ALKANE
RESOURCES LTD
ABN 35 000 689 216

Boda Resource Estimate of ~10.1M Gold Equivalent Ounces

- ➢ The initial Inferred Mineral Resource for the Boda Deposit has been estimated at 624Mt grading at 0.51g/t AuEq* for 10.1 MEqoz (5.21Moz Au, 0.90Mt Cu)

- ➢ The estimate is based on approximately 71,400 metres of drilling using a 0.3g/t gold equivalent (AuEq*) cutoff deemed appropriate for potential open cut mining.

- ➢ This includes a sub-component for the potential use of bulk-tonnage underground mining using a cutoff grade of 0.4g/t AuEq* of:
  353Mt grading at 0.63g/t AuEq* for 7.1 MEqoz (3.72Moz Au, 0.62Mt Cu)

- ➢ Drilling continues to define the overall system with extensions being tested south of Boda at Boda Two and northwest of Boda towards Kaiser, in addition to infill drilling of the Inferred Resource. The deposit remains open at depth and along strike to the south and along strike to the north-west within the Boda intrusive corridor.

- ➢ Preliminary metallurgical study indicated potential for two stage ore processing. The first stage would produce a copper-gold concentrate for immediate sale and the second stage produce gold bullion from a cyanide leach. Preliminary recoveries are 85% for gold, copper and silver.

- ➢ Drilling for the purpose of estimating an initial shallow Inferred Mineral Resource at Kaiser, located 700m north-west of Boda, is nearing completion with a resource estimation expected in Q4 2022.

*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 at 85% per economic element from preliminary metallurgical studies. In Alkane's opinion all the elements included in the metal equivalents calculation have reasonable potential to be recovered and sold.*

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Alkane Resources Limited (ASX: ALK) is pleased to announce the initial Boda resource following its extensive drilling program at the Company's Boda Prospect in Central New South Wales. Boda is 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 initial resource begins to show the significant potential of both Boda and the larger Northern Molong Porphyry Project.

"Since the original drill discovery in 2019 we have steadily demonstrated that mineralisation extends over more than 3 kilometres from Boda Three to Kaiser. We are well advanced in a shallower drilling program at Kaiser-Duke that should enable an initial resource to be confirmed there.

"This resource at Boda is just the beginning!

"Alkane is planning further drilling across our tenement package and is continuing the preliminary work that is required to further understand mining and processing options for the future."

***Resource drilling at Boda***

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.

Since the discovery of Boda in late-2019, a significant campaign of RC and diamond core drilling commenced. The drilling campaign was designed to test the dimensions and extensions of the mineralisation at Boda for the purposes of a maiden resource estimation. In addition to testing other known gold-copper mineralisation occurrences and geophysical anomalies within the 15 km intrusive corridor that extends from Boda Three to Finns Crossing.

Alkane Resources Ltd – Boda Resource – 30 May 2022
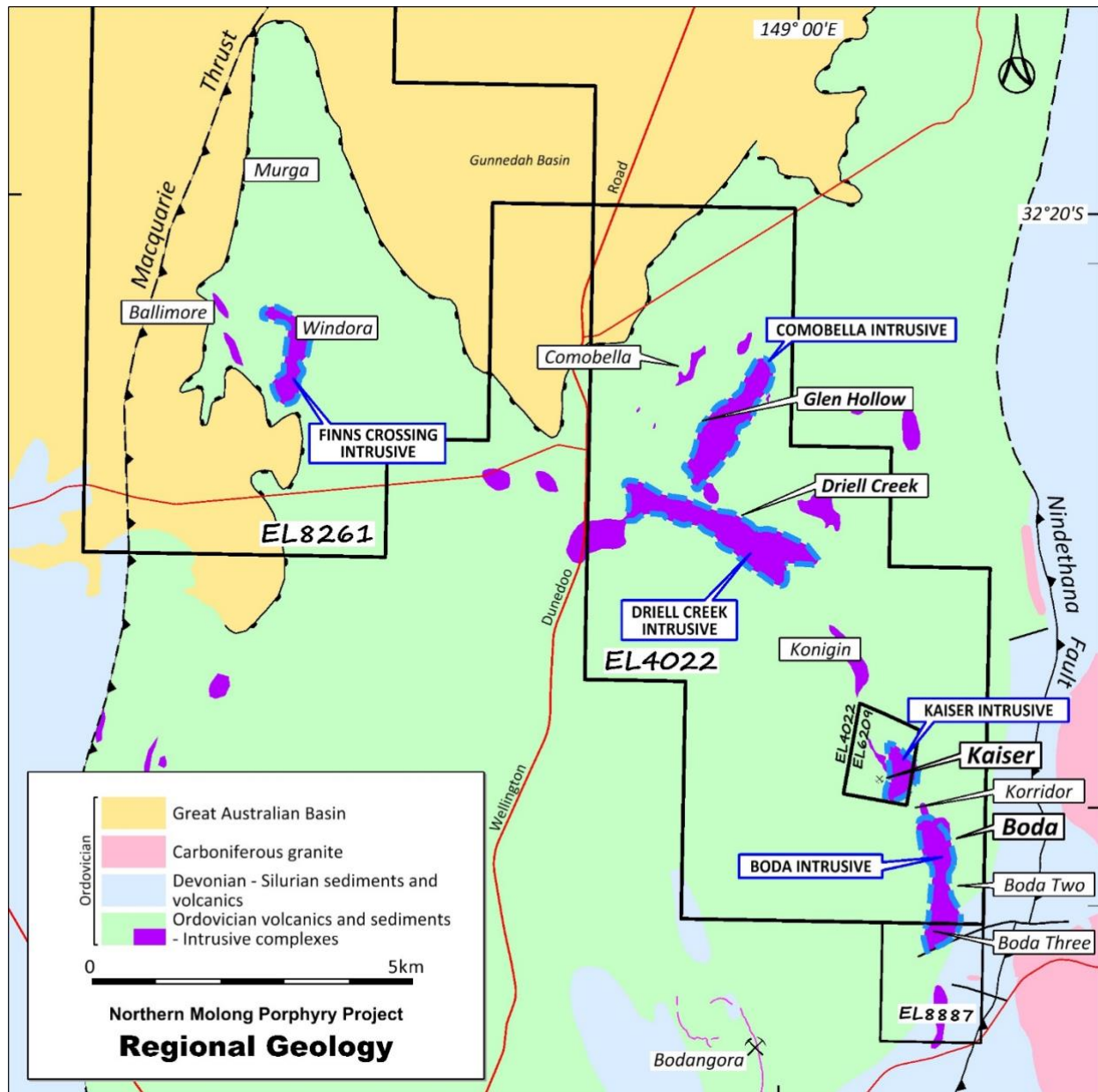
Boda Initial Mineral Resource

The initial Inferred Mineral Resource estimation for the Boda deposit was confined to a surface area of 1,000m strike length and 500m width and is summarised in Table 1. The estimation uses nominal drill hole grid of 100m by 50m to depths averaging approximately 1,000m. It utilises assay results captured from 83 drill holes of a combined 52,390 metres of diamond core and 19,041 metres of RC drilling. The resource was calculated to an average -500mRL. A review of feasibility and existing operating data for similar deposits in Australia (*see data sources below) was considered in determining cutoff 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. Figure 1 presents grade vs tonnage curves at various cut-off grades.

