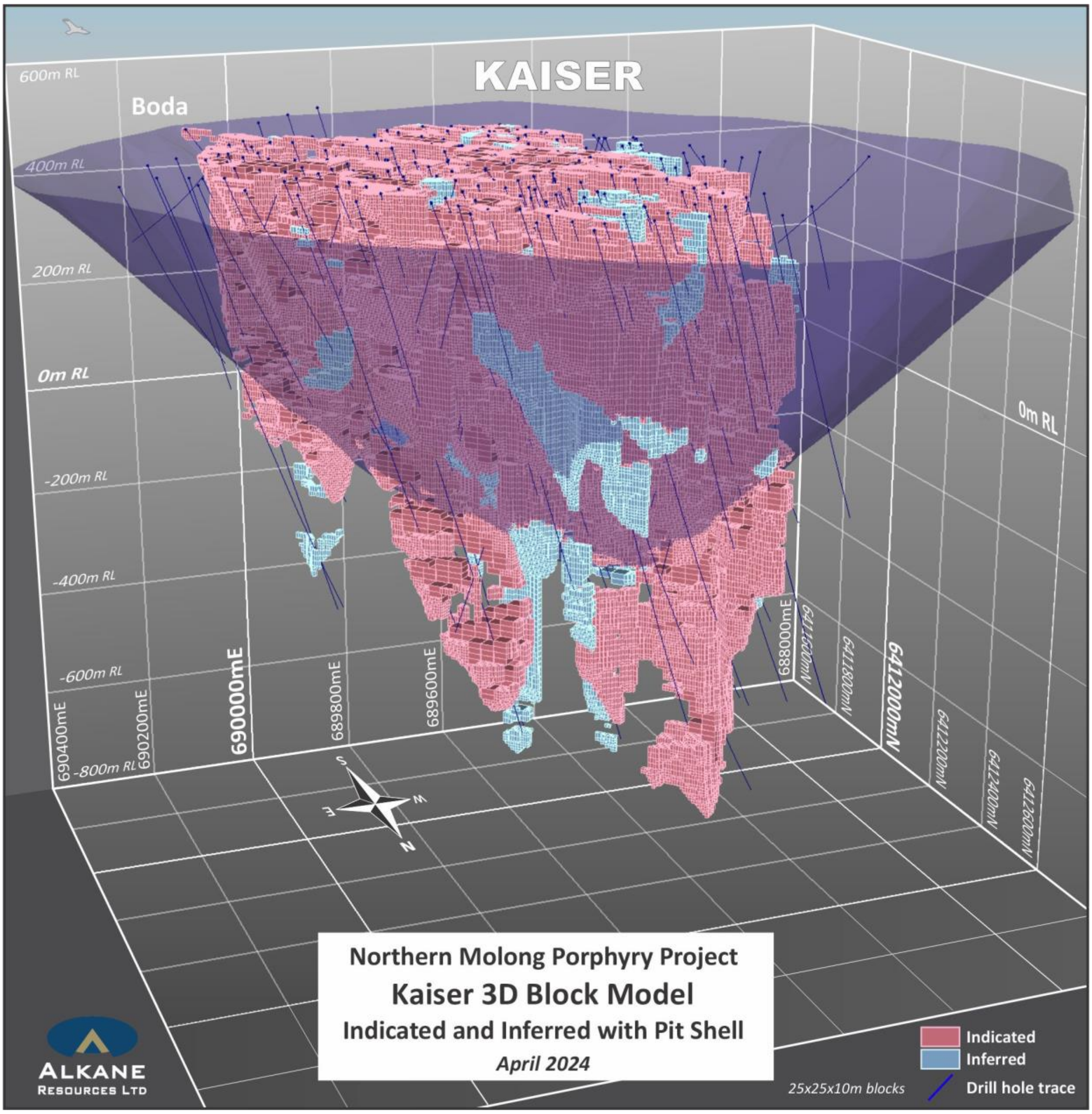
****The equivalent calculation formula is AuEq(g/t) = Au(g/t) + Cu%/100*31.1035*copper price ($/t)/gold price($/oz). 12-month average metal prices were used of US$1,950/oz gold and US$8,600/t copper, and A$:US$0.67. Recoveries are estimated at 81% Cu and 71% Au from metallurgical studies at Kaiser.***

****Data Sources***

ASX.NCM, 7 December 2021, Newcrest Annual Information Form.
ASX.OZL, 7 November 2016, Carrapateena Sub-Level Cave Pre-feasibility Study.
16 November 2020, Carrapateena 2020 Mineral Resources and Ore Reserves Statement and Explanatory Notes as at 30 June 2020.
ASX.AZY, 23 February 2022, Rio Tinto reports first Indicated Mineral Resource estimate at Winu Project.
ASX.CVV, 4 November 2021, Updates 2021 Scoping Study – Caravel Copper Project.
1 April 2022, Caravel Copper Project Maiden Ore Reserve.

The detailed drilling enabled revision of the wireframe models, resulting in a 15% increase in gold grade and a 10% increase in copper grade but an overall drop of 20% in the total resource tonnage with the removal of some historical drilling and the elimination of peripheral poorly informed mineralisation.

The Mineral Resource will, in time, be subject to further resource infill and extension drilling to define the continuity of the mineralisation at depth and improve its confidence. A 3D model of the Kaiser block model coloured by resource classification is displayed below.



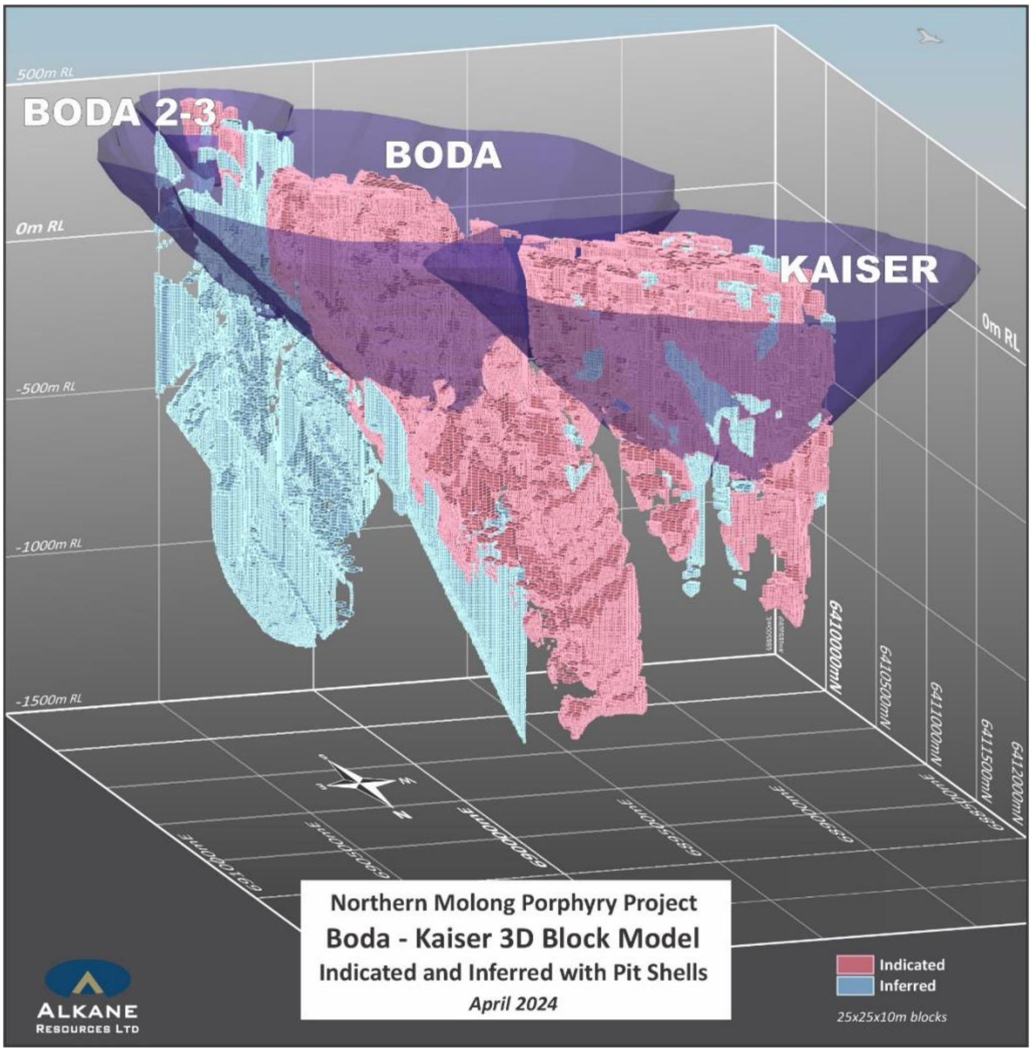
At the nearby Boda Deposit, Mineral Resources are estimated at 583 Mt at 0.34 g/t Au, 0.18% Cu for 6.83 Moz gold and 1.03 Mt copper (ASX Announcement 14 December 2023), giving the Boda-Kaiser District a combined Mineral Resource of 796 Mt at 0.33g/t Au, 0.18% Cu for 8.28 Moz gold and 1.52 Mt copper as summarised in Table 2.

Table 2 Total Mineral Resources for the Boda District

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 Pit 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	179	0.27	0.20	10	0.29	0.14	189	0.54	0.27	0.19	3.28	1.66	0.37
Subtotal	**370**	**0.32**	**0.18**	**52**	**0.29**	**0.16**	**422**	**0.56**	**0.31**	**0.18**	**7.59**	**4.26**	**0.76**
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
Kaiser	16	0.30	0.22	8	0.36	0.20	24	0.61	0.32	0.21	0.46	0.24	0.05
Subtotal	**167**	**0.34**	**0.20**	**206**	**0.34**	**0.18**	**374**	**0.59**	**0.34**	**0.18**	**7.09**	**4.02**	**0.70**
TOTAL	**537**	**0.32**	**0.19**	**258**	**0.33**	**0.18**	**796**	**0.58**	**0.33**	**0.18**	**14.7**	**8.28**	**1.46**

The figures used to calculate Mineral Resources are more precise than the rounded numbers shown in the tables, hence small differences may result if the calculations are repeated using the tabulated figures.

