ASX and MEDIA RELEASE

27 February 2023

ALKANE RESOURCES LTD
ABN 35 000 689 216

Kaiser Resource Estimate of ~4.7M Gold Equivalent Ounces

- **The initial Inferred Mineral Resource for the Kaiser Deposit has been estimated at:**

  270Mt grading at 0.54g/t AuEq* for 4.7Moz AuEq* (0.48Mt Cu, 2.05Moz Au)

- **The estimate is based on approximately 49,400 metres of drilling using a 0.3g/t gold equivalent (AuEq*) cutoff to the -140mRL deemed appropriate for potential open cut mining.**

- **The Kaiser Resource is located 500 metres northwest of the Boda deposit within the Northern Molong Porphyry Project (NMPP). The average grade for Kaiser is slightly higher than Boda largely due to the higher copper grade. As a result, the value of the contained copper now exceeds the value of gold for the Boda-Kaiser resources:**

  Kaiser: 270Mt at 0.54g/t AuEq* for 4.7Moz AuEq (2.05Moz Au, 0.48Mt Cu)

  Boda: 624Mt at 0.51g/t AuEq* for 10.1Moz AuEq (5.21Moz Au, 0.90Mt Cu)

  Total: 894Mt at 0.52g/t AuEq* for 14.8Moz AuEq (7.26Moz Au, 1.38Mt Cu)

- **Drilling continues to define the overall Boda-Kaiser system with extensions being tested south of Boda at Boda Two and Boda Three and northwest of Boda towards Kaiser. The Kaiser deposit remains open at depth and along strike, and west of the Kaiser Fault.**

- **Additional infill drilling of the Inferred Resources at Boda and Kaiser is underway to improve confidence to reclassify to Indicated status. Updated resource estimations for Kaiser and Boda are expected at the end of CY2023.**

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 US$1,770/oz gold and US$9,750/t copper, and A$:US$0.70. Recoveries are assumed the same for Au and Cu at 85% from preliminary metallurgical studies. Alkane considers the elements included in the metal equivalents calculation have a reasonable potential to be recovered and sold.

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Alkane Resources Limited (ASX: ALK) is pleased to announce the initial Kaiser resource following its extensive drilling program at the Company's Kaiser Prospect in Central New South Wales. The Kaiser resource is located 500 metres northwest of Boda, a landmark porphyry gold-copper system, within the Northern Molong Porphyry Project, which the Company believes 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:

"This addition of the Kaiser resource to Boda further demonstrates the significant potential of the Northern Molong Porphyry Project and Alkane's large tenement package.

"Kaiser and Boda together now approaches 15 million gold equivalent ounces, and after adding Kaiser, copper now exceeds the value of gold in the system.

"We expect the resource to grow further as we continue to test extensions south of Boda and we'll also conduct infill drilling to update Kaiser and Boda to Indicated resource classification before the end of the year.

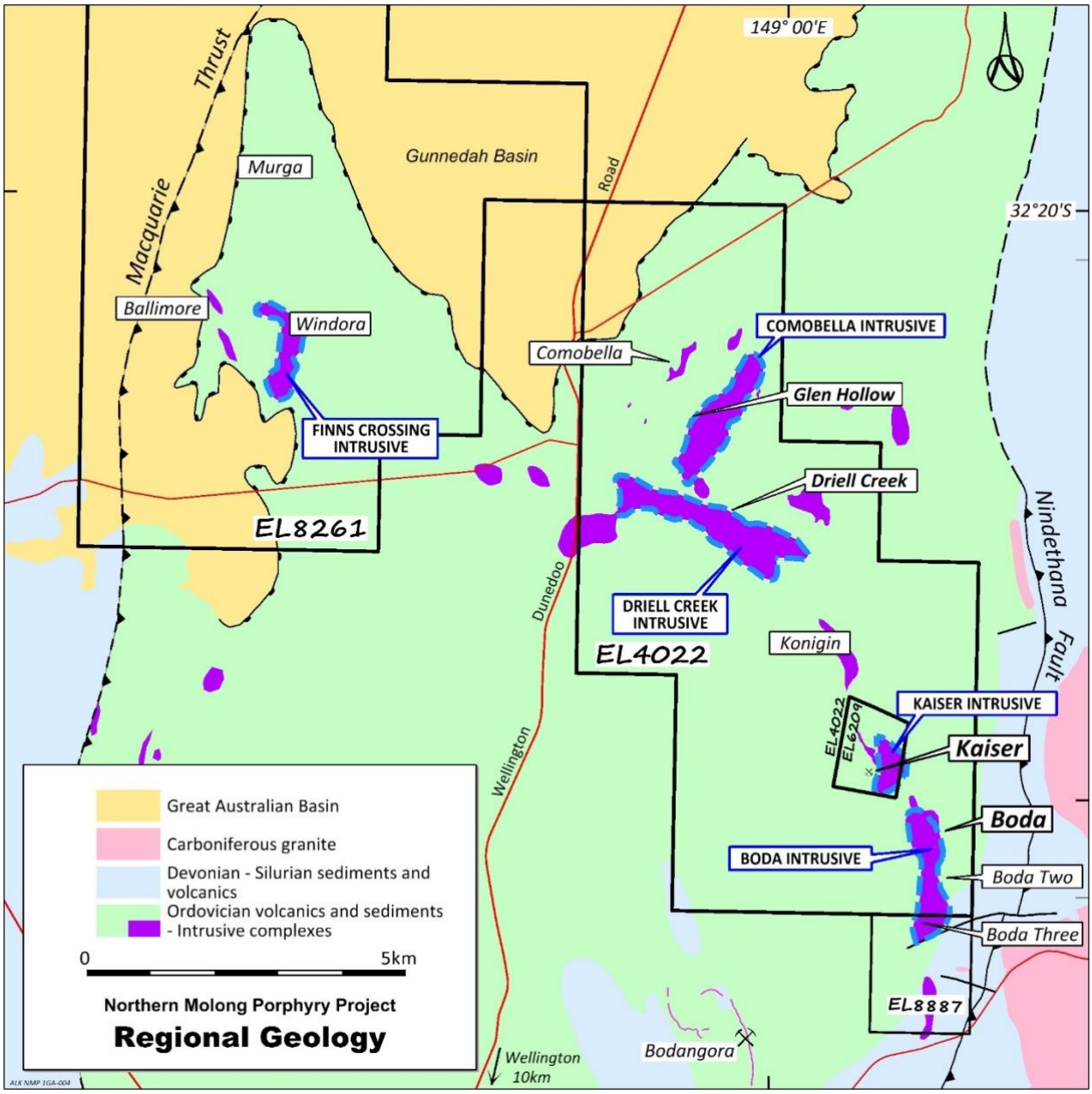
"Alkane is also continuing the preliminary work that is required to further understand mining and processing options for the future and are looking to wrap these into a concept study as the Indicated Resource is released."

Northern Molong Porphyry Project (NMPP)

Alkane Resources Ltd 100%

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

Exploration in the NMPP has identified five discrete magnetic/intrusive complexes – Kaiser, Boda, Comobella, Driell Creek and Finns Crossing – within a 15km northwest trending corridor. The corridor is defined by intermediate intrusives, lavas and breccias, extensive alteration and widespread, low-grade, gold-copper mineralisation.