Table 1   Inferred Mineral Resource for Boda

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	624	0.51	0.26	0.14	0.47	10.1	5.21	0.90	9.49
Inferred	0.4g/t	353	0.63	0.33	0.18	0.55	7.12	3.72	0.62	6.24
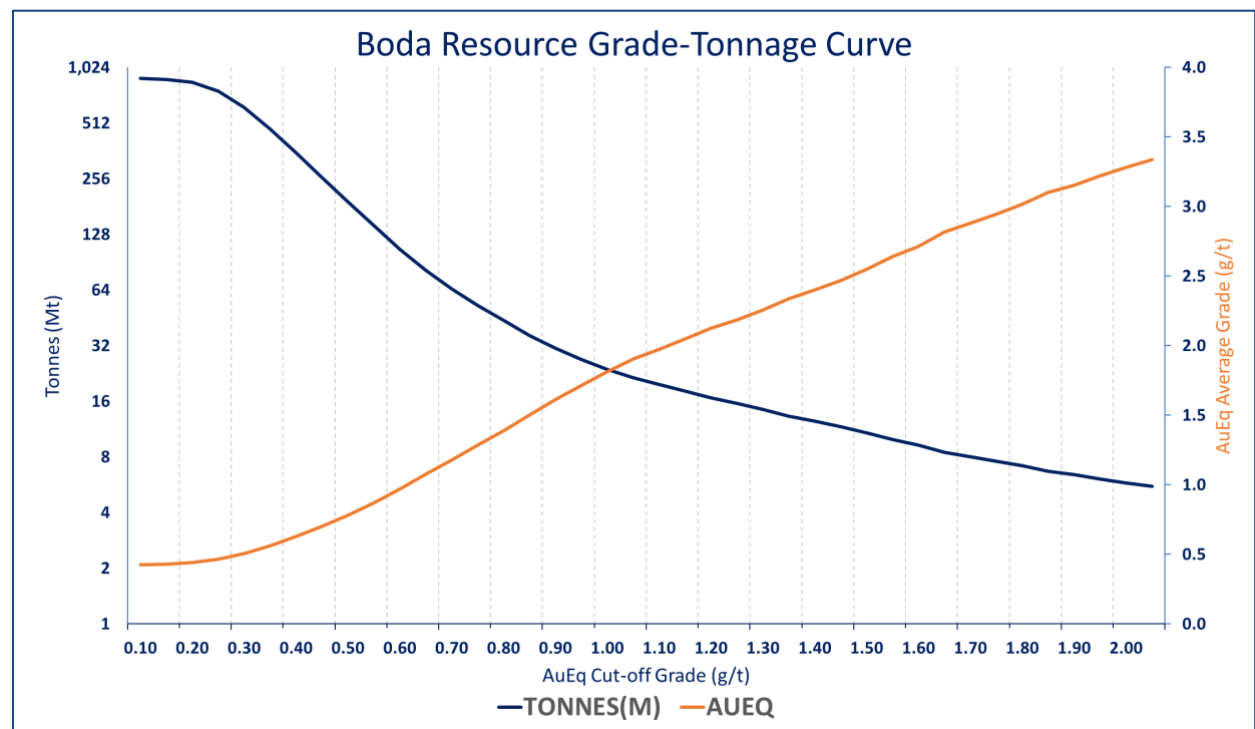
Full details are provided in the appended JORC Table 1 and text summary below. Gold equivalent is determined using 6-month average pricing and preliminary metallurgical recoveries.

Figure 1   Grade vs Tonnage curves for the Boda Mineral Resource

*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.

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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 Boda mineralisation is displayed below.
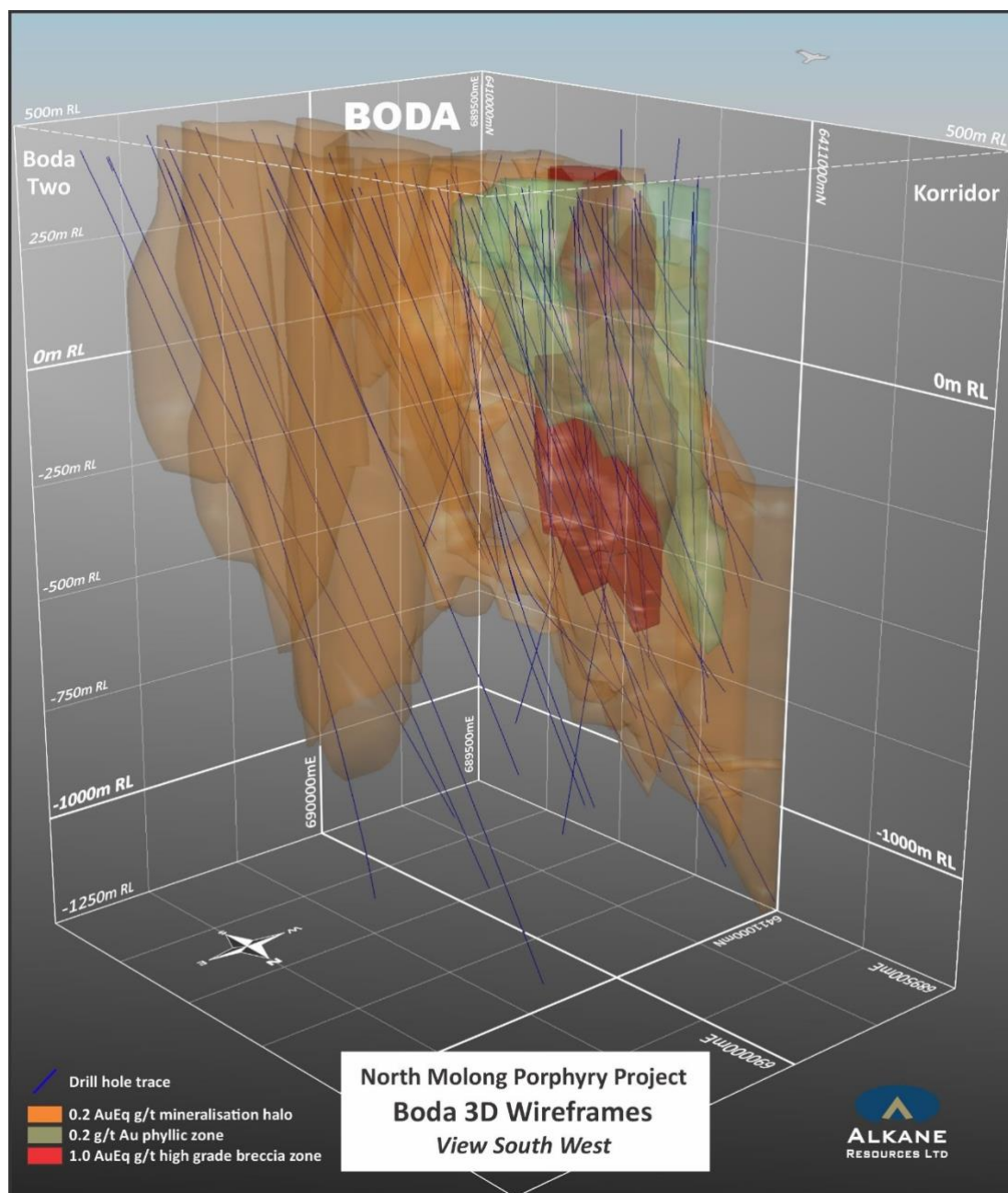

Exploration Upside at Boda

The Mineral Resource estimation was calculated to the -1000mRL in its deepest drilled sections, with the bulk of the resource modelled on average to the -500mRL. There remains potential for further extensions to the main zones of mineralisation. In particular, to the north-west where the system appears to plunge in this direction and mineralisation observed within the breccias are zoning to more bornite and silica dominant. Infill drilling at Boda will improve the confidence of the resource estimation and continue to define the higher-grade sulphide cemented breccias.

