13 February 2020



Significant Porphyry Gold-Copper Mineralisation Width Increases with Depth at Boda

The Boda Prospect has been tested with one diamond core drill hole (KSDD005) 200 metres below a zone of gold-copper mineralisation previously defined in diamond drilling (507m @ 0.48g/t Au, 0.20% Cu from 211m in KSDD003). KSDD005 assay results indicate an increase in thickness of significant porphyry gold-copper mineralisation with depth. Drill intercept highlights include:

KSDD005	689m @ 0.46g/t gold, 0.19% copper from 402 metres
incl	312m @ 0.70g/t gold, 0.19% copper from 402 metres
incl	119m @ 1.47g/t gold, 0.29% copper from 463 metres
incl	10m @ 3.77g/t gold, 0.63% copper from 464 metres
also	12m @ 4.38g/t gold, 0.75% copper from 564 metres

- The drilling is part of a 5,000 metre diamond core drilling exploration program to test the depth and strike extensions to the significant porphyry gold-copper mineralisation at Boda.
- The Boda Prospect is part of the Northern Molong Porphyry Project (NMPP) which incorporates exploration licences covering an area of 110 km² of the northern Molong Volcanic Belt (MVB), in the Central West of New South Wales. The northern MVB, within the eastern Lachlan Orogen is considered highly prospective for large porphyry gold-copper mineralisation, as demonstrated by the world class Cadia Valley porphyry district, located 110 km to the south.

Alkane Resources' (ASX:ALK) Managing Director, Nic Earner, said: "These drill results give us further encouragement that the Boda Prospect is a significant discovery. The continuation of grade at depth and the consistency of mineralisation are further evidence of a big porphyry system. Alkane is continuing its follow up drilling, we look forward to bring shareholders further results as they become available".

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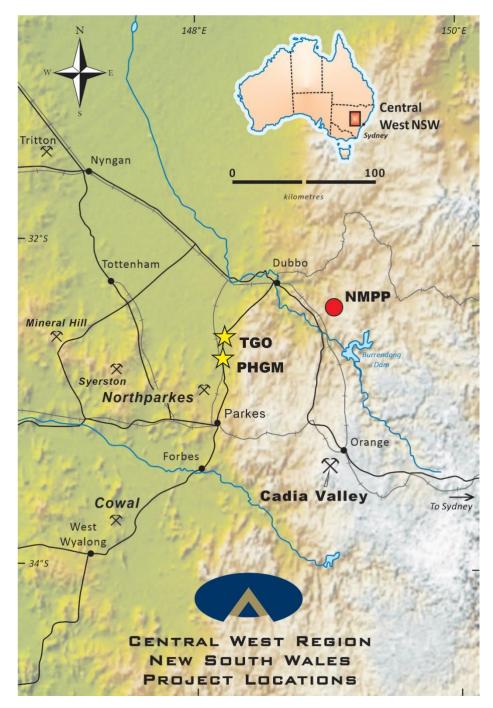
Northern Molong Porphyry Project (NMPP)

Alkane Resources Ltd 100%

The Northern Molong Porphyry Project (NMPP) incorporates four exploration licences; Bodangora (EL 4022), Boda South (EL 8887), Kaiser (EL 6209) and Finns Crossing (EL 8361), covering an area of 115km² of the northern Molong Volcanic Belt (MVB), in the Central West of New South Wales.

The NMPP is located close to the major regional centres of Dubbo and Orange, which together with Parkes and Wellington, service several major mines in the district including Alkane's own Tomingley Gold Operations. In addition, the NMPP is close to road, rail, power, gas and water infrastructure.

The northern MVB, within the eastern Lachlan Orogen is considered highly prospective for large porphyry gold-copper mineralisation, as demonstrated by the presence of the world class Cadia Valley porphyry district located 110 km to the south (~49Moz Au; Newcrest website).



