ASX and MEDIA RELEASE

21 June 2024

ALKANE RESOURCES LTD
ABN 35 000 689 216

NMPP Regional Exploration Update
Potential For New Au-Cu Porphyry Deposits Demonstrated

- **Recent exploration has focused on growing the understanding of the regional geological setting of the Boda-Kaiser District to aid the discovery of new Au-Cu porphyry deposits within the Northern Molong Porphyry Project (NMPP).**
- **At Boda 2-3 the high-grade hydrothermal breccia intersected by drill hole BOD094 was tested along strike by two diamond core holes. A chalcopyrite cemented breccia was intersected 40m north and along strike of BOD094 by BOD159 and a more distal hydrothermal breccia was intersected 120m north along strike by BOD158. Results included:**

BOD159	**106m grading 0.43g/t AuEq (0.25g/t Au, 0.13% Cu) from 1028m**
incl	**5m grading 1.59g/t AuEq (1.09g/t Au, 0.37% Cu) from 1066m**
and	**65.5m grading 1.78g/t AuEq (1.22g/t Au, 0.41% Cu) from 1154.5m**
incl	**15.6m grading 6.16g/t AuEq (4.37g/t Au, 1.31% Cu) from 1199.4m**
incl	**4.5m grading 11.0g/t AuEq (7.92g/t Au, 2.28% Cu) from 1200.2m**
also	**2.6m grading 15.1g/t AuEq (10.9g/t Au, 3.06% Cu) from 1211m**
BOD158	**452.6m grading 0.40g/t AuEq (0.21g/t Au, 0.14% Cu) from 852m**
incl	**30m grading 0.89g/t AuEq (0.41g/t Au, 0.35% Cu) from 1066m**
and	**8.3m grading 0.81g/t AuEq (0.43g/t Au, 0.28% Cu) from 1413.6m**

- **Regional exploration drilling of 9 RC and 1 diamond core drill holes was completed at the Driell Creek prospect, located northwest of Boda-Kaiser. All drilling identified porphyry style alteration and mineralisation; significant results included:**

DRC004	**130m grading 0.25g/t Au, 0.11% Cu from 174m to end of hole.**
DRC010	**47.7m grading 0.12g/t Au, 0.15% Cu from 279.3m**
incl	**7m grading 0.34g/t Au, 0.26% Cu from 320m**
DRC002	**9m grading 0.61g/t Au from 255m (gold only zone)**
DRC007	**30m grading 0.13g/t Au, 0.10% Cu from 78m**
and	**6m grading 0.26g/t Au, 0.15% Cu from 96m**

CONTACT : **NIC EARNER, MANAGING DIRECTOR, ALKANE RESOURCES LTD, TEL +61 8 9227 5677**
INVESTORS : NATALIE CHAPMAN, CORPORATE COMMUNICATIONS MANAGER, TEL +61 418 642 556
MEDIA : PAUL RYAN, CITADEL-MAGNUS, TEL +61 409 296 511

Level 4, 66 Kings Park Rd, West Perth WA 6005, AUSTRALIA (PO Box 768, West Perth WA 6872, AUSTRALIA)
Telephone: +61 8 9227 5677 Facsimile: +61 8 9227 8178 www.alkane.com.au mail@alkane.com.au

- **An airborne gravity survey was flown over the entire NMPP in late 2023. Subsequent 3D inversion modelling and interpretation of the data confirmed a 35km^2 intrusive complex, termed the Comobella Intrusive Complex (CIC). Periphery to the major CIC are several small intrusive complexes. These fertile apophyse** intrusives can be significantly mineralised, as seen in the deposits already defined at Boda-Kaiser.**
- **Drilling occurred at the Konigin and Murga prospects. Results indicated the geology is favourable for porphyry type environments however, individual drill results showed weak mineralisation. Further drilling at these targets is now considered a lower priority than Driell Creek.**
- **Planned regional exploration in the NMPP for the next 12 months will focus on further drill testing of the Driell Creek prospect. Other exploration will comprise of target generation work comprising mapping, soil sampling, IP, ground gravity and air-core drilling using bottom-of-hole litho-geochemistry, focusing on the Haddington, Windora, Ballimore, Comobella North and Boda 4 prospects. This exploration forms part of the approximately $6m Alkane exploration budget in FY25.**

Alkane Resources Limited (**ASX: ALK**) is pleased to announce further results from its drilling program at the Company's Northern Molong Porphyry Project (NMPP) in Central New South Wales. The program tested the highest priority targets across the tenement package.