Alkane Resources Ltd – Boda Resource – 30 May 2022

Other exploration targets include areas immediately along strike north-west of Boda towards and including the Korridor prospect where significant RC drill hole intercepts include BOD065 – 64m grading 0.43g/t Au, 0.12% Cu from 174m to end of hole. The Boda Two prospect is adjacent and south of Boda, where the mineralisation appears to rotate from a northwest trend at Boda to a northerly trend at Boda Two. 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. Drilling for the purposes of estimating an initial mineral resource is nearing completion at Kaiser and the estimation is expected in the Q4 2022. Other exploration is focused on defining higher grading centres within the 3.5km intrusive corridor as well as extending the known alteration northwest of Kaiser.
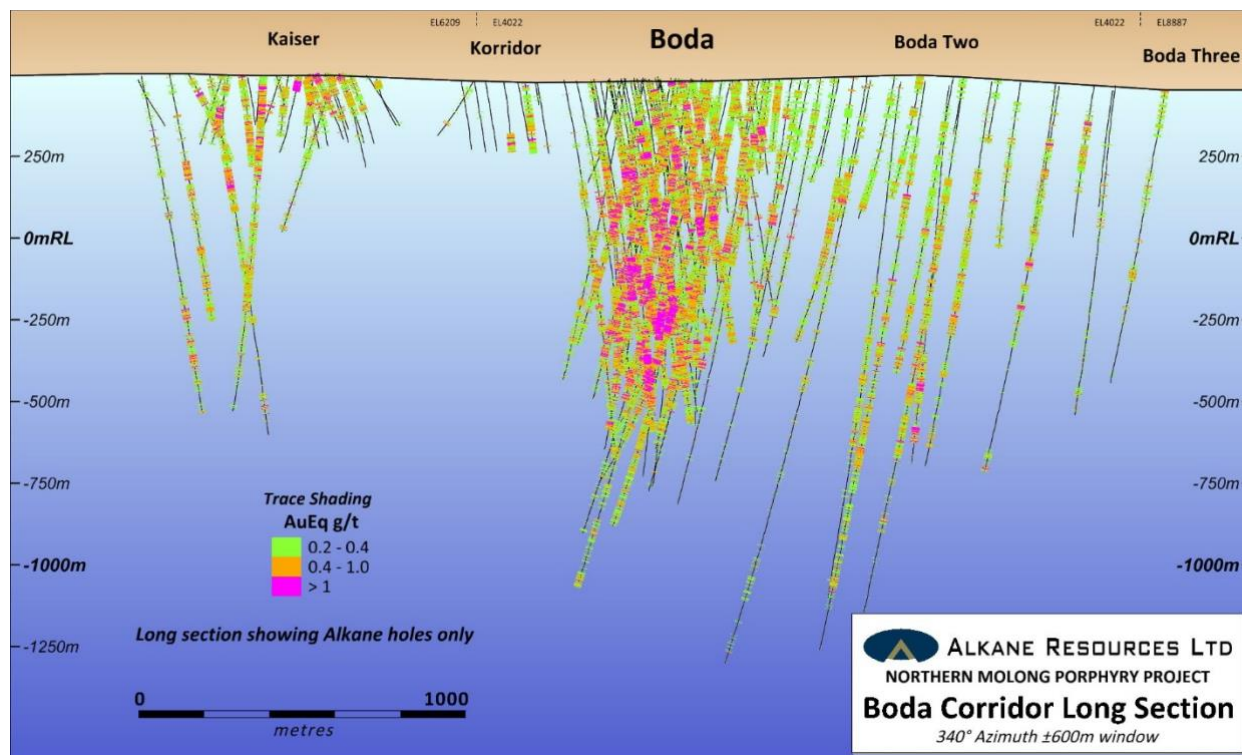
Geology and Geological Interpretation

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 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 Boda Deposit is located within a NW-SE trending structural corridor on the north-western margin of a significant magnetic high with dimensions of approximately 2 km x 0.7 km. The mineralisation is hosted within a package of submarine basaltic to andesitic lavas with subordinate latite flows. 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.

Intrusive- to magmatic-hydrothermal breccias appear to be the focus for the calc-potassic alteration and gold-copper mineralisation at Boda. The mineralisation is related to a series of NW-trending monzodiorite intrusions that manifest as a series of vertically extensive intrusive breccias forming a 500 x 300 m stock central to Boda. These intrusive breccias transition to hydrothermal breccias to which the highest Au-Cu grades at Boda 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 magmatic-hydrothermal brecciation event was likely to have occurred syn- to post-emplacement of the monzodiorite and pre-emplacement of the weakly altered and mineralised monzonites. The intrusive breccia which is a likely 'causative' to the main Boda mineralisation, is observed as monzodioritic in composition.

The 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.

Gold is observed within the mineralised breccias often without magnification, associated with chalcopyrite and 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 (± 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.

Boda is overprinted in the north-east by phyllic alteration comprising sericite-quartz-calcite ± albite with up to 10% pyrite by volume. The pyrite occurs as disseminated spots, aggregates, and short veinlets. Veining within the shallower phyllic zone comprises calcite-quartz-pyrite with some veins exhibiting epithermal bladed and multiphase fill textures. The phyllic alteration is copper poor however gold grades over 100s of metres can average from 0.2g/t to 0.6g/t with occasional thin intervals of >10g/t Au.

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

The monzonites, dolerites, 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 and the high-grade breccia was informed using a 1.0g/t AuEq lower cutoff. Where the intercept gold 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.