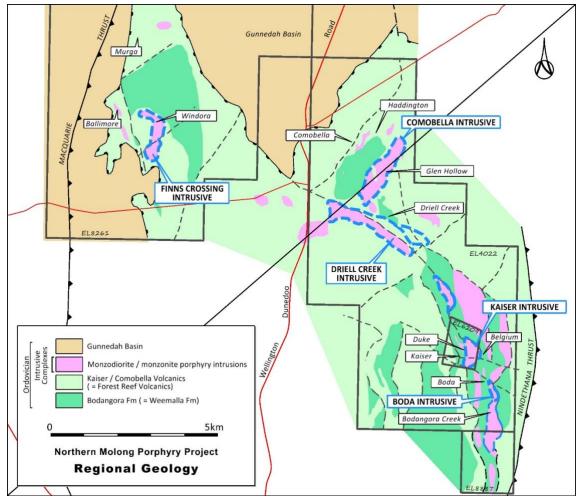


Alkane's exploration activity over several years has established a geological framework for the region which highlights strong similarities with the Cadia district. Although structurally more complex than the Cadia Valley area, Alkane has been able to reconstruct the geology in the area and has shown that a stratigraphic sequence similar to that at Cadia exists within the project area, and that mineralisation is hosted by similar rock types at very similar stratigraphic positions.

Exploration in the NMPP has demonstrated the margins of major monzonite intrusive complexes provide a primary control for porphyry and epithermal mineralisation, with significant intersections being reported along the western margin of the Kaiser Intrusive Complex and from Boda positioned at the western margin of the Boda intrusive Complex (BIC).

Five discrete magnetic/intrusive complexes have been identified to date – Kaiser, Boda, Comobella, Driell Creek and Finns Crossing – within a 15 km northwest trending corridor.

The Kaiser-Boda target zone has been mapped over a north-south strike length of 6 km and 1 km wide corridor defined by monzonite intrusives, extensive alteration and widespread low grade gold-copper mineralisation.



Boda Prospect

A single diamond drill hole (KSDD005, 1539.6m) was drilled approximately 200 metres vertically below KSDD003 (507m @ 0.48g/t Au, 0.20% Cu from 211m; ASX Announcement 9 September 2019). The hole was located to test the depth extensions of the gold-copper porphyry mineralisation across the western margin of the Boda Intrusive Complex (BIC) and to assist with lithological and structural orientations; determine if there are grade vectors. Similar to drill hole KSDD003, KSDD005 intersected at least two phases of monzonite porphyries proximal to the significant gold-copper mineralisation intruding into



more primitive volcaniclastics and lavas that host the majority of the potassic alteration. A thick zone of pyrite stringers and disseminations surrounds a gold-rich chalcopyrite dominant core with chalcopyrite forming as disseminated blebs, in planar quartz veins and as weakly formed stringers.

KSDD005 diamond core drill hole intersected an extensive (greater than 700m true thickness) pyrite shell with a chalcopyrite dominant core (approximately 300m thick), characteristic of the upper parts of an alkalic porphyry mineralisation system. Lithogeochemistry conducted on the drill samples is also supportive, displaying a zonation pattern of outer propylitic and sodic alteration from the top of hole vectoring to a copper rich calc-potassic core (biotite + chlorite + chalcopyrite ± kspar ± magnetite ± bornite mineral assemblage) and terminating in a propylitic chlorite + pyrite zone. No causative porphyry has been identified in the drilling possibly suggestive of a deeper source. The style of alteration and mineralisation has several apparent similarities with sections of the Cadia East Deposit (2,900Mt @ 0.36g/t gold, 0.26% Cu, Newcrest global resource Annual Report 2018). The drill hole has increased the width of the significant gold-copper porphyry mineralisation, 200 metres vertically below KSDD003 with intercepts of:

KSDD005	689m @ 0.46g/t gold, 0.19% copper from 402 metres
incl	312m @ 0.70g/t gold, 0.19% copper from 402 metres
incl	119m @ 1.47g/t gold, 0.29% copper from 463 metres
incl	10m @ 3.77g/t gold, 0.63% copper from 464 metres
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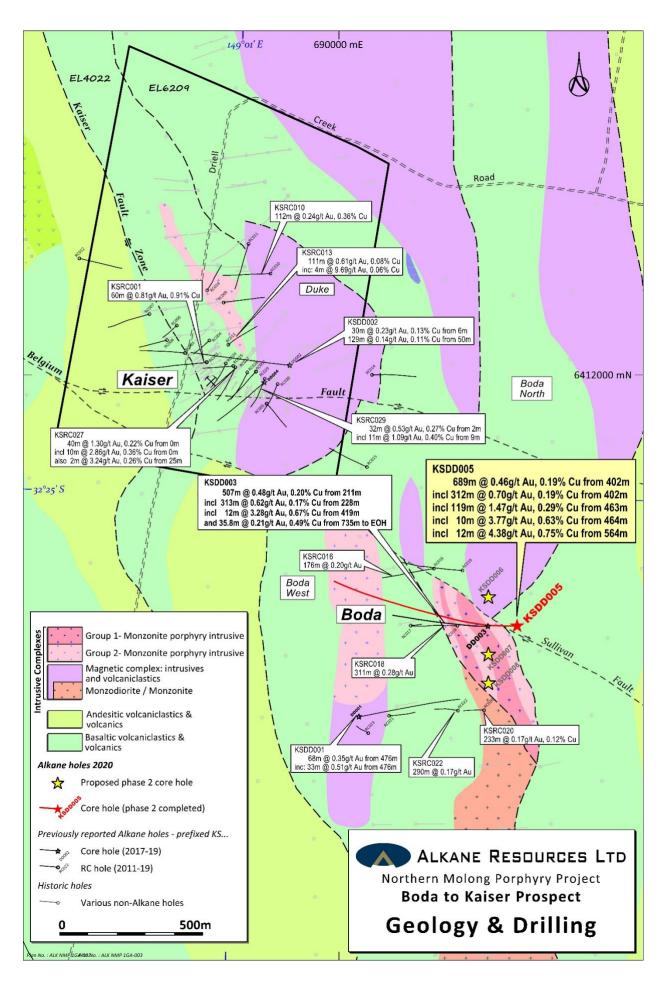
The drilling is part of a 5,000 metre diamond core drilling exploration program to test the depth and strike extensions to the significant porphyry gold-copper mineralisation at the Boda Prospect. The Boda mineralisation is open at depth and along strike. An inner calc-potassic bornite rich core to the system remains untested.

An historic Induced Polarisation (IP) survey completed by CRA Exploration (Rio) over the Boda Intrusive Complex (BIC) exhibits a strong high chargeable anomaly along the northern edge of the survey area coincident with the magnetic anomaly at the Boda Prospect. Early drill testing of this anomaly by Alkane intersected a gold anomalous pyrite shell and with further drilling intersected the gold-copper mineralised core and the subsequent discovery of Boda. Alkane has initiated a 70 line km IP survey over the 6 km strike extensions of the BIC to generate further drilling targets in this prospective area.

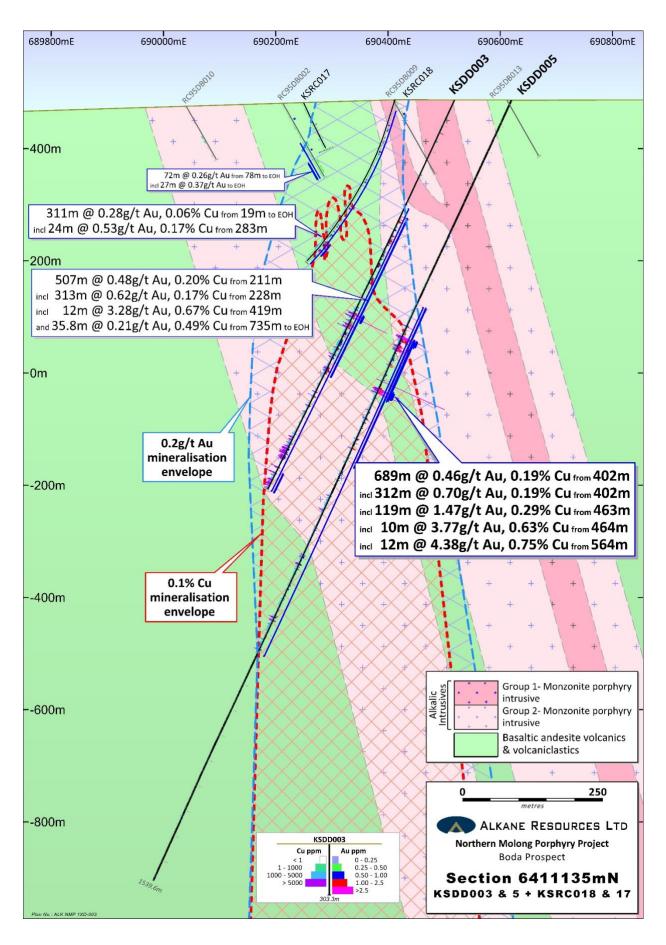
N	NMPP Diamond Core and RC Significant Drilling Results – 14 February 2020 (>0.2g/t Au and/or 0.1% Cu)									u)		
Hole ID	Easting (MGA)	Northing (MGA)	RL	Dip	Azimuth (Grid)	Total Depth	Interval From (m)	Interval To (m)	Intercept (m)	Au (g/t)	Cu (%)	Prospect
KSDD005	690620	6411125	486	-65	270	1539.6	262	272	10	0.23	0.02	
and							354	369	15	0.16	0.10	
and							402	1091	689	0.46	0.19	
incl							402	714	312	0.70	0.19	
incl							463	582	119	1.47	0.29	BODA
incl							463	493	30	2.28	0.46	BODA
incl							464	474	10	3.77	0.63	
also							564	576	12	4.38	0.75	
and							1395	1396.1	1.1	0.27	0.23	
and							1409.4	1415	5.6	0.13	0.16	