**The equivalent calculation formula is AuEq(g/t) = Au(g/t) + Cu%/100*31.1035*copper price ($/t)/gold price($/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 for Boda, and at 81% Cu and 71% Au for Kaiser from metallurgical studies.*

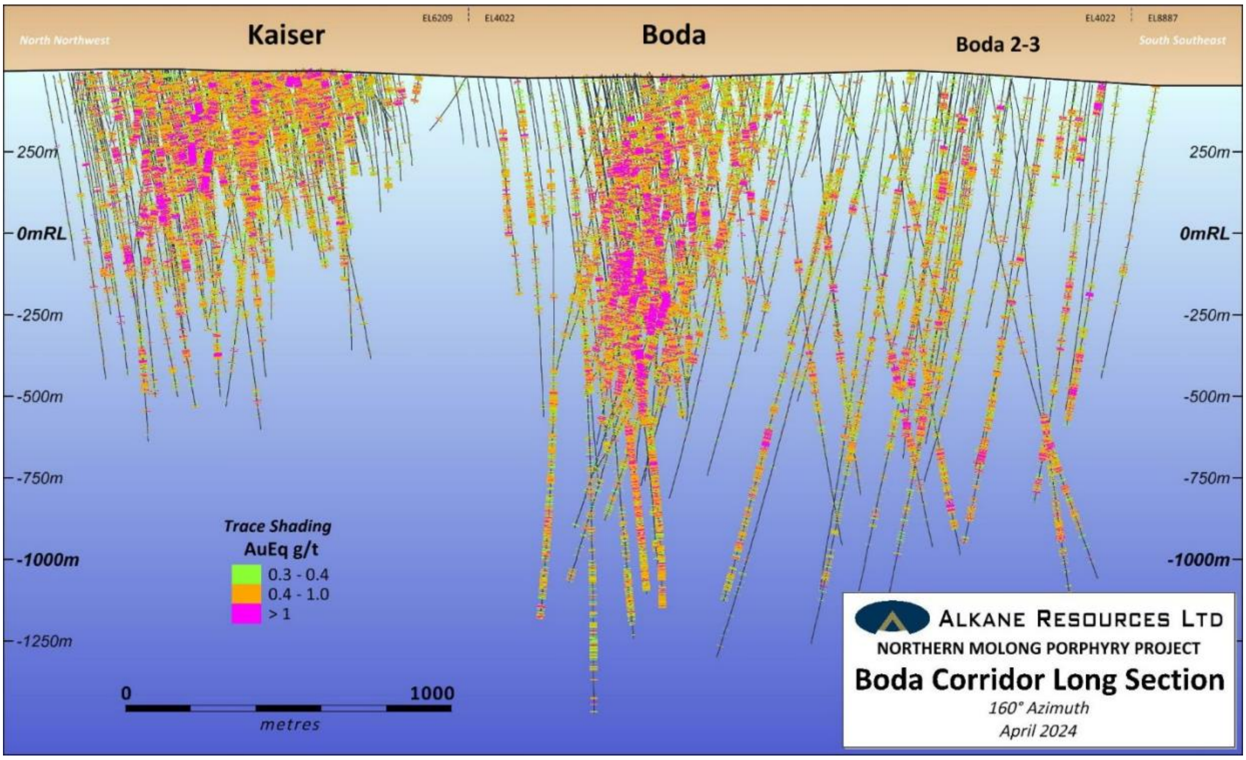


Exploration Upside

The Mineral Resource estimation was calculated to the -500mRL (surface is ~500mRL) in its deepest drilled sections. There remains potential for further extensions to the main zones of mineralisation. Two significant reverse faults bound and dislocate the main zone of mineralisation at Kaiser. There is potential for further extensions to the central Kaiser mineralisation, which is inferred to be dislocated down thrust to the west by the Solar Fault.

Further infill drilling is required around zones west of the Kaiser Fault and east of the Solar Fault because these domains are statistically moderately nuggety in gold. The extra drilling will aid in improving the confidence of those domains to convert from Inferred to Indicated resources.

Exploration has defined a 3.5km corridor of extensive calc-potassic alteration associated with Au-Cu porphyry mineralisation. The corridor trends north from Boda 2-3 to Boda for approximately 1km, where it rotates northwest from Boda to Kaiser for a further 2.5km. The long section below shows all the drilling completed in the corridor. Regional exploration has recently targeted Driell Creek, Konigin and Murga prospects, all positioned within an inferred 15km northwest-trending intrusive corridor.



Geology and Geological Interpretation

Alkane's Northern Molong Porphyry Project (NMPP) is a group of exploration licences located within the Molong Volcanic Belt (MVB) of the Macquarie Arc approximately 20km northeast of Wellington and approximately 250km north-west of Sydney. The MVB is considered highly prospective for large-scale porphyry gold-copper deposits, as demonstrated by the Cadia Valley porphyry district located 120km to the south. Cadia is one of the world's largest alkalic porphyry deposits, with a total endowment of 50 million ounces of gold and 9.5 million tonnes of copper.

The Kaiser Deposit is located within a NW-SE trending structural corridor on a significant magnetic high with approximately 800m x 700m dimensions named the Kaiser Intrusive Complex (KIC). The mineralisation is hosted within a package of submarine basaltic to andesitic lavas. The volcanic sequence is intruded by monzodiorite-monzonite units and related magmatic-hydrothermal breccias. The deposit is crosscut by several post-mineralisation dykes and sills of varying composition.

Intrusive- to magmatic-hydrothermal breccias are the focus of Kaiser's calc-potassic alteration and gold-copper mineralisation. The mineralisation is related to a series of northwest-trending monzodiorite-monzonite intrusions manifesting as a series of vertically extensive intrusive breccias forming a stock central to the KIC. These intrusive magmatic breccias transition to hydrothermal breccias to which the highest gold-copper grades are related. The majority of brecciation is in the form of a 'crackle breccia' that can either have a hydrothermal matrix, usually comprising of calcite ± actinolite ± pyrite ± magnetite ± chalcopyrite or an igneous matrix. The intrusive breccias are likely 'causative' to the main mineralisation event at Kaiser.

The volcanic package at Kaiser has undergone intense and extensive calc-potassic to potassic alteration, often replacing both phenocrysts and the groundmass. The calc-potassic alteration comprises fine-grained biotite-actinolite-epidote-magnetite with lesser internal zones of potassic alteration comprising only hydrothermal biotite. Veining within the calc-potassic zone is dominated by calcite-quartz vein assemblages that are typically sulphide-poor.

Copper mineralisation is observed throughout the prospect, primarily as chalcopyrite with lesser bornite and subordinate chalcocite and covellite. Within the intrusive-hydrothermal breccias, chalcopyrite and, to a lesser extent, bornite occur predominantly as a cement mineral between the calc-potassic altered clasts. Outside of the breccias, copper mineralisation is observed within calcite ± quartz ± epidote dominant veins and as disseminations and patches, often intergrown with epidote.

Gold is observed within the sulphide-cemented breccias, often without magnification, and is associated with pyrite, chalcopyrite and/or bornite in the hydrothermal cement.

Calc-potassic alteration grades into propylitic alteration away from the breccia complex and has a typical assemblage of actinolite-hematite-epidote-pyrite (± chalcopyrite). More distal from the mineralised centre, the assemblage typically becomes more chlorite-calcite-albite-pyrite dominant.

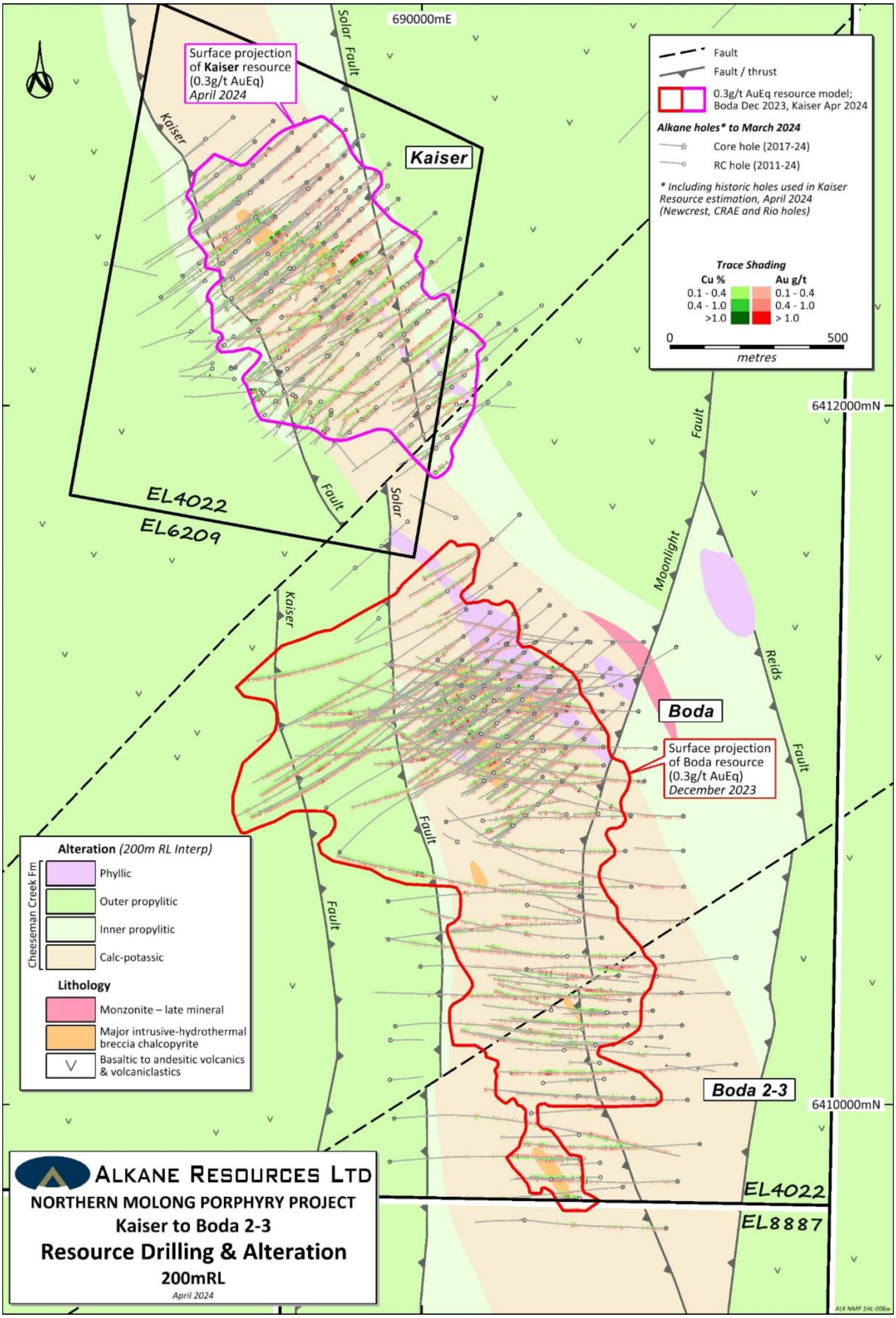
Kaiser includes a zone of potassic alteration comprising wholly of biotite alteration with quartz-calcite veining with up to 10% pyrite by volume along its northeast flank. The pyrite occurs as disseminated spots, aggregates, and as breccia cement. The alteration is generally copper-poor however, gold grades over several tens of metres can average from 0.2g/t – 0.4g/t Au with occasional thin intervals of >10g/t Au associated with pyrite cemented breccias.

Two significant reverse faults bound and dislocate the central zone of calc-potassic mineralisation at Kaiser. The Kaiser Fault dips east and thrusts the deeper Kaiser Main zone over the Kaiser West zone of mineralisation. The Solar Fault dips west and thrusts the Kaiser Main zone over the Kaiser East zone.