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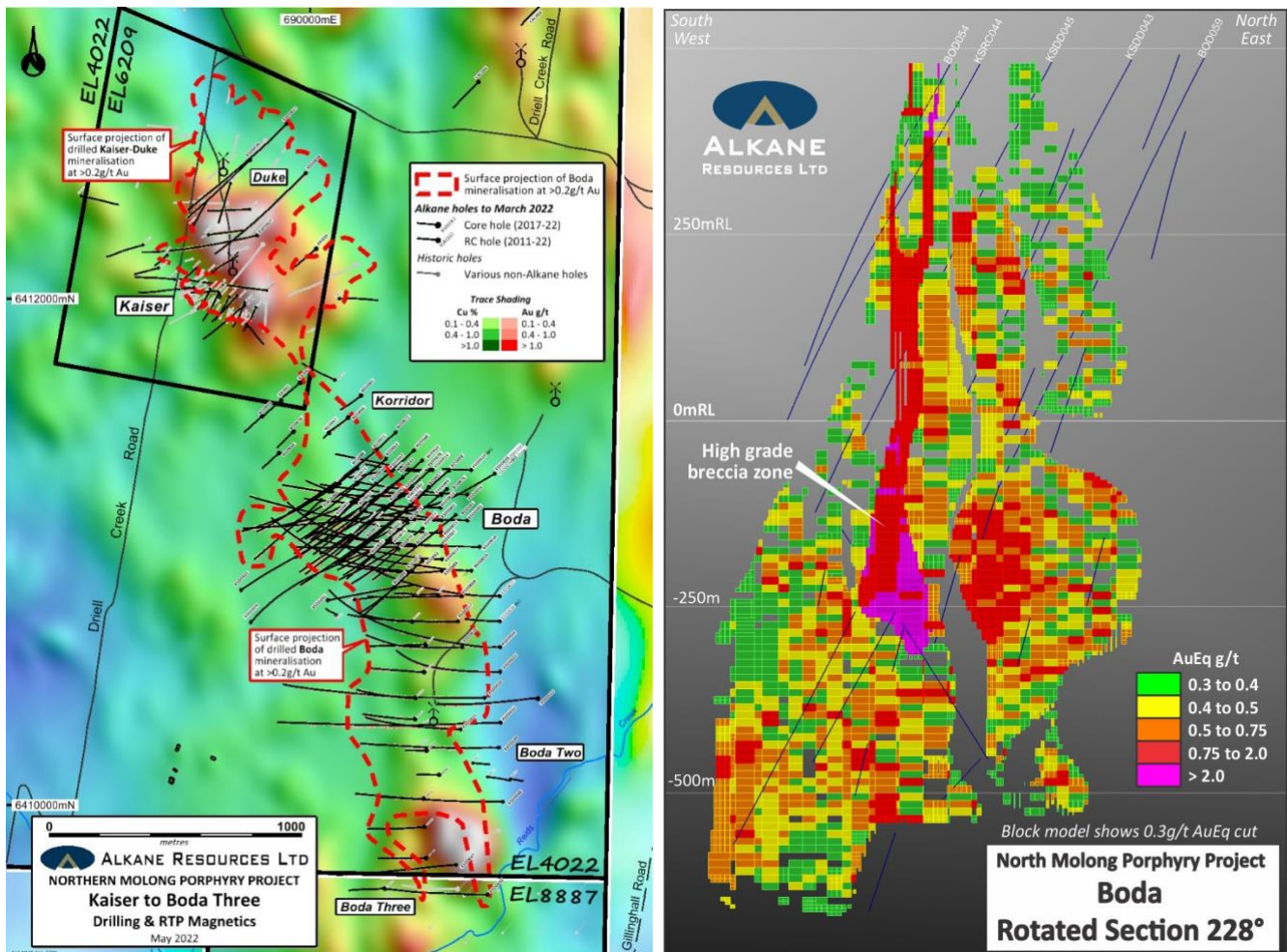
BODA MINERAL RESOURCE – *Supporting information*

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, copper and silver mineral resource within the Boda deposit, based on reverse circulation and diamond drilling sampling data available as of March 2022, and is detailed below:

Drilling Techniques

The Boda deposit has been evaluated using all of Alkane's reverse circulation (RC) and diamond drilling (DD) holes within the prospect area. No previous companies' exploration drilling in the region (shallow RC, air-core and RAB holes) was used in the assessment.

Drilling at the Boda deposit was completed in an extended campaign since the discovery drill hole KSDD003 in September 2019. The drilling at Boda comprised of a total of 83 drill holes made up of 19,041 metres of RC and 52,390 metres of diamond core for a total of 71,431 metres. Drilling statistics are summarised in Table 2.

Table 2   Summary Drilling Statistics for Boda Resource Estimation

Boda Drilling Statistics					
Hole Type	**Reverse Circulation (pre-collars)**	**Reverse Circulation**	**HQ3 Diamond**	**PQ3 Diamond**	**Total**
No. Holes	39	28	55	16	**83**
Metres	9,796	9,245	51,880.7	509.6	**71,431.3**

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 initial exploration drilling was conducted on east-west traverses, with subsequent resource definition drilling at Boda conducted on optimal southwest striking traverses. Resource drill sections are spaced 50m apart with drill holes at nominal 100m intervals along these sections.

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.

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All composites 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.

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.

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, 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 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 relatively poor at 0.66, however when the 4 highest grade samples are removed, we have a correlation coefficient value of 0.92 indicating good repeatability for grades forming the bulk of the resource (between 0.2 - 1.5 g/t). Copper shows excellent repeatability with a correlation coefficient of 0.999 also indicating that the lower correlation coefficient in gold is due to a high-grade gold nugget effect rather than improper sampling procedures.

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 West Wyalong for Au and Cu analyses over the course of the resource drilling campaign as a 1.3% 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 the high-grade breccia domain, the gold-rich phyllic domain, the monzonite domain and into the broad low-grade envelope 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 6 and a maximum of 16 composited (1m) samples and limited to a maximum of 4 per hole, with an initial search ellipse using a major axis of 40m, with various semi and minor axis ratios depending on the metal and domain being estimated.

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 domains.

Distance limiting (40 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 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.
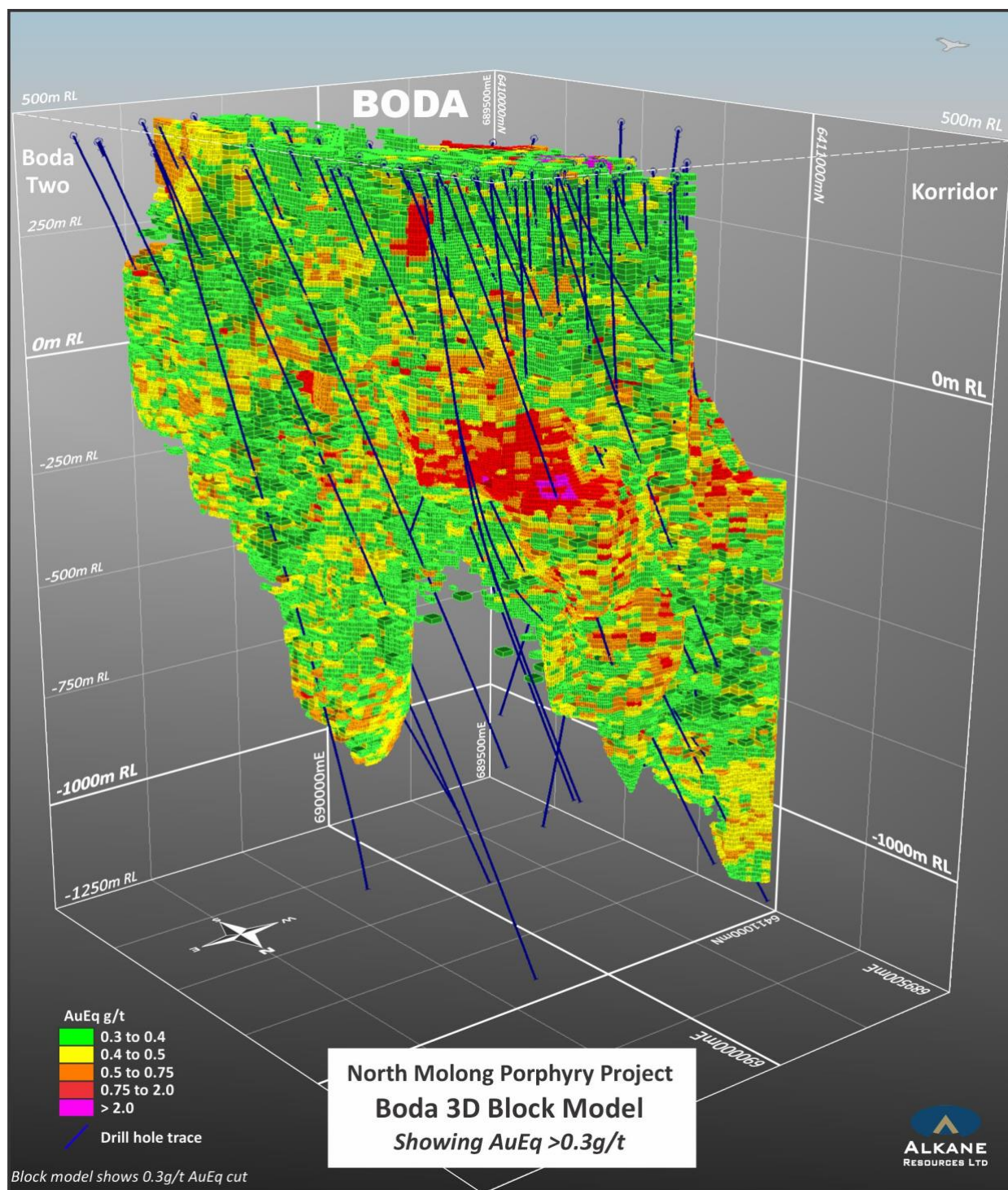
Classification Criteria