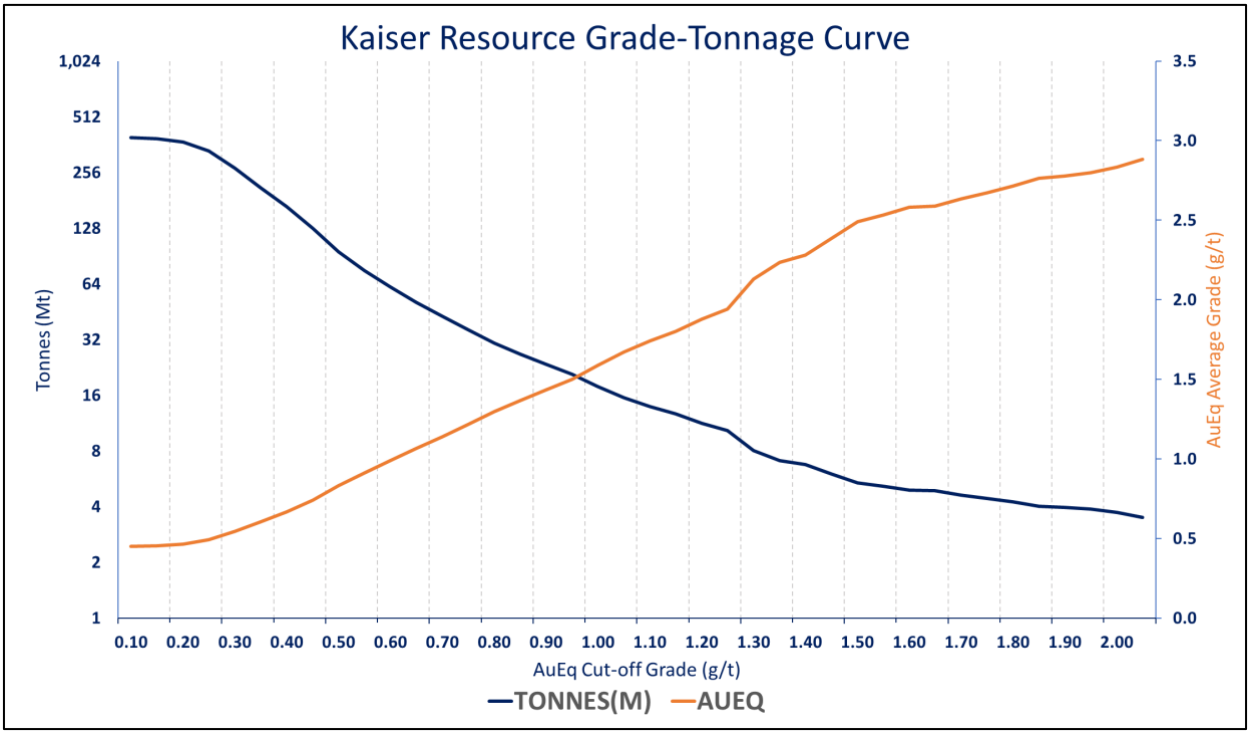
Significant exploration on the NMPP commenced in 2019, defining several gold-copper occurrences and co-incident IP anomalies within the 15 km monzonite intrusive corridor that extends from Boda Three to Finns Crossing. This exploration comprised of intensive drilling of the Boda prospect resulting in the reporting of an initial Inferred Resource with a total metal inventory of 5.2Moz gold and 0.9Mt copper (ASX Announcement 30 May 2022). Drilling continues to test mineralised zones outside of the Boda Deposit resource envelope at Kaiser, Korridor (Boda North) and Boda Two/Three prospects.

Kaiser Initial Mineral Resource

The initial Inferred Mineral Resource estimation for the Kaiser deposit is confined to a surface area of 1,100m strike length and 700m width and is summarised in Table 1 (note that Table 1 includes data for a cutoff of 0.4g/t AuEq* to compare with the earlier Boda Resource estimate). The estimation uses nominal drill hole grid of 100m by 100m to depths averaging 400m and up to 800m below surface (~490mRL). It utilises a total of 130 drill holes for a combined 49,398 metres including an historical assay component (for the period 1995 – 2003) captured by Rio Tinto and Newcrest from 37 drill holes comprising of 3,224 metres of RC and 4,169 metres of diamond core. The extensive shallow drilling on the small high grade historic Kaiser workings completed prior to the Rio work, has not been included in this estimation. The resource was classified to the -140mRL as the depth. A review of feasibility and existing operating data for similar deposits in Australia (**see data sources below) was considered in determining cutoff grade of 0.3 g/t AuEq* as reasonable for the prospect of eventual extraction with the use of an open cut mining method. Figure 1 presents grade vs tonnage curves at various cut-off grades.

Table 1 Inferred Mineral Resource for Kaiser

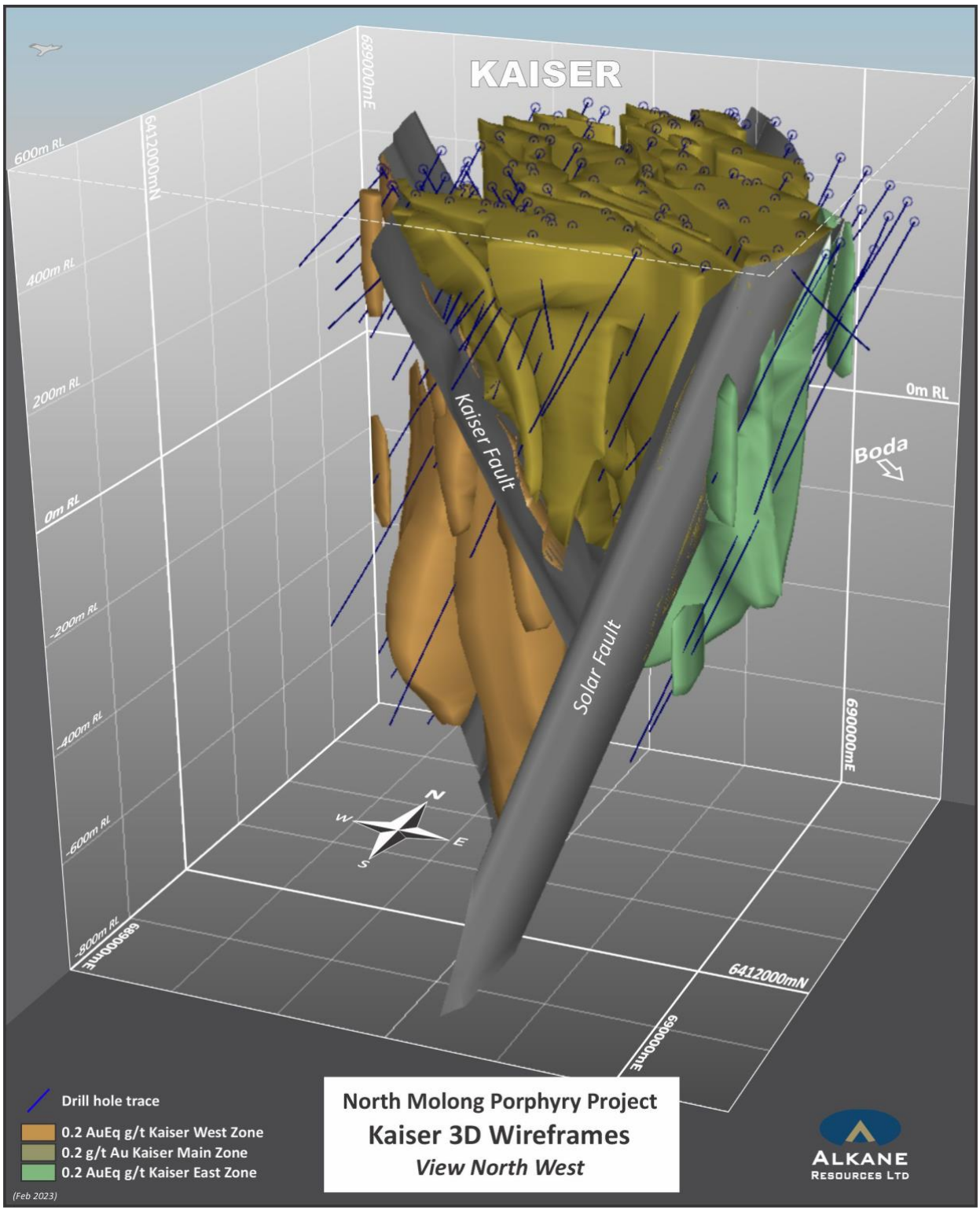
Resource Category	AuEq Cutoff	Tonnes (Mt)	Grade				Contained Metal			
			AuEq (g/t)	Au (g/t)	Cu (%)	Ag (g/t)	AuEq* (Moz)	Au (Moz)	Cu (Mt)	Ag (Moz)
Inferred	0.3g/t	270	0.54	0.24	0.18	0.46	4.72	2.05	0.48	3.97
Inferred	0.4g/t	164	0.67	0.28	0.22	0.55	3.58	1.48	0.36	2.94



Full details are provided in the appended JORC Table 1 and text summary below. Gold equivalent is determined using 6-month average pricing and preliminary metallurgical recoveries.

Figure 1 Grade vs Tonnage curves for the Kaiser Mineral Resource

The Mineral Resource will be subject to further resource infill and extension drilling with a view to define the continuity of the mineralisation at depth and to improve the confidence in the Mineral Resource. A 3D model of the Kaiser mineralisation is displayed below.



**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.

At the nearby Boda deposit, an initial Inferred Resource was estimated at 624 Mt at 0.51 g/t AuEq* for 5.2 Moz gold and 0.9 Mt copper (ASX Announcement 30 May 2022), giving the total NMPP combined Resources of 894 Mt at 0.52 g/t AuEq* for 7.26 Moz Au and 1.38 Mt Cu as summarised in Table 2.