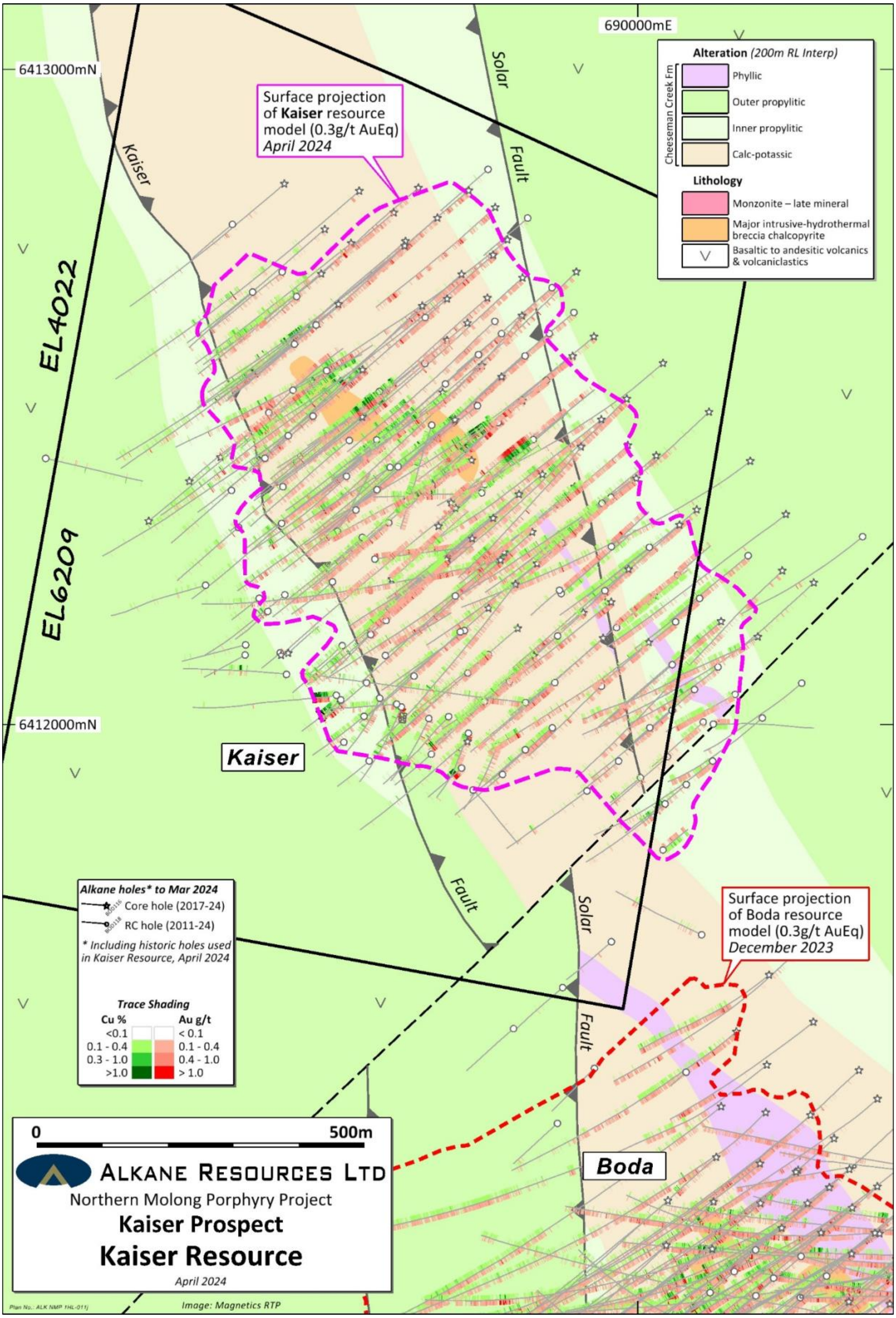
There is negligible post-mineral cover on the Kaiser deposit. Weathering and oxidation of the mineralised bedrock extends on average approximately 15m from the surface. The Kaiser Fault zone is associated with minor supergene copper forming as native copper. The native copper zones can extend hundreds of metres down the Kaiser Fault and can permeate up to 50 metres away from the structure.

The faults, surface and base of oxidation were modelled in 3D and formed the basis of wireframing the mineralisation in the estimation. All wireframes were built by Alkane geologists. This informed the estimates and, along with grade guided the interpretation of the ore envelope wireframes at a nominal 0.2g/t AuEq lower cutoff.

Boda-Kaiser drill hole location plan with resource outlines



Kaiser drill hole location plan



KAISER MINERAL RESOURCE – *Supporting information*

The Mineral Resource Statement for the Boda Mineral Resource Estimate (MRE) is reported according to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the 'JORC Code') 2012 edition. In the opinion of Alkane, the resource estimation reported is a reasonable representation of the global gold and copper mineral resource within the Kaiser Deposit, based on reverse circulation and diamond drilling sampling data available as of April 2024, and is detailed below:

Drilling Techniques

The Kaiser deposit has been evaluated using all of Alkane's reverse circulation (RC) and diamond drilling (DD) holes within the deposit area. Previous companies' exploration drilling was also included in the estimation where Alkane was confident of the collar locations and modern assaying methods, this comprised of only four drill holes completed by Newcrest.

Drilling at the Kaiser deposit was conducted as an extended campaign since the maiden Kaiser Mineral Resource Estimate was announced on 18 December 2023. The revised estimation uses a total of 217 drill holes for a total of 94,779 metres comprising of 41,487 metres of diamond core and 53,292 metres of RC drilling, including an historical assay component (for the period 2001 – 2002) captured by Newcrest from 4 drill holes comprising of 2,684 metres of diamond core. This revised estimation of Kaiser uses an extra 120 drill holes for a total of 50,090 metres. Drilling statistics are summarised in Table 3.

Table 3 Summary Drilling Statistics for Boda Resource Estimation

Company	**Alkane Resources**			**Newcrest**
Hole Type	RC (Pre-collars)	RC	Diamond (PQ3/HQ3)	NQ3
No. of Holes	80	127	86	4
Metres	21,739	31,553	38,803	2,684
Total No. of Holes (not including pre-collars)	**213**			**4**
Total Metres	**92,095**			**2,684**

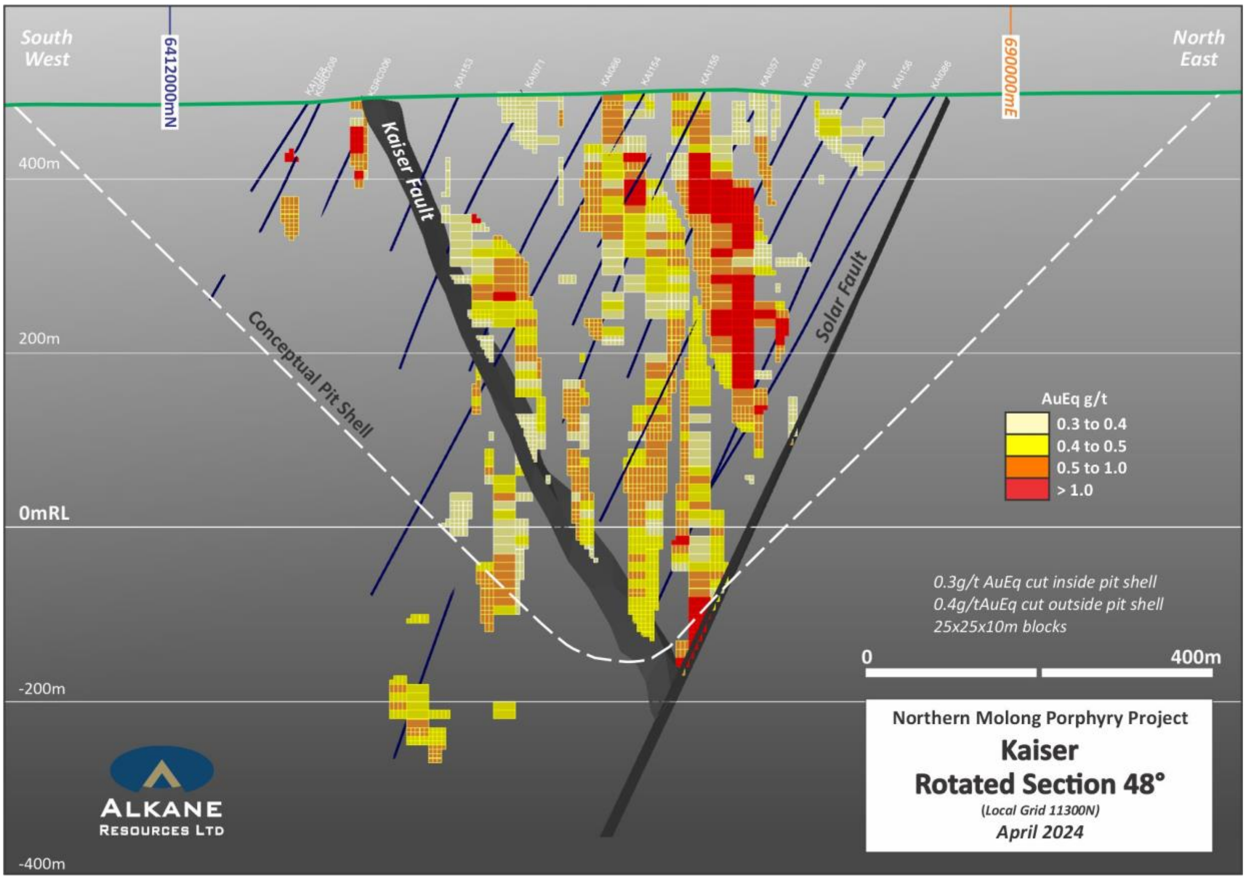
Drilling was conducted using high-capacity RC drill rigs and high-powered diamond core drill rigs to retrieve large samples and drill to significant depths. The majority of drilling used in the estimation was conducted on nominal southwest-orientated sections that were spaced 50m apart with drill holes at nominal 50m intervals along these sections.

Sampling and Sub-Sampling Techniques

Sampling was conducted on all types of drilling from the surface to the bottom of the hole. Sampling via the different drilling techniques used is described as follows:

RC Drilling:

Samples from the RC drilling were collected at 1 metre intervals via a cyclone and placed into large plastic bags. Spear samples were collected from each 1 metre sample and composited to 3 metres for initial analysis, unless the geologist on site determined visually strong mineralisation, then 1 metre samples were collected via a splitter below the cyclone and sent for analysis.



All composites assaying ≥0.1g/t Au or ≥0.1% Cu together with their upper and lower bounding composite samples were re-split as 1 metre samples collected when drilling into a calico bag via a splitter below the cyclone.

Diamond Core Drilling:

Half core samples of PQ3 and HQ3 size were collected from all geologically logged and potentially mineralised zones. The core was cut in half and sampled in a range of 0.3 metre to 1.3 metre intervals as determined by the geologist based on lithological contacts, alteration zones and mineralisation zones. Geotechnical, magnetic susceptibility and bulk density measurements were collected, as well as lithology logging and structural data. The remaining half core is stored at the Orange exploration facility.

Sample Analysis Method

All samples were submitted to ALS Chemex Laboratory in Orange. Samples were oven-dried before crushing to <6mm using a jaw crusher (in the case of diamond core), split to 3kg if required then pulverised in an LM5 (or equivalent) to ≥85% passing 75µm. Bulk rejects for all samples were discarded. A pulp packet (±100g) is stored for future reference.