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

Alkane Managing Director, Nic Earner, said: *"This program of drilling has confirmed the potential to find further deposits similar to Boda and Kaiser across the Northern Molong Porphyry tenement package.*

"Driell Creek has delivered some encouraging results from this round of drilling. Driell Creek is emerging as our next priority area for follow-up drilling. Early-stage target generation work will continue at several other prospects.

"Alkane is very close to finalising the scoping study for the Boda-Kaiser deposits at the NMPP, any regional discoveries carry the potential to upgrade the project's long term economic outcomes."

The equivalent calculation formula is AuEq(g/t) = Au(g/t) + Cu%/100*31.1035*copper price($/t)/gold price($/oz). The prices used were 12-month averages of US$2,000/oz gold and US$8,800/t copper, and A$:US$0.66. Recoveries are estimated at 87% Cu and 81% gold from metallurgical studies at Boda 2-3. Alkane considers the elements included in the metal equivalents calculation to have a reasonable potential to be recovered and sold.

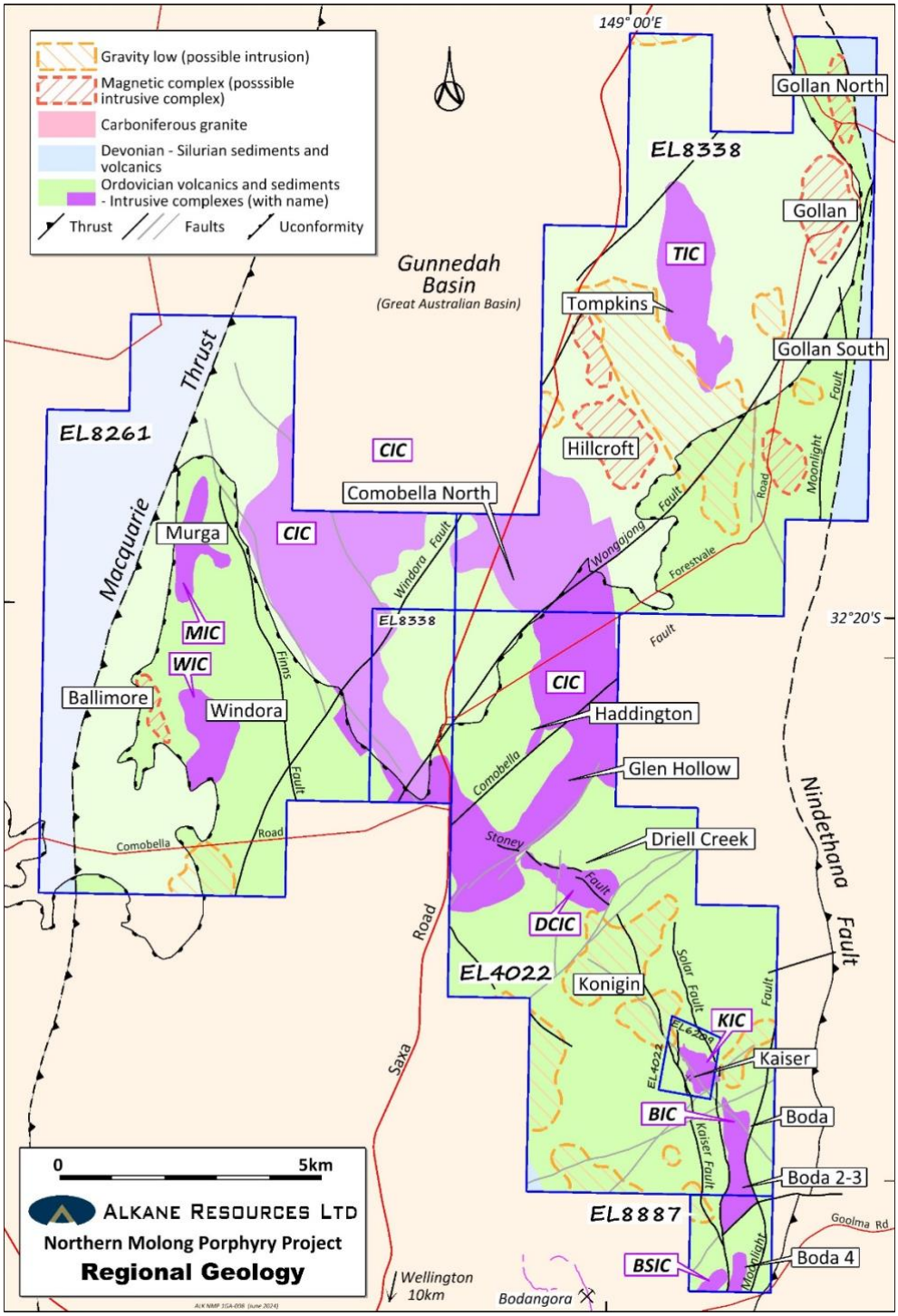
***** A small dyke or sill injected from a larger intrusive body into adjacent rocks.***