Table 2 Total Mineral Resources for the Northern Molong Porphyry Project

BODA-KAISER MINERAL RESOURCES (as at 24 February 2023)			
DEPOSIT	**INFERRED**		**CONTAINED METAL**
	M Tonnes	Grade (Au g/t / Cu %)	Au Moz / Cu Mt
Resources (cut off 0.3g/t AuEq)			
BODA Au	624	0.26	5.20
BODA Cu	624	0.14	0.90
BODA AuEq*	**624**	**0.51**	**10.1 MozEq***
KAISER Au	270	0.24	2.08
KAISER Cu	270	0.18	0.49
KAISER AuEq*	**270**	**0.54**	**4.7 MozEq***
TOTAL AuEq*	**894**	**0.52**	**14.8 MozEq***
Resources (cut off 0.4g/t AuEq)			
BODA Au	353	0.33	3.71
BODA Cu	353	0.18	0.62
AuEq*	**353**	**0.63**	**7.1 MozEq***
KAISER Au	164	0.28	1.48
KAISER Cu	164	0.22	0.36
KAISER AuEq*	**164**	**0.67**	**3.5 MozEq***
TOTAL AuEq*	**517**	**0.64**	**10.6 MozEq***

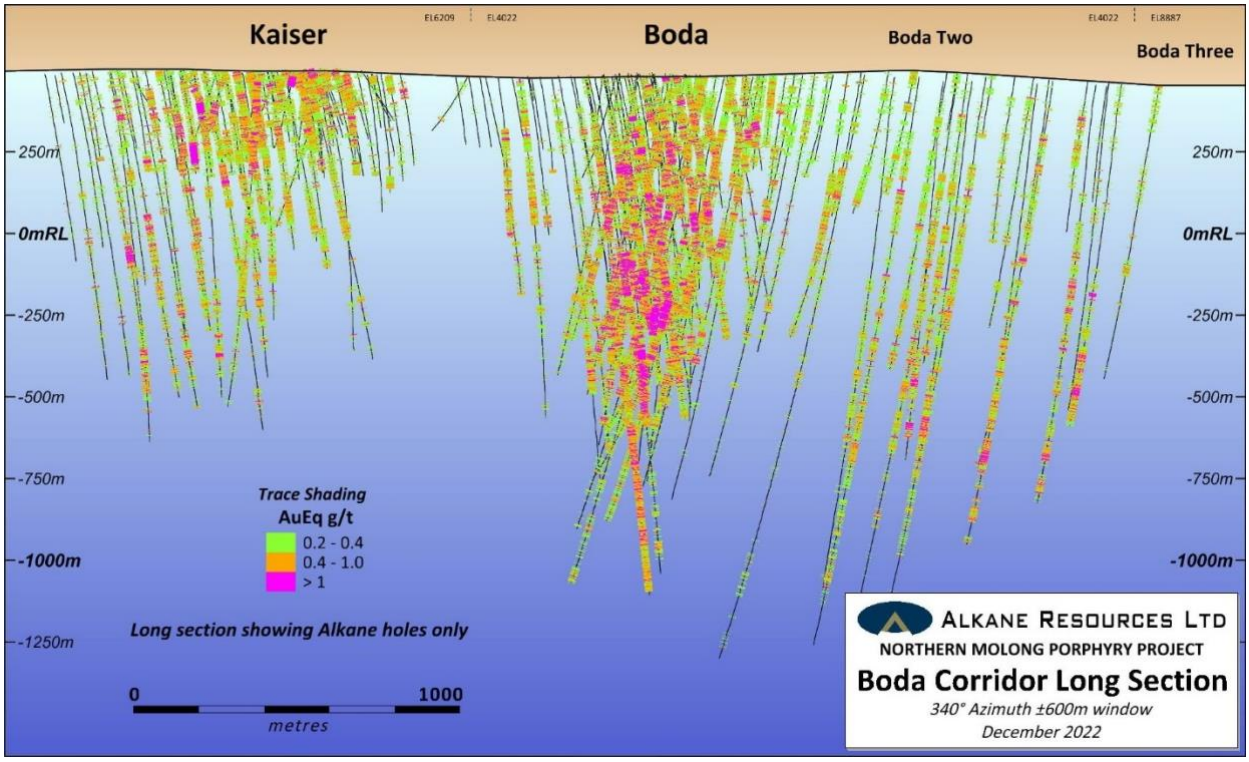
Exploration Upside at Kaiser

The Mineral Resource estimation was classified to the -140mRL, the depth considered reasonable for the prospect of eventual extraction by open cut methods. Two significant reverse faults bound and dislocate the main zone of mineralisation at Kaiser. There is potential for further extensions to higher grading mineralisation on the down thrust Kaiser West zone of mineralisation, southwest of the Kaiser Fault. This target area is supported by drill hole KAI090 intersecting a bornite-chalcopyrite crackle breccia of 122.4m @ 0.40% Cu, 0.42g/t Au from 576.6m, including 28m @ 0.84% Cu, 0.92g/t Au from 646m (ASX Announcement 25 October 2022).

Further deeper drilling around higher grading intercepts within the Kaiser East and Kaiser West zones will improve confidence for the classification for an underground resource estimation.

Exploration immediately southwest and along strike of the Kaiser East zone towards the Boda Deposit where significant RC drill hole intercepts include BOD065 – 64m grading 0.43g/t Au, 0.12% Cu from 174m to end of hole. Exploration drilling is ongoing at the Boda Two/Three prospects adjacent and south of the Boda Deposit. Boda Two includes a poorly defined distal zone of phyllic pyrite-gold alteration with a significant drill hole intercept of KSDD022 – 292m grading 0.66g/t Au from 867m. This is in addition to the proximal and extensive gold-copper calc-potassic alteration intersected by broadly spaced drilling, including significant intercepts of KSDD033 – 995m grading 0.19g/t Au, 0.12% Cu from 322m.

Exploration around the Boda-Kaiser area has defined a 3.5km corridor of extensive calc-potassic alteration associated with Au-Cu porphyry mineralisation. The corridor trends north from Boda Three to Boda for approximately 1km, where it rotates to northwest from Boda to Kaiser for a further 2.5km. All the drilling completed in the corridor is illustrated in the long section below.



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 20 km north-east of Wellington and approximately 250 km 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 120 km to the south. Cadia is one of the world's largest alkalic porphyry deposit 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 dimensions of approximately 800 m x 700 m 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 monzogabbroic, and monzodiorite-monzonite units and related magmatic-hydrothermal breccias. The deposit is crosscut by numerous post-mineralisation dykes and sills of varying composition.

Magmatic-hydrothermal breccias appear to be the focus for the calc-potassic alteration and gold-copper mineralisation at Kaiser. The mineralisation is related to a series of NW-trending monzodiorite-monzonite intrusions that manifest as a series of vertically extensive intrusive breccias forming a stock central to the KIC. These intrusive breccias transition to hydrothermal breccias to which the highest Au-Cu grades at Kaiser 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 ± bornite or an igneous matrix.

The intrusive breccias are the likely 'causative' to the main Kaiser mineralisation.

The Kaiser-Boda volcanic package has undergone intense and extensive calc-potassic to potassic alteration often replacing both phenocrysts and the groundmass. This alteration is apparent over a strike length of approximately 3.5km from Kaiser, southeast to Boda, then rotating and continuing south to Boda Two and Three, with more significant mineralising centres occurring at each of the prospects. The calc-potassic alteration comprises fine-grained biotite-actinolite-epidote-magnetite with lesser internal zones of potassic alteration comprising only hydrothermal biotite. Towards the margins of this alteration hematite dusting of albite is commonly observed and is a diagnostic mineral of inner propylitic alteration and can provide a vector to the centre of the system.

Veining within the calc-potassic zone is dominated by calcite-quartz vein assemblages that are typically sulphide poor. Fine grained calcite occurs both as veinlets, usually along brittle fractures and as a widespread disseminated phase within the calc-potassic altered rocks.

Copper mineralisation is observed throughout the prospect primarily as chalcopyrite with subordinate bornite and chalcocite, and rare covellite. Within the magmatic 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. Native copper has been observed along the Kaiser Fault zone in thicknesses up to 10m wide. The native copper is interpreted to be secondary forming as supergene enrichment via weathering down this significant structure.