For all samples used in the resource estimate, gold was determined using a 50g charge fused at approximately 1100°C with alkaline fluxes, including lead oxide. The resultant prill was dissolved in aqua regia, and gold was determined by flame AAS.

In addition to gold assay, samples were assayed for a full multi-element suite using a multi-acid complete digest with an AES and MS finish.

Commercially prepared Certified Reference Materials (CRM) and blanks were inserted at approximately 1 in 40 samples. CRM's were not identifiable to the laboratory. Standards were deemed to be within tolerance if the result was within 3 standard deviations and 10% of the expected value. When a standard fell outside this tolerance, the standard and a selection of samples from the batch were resubmitted. These “failed” samples are not included in the resource estimation.

Field duplicate samples were inserted at 1 in 40 samples (alternate to CRM’s). Field duplicate samples were collected by riffle splitting the RC sample. The coefficient of determination for gold when the 5 highest grade samples are removed has a correlation coefficient value of 0.93, indicating good repeatability for grades forming the bulk of the resource. Copper shows excellent repeatability with a correlation coefficient of 0.99 after the 5 highest-grading samples are removed. The copper result indicates the lower correlation coefficient in gold is likely due to the nugget effect of gold rather than improper sampling procedures.

Laboratory QAQC sampling includes inserting of CRM samples, internal duplicates and screen tests. This data was reported for each sample submission. Umpire laboratory check samples were forwarded to SGS Laboratory in Townsville for gold and copper analyses over the course of the resource drilling campaign as a 1.3% proportion of total assays. The results were generally repeatable between the laboratories with no statistically significant bias detected.

In the competent person’s opinion, the laboratory has performed satisfactorily for the drilling used in the estimation, and any noted discrepancies are acceptable for the resource classification applied.

Estimation Methodology

Grade estimation was completed using Ordinary Kriging (OK) with a hard boundary interpolation on the mineralisation domains, the gold-rich domains and to the fault surfaces. All wireframing and estimation were completed with Datamine Studio RM software.

Exploratory data analysis of the capped and de-clustered composited gold and copper variables within each domain was undertaken by Cube Consulting (Cube) with separate variograms for each metal and for each domain being produced using Datamine/Snowden Supervisor software. Sample data was composited into one-metre downhole lengths using a best-fit methodology.

Cube conducted an estimation search neighbourhood analysis to determine optimal search parameters for Ordinary Kriging (OK) estimation of gold and copper grade. This analysis was carried out on only the well-informed domains. This determined an optimum block size of 25mX x 25mY x 10mZ and sub-blocking down to 5mX x 5mY x 5mZ. These blocks were informed by a minimum of 10 and a maximum of 20 composited samples, with an initial search ellipse using a major axis of 40m to 100m, with various semi and minor axis ratios depending on the metal and domain being estimated. To inform any remaining blocks a second pass search radius was made at double the first pass and five times for a third pass. The model was rotated to best align the block dimensions with interpreted mineralisation.

A top cut analysis was carried out by a visual inspection of the data using histograms, log-transformed probability plots, mean and variance plots, and sensitivity analysis for individual domains to identify population outliers. The spatial location of the outliers was also considered when applying the grade caps. The sensitivity analysis involved analysing varying cap values, to estimate the contribution of each sample to the overall metal content. Capping was deemed necessary for most of the domains.

Distance limiting of high grades via an aggressive top cut was used during the estimation process on domains with evidence for higher grade samples having a greater spatial influence than warranted. This results in the higher grades being more locally representative and having less of an influence over distance.

Validation and verification of the modelling parameters and processes of estimation included visual inspections in section, plan and in 3D, volumetric comparison of resource wireframes to the block model, and a comparison of other iterations vs the final OK model. In the competent person's opinion, all methods of validation produced acceptable results.

Classification Criteria

Mineral Resources were classified as Inferred or Indicated to appropriately represent confidence and risk concerning the data quality, drill hole spacing, geological and grade continuity, mineralisation volumes, as well as metal distribution. There is no material classified as Measured.

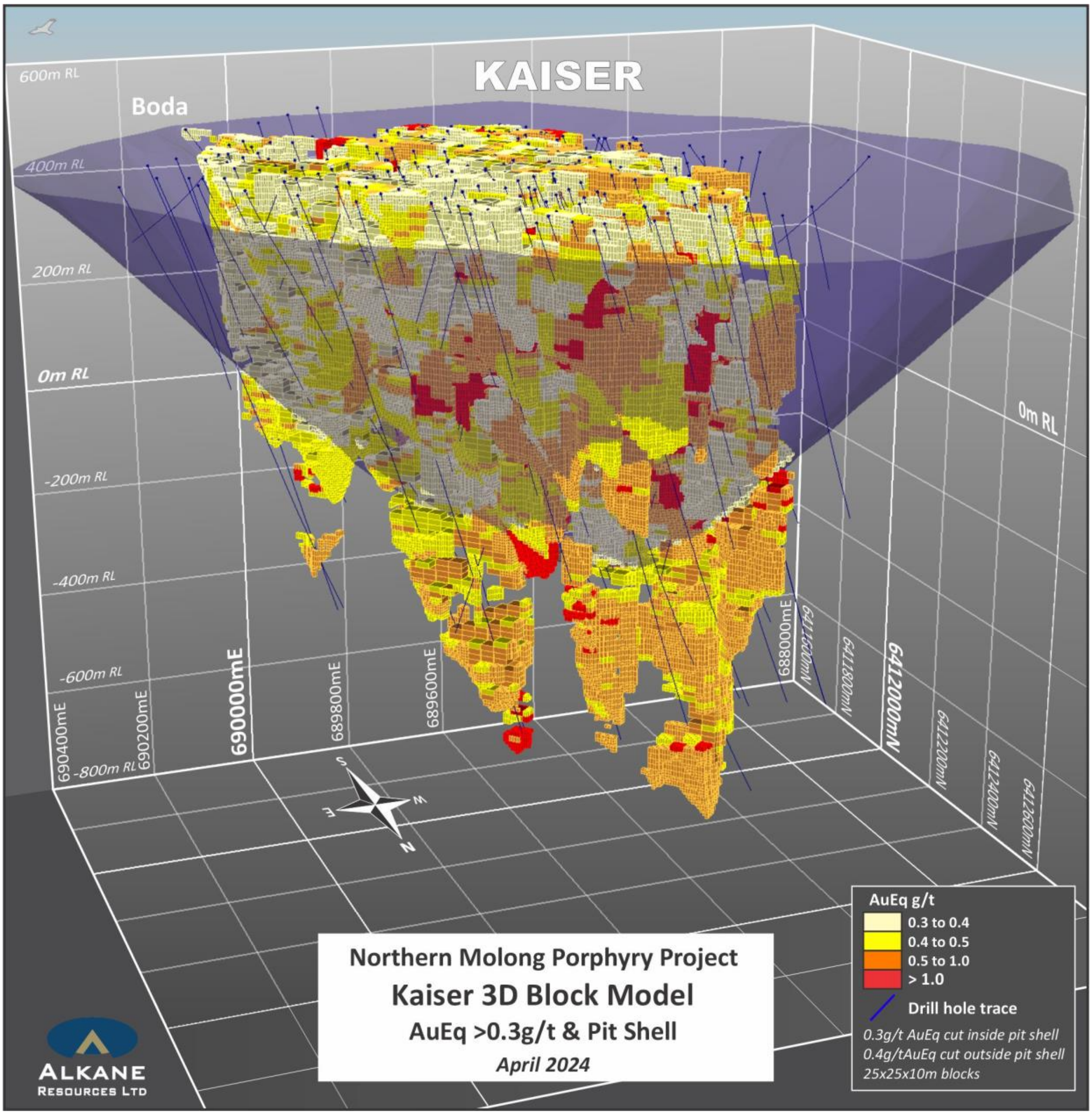
Indicated Mineral Resources were defined where a high level of geological confidence in geometry, continuity, and grade was demonstrated and were identified as areas where:

- Drill spacing was averaging below 60m, or where drilling was within 60m of the block estimate;

- Estimation quality is of high confidence with respect to low kriging variance; and

- Blocks are informed by or nearby blocks informed by a first-pass search.

The remaining estimated blocks within the defined mineralisation domains were classified as Inferred Resources (this included blocks in the less well-informed domains and all blocks in the poorly-informed



domains). The dimensions of the search ellipse were based on the recommended search neighbourhood parameters.

Cut-Off Grade

The Mineral Resource cut-off grade for reporting of the Kaiser deposit was selected as 0.3g/t AuEq for open-cut mining and 0.4g/t AuEq for bulk underground mining methods. This was based upon a review of existing and feasibility operating data for similar deposits in Australia as reasonable for the prospect of eventual extraction. Gold equivalents have been calculated using the formula AuEq(g/t) = Au(g/t) + Cu%/100*31.1035*copper price($/t)/gold price($/oz). The prices used were based on a 12-month average of US$1,950/oz gold and US$8,600/t copper and an exchange rate of A$:US$0.67. Metal recoveries are estimated at 81% for copper and 71% for gold from metallurgical testwork on the Kaiser deposit.

Mining and Metallurgy

It is assumed that based on the orientations, thickness and depths of the dispersive gold-copper mineralisation modelled bulk tonnage mining methods such as open cut or sub-level / block caving would be considered, as per comparison with similar Australian deposits referenced earlier. No dilution or cost factors were applied to the estimate. The resources amenable to open pit extraction have been constrained with a notional pit shell using forward-looking price assumptions, processing costs and recoveries. Resources below the notional pit shell are reported as potential underground mineable resources applying a higher cut-off grade.

A substantial metallurgical study on Kaiser shows that a simple flowsheet of conventional crushing, grinding and flotation circuits can produce a saleable concentrate with leaching of the cleaner tail to produce gold dore (see ASX announcement 14 November 2023). Overall recoveries for this process are estimated at 81% for copper and 71% for gold and are used for the purposes of cut-off grade estimation.

No metallurgical recovery factors were applied to the Mineral Resources or Resource Tabulations.

Competent Person

Unless otherwise advised above, the information in this report that relates to exploration results and mineral resources being reported for the first time is based on information compiled by Mr David Meates MAIG, (Alkane Exploration Manager NSW) 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 Meates has provided his prior written consent 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 previously reported exploration results and exploration targets is extracted from the Company's ASX announcements noted in the text of the announcement 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 original announcements and that the form and context in which the Competent Person's findings are presented have not been materially altered.

Disclaimer

This report contains certain forward looking statements and forecasts, including possible or assumed reserves and resources, production levels and rates, costs, prices, future performance or potential growth of Alkane Resources Ltd, industry growth or other trend projections. Such statements are not a guarantee of future performance and involve unknown risks and uncertainties, as well as other factors which are beyond the control of Alkane Resources Ltd. Actual results and developments may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors. Nothing in this report should be construed as either an offer to sell or a solicitation of an offer to buy or sell securities.

This document has been prepared in accordance with the requirements of Australian securities laws, which may differ from the requirements of United States and other country securities laws. Unless otherwise indicated, all ore reserve and mineral resource estimates included or incorporated by reference in this document have been, and will be, prepared in accordance with the JORC classification system of the Australasian Institute of Mining, and Metallurgy and Australian Institute of Geoscientists.