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. There is no material classified as Indicated or Measured.
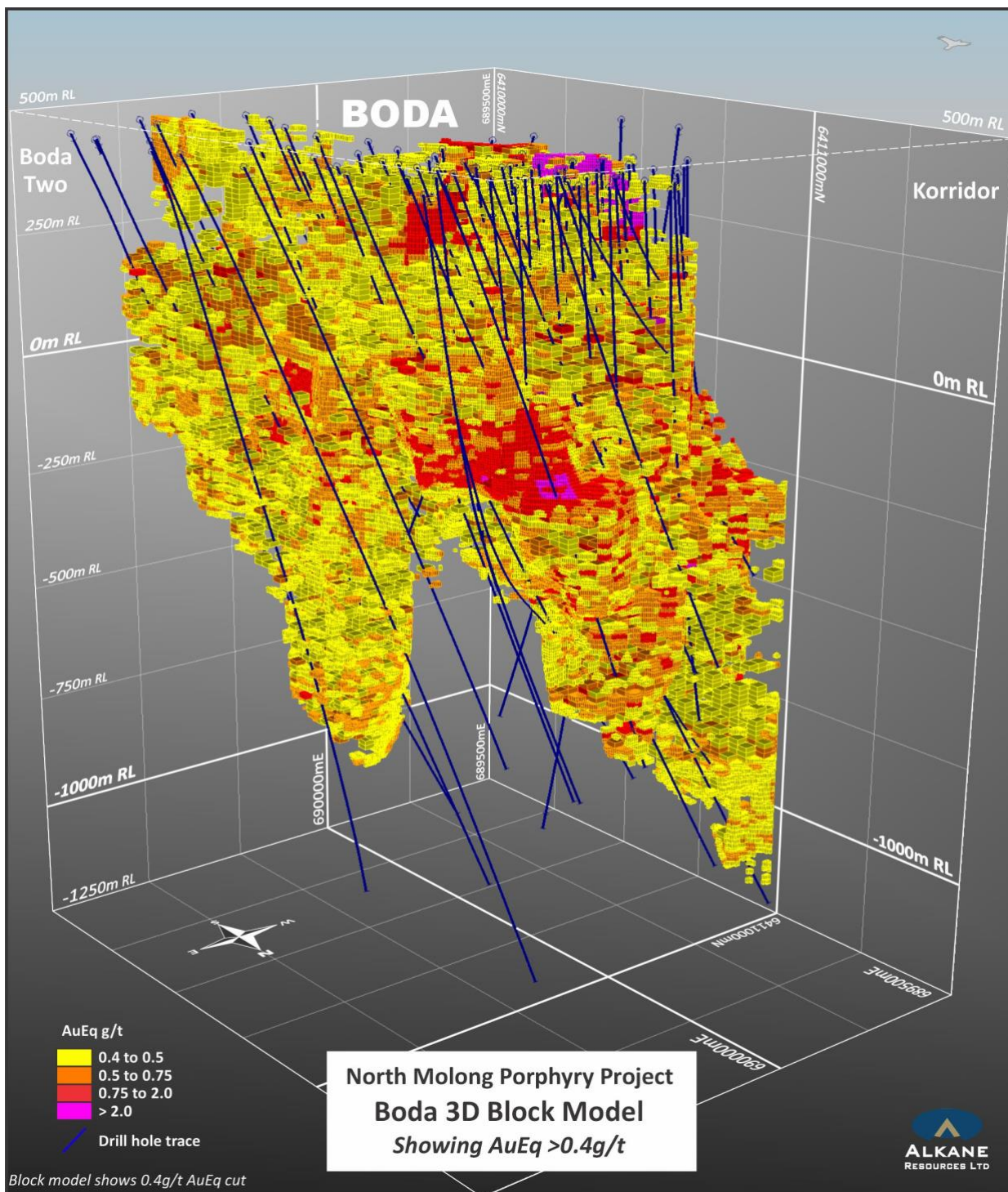
Cut-Off Grade

The Mineral Resource cut-off grade for reporting of the Boda 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 $AuEq(g/t) = Au(g/t) + Cu\%/100 * 31.1035 * copper\ price(\$/t)/gold\ price(\$/oz)$. Silver (Ag) was not included in the AuEq calculation. The prices used were based on a 6-month average 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, copper and silver are all

modelled to be 85% from preliminary metallurgical studies. Figures below show the block models using a 0.3g/t AuEq cut-off vs a 0.4g/t AuEq cut-off.

North Molong Porphyry Project
Boda 3D Block Model
Showing AuEq >0.3g/t

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

Drill hole trace

Block model shows 0.3g/t AuEq cut

North Molong Porphyry Project
Boda 3D Block Model
Showing AuEq >0.4g/t

AuEq g/t
- 0.4 to 0.5
- 0.5 to 0.75
- 0.75 to 2.0
- > 2.0
- Drill hole trace

Block model shows 0.4g/t AuEq cut

Mining and Metallurgy

It is assumed that based on the orientations, thickness and depths of the dispersive gold-copper mineralisation modelled that 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.

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 phyllic altered 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, copper and silver for the purposes of cut-off grade estimation.

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

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 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 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 ~9.7% of Calidus Resources (ASX: CAI).