Northern Molong Porphyry Project (NMPP)

Alkane Resources Ltd 100%

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

Exploration has identified seven discrete intrusive complexes – Kaiser, Boda, Boda South, Driell Creek, Murga, Windora and Tompkins – outboard of the major 35km^2 Comobella Intrusive Complex (CIC) and within a northwest trending transverse corridor. Intermediate intrusives, lavas and breccias, extensive alteration and widespread, low-grade, gold-copper mineralisation, define the corridor, and two significant gold-copper resources have been defined at Boda[1] and Kaiser[2]. Exploration continues to improve the understanding of the Boda-Kaiser geological setting and to test targets throughout the NMPP.



Several major drilling campaigns that commenced after the discovery of Boda in September 2019 have culminated in estimating two large Au-Cu resources (Indicated and Inferred) at Boda (including Boda 2-3) and Kaiser. Regional exploration has since recommenced with a FALCON Airborne Gravity Gradiometer (AGG) survey over the entire NMPP in late-2023. The gravity data was modelled into 3D and interpreted with Alkane's detailed airborne magnetics to inform existing and new targets within the Project.

A drilling program comprising of a total 8,470m, was subsequently conducted in early-2024, focusing on the Konigin, Driell Creek, Murga and Boda 2-3 prospects. Assay results have been received and collated for the program comprising of 14 reverse circulation (RC) drill holes for a total of 4,408 metres and 4 diamond cores (DD) for a total of 4,062 metres of core.

The exploration undertaken included:

- Two DD holes targeted the northern strike length of the high-grade hydrothermal breccia and porphyry intersected by BOD094 (58m @ 1.28g/t Au, 0.74% Cu) at the Boda 2-3 deposit[3];
- Nine RC holes and one DD hole testing the Driell Creek intrusive complex (DIC);
- Testing the magnetic feature at Murga for skarn mineralisation with five RC holes;
- Targeting the strong conductive IP anomaly at the Konigin prospect with one DD hole;
- One sample taken from a hydrothermal breccia outcrop at Boda 4; and
- Completion of an airborne gravity survey of the entire NMPP.

Boda 2-3

The Boda 2-3 mineralisation is included in the Boda MRE and is centred around a magnetic high within the Boda Intrusive Complex (6.4Moz gold, 1.0Mt copper[1]).

Boda 2-3 comprises a west-tilted sequence of basaltic to andesitic volcaniclastics and volcanics that have been intruded by a series of steep west dipping dykes, stocks and intrusive breccias ranging in composition from diorite to monzodiorite. The sequence is dislocated by a series of imbricated thrust faults resulting in deep distal propylitic altered volcanics with minor gold-copper mineralisation in the west being thrust over a central zone of broadly calc-potassic altered volcanics with extensive gold-copper mineralisation. These sections are further thrusted over the preserved upper level of the Boda 2-3 porphyry system in the east.