This document has been authorised for release to the market by Nic Earner, Managing Director.

ABOUT ALKANE - www.alkane.com.au - ASX: ALK

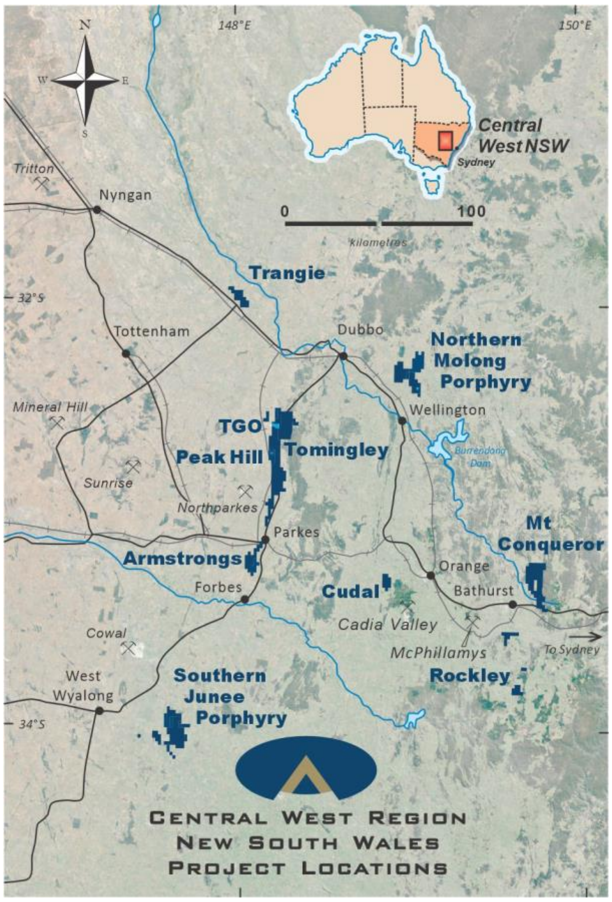
Alkane Resources intends to grow to become one of Australia's multi-mine gold and copper producers.

The Company's current gold production is from the Tomingley Gold Operations in Central West New South Wales, which has been operating since 2014 and has the resources to continue to operate beyond 2030.

Alkane has an enviable exploration track record and controls several highly prospective gold and copper tenements. Its most advanced exploration projects are in the tenement area between Tomingley and Peak Hill, which have the potential to provide additional ore for Tomingley's operations.

Alkane's exploration success includes the landmark porphyry gold-copper mineralisation discovery at Boda in 2019. With drilling ongoing adjacent to the initial resource identified at Boda, Alkane is confident of further consolidating Central West New South Wales' reputation as a significant gold and copper production region.

Alkane's gold interests extend throughout Australia, with strategic investments in other gold exploration and aspiring mining companies, including ~7.0% of Calidus Resources (ASX: CAI).



The following tables are provided to ensure compliance with the JORC Code (2012) edition requirements for the reporting of exploration results.

APPENDIX 1

JORC Code, 2012 Edition – Table 1 report – Kaiser April 2024

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	The deposit has been evaluated using reverse circulation and diamond drilling techniques. Reverse Circulation (RC) samples are collected at one metre intervals via a cyclone and riffle or cone splitter. Intervals outside of visual ore zones are composited to 3 metres. Diamond Drilling (DD) sample intervals are defined by geologist during logging to honour geological boundaries.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	RC drilling completed to industry standards. Core is laid out in suitably labelled core trays. A core marker (core block) is placed at the end of each drilled run (nominally 3m or 6m) and labelled with the hole number, down hole depth, length of drill run. Core is aligned and measured by tape, comparing back to this down hole depth consistent with industry standards.
	• *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	RC Drilling – the total sample (~35kg) is delivered via cyclone into a large plastic bag which is retained for future use if required. A sub-sample of approximately 1kg is spear sampled from each plastic bag and composited to make a 3 metres sample interval. If mineralisation is observed by the site geologist this is sampled as a final 1m interval instead. The 1m intervals forming composite samples assaying ≥0.10 g/t Au or ≥0.10 % Cu are re-split using a cone splitter on the rig into a separate calico at the time of drilling and re-submitted to the laboratory for re-assay. DD Drilling – Core was laid out in suitably labelled core trays. A core marker (core block) was placed at the end of each drilled run (nominally 6m) and labelled with the hole number, down hole depth, length of drill run. Core was aligned and measured by tape, comparing back to this down hole depth consistent with industry standards. Half core is sampled with a Corewise automatic core saw. All samples sent to laboratory are crushed and pulverised to produce a ~100g pulp for assay process. All samples are fire assayed using 50g charge. Visible gold is rarely observed in core.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of*	The resource is based on 217 drill holes for a total of 94,779 metres comprising of 41,487 metres of diamond core and 53,292 metres of RC drilling.

Criteria	JORC Code explanation	Commentary
	diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	Conventional RC drilling using 100mm rods and 144mm face sampling hammer. Diamond drill holes were pre-collared using either PQ3 (83mm diameter) diamond core or RC drilling through to competent material in fresh rock and cased down to triple tube HQ3 (64mm diameter) core tails. Diamond core is oriented using the “Reflex” core orientation tool.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	DD - core loss was identified by drillers and calculated by geologists when logging. Generally ≥99% was recovered with any loss usually in portions of the oxide zone. Triple tube coring was used at all times to maximise core recovery with larger diameter (PQ3) core or RC precollars used in the oxide zones. RC sample quality is assessed by the sampler by visual approximation of sample recovery and if the sample is dry, damp or wet.
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	Sample quality is qualitatively logged. Core drilling completed using HQ triple tube where possible to maximise core recovery. A high capacity RC rig was used to enable dry samples collected. Drill cyclone is cleaned between rod changes and after each hole to minimise cross-hole contamination.
	• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	There is no known relationship between sample recovery and grade.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	RC - each one metre interval is measured for magnetic susceptibility and geologically logged for characteristics such as lithology, weathering, alteration (type, character and intensity), veining (type, character and intensity) and mineralisation (type, character and volume percentage). DD - all core is laid out in core trays and geologically logged for characteristics such as lithology, weathering, alteration (type, character and intensity), veining (type, character and intensity), magnetic susceptibility and mineralisation (type, character and volume percentage). A detailed geotechnical log is also undertaken collecting parameters such as core recovery, RQD, fracture count, and fracture type and orientation.
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*	All logging is qualitative with visual estimates of the various characteristics. RC - A representative sample of each one metre interval is retained in chip trays for future reference. DD - Core is photographed and all unsampled core is retained for reference purposes.
	• *The total length and percentage of the relevant intersections logged.*	Entire DD core and RC chip samples were geologically and geotechnically logged by qualified geologists.
Sub-sampling techniques	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	Zones of visual mineralisation and/or alteration are marked up by the geologist and cut in half if HQ3 or PQ3 sized using a Corewise automatic core cutting saw. The right half is sampled to sampling intervals that are generally based on geology but do not exceed 1.3 metres in length. The left half is archived.

Criteria	JORC Code explanation	Commentary
and sample preparation	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*	RC - for each one metre interval with visual mineralisation and/or alteration the calico sample bag is numbered and submitted to the laboratory for analysis. Intervals without visual mineralisation and/or alteration are spear sampled and composited over three metres. Damp or wet samples are recorded by the sampler. For composited intervals returning grades >0.1g/t Au or 0.1% Cu, the 1m calico bags are retrieved for assay. Laboratory Preparation – the entire RC sample (3kg) is dried and pulverised in an LM5 (or equivalent) to ≥85% passing 75µm. Bulk rejects for all samples are discarded. A pulp packet (±100g) is stored for future reference.
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	Samples were delivered by Alkane personnel to ALS Minerals Laboratory, Orange NSW. Crushed with 70% <2mm (ALS code CRU-31), split by riffle splitter (ALS code SPL-21), and pulverised 1000grm to 85% <75um (ALS code PUL-32). Crushers and pulverisers are washed with QAQC tests undertaken (ALS codes CRU-QC, PUL-QC).
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	Internal QAQC system in place to determine accuracy and precision of assays
	• *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*	Non-biased core cutting using an orientation line marked on the core. Duplicate RC samples are collected for both composite intervals and re-split intervals.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Sample sizes are assumed to be within industry standard and considered appropriate.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	All samples were analysed by ALS Minerals Gold is determined using a 50g charge fused at approximately 1100°C with alkaline fluxes, including lead oxide. The resultant prill is dissolved in aqua regia with gold determined by flame AAS. For other geochemical elements, most samples are digested by near-total mixed acid digest for each element determined by ICP Atomic Emission Spectrometry or ICP Mass Spectrometry. For selected drill holes that are nearby (less than 100m spaced drilling) previous drilling with near-total mixed acid digest assay results or that are re-split RC samples, these samples are digested by aqua regia with a ICP Atomic Emission Spectrometry for Ag, As, Cu, Mo and S only.
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*	Not applicable to this report or deposit.
	• *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	Commercially prepared Certified Reference Materials (CRM) are inserted at 1 in 40 samples. CRM's are not identifiable to the laboratory. Field duplicate samples are inserted at 1 in 40 samples. Laboratory QAQC sampling includes insertion of CRM samples, internal duplicates and screen tests. This data is reported for each sample submission. Failed standards result in re-assaying of portions of the affected sample batches.

Criteria	JORC Code explanation	Commentary
		1.3% of gold and copper assay results from ALS Orange were checked using SGS Townsville as an external umpire laboratory.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	Drill data is compiled, collated and reviewed by senior Alkane staff. Cube Consulting was used to verify exploration data, domaining and to recommend estimation parameters.
	• *The use of twinned holes.*	Twinned holes have not been used.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	All drill hole logging and sampling data is entered directly into Geobank Mobile in the field for validation, transfer, and storage into Geobank database with verification protocols in place. All primary assay data is received from the laboratory as electronic data files which are imported into sampling database with verification procedures in place. QAQC analysis is undertaken for each laboratory report
	• *Discuss any adjustment to assay data.*	No assay data was adjusted.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Drill holes are laid out using handheld GPS (accuracy ± 2m) then surveyed accurately with DGPS_RTK (± 0.1m) by licenced surveyors on completion. RC drill holes are surveyed using a single shot north seeking tool at a nominal 30m down hole interval. DD are surveyed at nominal 30m down hole during drilling to maintain drilling direction and then at 6m intervals on retrieval of rod string using a multi shot north seeking instrument.
	• *Specification of the grid system used.*	GDA94, MGA (Zone 55)
	• *Quality and adequacy of topographic control.*	A site digital terrain model was derived from an airborne drone LiDAR survey and checked from accurate (± 0.1m) surveyed hole collar positions by licenced surveyors.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	Nominal drill hole spacing is 50m x 50m along south-west trending transverses. The data spacing is deemed to be sufficient in reporting a Mineral Resource.
	• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*	The drill hole spacing has been shown to be appropriate by variography.
	• *Whether sample compositing has been applied.*	RC – samples with no visible mineralisation or alteration are composited to 3m with 1m resamples assayed if the composite returned a gold value of >0.1g/t gold or >0.1% copper. One metre samples override 3m composites in the database. DD – core is sampled to geology with sample sizes ranging from 0.3m to 1.3m.
Orientation of data in relation	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	The orientation of drilling and sampling is along south-west traverses, perpendicular to the strike of mineralisation. Drilling was conducted both to the southwest and the northeast testing the subvertical mineralisation from opposite directions. The drilling directions are not considered to have any biasing effects.