Alkane Resources Ltd – Boda Resource – 30 May 2022
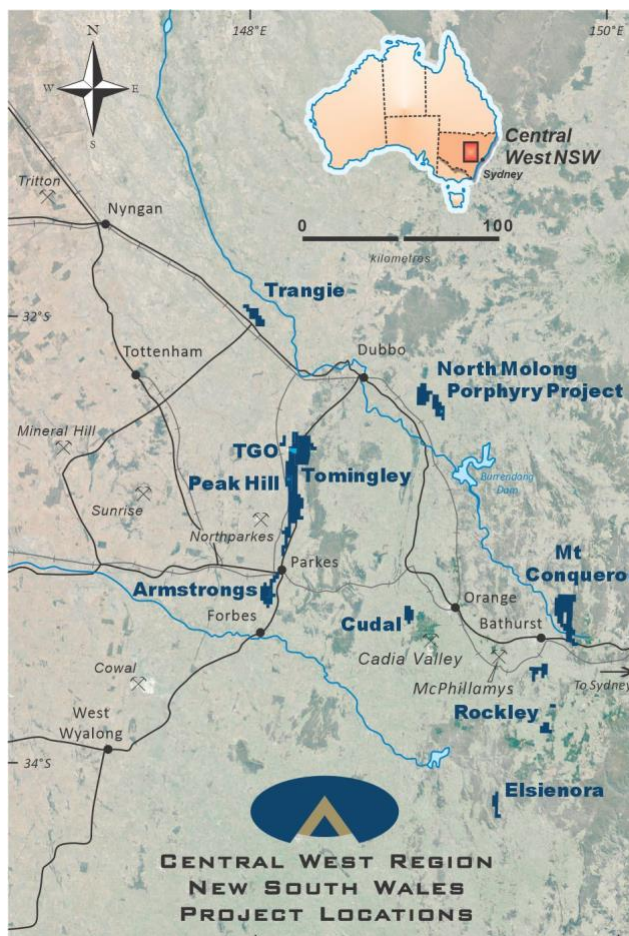
The following tables are provided to ensure compliance with the JORC Code (2012) edition requirements for the reporting of exploration results.

APPENDIX 1

JORC Code, 2012 Edition – Table 1 report – Boda May 2022

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 Boda 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 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).*	The resource is based on 83 drill holes comprising of 19,041 metres of RC and 52,390 metres of diamond core for a total of 71,431 metres. 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.

Criteria	JORC Code explanation	Commentary
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. Use of RC rigs with high air capacity assists in keeping samples dry. Triple tube coring is used at all times 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.
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.

Criteria	JORC Code explanation	Commentary
	• 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.
	• For all sample types, the nature, quality and appropriateness of the sample preparation technique.	ALK 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. 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.
	• 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 (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. 1.3% of gold and copper assay results from ALS Orange were checked using SGS West Wyalong as an external umpire laboratory.
	• 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.

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Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	• *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.*	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.*	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 50m x 100m along south-west trending transverses. Earlier drilled variably spaced, east-west collared drill holes 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. 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 orientation of drilling and sampling was originally east-west and oblique to the strike of the Boda mineralised system. The drilling direction was later changed to 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.

Criteria	JORC Code explanation	Commentary
	• *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.
		Cube Consulting is used to verify exploration data and to determine the resource estimation parameters.

Section 2 Reporting of Exploration Results

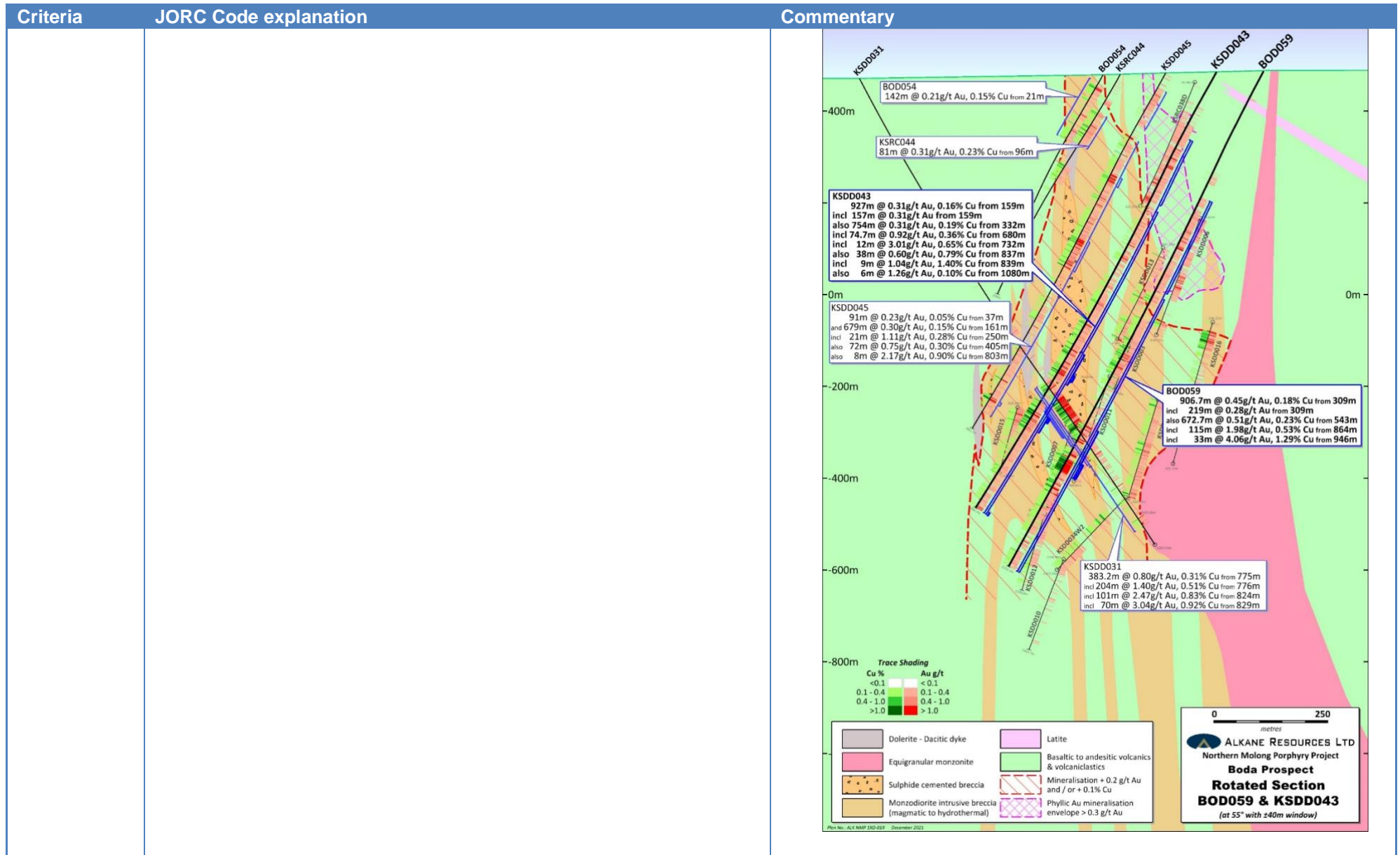(Criteria listed in the preceding section also apply to this section.)