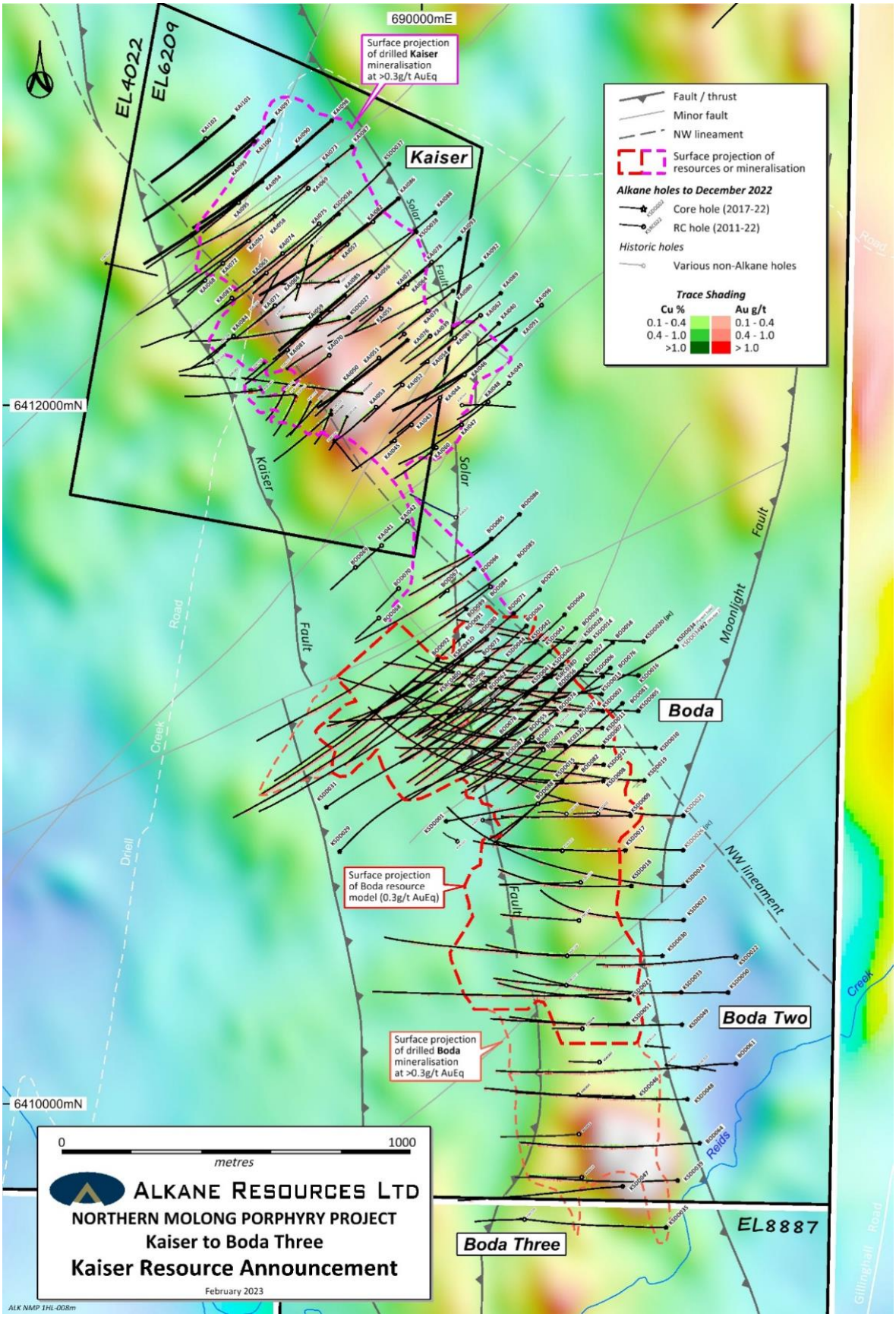
Calc-potassic alteration grades into propylitic alteration away from the breccia complex and has a typical assemblage of actinolite-hematite-epidote-pyrite (± trace chalcopyrite) proximal to the calc-potassic alteration zone. Moving further away from the mineralised centre the typically assemblage becomes more chlorite-calcite-albite-pyrite dominant.

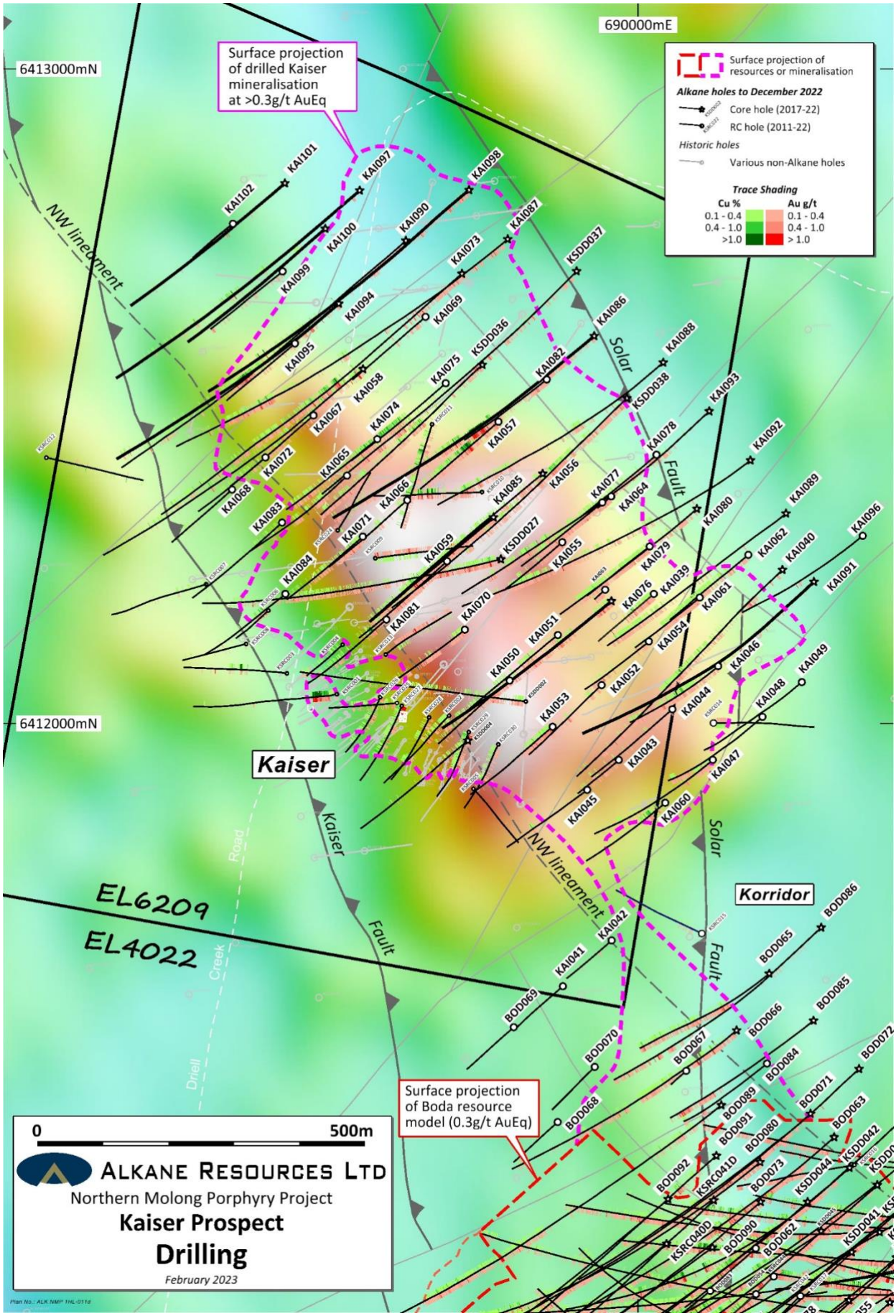
Two significant reverse faults bound and dislocate the main zone of mineralisation at Kaiser. The Kaiser Fault dips east and thrusts the deeper Kaiser Main zone over the shallower Kaiser West zone of mineralisation. The Solar Fault dips west and thrusts the Kaiser Main zone over the Kaiser East zone. The East Kaiser zone is immediately northwest of Boda, comprises of potassic to inner propylitic alteration with up to 10% pyrite by volume. The pyrite occurs as disseminated spots, aggregates, and short veinlets. The mineralisation is copper poor at shallower levels however gold grades over 10s of metres can average from 0.2 g/t to 0.3 g/t with occasional thin intervals of >10 g/t Au.

The Kaiser geology and mineralisation style is largely identical to Boda and possibly represents a deeper part of the system thrust over the shallower level Boda Deposit.

There is negligible post-mineral cover on the Kaiser deposit. Weathering and oxidation of the mineralised bedrock extends on average approximately 15m from surface.

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. Where the intercept gold equivalent value was below the nominal cut-off and the mineralisation continuity was supported by veining and alteration, the intercept was included within the domain due to the commodity and the style of deposit.