Criteria	JORC Code explanation	Commentary
to geological structure		Drill intersections are approximately 50% of true widths.
	• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	Estimated true intervals are ~50% of downhole lengths.
Sample security	• *The measures taken to ensure sample security.*	All RC samples are bagged in tied numbered calico bags, grouped into larger tied polyweave bags and transported to the Orange exploration facility. All diamond core is transported to the Orange exploration facility, where it is logged and sampled into tied numbered calico bags. All RC and diamond core samples are placed in bulker bags with a sample submission sheet and couriered to ALS in Orange. All sample submissions are documented via ALS tracking system and all assays are reported via email. Sample pulps are returned to site and stored for an appropriate length of time (minimum 3 years). The Company has in place protocols to ensure data security.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	The Company does not routinely have external consultants verify exploration sampling techniques. The Company has provided accurate resource estimations at Tomingley Gold Operations using these described sampling techniques. Cube Consulting is used to verify exploration data and to determine the resource estimation parameters.

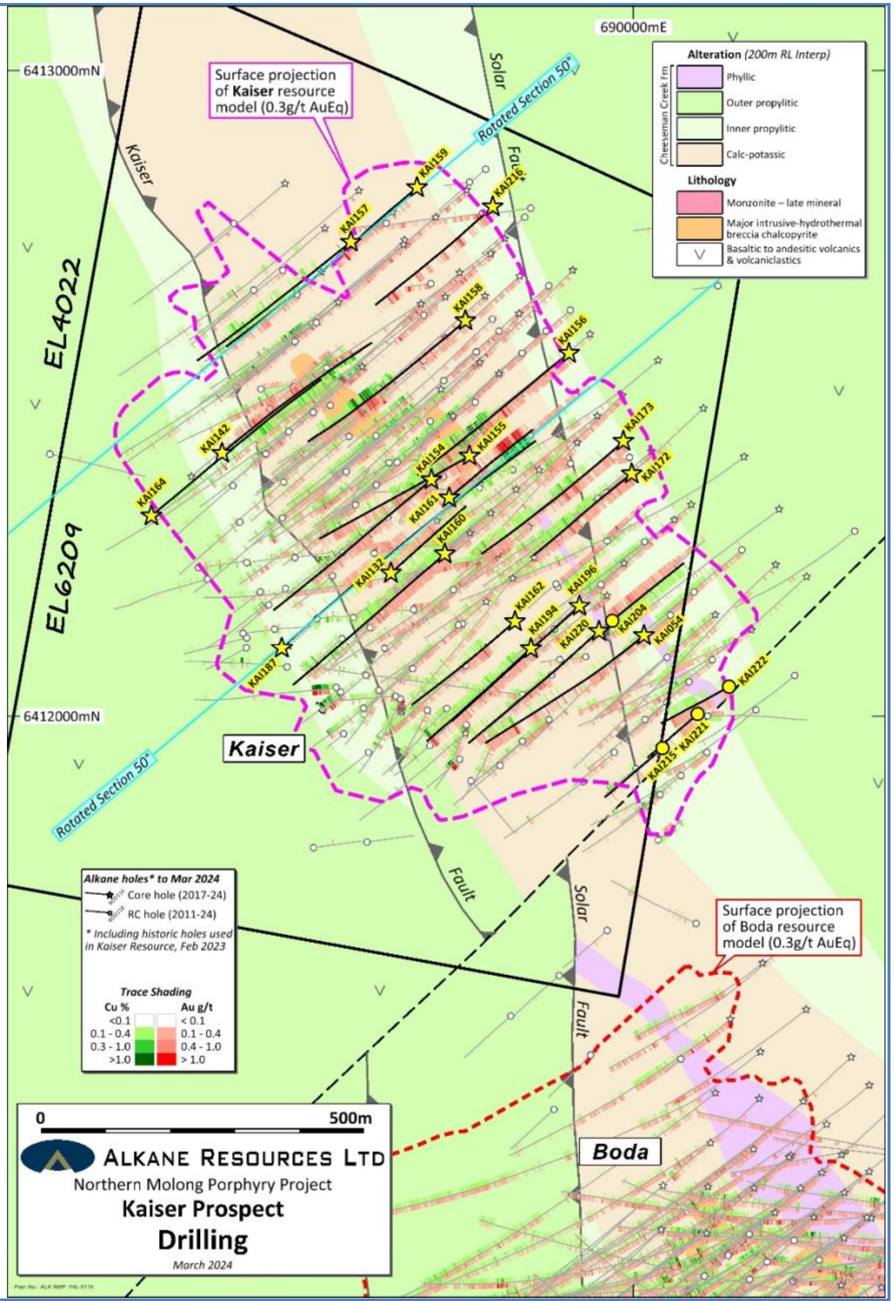
Section 2 Reporting of Exploration Results

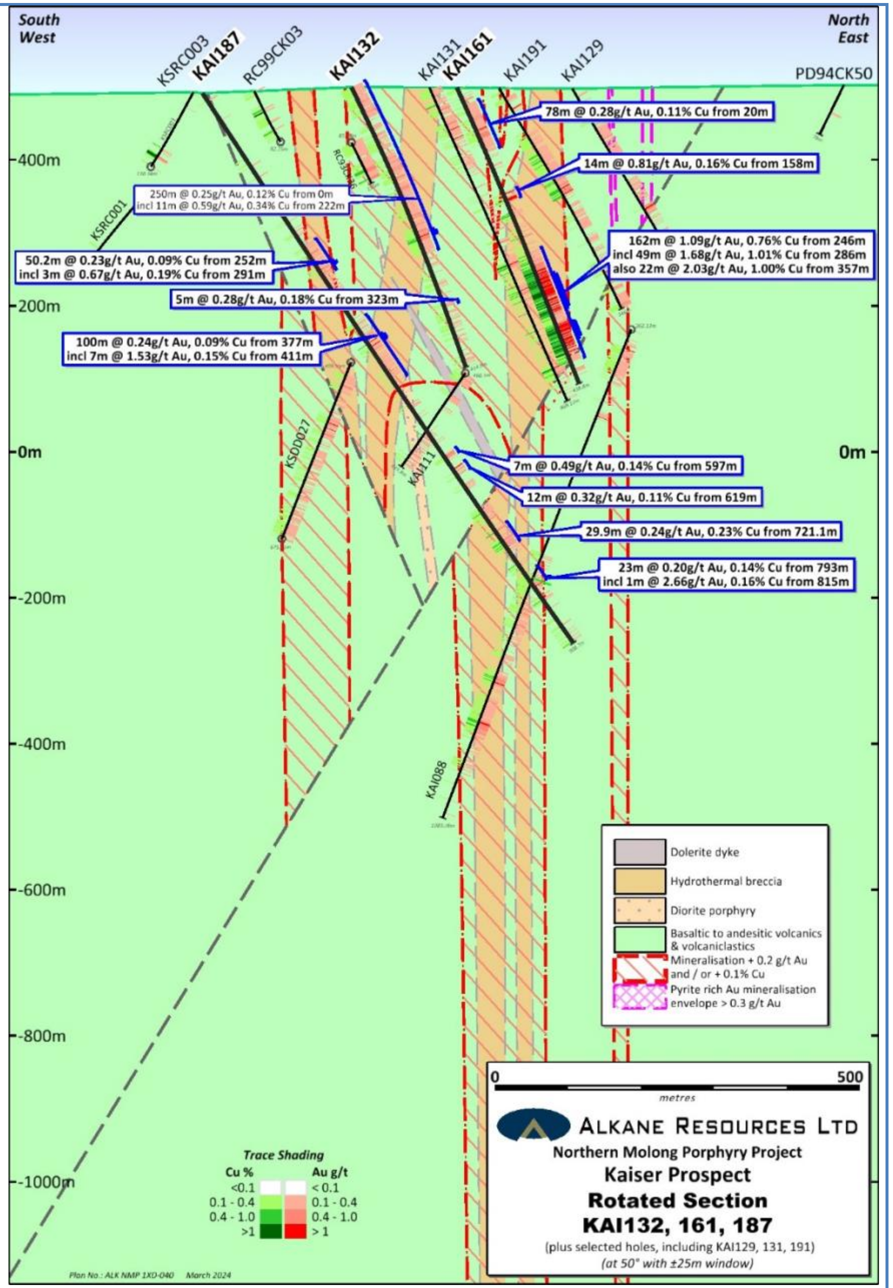
(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	All five licences (EL4022, EL6209, EL8261, EL8338 and EL8887) in the Northern Molong Porphyry Project are owned 100% by Alkane. Ajax Joinery retain a 2% net smelter return on any products produced from within EL6209 (Kaiser).
	• *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	All exploration licences are in good standing. EL4022 expires on 13 August 2026. EL6209 expires on 11 March 2029. EL8338 expires on 27 January 2030. EL8887 expires on 6 February 2026. EL8261 expires on 30 April 2029.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Significant historical drilling activity has been conducted within the bounds of EL6209. KAISER PROSPECT: Under-reporting of historical exploration drill results pre-Rio and Newcrest from the Kaiser Prospect is suggested by preliminary metallurgical test work by previous explorers and is supported by a drill hole (KSRC001) completed by Alkane. This can be partly explained by the partial digests and analogue equipment commonly used in the 1970s.