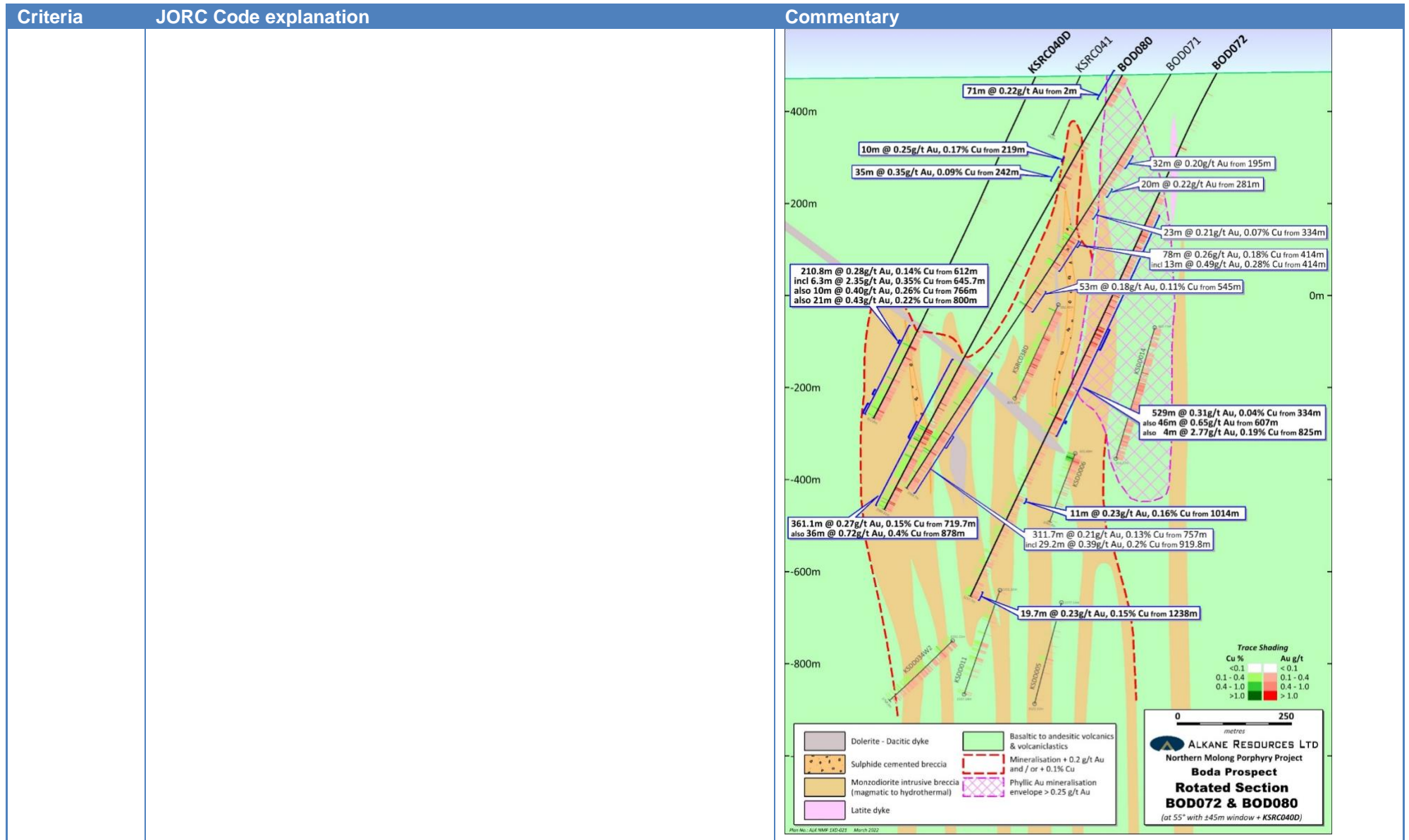| Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness 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.
	• *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 EL4022.
		BODA PROSPECT: CRA Exploration/Rio Tinto completed a small IP survey and several reconnaissance RC holes in the Boda Prospect area in 1995. The results identified sporadic, shallow low-grade intervals of gold mineralisation hosted within a sequence of monzonites, diorites and intermediate volcanics. Sampling was performed by collecting spear composites from 3m drill runs, assayed by aqua regia digest and fire assay-AAS and ICP finishes.
		Amax Mining Inc/Woodsreef Mines grid sampled the residual soil profile and analysed for Cu, Pb and Zn. A coherent +250 ppm Cu soil anomaly was outlined with a strike length of

Criteria	JORC Code explanation	Commentary
		over 1000m and a maximum of 1.25% Cu, in the -80-mesh sieve fraction. Grid based rock chip sampling produced up to 5.4% Cu and 42ppm Au.
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 Boda 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:*
	 o *easting and northing of the drill hole collar*
	 o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	 o *dip and azimuth of the hole*
	 o *down hole length and interception depth*
	 o *hole length.*
		All material information has been previously reported in the following announcements:
		    9 September 2019, ASX Announcement;
		    13 February 2020, ASX Announcement;
		    23 March 2020, ASX Announcement;
		    22 April 2020, ASX Announcement;
		    19 May 2020, ASX Announcement;
		    11 November 2020, ASX Announcement;
		    18 December 2020, ASX Announcement;
		    8 March 2021, ASX Announcement;
		    3 May 2021, ASX Announcement;
		    16 August 2021, ASX Announcement.
		    22 October 2021, ASX Announcement;
		    17 December 2021, ASX Announcement;
		    25 February 2022, ASX Announcement;
		    30 March 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

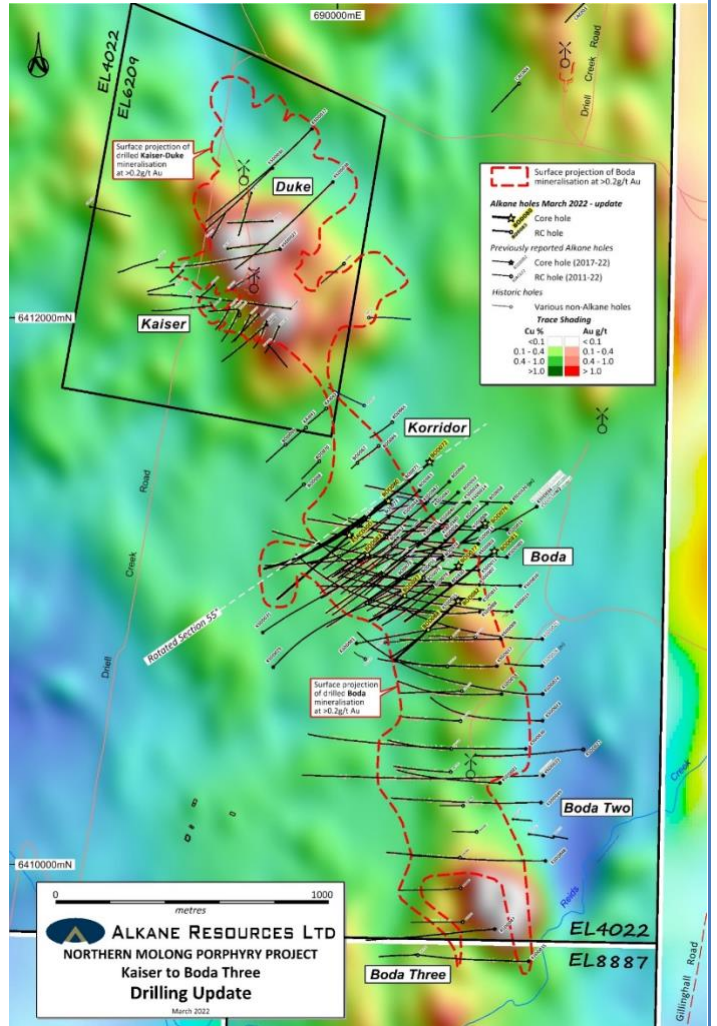| Criteria	JORC Code explanation	Commentary
		can be significant because of the type of bulk mining techniques used to extract this style of mineralisation but are limited to <15% for the purpose of calculation.
		No top cut has been used.
		Short intervals of high grades that have a material impact on overall intersection are reported as separate (included) intervals.
	• *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	No metal equivalents are reported for the exploration results.