690000mE
6412000mN
6410000mN
EL4022
EL6209
EL8887
Surface projection of drilled Kaiser mineralisation at >0.3g/t AuEq
Kaiser
Boda
Boda Two
Boda Three
Surface projection of Boda resource model (0.3g/t AuEq)
Surface projection of drilled Boda mineralisation at >0.3g/t AuEq
Fault / thrust
Minor fault
NW lineament
Surface projection of resources or mineralisation
Alkane holes to December 2022
Core hole (2017-22)
RC hole (2011-22)
Historic holes
Various non-Alkane holes
Trace Shading
Cu %
Au g/t
0.1 - 0.4
0.4 - 1.0
>1.0
0.1 - 0.4
0.4 - 1.0
> 1.0
Solar
Fault
Moonlight
NW lineament
Road
Creek
Driell
Reids
Gillinghall Road
0
1000
metres
ALKANE RESOURCES LTD
NORTHERN MOLONG PORPHYRY PROJECT
Kaiser to Boda Three
Kaiser Resource Announcement
February 2023
ALK NMP 1HL-008m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Surface projection of drilled Kaiser mineralisation at >0.3g/t AuEq
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Au g/t
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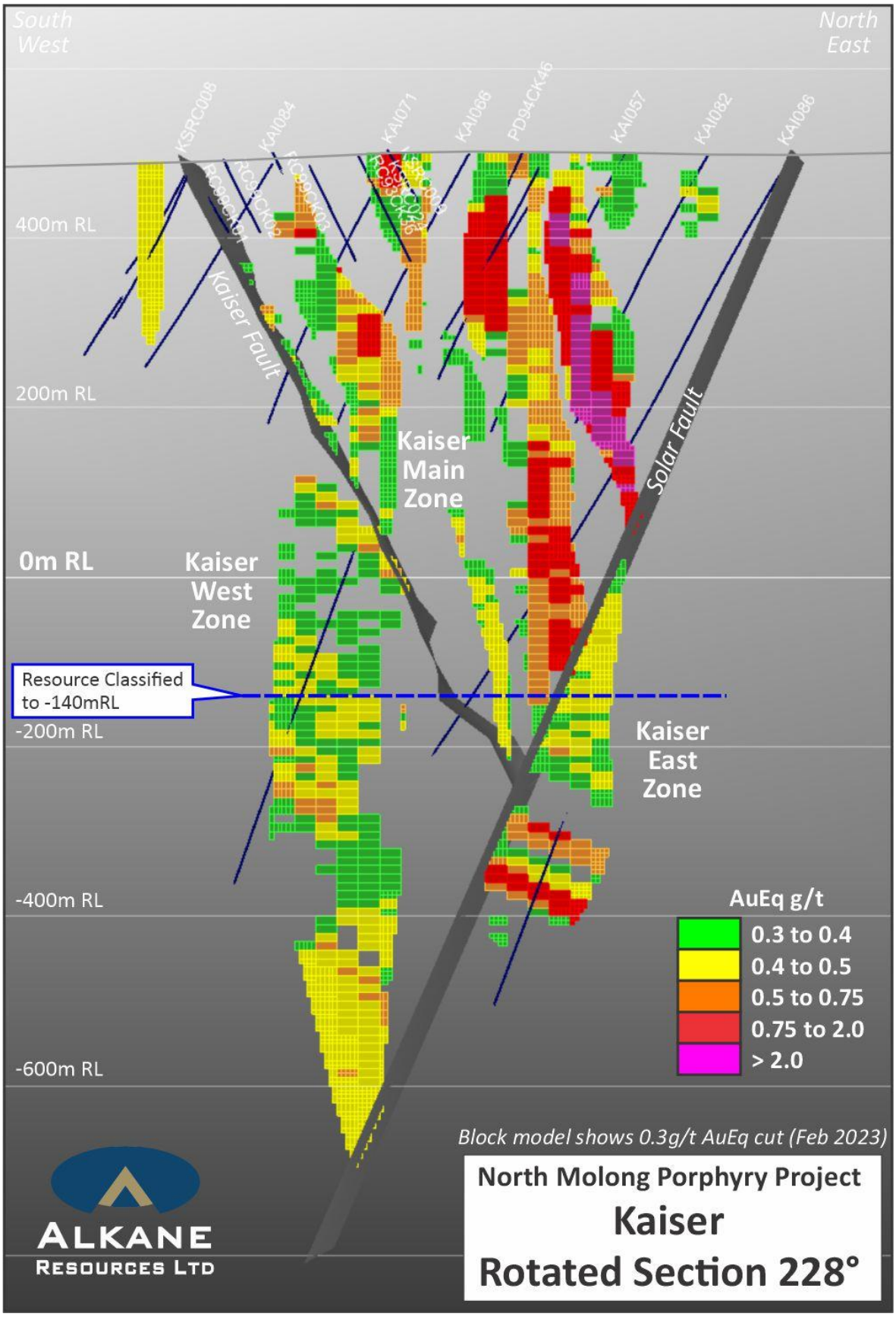
0.4 - 1.0
> 1.0
NW lineament
Solar
Fault
Kaiser
Korridor
Kaiser Road
Creek
Driell
EL6209
EL4022
Surface projection of Boda resource model (0.3g/t AuEq)
0
500m
ALKANE RESOURCES LTD
Northern Molong Porphyry Project
Kaiser Prospect
Drilling
February 2023


South West
North East
KSRC008
KAI084
KAI071
KAI066
PD94CK46
KAI057
KAI082
KAI086
400m RL
200m RL
0m RL
-200m RL
-400m RL
-600m RL
Kaiser Fault
Solar Fault
Kaiser Main Zone
Kaiser West Zone
Kaiser East Zone
Resource Classified to -140mRL
AuEq g/t
0.3 to 0.4
0.4 to 0.5
0.5 to 0.75
0.75 to 2.0
> 2.0
Block model shows 0.3g/t AuEq cut (Feb 2023)
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North Molong Porphyry Project
Kaiser
Rotated Section 228°

KAISER MINERAL RESOURCE – *Supporting information*

The Mineral Resource Statement for the Kaiser 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, copper and silver mineral resource within the Kaiser deposit, based on reverse circulation and diamond drilling sampling data available as of February 2023, 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 prospect area. Previous companies' exploration drilling was also included in the estimation where Alkane was confident of the collar locations and modern assaying methods, this included all drill holes completed by Rio Tinto and Newcrest. The estimation utilises a total of 130 drill holes for a combined 49,334 metres including the historical assay component. Drilling statistics are summarised in Table 3.

Table 3 Summary Drilling Statistics for Kaiser Resource Estimation

Company	**Alkane Resources**				**Rio Tinto**		**Newcrest**
Hole Type	RC (Pre-collars)	PQ3 (Pre-collars)	RC	HQ3	RC	HQ3	NQ3
No. of Holes	24	2	67	26	28	5	4
Metres	7,667.86	50.3	18,959	15,264.05	3,224	1,484.56	2,684.9
Total No. of Holes (not including pre-collars)	93				33		4
Total Metres	41,941.21				4,708.56		2,684.9

Drilling was conducted using high-capacity RC drill rigs and high-powered diamond core drill rigs for the purpose of retrieving large sized sample and for drilling to significant depths. The majority of drilling used in the estimation was conducted on nominal southwest orientated traverses using a 100m x 100m drill hole grid.

Sampling and Sub-Sampling Techniques

Sampling on all types of drilling was conducted from the surface to the bottom of 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 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 sampled by Alkane and assaying ≥0.1g/t Au or ≥0.05% Cu together with their upper and lower bounding composite samples were re-split as 1 metre samples collected at the time of drilling into a calico bag via a splitter below the cyclone.

Historical (1995 – 1999) 2 metre composites spear sampled by Rio were not resplit.

Diamond Core Drilling:

Half core samples 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. Historical representative half core drilled by Newcrest and Rio is stored at the NSW Londonderry State Core Library.

Sample Analysis Method

All samples were submitted to ALS Chemex Laboratory in Orange. Samples were oven dried prior to 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 determined by flame AAS.

In addition to gold assay, Alkane samples were assayed for a full multi-element suite using a multi-acid complete digest, with an AES and MS finish. Historical assays by Rio and Newcrest were for copper and other base metals such as As, Co, Cr, Fe, Mo, Pb, S and Zn used an aqua regia digestion with an ICP-AES 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 along with 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 is 0.92 indicating good repeatability for grades forming the bulk of the resource (removing the five highest grade assays). Copper is extremely high showing excellent repeatability with a correlation coefficient of 0.999 for the bulk of the resource (removing the four highest grade assays). Sampling technique is considered highly effective as observed from the very high correlation co-efficient of the two metals.

Laboratory QAQC sampling includes insertion 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 Au and Cu analyses over the course of the resource drilling campaign as a 1.25% proportion of total assays. In general, the results were repeatable between the laboratories with no statistically significant bias detected.

In the competent persons opinion, the laboratory has performed satisfactorily over the resource drilling campaign and any noted discrepancies are acceptable for the resource classification applied.

Estimation Methodology

Grade estimation was completed using Ordinary Kriging (OK) with dynamic anisotropy to optimise search ellipse orientation within the lodes, using a hard boundary interpolation on all the domains. All wireframing and estimation was completed with Datamine Studio RM software.

Exploratory data analysis of the capped and de-clustered composited gold, copper and silver 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, copper and silver grade. This analysis was carried out on only the well-informed domains. This determined an optimum block size to be 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 22 composited (1m) samples and limited to a maximum of 5 per drill hole, with an initial search ellipse using various major, 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 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 most of the well-informed domains.

Distance limiting of high grades over a certain distance 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.

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 persons opinion, all methods of validation produced acceptable results.