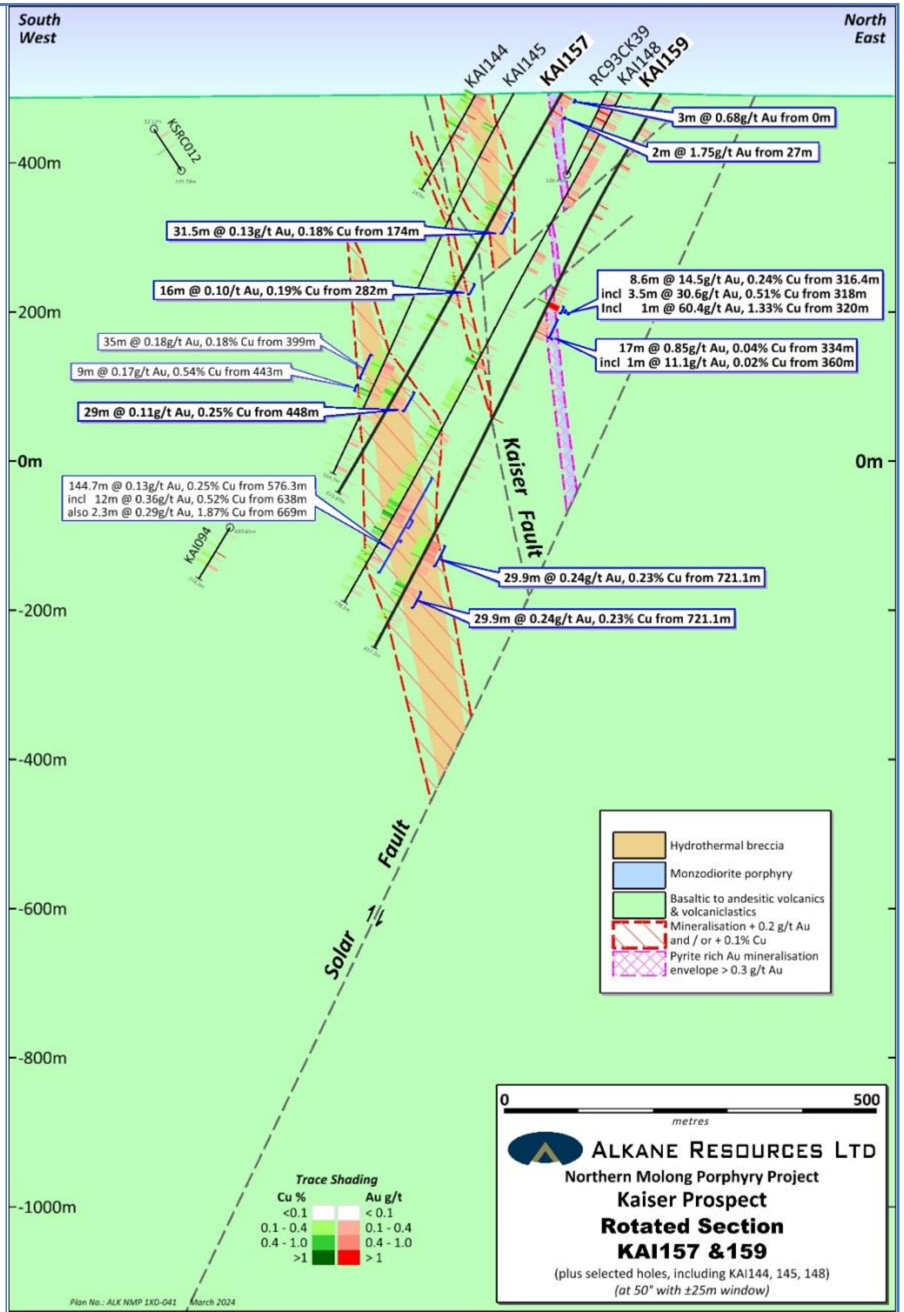
Criteria	JORC Code explanation	Commentary
		EL6209 (Kaiser) historical records show 14 AC (170m), 78 RC (7591m) and 45 DD holes (7833m) = 15,594m. Of which only modern drilling results were included in the Estimation. This contained 29 drill holes by Rio comprising of 3,224 metres of RC and 1,485 metres of diamond core and 4 drill holes by Newcrest of 2,685 metres of diamond core for a total of 7,394 metres.
Geology	• *Deposit type, geological setting and style of mineralisation.*	The area is located at the northern extent of the Molong Volcanic Belt, a geological region considered highly prospective for and host to several economically important examples of porphyry Au-Cu mineralisation e.g. Cadia Valley alkalic porphyry cluster. See main section of the announcement for detailed description of the Kaiser geology.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.*	All material information has been previously reported in the following announcements: 8 April 2014, ASX Announcement; 21 January 2015, ASX Announcement; 6 May 2016, ASX Announcement; 3 April 2017, ASX Announcement; 15 August 2017, ASX Announcement; 9 September 2019, ASX Announcement; 8 March 2021, ASX Announcement; 22 October 2021, ASX Announcement; 17 December 2021, ASX Announcement; 18 July 2022, ASX Announcement; 7 September 2022, ASX Announcement; 25 October 2022, ASX Announcement; 9 December 2022, ASX Announcement; 9 November 2023 ASX Announcement; 20 December 2023 ASX Announcement; 12 February 2024 ASX Announcement; 15 March 2024 ASX Announcement.
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	All drill data has been previously reported.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.*	Exploration results reported for uncut gold grades, grades calculated by length weighted average.
	• *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.*	Reported intercepts are calculated using a broad lower cut of 0.2g/t AuEq, although grades lower than this may be present internally (internal dilution). No top cut has been used. Short intervals of high grades that have a material impact on overall intersection are reported as separate (included) intervals.

Criteria	JORC Code explanation	Commentary
	• *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	Gold equivalent values were calculated and used in modelling the mineralisation shells. Metal prices used for the gold equivalent are based on a historical 12-month average and were US$1950/oz for gold and US$8600/t for copper, and A$:US$0.67. Recoveries are estimated at 81% for Cu and 71% for Au from metallurgical studies at Kaiser.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* ○ *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* ○ *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	It is apparent on the sections and the report descriptions that the overall geometry of the porphyry mineralisation at Kaiser is subvertical, striking northwest. True intervals are likely to be ~50% of downhole lengths.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Recent cross sections and a plan showing geology with drill collars were included with previously reported exploration results detailing the significant resource. Various representative drill hole sections illustrating the mineralisation and geology are below.


690000mE
6413000mN
6412000mN
Surface projection of Kaiser resource model (0.3g/t AuEq)
Rotated Section 50°
Kaiser Fault
Solar Fault
EL4022
EL6209
Kaiser
Boda
Surface projection of Boda resource model (0.3g/t AuEq)
Alteration (200m RL Interp)
Cheeseman Creek Fm
Phyllic
Outer propylitic
Inner propylitic
Calc-potassic
Lithology
Monzonite – late mineral
Major intrusive-hydrothermal breccia chalcopyrite
Basaltic to andesitic volcanics & volcaniclastics
Alkane holes* to Mar 2024
Core hole (2017-24)
RC hole (2011-24)
* Including historic holes used in Kaiser Resource, Feb 2023
Trace Shading
Cu %
Au g/t
<0.1
0.1 - 0.4
0.3 - 1.0
>1.0
< 0.1
0.1 - 0.4
0.4 - 1.0
> 1.0
KAI159
KAI216
KAI157
KAI158
KAI156
KAI142
KAI164
KAI173
KAI154
KAI155
KAI172
KAI161
KAI160
KAI132
KAI162
KAI196
KAI194
KAI204
KAI220
KAI054
KAI187
KAI222
KAI221
KAI215
0
500m
ALKANE RESOURCES LTD
Northern Molong Porphyry Project
Kaiser Prospect
Drilling
March 2024



South West
North East
KSRC003
KAI187
RC99CK03
KAI132
KAI131
KAI161
KAI191
KAI129
PD94CK50
KSRC001
KSDD027
KAI111
KAI088
400m
200m
0m
-200m
-400m
-600m
-800m
-1000m
78m @ 0.28g/t Au, 0.11% Cu from 20m
14m @ 0.81g/t Au, 0.16% Cu from 158m
250m @ 0.25g/t Au, 0.12% Cu from 0m
incl 11m @ 0.59g/t Au, 0.34% Cu from 222m
162m @ 1.09g/t Au, 0.76% Cu from 246m
incl 49m @ 1.68g/t Au, 1.01% Cu from 286m
also 22m @ 2.03g/t Au, 1.00% Cu from 357m
50.2m @ 0.23g/t Au, 0.09% Cu from 252m
incl 3m @ 0.67g/t Au, 0.19% Cu from 291m
5m @ 0.28g/t Au, 0.18% Cu from 323m
100m @ 0.24g/t Au, 0.09% Cu from 377m
incl 7m @ 1.53g/t Au, 0.15% Cu from 411m
7m @ 0.49g/t Au, 0.14% Cu from 597m
12m @ 0.32g/t Au, 0.11% Cu from 619m
29.9m @ 0.24g/t Au, 0.23% Cu from 721.1m
23m @ 0.20g/t Au, 0.14% Cu from 793m
incl 1m @ 2.66g/t Au, 0.16% Cu from 815m
Dolerite dyke
Hydrothermal breccia
Diorite porphyry
Basaltic to andesitic volcanics & volcaniclastics
Mineralisation + 0.2 g/t Au and / or + 0.1% Cu
Pyrite rich Au mineralisation envelope > 0.3 g/t Au
0
500
metres
ALKANE RESOURCES LTD
Northern Molong Porphyry Project
Kaiser Prospect
Rotated Section
KAI132, 161, 187
(plus selected holes, including KAI129, 131, 191)
(at 50° with ±25m window)
Trace Shading
Cu %
Au g/t
<0.1
0.1 - 0.4
0.4 - 1.0
>1
< 0.1
0.1 - 0.4
0.4 - 1.0
> 1
Plan No.: ALK NMP 1XD-040 March 2024


South West
North East
KAI144
KAI145
KAI157
RC93CK39
KAI148
KAI159
KSRC012
KAI094
400m
200m
0m
-200m
-400m
-600m
-800m
-1000m
3m @ 0.68g/t Au from 0m
2m @ 1.75g/t Au from 27m
31.5m @ 0.13g/t Au, 0.18% Cu from 174m
16m @ 0.10/t Au, 0.19% Cu from 282m
8.6m @ 14.5g/t Au, 0.24% Cu from 316.4m
incl 3.5m @ 30.6g/t Au, 0.51% Cu from 318m
Incl 1m @ 60.4g/t Au, 1.33% Cu from 320m
17m @ 0.85g/t Au, 0.04% Cu from 334m
incl 1m @ 11.1g/t Au, 0.02% Cu from 360m
35m @ 0.18g/t Au, 0.18% Cu from 399m
9m @ 0.17g/t Au, 0.54% Cu from 443m
29m @ 0.11g/t Au, 0.25% Cu from 448m
144.7m @ 0.13g/t Au, 0.25% Cu from 576.3m
incl 12m @ 0.36g/t Au, 0.52% Cu from 638m
also 2.3m @ 0.29g/t Au, 1.87% Cu from 669m
29.9m @ 0.24g/t Au, 0.23% Cu from 721.1m
29.9m @ 0.24g/t Au, 0.23% Cu from 721.1m
Kaiser Fault
Solar Fault
Hydrothermal breccia
Monzodiorite porphyry
Basaltic to andesitic volcanics & volcaniclastics
Mineralisation + 0.2 g/t Au and / or + 0.1% Cu
Pyrite rich Au mineralisation envelope > 0.3 g/t Au
0
500
metres
ALKANE RESOURCES LTD
Northern Molong Porphyry Project
Kaiser Prospect
Rotated Section
KAI157 &159
(plus selected holes, including KAI144, 145, 148)
(at 50° with ±25m window)
Trace Shading
Cu %
<0.1
0.1 - 0.4
0.4 - 1.0
>1
Au g/t
< 0.1
0.1 - 0.4
0.4 - 1.0
> 1
Plan No.: ALK NMP 1XD-041
March 2024