Significant intervals, defined by >0.2g/t Au and/or 0.1% Cu, with up to 7.7% internal dilution. True widths are approximately 70% of intersected width











Competent Person

Unless otherwise advised above, the information in this report that relates to exploration results is based on, and fairly reflects, information compiled by Mr David Meates MAIG, (Alkane Senior Exploration Geologist) 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.

Previous Information

The information in this report that relates to exploration results 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 Mr Nic Earner, Managing Director ABOUT ALKANE - <u>www.alkane.com.au</u> - ASX: ALK and OTCQX: ANLKY

Alkane is a gold production company with a multicommodity exploration and development portfolio. Alkane's projects are predominantly in the Central West region of NSW, but extend throughout Australia through investments in other gold exploration and mining companies.

Alkane's gold production is from the Tomingley Gold Operations (TGO) which has been operating since early 2014 and it's most advanced gold exploration projects are in the 100% Alkane owned tenement area between TGO and Peak Hill and have the potential for sourcing additional ore for TGO.

Alkane has other 100% owned exploration tenements in the Central West NSW prospective for gold and copper. The recently announced significant porphyry gold-copper mineralisation intersected at Boda is an example of this potential.

Alkane's largest non-gold project is the Dubbo Project (DP), a large in-ground resource of zirconium, hafnium, niobium, yttrium and rare earth elements. As it is an advanced polymetallic project outside China, it is a potential strategic and independent supply of critical minerals for a range of sustainable technologies and future industries. It has a potential mine life of 75+ years. The DP is development ready, subject to financing, with the mineral deposit and surrounding land acquired and all major State and Federal approvals in place.





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

JORC Code, 2012 Edition – Table 1 NORTHERN MOLONG PORPHYRY PROJECT

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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 	 Diamond core drilling was undertaken by Ophir Drilling Pty Ltd DD sample intervals were defined by geologist during logging to honour geological boundaries, cut in half by diamond saw, with half core sent to ALS Laboratories Sampling and QAQC procedures are carried out using Alkane protocols as per industry best practice
	• 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.	 Core was laid out in suitably labelled core trays. A core marker (core block) was placed at the end of each drilled run (nominally 3m) and labelled with the hole number, down hole depth, length of drill run. Core was aligned and measured by tape, comparing back to this down hole depth consistent with industry standards. Half core was sampled Gold was determined by fire assay fusion of a 50g charge with an AAS analytical finish A multi-element suite was determined using a four acid digest with a ICP-MS analytical finish
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). 	Triple tube diamond drilling with PQ3/HQ3 wireline bit producing 83mm diameter (PQ3) and 61.1mm diameter (PQ3) sized oriented core.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	 DD - core loss was identified by drillers and calculated by geologists when logging. Generally ≥99% was recovered with any loss usually in portions of the oxide zone Triple tube coring was used at all times to maximise core recovery with larger diameter (PQ3) core used in the oxide zones.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Sample quality is qualitatively loggedCore drilling completed using HQ triple tube 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