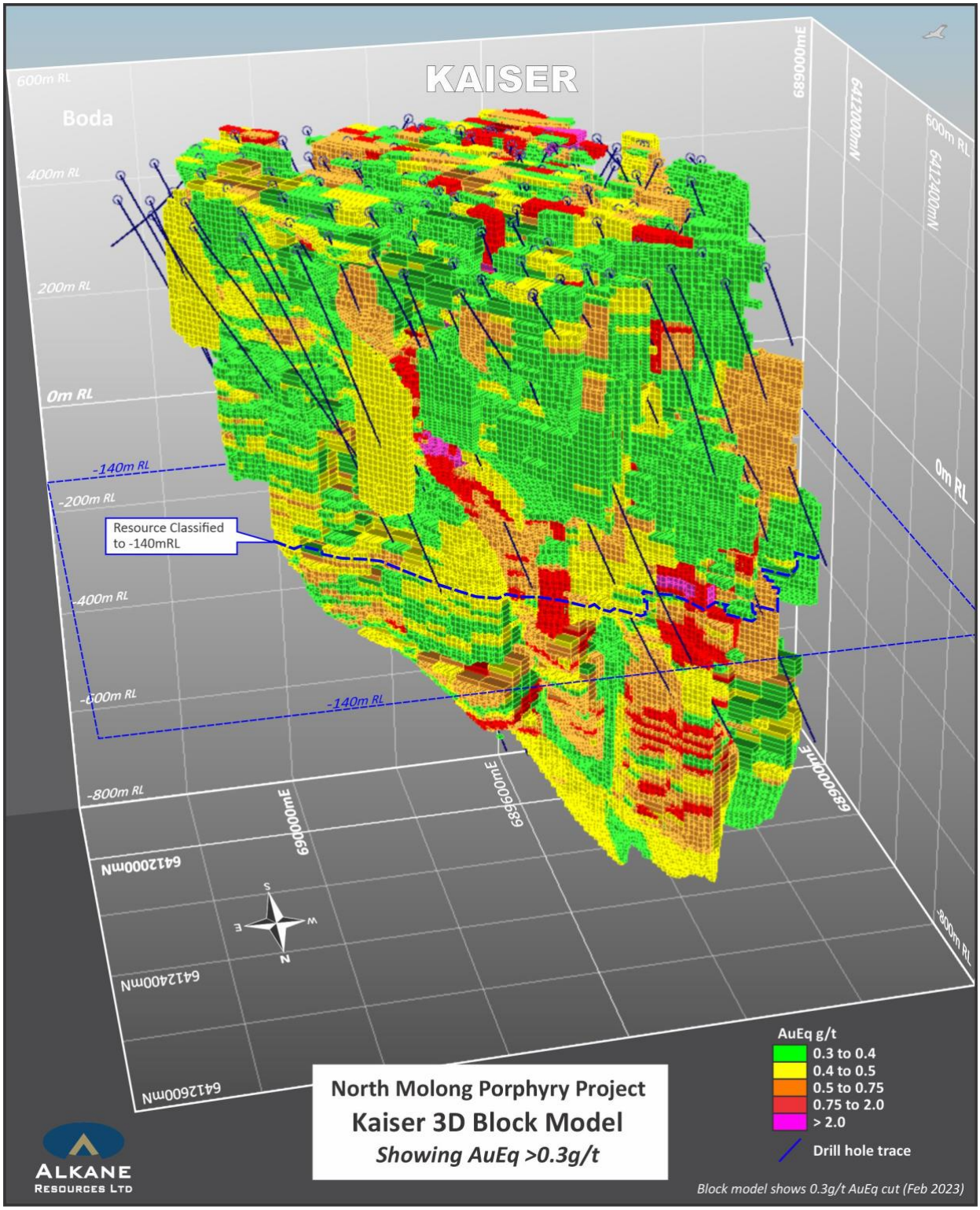
Classification Criteria

Mineral Resources were classified as 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. Only resources above the -140mRL were classified as deemed reasonable for the prospect of eventual extraction via open cut methods. There is no material classified as Indicated or Measured, or below the -140mRL.

Cut-Off Grade

The Mineral Resource cut-off grade for reporting of the Kaiser deposit was selected as 0.3g/t AuEq for possible open cut mining. 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). Silver (Ag) was not included in the AuEq calculation. The prices used were based on the 6-month average used in the Initial Boda Resource (see ASX Announcement 30 May 2022) of US$1,770/oz

gold and US$9,750/t copper, and an exchange rate of A$:US$0.70. Preliminary recoveries for gold and copper are modelled to be 85% from preliminary metallurgical studies. Figure below show the block model using a 0.3g/t AuEq cut-off.



Mining and Metallurgy

It is assumed that based on the orientations, thickness and shallow depth of the dispersive copper-gold mineralisation modelled that a shallow bulk tonnage mining method such as open cut would be considered. No dilution or cost factors were applied to the estimate.

Preliminary metallurgical study indicates processing is feasible with a standard grind (106 micron) with a flotation circuit. Eight core samples representative of ore types and grades were selected from the Boda, Boda Two and Kaiser deposits. These samples were subjected to standard comminution and flotation test work typical of porphyry gold-copper deposits. While this is considered a preliminary scoping program, a staged process could recover largely chalcopyrite-pyrite concentrate grading around 25% Cu and 30-40g/t Au and is considered a saleable concentrate. A separate pyrite concentrate (typical of the pyrite gold zone flanking the porphyry mineralisation) was floated as separate product. This could be subject to a finer grind (25 micron) with a cyanide leach for production of gold bullion. Overall preliminary recoveries for this process range from 75 – 90% for copper and 80 – 90% for gold, with 85% recoveries used for gold and copper 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 is poised to become Australia's next multi-mine gold producer.

The Company's current gold production is from the Tomingley Gold Operations in Central West New South Wales, where it has been operating since 2014 and is currently expediting a development pathway to extend the mine's life 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 has 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 a major drill program ongoing at Boda, Alkane is confident of further consolidating Central West New South Wales' reputation as a significant gold production region.

Alkane's gold interests extend throughout Australia, with strategic investments in other gold exploration and aspiring mining companies, including ~9.8% 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 February 2023

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 Kaiser 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. Historic RC by Rio Tinto (Rio) collected one metre intervals via a cyclone and composited all samples to 2 metres using a spear. Diamond Drilling (DD) sample intervals are defined by geologist during logging to honour geological boundaries. Air Core (AC) pre-collars completed by Newcrest but were not sampled.
	• *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 3 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 - approximately 10% (3kg) of total sample is delivered via cone or riffle splitter into a calico bag with the remaining sample delivered into a large plastic bag and retained for future use if required. DD Drilling – sample intervals defined by geologist during logging to honour geological boundaries. 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 occasionally 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 diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	Alkane drilled 93 drill holes comprising of 26,627 metres of RC and 15,314 metres of diamond core for a total of 41,941 metres for the resource estimation. Rio drilled 33 drill holes comprising of 3,224 metres of RC and 1,485 metres of diamond core and Newcrest drilled 2,685 metres of diamond core for a total historical component of 7,394 metres.

Criteria	JORC Code explanation	Commentary
		Alkane employed conventional RC drilling using 100mm rods and 144mm face sampling hammer. Rio employed a 120mm 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 (61mm diameter) core tails. Diamond core is oriented using the "Reflex" core orientation tool. Historical diamond core by Newcrest used air-core precollars through the oxide zone (not sampled) and tailed with triple tube NQ3 (45mm). Rio drilled HQ (64mm diameter) from surface.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	RC - sample recovery is visually estimated and generally very good (>90%) aided using oversized shrouds. Samples are occasionally damp or wet in RC holes drilled below 250 metres. Sample quality is assessed by the sampler by visual approximation of sample recovery and if the sample is dry, damp or wet. Riffle and cone splitters were used to ensure a representative sample was achieved on all 1 metre samples. DD - core loss is identified by drillers and calculated by geologists when logging. Generally, ≥99% was recovered.
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	RC drilling completed using oversized shrouds to maintain sample return and all samples are split using riffle or cone splitters. Alkane's use of RC rigs with high air capacity assists in keeping deep RC samples dry. Rio used a UDR650 drilling rig to only shallow depths (less than 150m). Triple tube coring was used by Alkane and Newcrest to maximise core recovery.
	• *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.*	All DD core and RC chip samples have been geologically and geotechnically logged by qualified geologists.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	DD - zones of visual mineralisation and/or alteration are marked up by the geologist and cut in half 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. All core is sampled. Laboratory Preparation – drill core is oven dried prior to crushing to <6mm using a jaw crusher, split to 3kg if required then 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. Historical core was cut in half and sampled.
	• *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 0.05% 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. Historical RC completed by Rio was 2 metre spear composited from 1 metre sample collected in plastic bags from the cyclone.
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	Alkane (2014 – present), Rio (1995 – 1999) and Newcrest (2003) sampling techniques are of industry standard and considered adequate.
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	RC – field duplicate samples collected at every stage of sampling to control procedures DD – external laboratory duplicates used.
	• *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.*	RC - Duplicate samples are riffle split from the riffle/conical split calico from the drill rig. Duplicates show generally good repeatability but may indicate a “nugget” effect on the highest gold grades.
	• *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.*	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 and gold determined by flame AAS. This technique was also employed by Rio and Newcrest for the historical assays. For other geochemical elements, samples are digested using a multi-acid digest with each element concentration determined by ICP Atomic Emission Spectrometry or ICP Mass Spectrometry. Historical assaying by Rio and Newcrest for copper and other base metals such as As, Co, Cr, Fe, Mo, Pb, S and Zn used an aqua regia digestion with an ICP-AES finish.
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times,*	Not applicable to this report or deposit.