Criteria	JORC Code explanation	Commentary
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Data relating to all exploration drill holes has been reported in previous documentation of exploration results.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	No additional or new drilling results are being reported.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	Additional drilling is planned targeting poorly informed Inferred resources on the flanks of the Kaiser deposit. Other drilling will target deep extensions to the Kaiser mineralisation footwall to the Solar Fault.
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	See body of announcement.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	All raw data is captured directly through Geobank Mobile and validated before uploading into the Geobank database.
	• *Data validation procedures used.*	There are validation checks to avoid duplications of data. The data are further validated for consistency when loaded into Geobank and desurveyed.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* *(If no site visits have been undertaken indicate why this is the case.)*	The Competent Person regularly visits drill sites and is based in the Orange exploration office where he is involved in geological discussions, drilling updates, viewing of the data and of the core.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	The geological model is built on structural data from core, lithological logging, lithogeochemistry and petrological studies. The mineralised system is subvertical and strikes north-west. The domain wireframes were built by Alkane geologists.
	• *Nature of the data used and of any assumptions made.*	Structural measurements from oriented drill core were used to assist in the geological interpretation along with lithological, alteration and mineralisation logging of RC chips. Lithogeochemistry was used to aid defining different lithologies and alteration types. Approximately half of the data comes from drill core as opposed to RC chips.
	• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*	Kaiser is positioned within a significant north-west trending structural corridor, the geology is

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		well understood from a significant amount of drilling. A different geological interpretation at this stage would have a negligible effect on the Mineral Resource Estimation.
	• *The use of geology in guiding and controlling Mineral Resource estimation.*	Geological logging together with lithogeochemistry was used to develop a geological model. Alteration and breccia textures along with grade guided the interpretation of the ore envelope wireframes. Interpreted faults truncate and dislocate the mineralisation domains. Most of the mineralisation is hosted by hydrothermal and intrusive-hydrothermal breccias with mineralised stockwork calcite-quartz veining. Potassic gold-rich pyrite alteration occurs east of Kaiser and is modelled as gold-rich and copper-poor domains. Dolerite and dacitic dykes post-date the mineralisation and stope and truncate out the modelled mineralised domains but were deemed too thin to model out of the resource.
	• *The factors affecting continuity both of grade and geology.*	The alteration at Kaiser is typically zoned similarly to other gold-copper alkalic porphyry deposits. The strongest gold-copper grades are usually associated with the central calc-potassic alteration that zones to lower grading inner propylitic alteration to largely barren outer propylitic alteration. Within the calc-potassic alteration is a stock of hydrothermal breccias, that are zoned from pyrite dominant to chalcopyrite dominant where the highest Au-Cu grades are found. A separate, possibly earlier, potassic alteration zone associated with biotite and significant pyrite mineralisation occurs on the north-east flank of Kaiser that is gold rich. Cross-cutting this mineralisation are numerous thin (less than 5m) late- to post- mineral dykes ranging from monzonitic to basaltic compositions.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	Strike length ~ 1,100m Width ~ 650m Depth ~ surface (~490mRL) to an average of ~ 500m below surface, the deepest the resource is classified to is ~800m below surface.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	The resource model has used all of Alkane's exploration drill data. 58 mineralisation wireframes were constrained by two fault wireframes for the resource modelling. Two surfaces were also used to separate material types - topography and base of oxidation surfaces. Minor native copper (supergene) has marginally overprinted mineralisation domains proximal to the Kaiser Fault zone and has been flagged in the block model. The material type classification was used to allocate density values. The drillhole data was flagged by the domain wireframes in priority order, to prevent double use of the data in any intersecting and overprinting zones. The mineralised zones of greater than 0.2g/t AuEq were wireframed and constrained to the Kaiser Fault, Solar Fault and topography surfaces. The samples within their respective zones were flagged to prevent any overestimation that could be caused by use of assays outside these boundaries.

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		Top-cuts were selected for each domain based on a visual inspection of the data using histograms, log-transformed probability plots, percentile analysis and sensitivity analysis for individual domains. Spatial location of the outliers was also taken into consideration for the application of the grade caps. The sensitivity analysis involved analysing varying cap values, to estimate the contribution of each sample to the overall metal content. Capping was deemed necessary for some of the domains. Distance limiting of 25 metres of high grades via an aggressive top cut was used during the estimation process on domains that had evidence for higher grade samples having a greater spatial influence than warranted. This resulted in higher grades being more locally representative and having less of an influence over distance. An estimation search neighbourhood analysis was used to determine optimal search parameters for Ordinary Kriging (OK) estimation of Au and Cu grade. The correlation between Au and Cu was considered moderate for most domains and the variables were estimated separately. Density was averaged for each domain and assigned individually. The determined optimum block size is 25mX x 25mY x 10mZ with a sub-blocking size of 5mX x 5mY x 5mZ. These blocks were informed by a minimum of 10 and a maximum of 20 composited (1m) samples, with an initial search ellipse using various major (40m -100m), semi and minor axis ratios depending on the metal and domain being estimated. To inform any remaining blocks a second pass search radius was made at double the first pass and five times for a third pass. The model was rotated to best align the block dimensions with interpreted mineralisation. Grade estimation was completed using Ordinary Kriging (OK) with dynamic anisotropy. All wireframing and estimation was completed with Datamine Studio RM
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	The Maiden Kaiser Mineral Resource Estimation announced on 27 February 2023 as 270Mt grading 0.24g/t Au, 0.18% Cu using a 0.3g/t AuEq. Using a 0.3g/t AuEq cut-off for open pittable resources the revised MRE is lower in tonnes but slightly higher in grade at 189Mt 0.27g/t Au, 0.19% Cu.
	• *The assumptions made regarding recovery of by-products.*	The Global Resources are presented using a gold equivalent (AuEq) cut-off. The AuEq is calculated using a 12-month average of gold, copper prices and AUD exchange rate. Recoveries of gold and copper have been estimated from a substantial metallurgical study.
	• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*	A substantial metallurgical study showed a good copper concentrate low in penalty elements with only fluorine that may require negotiation with potential customers. No deleterious elements resulted from the study.
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*	The resource was estimated on a nominal 50m x 50m drilled area at Kaiser. An estimation search neighbourhood analysis was used to determine optimal search parameters for Ordinary Kriging (OK) estimation of Au and Cu grade. The correlation between Au and Cu was considered moderate for most domains and the variables were estimated separately. Density was averaged for the different domains. The determined optimum block size is 25mX x 25mY x 10mZ with a sub-blocking size of 5mX x 5mY x 5mZ

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	• *Any assumptions behind modelling of selective mining units.*	No assumptions made.
	• *Any assumptions about correlation between variables.*	The correlation between Au and Cu was considered moderate for most domains and the variables were estimated separately.
	• *Description of how the geological interpretation was used to control the resource estimates.*	Most of the mineralisation domains are hosted by early hydrothermal breccias with mineralised stockwork calcite-quartz veining. Gold-rich mineralisation associated with potassic alteration occurs along the eastern flank that has been domained separately to the gold-copper calc-potassic mineralisation. Dolerite and dacitic dykes post-date the mineralisation and truncate and stope out mineralisation but were considered too thin (less than 5m) to domain out. Two major post-mineral faults truncate and dislocate the mineralisation and domains were modelled up to these fault boundaries. Only data form the same domain was used to make estimates.
	• *Discussion of basis for using or not using grade cutting or capping.*	Top-cuts were selected for each domain based on a visual inspection of the data using histograms, log-transformed probability plots, percentile analysis and sensitivity analysis for individual domains. Spatial location of the outliers was also taken into consideration for the application of the grade caps. The sensitivity analysis involved analysing varying cap values, to estimate the contribution of each sample to the overall metal content. Capping was deemed necessary for a majority of domains. Distance limiting of high grades via an aggressive top cut was used during the estimation process on domains that had evidence for higher grade samples having a greater spatial influence than warranted. This results in the higher grades being more locally representative and having less of an influence over distance.
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	Validation of the modelling parameters and processes of estimation included visual inspections in section, plan and in 3D; and comparisons of previous iterations vs the final OK model were made. Comparisons were also made with the maiden resource model.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	The tonnages were estimated on a dry tonnage basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	A notional pit shell design (using forward looking metal prices and mining costs) was used to determine potential open cut mining resource with a cut-off grade as 0.3g/t AuEq and a resource below the pit shell with a 0.4g/t AuEq cut-off for a potential bulk underground mining method. Gold equivalents have been calculated using the formula AuEq(g/t) = Au(g/t) + Cu%/100*31.1035*copper price($/t)/gold price($/oz). The prices used were based on a 12-month average of US$1,950/oz gold and US$8,600/t copper, and an exchange rate of A$:US$0.67. Recoveries are estimated as 81% for Cu and 71% for Au from metallurgical studies at Kaiser.

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Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	The cut-off grades used for the Mineral Resource were based upon a review of existing and feasibility operating data for similar deposits in Australia and Canada as reasonable for the prospect of eventual extraction. A notional pit shell design (using forward looking metal prices and mining costs) was used to determine potential open cut mining resource with a cut-off grade as 0.3g/t AuEq and a resource below the pit shell with a 0.4g/t AuEq cut-off for a potential bulk underground mining method.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	A substantial metallurgical study on Kaiser shows that a simple flowsheet of conventional crushing, grinding and flotation circuits can produce a saleable concentrate with leaching of the cleaner tail to produce gold dore (see ASX announcement 14 November 2023). Overall recoveries for this process are estimated at 81% for copper and 71% for gold, and are used for the purposes of cut-off grade estimation.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	The Boda District is a greenfield discovery. Previous mining occurred at the nearby Kaiser mine in the 1870s. Kaiser and Boda are located on agriculturally modified freehold land with recently constructed wind turbines positioned nearby on surrounding hills.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	Density has been determined using the Archimedes Principle on diamond core and measured every 20 metres for determination of a bulk dry density.
	• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.*	SG measurements completed on all domain types.
	• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	SG was averaged for each domain and applied individually.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*	*Resource Model* Mineral Resources were classified as Indicated or Inferred to appropriately represent confidence and risk with respect to data quality, drill hole spacing, geological and grade continuity, mineralisation volumes, as well as metal distribution. There is no material classified as Measured. Indicated Mineral Resources were defined where a high level of geological confidence in geometry, continuity, and grade, was demonstrated, and were identified as areas where: - Drill spacing was averaging a nominal 60m, or where drilling was within 60m of the block estimate;

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		- Estimation quality is considered to be of high confidence in respect to low kriging variance; and - Blocks are informed by or are nearby to blocks informed by a first pass search. Remaining estimated blocks made within the defined mineralisation domains were classified as Inferred Resources where geological continuity could be defined, otherwise they were not classified.
	• *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).*	The geological model includes additional mineralisation that has very low drilling density that is unclassified and therefore not included in the Mineral Resource Estimation.
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The classification reflects the Competent Persons view of the deposit and its supporting data.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	Cube Consulting reviewed the estimation data and domains wireframed by Alkane geologists and provided estimation parameters.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*	No statistical or geostatistical method (non-linear or simulation) was used to quantify the relative accuracy of the estimate within confidence limits. Confidence of the estimate is dependent on: accuracy of the interpretation and geological domaining; accuracy of the drill hole data (location and values); orientation of search ellipses used; and estimation parameters which are reflected in the variogram model used.
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*	The resources are Indicated and Inferred, being based on drill hole spacing and geological continuity. To ensure the resources have 'reasonable prospects of eventual economic extraction' the resources have used a notional pit design and cut-off grades based upon a review of existing and feasibility operating data for similar deposits in Australia and Canada.
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	Kaiser is a recent discovery.