New drilling comprising two diamond core holes collared at 80m intervals along strike to the north of BOD094 that identified a 'causative' monzodiorite associated with chalcopyrite cemented hydrothermal brecciation of 58m grading 1.28g/t Au, 0.74% Cu from 1223m including 12m grading 3.37g/t Au, 0.98% Cu[3]. Assay results received from the drill hole BOD159 that deviated to within 40m of the high-grade interval intersected by BOD094, intersected a chalcopyrite cemented breccia with visible gold that is thicker and higher grading to the high-grade interval intersected by BOD094. Significant results include:

BOD159	106m grading 0.43g/t AuEq (0.25g/t Au, 0.13% Cu) from 1028m
incl	5m grading 1.59g/t AuEq (1.09g/t Au, 0.37% Cu) from 1066m
and	65.5m grading 1.78g/t AuEq (1.22g/t Au, 0.41% Cu) from 1154.5m
incl	15.6m grading 6.16g/t AuEq (4.37g/t Au, 1.31% Cu) from 1199.4m
incl	4.5m grading 11.0g/t AuEq (7.92g/t Au, 2.28% Cu) from 1200.2m
also	2.6m grading 15.1g/t AuEq (10.9g/t Au, 3.06% Cu) from 1211m

BOD159 – Chalcopyrite cemented breccia with visible gold from 2.6m interval grading 10.9g/t Au and 3.06% Cu from 1211m.

Drill hole BOD158, collared 160m north of BOD094, intersected a thick zone of calc-potassic alteration with more distally developed hydrothermal calcite-actinolite-pyrite-chalcopyrite brecciation, 80m north of the chalcopyrite cemented breccia intersected by BOD159. This style of brecciation is common on the margins of sulphide cemented breccias and is interpreted to be the northern extent of the chalcopyrite cemented breccia intersected by both BOD094 and BOD159. Significant results from BOD158 include:

BOD158	452.6m grading 0.40g/t AuEq (0.21g/t Au, 0.14% Cu) from 852m
incl	30m grading 0.89g/t AuEq (0.41g/t Au, 0.35% Cu) from 1066m
also	12m grading 0.88g/t AuEq (0.51g/t Au, 0.27% Cu) from 1153m
also	5m grading 0.96g/t AuEq (0.60g/t Au, 0.26% Cu) from 1244m
also	4m grading 1.00g/t AuEq (0.56g/t Au, 0.32% Cu) from 1264m
and	8.3m grading 0.81g/t AuEq (0.43g/t Au, 0.28% Cu) from 1413.6m
and	11.8m grading 0.55g/t AuEq (0.25g/t Au, 0.22% Cu) from 1444.2m

The drilling has confirmed the high-grade chalcopyrite cemented breccia has a strike length of greater than 100m and is open along strike to the south and down-dip. The breccia is dislocated by major faulting. The Solar and Moonlight Faults dip west and truncate the surrounding extensive calc-potassic lower grade Au-Cu mineralisation, constraining the thickness of drilling intercepts when collared east (BOD158-159) in comparison to west collared holes such as BOD094. Due to the depth of the mineralisation and its significant dislocation by major faulting, no further drilling is planned at this stage until the Boda-Kaiser project development is further advanced or is deemed necessary for its successful development.

The gold equivalent calculation formula is AuEq(g/t) = Au(g/t) + Cu%/100*31.1035*copper price($/t)/gold price($/oz). The prices used were 12-month averages of US$2,000/oz gold and US$8,800/t copper, and A$:US$0.66. Recoveries are estimated at 87% Cu and 81% gold from substantial metallurgical testwork at Boda 2-3. Alkane considers the elements included in the metal equivalents calculation to have a reasonable potential to be recovered and sold.

Driell Creek Prospect

The Driell Creek Intrusive Complex (DIC) complex covers a 6km^2 area within the Boda northwest intrusive corridor. The complex includes numerous magnetic features aligned in a northwest to west-northwest orientation with a moderate to low gravity response.

The Driell Creek Prospect includes a coincident magnetic low and induced polarisation (IP) chargeability high with shallow level anomalous multi-element geochemistry (As-Bi-Zn) characterising a significant sized phyllic alteration zone interpreted to be a lithocap. Lithocaps generally occur above or adjacent to porphyry systems. A previous RC drill hole (COMRC040)[4] targeted 500m south of this feature and intersected 120m at 0.10% Cu, 0.10g/t Au from 168m to end of hole.