Criteria	JORC Code explanation	Commentary
	calibrations factors applied and their derivation, etc.	
	• *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 (alternate to CRM's). 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. 1.25% of gold and copper assay results from ALS Orange were checked using SGS West Wyalong 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 determine the resource 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.*	Data is verified in the field and uploaded using Geobank. All primary assay data is received from the laboratory as electronic data files that are imported into sampling database with verification procedures in place. QAQC analysis is undertaken for each laboratory report. Digital copies of Certificates of Analysis (COA) are stored in a central database with regular (daily) backup. Data is also verified on import into mining related software.
	• *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.*	Alkane 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. Historical Newcrest diamond holes and 1999 Rio series RC drill holes were surveyed in by DGPS (accuracy ± 1m). Rio 1995 – 1997 series of diamond and RC drill holes were surveyed with compass and tape from the historical established grid. This grid was verified by Alkane by surveying of still present historical collars, determining an accuracy of ± 10m for this series of drill hole collars. Historical Newcrest and Rio diamond drill holes were downhole surveyed every 50m. Rio downhole surveyed the bottom of hole on the majority of their relatively short (<150m) RC drill holes.

Criteria	JORC Code explanation	Commentary
	• *Specification of the grid system used.*	MGA94 grid system was used.
	• *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 100m x 100m along south-west trending transverses. Alkane's initially drilled holes and some historical drilled holes are variably spaced and were also used in the estimation. 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 >0.05% copper. One metre samples override 3m composites in the database. Historical RC samples (Rio) were composited to 2m and were not 1m re-split. DD – core is sampled to geology with sample sizes ranging from 0.3m to 1.3m.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	The significant amount of drilling is orientated south-west and perpendicular to the strike of mineralisation. The drilling directions are not considered to have any significant biasing effects. 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.*	As above.
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.

Criteria	JORC Code explanation	Commentary
		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.)

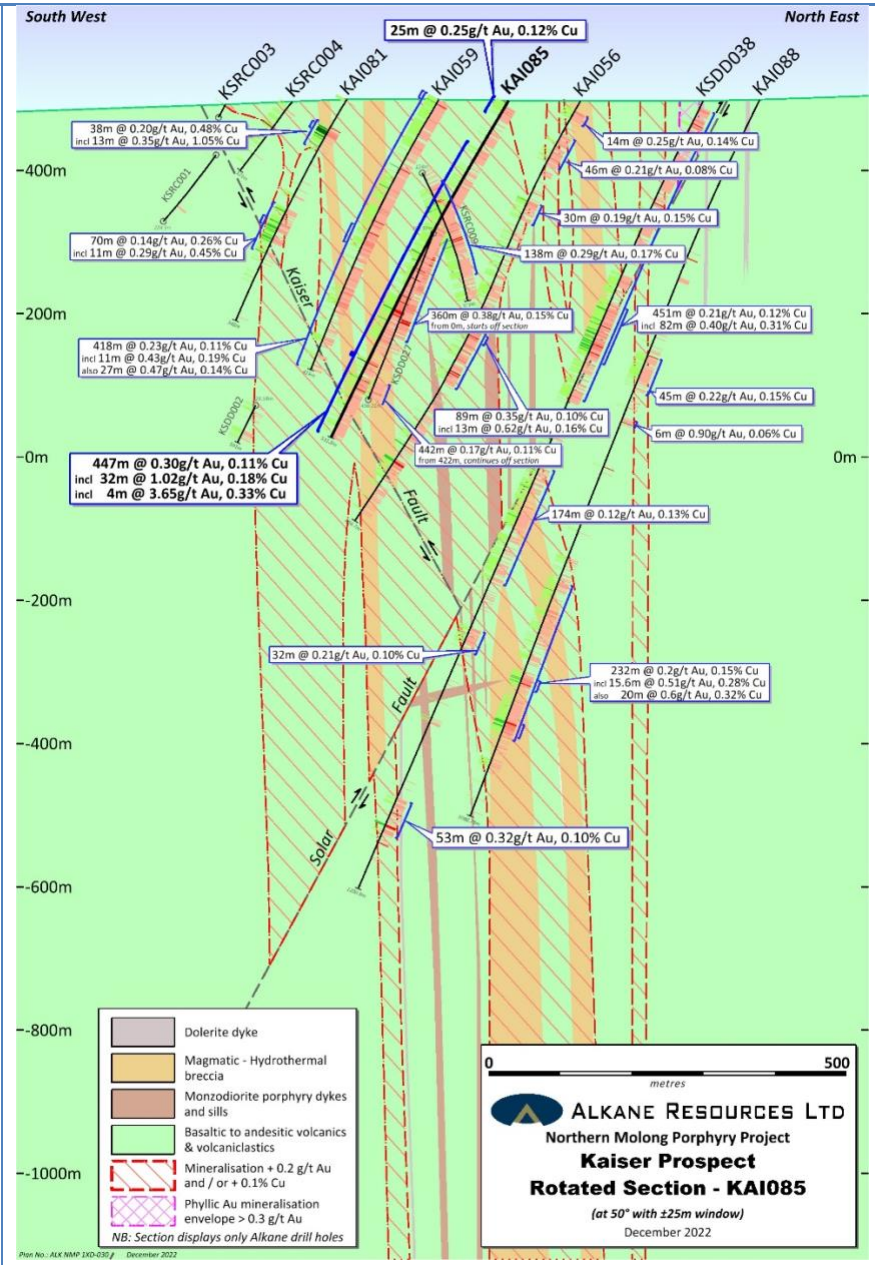
Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	All four licences (EL4022, EL6209, EL8261 and EL8887) in the Northern Molong Porphyry Project are owned 100% by Alkane, but EL6209 is subject to a 2% net smelter return to Ajax Joinery Pty Ltd.
	• *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 2023. EL8887 expires on 6 February 2026. EL8261 expires on 30 April 2023.
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. 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. In 2022 Alkane announced a Maiden Resource Estimation of 624 Mt @ 0.51 g/t AuEq for 5.21 Moz Au, 0.90 Mt Cu for the Boda discovery. See main section of the announcement for detailed description of the Kaiser geology.

Criteria	JORC Code explanation	Commentary
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.
	• *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 0.1g/t Au and/or 0.05% Cu although grades lower than this may be present internally (internal dilution). Internal dilution can be significant because of the type of bulk mining techniques used to extract this style of mineralisation. 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.
	• *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 were US$1770/oz for gold and US$9750/t for copper, and A$:US$0.70

Criteria	JORC Code explanation	Commentary
		Recoveries are assumed equal for Au and Cu at 85% from preliminary metallurgical studies at Boda and Kaiser.

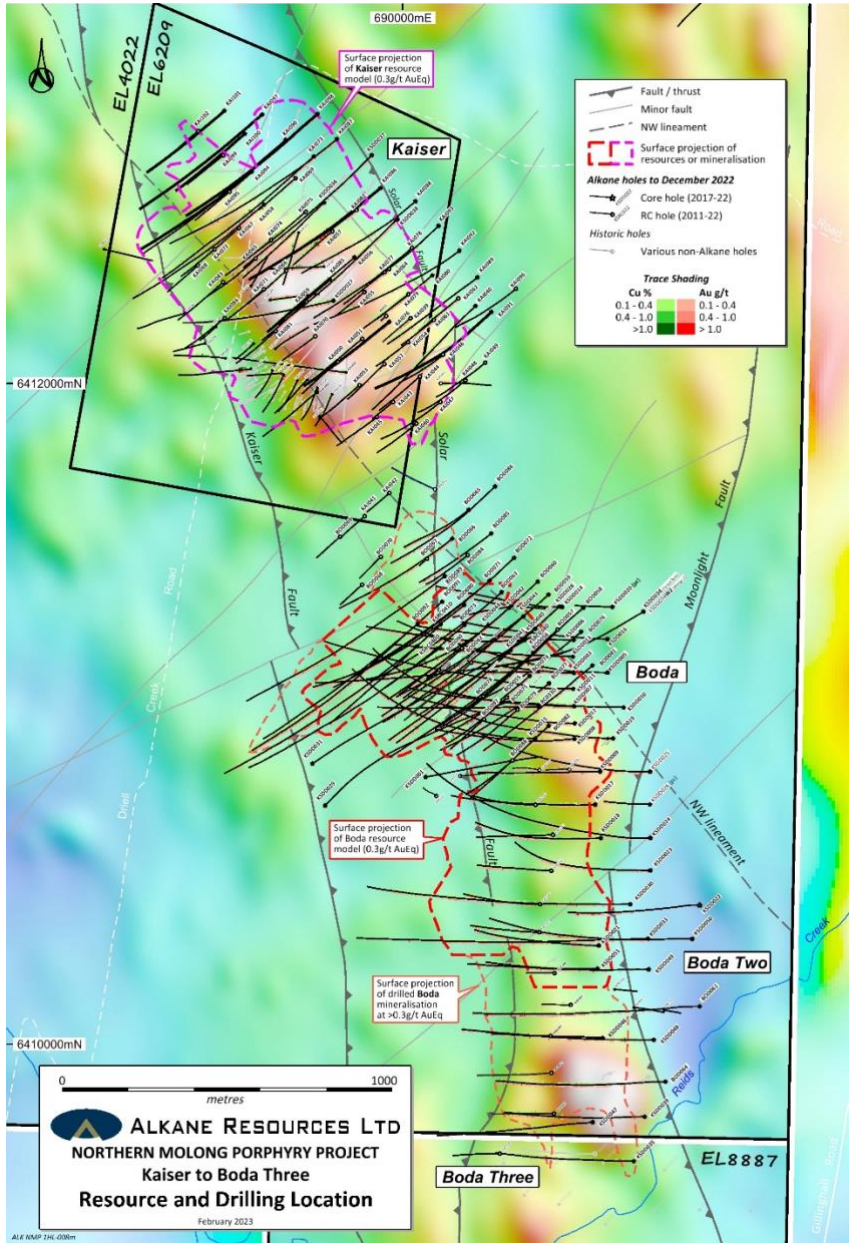
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.*
	  ○ *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*
	  ○ *If it is not known 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 prospect is subvertical.
		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.*	Cross sections and a plan showing geology with drill collars were included with previously reported exploration results detailing the unfolding discovery. One representative drill hole section illustrating the mineralisation and geology is attached below.