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 Boda 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 significant discovery. Various representative drill hole sections illustrating the mineralisation and geology are attached below.

BOD054
142m @ 0.21g/t Au, 0.15% Cu from 21m

KSRC044
81m @ 0.31g/t Au, 0.23% Cu from 96m

KSDD043
927m @ 0.31g/t Au, 0.16% Cu from 159m
incl 157m @ 0.31g/t Au from 159m
also 754m @ 0.31g/t Au, 0.19% Cu from 332m
incl 74.7m @ 0.92g/t Au, 0.36% Cu from 680m
incl 12m @ 3.01g/t Au, 0.65% Cu from 732m
also 38m @ 0.60g/t Au, 0.79% Cu from 837m
incl 9m @ 1.04g/t Au, 1.40% Cu from 839m
also 6m @ 1.26g/t Au, 0.10% Cu from 1080m

KSDD045
91m @ 0.23g/t Au, 0.05% Cu from 37m
and 679m @ 0.30g/t Au, 0.15% Cu from 161m
incl 21m @ 1.11g/t Au, 0.28% Cu from 250m
also 72m @ 0.75g/t Au, 0.30% Cu from 405m
also 8m @ 2.17g/t Au, 0.90% Cu from 803m

BOD059
906.7m @ 0.45g/t Au, 0.18% Cu from 309m
incl 219m @ 0.28g/t Au from 309m
also 672.7m @ 0.51g/t Au, 0.23% Cu from 543m
incl 115m @ 1.98g/t Au, 0.53% Cu from 864m
incl 33m @ 4.06g/t Au, 1.29% Cu from 946m

KSDD031
383.2m @ 0.80g/t Au, 0.31% Cu from 775m
incl 204m @ 1.40g/t Au, 0.51% Cu from 776m
incl 101m @ 2.47g/t Au, 0.83% Cu from 824m
incl 70m @ 3.04g/t Au, 0.92% Cu from 829m

Trace Shading

Cu %	Au g/t
<0.1	< 0.1
0.1 - 0.4	0.1 - 0.4
0.4 - 1.0	0.4 - 1.0
>1.0	> 1.0

Dolerite - Dacitic dyke

Latite

Equigranular monzonite

Basaltic to andesitic volcanics & volcaniclastics

Sulphide cemented breccia

Mineralisation + 0.2 g/t Au and / or + 0.1% Cu

Monzodiorite intrusive breccia (magmatic to hydrothermal)

Phyllic Au mineralisation envelope > 0.3 g/t Au

ALKANE RESOURCES LTD
Northern Molong Porphyry Project
Boda Prospect
Rotated Section
BOD059 & KSDD043
(at 55° with ±40m window)

Plan No.: ALK NMP 1XD-019   December 2021

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Criteria	JORC Code explanation	Commentary

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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 Boda deposit and to infill the current drilling to improve confidence and convert Inferred resources to Indicated/ Measured. Other drilling will target Kaiser, Boda Two and the Korridor prospects with the purpose of extending or adding mineral resources to the maiden Inferred Resource at Boda. Regional exploration comprising of IP, MT and soil geochemistry surveys are underway, with follow up drilling to test any encouraging anomalism.

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Criteria	JORC Code explanation	Commentary
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	The attached image highlights a 3.5km strike of gold-copper mineralisation defined with broad spaced drilling at Kaiser, Korridor, 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 I am 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. Most of the data comes from drill core as opposed to RC chips.
	• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*	Early geological interpretations suggested a steeply east dipping mineralisation and geology. Recent interpretation that formed the basis of the maiden Mineral Resource at Boda has defined a subvertical mineralising system striking north-west within a significant north-west trending structural corridor towards the Kaiser prospect.
	• *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. A high-grade breccia with sulphide cement represents the central high grade domain. Phyllic alteration (sericite-quartz-pyrite) overprints the earlier breccia mineralisation and is gold rich but copper poor. A late-mineral monzonite dyke stopes out the early breccia mineralisation and is very low-grade in copper with negligible gold grade. Dolerite and dacitic dykes post-date the mineralisation and stope and truncate out the modelled mineralised domains.
	• *The factors affecting continuity both of grade and geology.*	The alteration at Boda 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

Criteria	JORC Code explanation	Commentary
		breccias, that are zoned from pyrite dominant to chalcopyrite 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 ~ 1000m Width ~ 500m Depth ~ surface to an average of ~ 1,000m below surface with the deepest intercept is ~1,500m 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. 9 mineralisation wireframes, 3 monzonite wireframes, and 30 dolerite wireframes were interpreted and used as constraints 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 drill hole data was flagged by dolerite, monzonite, phyllic gold mineralised and gold-copper mineralised domain wireframes in priority order, to prevent double use the data in the intersecting zones. The mineralised zones of greater than 0.2g/t AuEq were wireframed and 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 (40 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, Cu and Ag grade. The correlation between Au, Cu and Ag was considered low 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. Grade estimation was completed using Ordinary Kriging (OK) with dynamic anisotropy. All wireframing and estimation was completed with Datamine Studio RM.

Criteria	JORC Code explanation	Commentary
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	Maiden resource estimation is of a greenfield discovery.
	• *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. 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 50m 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 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
	• *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 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 veining. One high-grade breccia with sulphide cement represents the central high-grade domain. Phyllic alteration (sericite-quartz-pyrite) domains overprint the earlier breccia mineralisation, they are gold rich but copper poor. Late-mineral monzonite dykes stope out the early breccia mineralisation domains and are weakly copper mineralised with negligible gold grade. Dolerite and dacitic dykes post-date the mineralisation and truncate and stope out mineralisation. 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 majority of the 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.

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Criteria	JORC Code explanation	Commentary
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	Cut-off grade for reporting of Boda was selected as 0.3g/t AuEq for potential open cut mining and 0.4g/t AuEq 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). Silver (Ag) was not included in the AuEq calculation. The prices used were based on a 6-month average 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, Cu and Ag 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 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.
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, copper and silver.
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.*	Boda is a greenfield discovery. Previous mining occurred at the nearby Kaiser mine in the 1870s. Boda is 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*

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Criteria	JORC Code explanation	Commentary
		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. 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 at least 50% to be able to classify the resource as Indicated. This distance represents approximately 85-90% of the sill for each of the domains.
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	Boda is a greenfield discovery.

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