Criteria	JORC Code explanation	Commentary
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. 	Core was laid out in core trays 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)
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography	 Mostly logging was qualitative with visual estimates of the various characteristics. In addition magnetic susceptibility data (quantitative) was collected as an aid for logging
		 All core geologically logged onto physical log sheets, followed by importing into Alkane's central database
		All core was logged by qualified and experienced geologists
	The total length and percentage of the relevant intersections logged	All drill holes were logged in full
Sub-sampling techniques and sample	• If core, whether cut or sawn and whether quarter, half or all core taken.	Core sawn with half core samples submitted for analysis
preparation	• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Core drilling only
	• For all sample types, the nature, quality and appropriateness of the sample preparation technique.	 Samples were delivered by Alkane personnel to ALS Minerals Laboratory, Orange NSW. Crushed with 70% <2mm (ALS code CRU-31), split by riffle splitter (ALS code SPL-21), and pulverised 1000grm to 85% <75um (ALS code PUL-32). Crushers and pulverisers are washed with QAQC tests undertaken (ALS codes CRU-QC, PUL-QC).
	 Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples 	Internal QAQC system in place to determine accuracy and precision of assays
	 Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling 	Non-biased core cutting using an orientation line marked on the core
	• Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample are of appropriate size
Quality of assay data and	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	 All samples were analysed by ALS Minerals Gold is determined using a 50g charge fused at approximately 1100°C with alkaline fluxes, including lead oxide. The resultant prill is dissolved in aqua regia with gold determined by flame AAS



Criteria	JORC Code explanation	Commentary
laboratory tests		Other geochemical elements, samples are digested by near-total mixed acid digest with each element 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.	No geophysical tools were used to determine any element concentrations
	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.	 Full QAQC system in place including certified standards and blanks of appropriate matrix and concentration levels
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Drill data is compiled and collated, and reviewed by senior staff. External consultants do not routinely verify exploration data until resource estimation procedures are deemed necessary
assaying	The use of twinned holes.	No twinned holes have been drilled at this early stage of exploration
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All drill hole logging and sampling data is entered directly into field data entry spreadsheets for transfer and storage in an industry standard access database with verification protocols in place
		 All primary assay data is received from the laboratory as electronic data files which are imported into sampling database with verification procedures in place. QAQC analysis is undertaken for each laboratory report
	Discuss any adjustment to assay data.	No adjustments made
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. 	 Drillholes are laid out using hand-held GPS (accuracy ±2m) then DGPS surveyed accurately (± 0.1m) by licenced surveyors on completion
	Specification of the grid system used.	• GDA94, MGA (Zone 55)
	Quality and adequacy of topographic control.	 Drillhole collars DGPS surveyed accurately (± 0.1m) by licenced surveyors on completion
	Data spacing for reporting of Exploration Results	At this early exploration stage, data spacing is variable with the focus on identifying new zones of mineralisation



Criteria	JORC Code explanation	Commentary
Data spacing and distribution	 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 	Early stage, reconnaissance drilling, no resource estimations being undertaken
	Whether sample compositing has been applied	No sampling compositing has been applied
Orientation of data in relation to	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	 Drillholes KSDD001, KSDD003 and KSDD005 suggest a broadly steeply east dipping geometry
geological structure	 If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material 	 Estimated true intervals at this early stage of drilling are possibly ~50% of downhole lengths
Sample security	The measures taken to ensure sample security.	 All samples are bagged into tied calico bags, before being grouped into plyweave bags and transported ~1hr to ALS Minerals Laboratory in Orange by Alkane personnel. All sample submissions are documented via ALS tracking system with results 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.	No audits or reviews have been conducted at this stage



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	 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. 	Drilling completed on exploration licence number 4022 which is owned 100% by Alkane.
status	 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 2020
Exploration	Acknowledgment and appraisal of exploration by other parties.	• Significant historical drilling activity has been conducted within the bounds of EL4022.
done by other parties		 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.
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.
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 colgth. 	See body of 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 holes have been reported in this announcement.
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).
		No top cut has been used
		Short intervals of high grades that have a material impact on overall intersection are reported as separate (included) intervals



Criteria	JORC Code explanation	Commentary
	 The assumptions used for any reporting of metal equivalent values should be clearly stated. 	No metal equivalents are reported
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 is steeply east 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. 	Plans showing geology with drill collars are included in the body of the announcement.
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.	Comprehensive reporting has been undertaken with all holes listed in the included table.
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. 	Other than drilling noted above and minor geophysical data which has been used to assist interpretations, no other material exploration data is available for reporting.
Further work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	 It is recommended that further drilling and an extension to the IP survey area at Boda prospect be undertaken within the licence to further define the targets
	 Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive 	See figures included in the announcement.