South West
North East
KSRC003
KSRC004
KAI081
KAI059
KAI085
KAI056
KSDD038
KAI088
25m @ 0.25g/t Au, 0.12% Cu
38m @ 0.20g/t Au, 0.48% Cu
incl 13m @ 0.35g/t Au, 1.05% Cu
70m @ 0.14g/t Au, 0.26% Cu
incl 11m @ 0.29g/t Au, 0.45% Cu
418m @ 0.23g/t Au, 0.11% Cu
incl 11m @ 0.43g/t Au, 0.19% Cu
also 27m @ 0.47g/t Au, 0.14% Cu
447m @ 0.30g/t Au, 0.11% Cu
incl 32m @ 1.02g/t Au, 0.18% Cu
incl 4m @ 3.65g/t Au, 0.33% Cu
32m @ 0.21g/t Au, 0.10% Cu
53m @ 0.32g/t Au, 0.10% Cu
14m @ 0.25g/t Au, 0.14% Cu
46m @ 0.21g/t Au, 0.08% Cu
30m @ 0.19g/t Au, 0.15% Cu
138m @ 0.29g/t Au, 0.17% Cu
360m @ 0.38g/t Au, 0.15% Cu
from 0m, starts off section
451m @ 0.21g/t Au, 0.12% Cu
incl 82m @ 0.40g/t Au, 0.31% Cu
45m @ 0.22g/t Au, 0.15% Cu
89m @ 0.35g/t Au, 0.10% Cu
incl 13m @ 0.62g/t Au, 0.16% Cu
6m @ 0.90g/t Au, 0.06% Cu
442m @ 0.17g/t Au, 0.11% Cu
from 422m, continues off section
174m @ 0.12g/t Au, 0.13% Cu
232m @ 0.2g/t Au, 0.15% Cu
incl 15.6m @ 0.51g/t Au, 0.28% Cu
also 20m @ 0.6g/t Au, 0.32% Cu
Kaiser
Fault
Fault
Solar
-400m
-200m
-0m
-200m
-400m
-600m
-800m
-1000m
0m
Dolerite dyke
Magmatic - Hydrothermal breccia
Monzodiorite porphyry dykes and sills
Basaltic to andesitic volcanics & volcaniclastics
Mineralisation + 0.2 g/t Au and / or + 0.1% Cu
Phyllic Au mineralisation envelope > 0.3 g/t Au
NB: Section displays only Alkane drill holes
0
500
metres
ALKANE RESOURCES LTD
Northern Molong Porphyry Project
Kaiser Prospect
Rotated Section - KAI085
(at 50° with ±25m window)
December 2022

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 at this time.
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 into the deeper parts of the Kaiser deposit and to infill the current drilling to improve confidence and convert Inferred resources to Indicated/ Measured. Other drilling will target extensions to add mineral resources to the maiden Inferred Resource at Boda. Regional exploration drill testing of targets comprising of IP, MT and soil geochemistry surveys are planned.

- *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*



Criteria	JORC Code explanation	Commentary
		The attached image highlights a 3.5km strike of gold-copper mineralisation defined with drilling at Kaiser, Boda, Boda Two and Boda Three prospects. Further drilling is planned at these prospects. Exploration is also planned along strike north-west of Kaiser within the Boda intrusive corridor.

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 they are 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 35% of the data comes from drill core as opposed to RC chips.
	• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*	No alternative geological interpretations were used on the Mineral Resource Estimation.
	• *The use of geology in guiding and controlling Mineral Resource estimation.*	Geological (lithological) 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. Most of the mineralisation is hosted by weakly developed hydrothermal breccias with mineralised stockwork calcite veining. Distal pyrite-gold alteration is positioned on the northeast shoulder and northeast of the Solar Fault is copper poor. Two significant reverse fault structures (Kaiser and Solar faults) dislocate and create hard boundaries to the mineralised domains. A base of oxidation surface informed the assigned density to the estimation blocks.
	• *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-

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		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 to bornite dominant where the highest Au-Cu grades are found. Cross-cutting this mineralisation are numerous 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 ~ 700m Depth ~ surface (~490mRL) to an average of ~ 400m below surface, the deepest the resource is classified to is to the -140mRL or ~600m 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. 34 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. 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. 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 most of the 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 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, Cu and Ag grade. The correlation between Au, Cu and Ag was considered low to 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 22 composited (1m) samples and limited to a maximum of 5 per drill hole, with an initial search ellipse using various major, 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

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		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 resource estimation is the first JORC compliant calculation for Kaiser.
	• *The assumptions made regarding recovery of by-products.*	The Inferred Resource is presented using a gold equivalent (AuEq) cut-off. The AuEq is calculated using recoveries from a preliminary metallurgical study and 6-month average of gold and copper prices used in the Boda Estimation (ASX announcement 30 May 2022). Silver was not used in the AuEq calculation.
	• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*	No deleterious elements identified in the preliminary metallurgical 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 100m x 100m drilled area. An estimation search neighbourhood analysis was used to determine optimal search parameters for Ordinary Kriging (OK) estimation of Au, Cu and Ag grade. The correlation between Au, Cu and Ag was considered low to 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. These blocks were informed by a minimum of 10 and a maximum of 22 composited (1m) samples and limited to a maximum of 5 per drill hole, with an initial search ellipse using various major, 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.
	• *Any assumptions behind modelling of selective mining units.*	No assumptions made.
	• *Any assumptions about correlation between variables.*	The correlation between Au, Cu and Ag was considered low to 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 is hosted by weakly developed hydrothermal breccias with mineralised stockwork calcite veining. Distal pyrite-gold alteration is positioned on the northeast shoulder and northeast of the Solar Fault is copper poor. Two significant reverse fault structures (Kaiser and Solar faults) dislocate and create hard boundaries to the mineralised domains. A base of oxidation surface informed the assigned density to the estimation blocks. 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

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		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 majority of the well-informed domains.
	• *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.
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.*	Cut-off grade for reporting of Kaiser was selected as 0.3g/t AuEq for potential open cut mining. Gold equivalents have been calculated using the formula AuEq(g/t) = Au(g/t) + Cu%/100*31.1035*copper price($/t)/gold price($/oz). Silver (Ag) was not included in the AuEq calculation. The prices used were based on a 6-month average used in the Maiden Boda Resource estimation (ASX announcement 30 May 2022) of US$1,770/oz gold and US$9,750/t copper, and an exchange rate of A$:US$0.70. Recoveries are assumed the same for Au and Cu at 85% from preliminary metallurgical studies.
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 grade 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.
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.*	Preliminary metallurgical studies are indicating a standard grind with a flotation circuit. Stage one will recover copper and some gold as a saleable concentrate. Stage two is a finer grind with a cyanide leach for gold on site. Overall recommended recoveries for this process are 85% for gold and copper.
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.*	Previous mining occurred on a small surface expression at the Kaiser mine in the 1870s. The Kaiser deposit covers areas of agriculturally modified freehold land with recently constructed wind turbines positioned nearby.
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,*	Density has been determined using the Archimedes Principle on diamond core and measured every 20 metres for determination of a bulk dry density.

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	the nature, size and representativeness of the samples.	
	• *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 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. Estimations below the -140mRL were unclassified and only resources above the -140mRL to surface were classified as Inferred. There is no material classified as Indicated or Measured.
	• *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 significant additional mineralisation that has very low drilling density that is unclassified material and 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 gold, copper and silver grade estimation parameters including the domains wireframed by the Alkane geologists.
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 all Inferred, being based on the current drill hole spacing. Drill hole spacing is recommended to be reduced by approximately 50% to be able to classify the resource as Indicated.
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	Kaiser is a new resource.