Nine RC drill holes and one diamond core drill hole for a total of 3,393 metres were recently completed testing various targets within the DIC.

Three RC drill holes (DRC004, DRC008-9) and one diamond drill hole (DRC010) targeted the area 500m south of the interpreted alkalic lithocap, with two drill holes (DRC004 and DRC010) intersecting proximal inner propylitic and calc-potassic alteration. The presence of chalcopyrite centre line quartz veins hosted in a diorite porphyry, is evidence of a hydrothermal fluid sourced from a nearby hydrous, saturated (SiO_2) magmatic source (causative porphyry). Significant faulting dislocates the prospect area, including a major northwest trending fault (Stoney Fault) that appears similar in nature to the Solar Fault – a major syn-volcanic structure that appears to focus Au-Cu mineralisation along its footwall at Boda. These structures have been reactivated during major deformation events significantly dislocating the volcanic packages in a reverse sense. Significant gold and copper values were returned including:

DRC004	130m grading 0.25g/t Au, 0.11% Cu from 174m to end of hole.
DRC010	47.7m grading 0.12g/t Au, 0.15% Cu from 279.3m
incl	7m grading 0.34g/t Au, 0.26% Cu from 320m
and	2m grading 0.12g/t Au, 0.19% Cu from 333m
and	54m grading 0.17g/t Au, 0.04% Cu from 463m
and	5m grading 0.16g/t Au, 0.11% Cu from 539m

DRC010 – Two chalcopyrite centre line quartz veins hosted in a diorite intrusive from 7m interval grading 0.34g/t Au and 0.26% Cu from 320m.

Three RC drill holes (DRC005 - 7) were completed as a traverse across a WNW trending magnetic feature approximately 500m west of the interpreted alkalic lithocap. The drilling intersected distal propylitic alteration that transitions to calc-potassic with a phyllic overprint towards the Driell Creek lithocap. Significant gold and copper values were returned including:

DRC005	3m grading 0.39g/t Au, 0.01% Cu from 210m

DRC007	30m grading 0.13g/t Au, 0.10% Cu from 78m
and	6m grading 0.26g/t Au, 0.15% Cu from 96m

Two RC drill holes (DRC002 - 3) for a total of 608m, tested a circular conductive IP anomaly (resistivity low) with a moderate chargeability response, 1km south of the Driell Creek lithocap. The drilling tested the geophysical feature identifying several gold bearing oxidised fault zones hosted within distal propylitic altered (epidote-hematite-chlorite-magnetite-pyrite) intermediate-mafic volcanics. Significant gold results include:

DRC002	9m grading 0.61g/t Au from 255m
DRC003	14m grading 0.25g/t Au from 231m
and	6m grading 0.17g/t Au from 249m

Konigin Prospect

The Konigin prospect was originally identified by an Induced Polarisation (IP) and Magnetotelluric (MT) electrical geophysical survey. The survey was conducted over the area immediately northwest of Kaiser within the northwest transverse corridor. Three coincident IP chargeability and conductivity anomalies were identified, with the strongest situated at the Konigin prospect. Konigin was initially tested by one shallow RC drill hole[5] (KON001). A deeper diamond core drill hole (KON002) for 835m was completed testing beneath KON001 into the deeper and more conductive part of the anomaly.

KON002 intersected a faulted package of volcaniclastics and lavas with lesser volcanic intrusives. The geophysical anomaly coincides with extensive pyrite with trace chalcopyrite mineralisation associated with chlorite-epidote-albite-magnetite ±actinolite alteration characteristic of inner propylitic alteration. Propylitic alteration is a more distal type of alteration to the hotter copper-rich calc-potassic core in alkalic porphyry systems, such as Boda. Significant mineralisation includes:

KON002	6.3m grading 0.17g/t Au from 368m
and	1m grading 0.29% Cu, 0.05g/t Au from 515m
and	1.1m grading 0.14% Cu, 0.04g/t Au from 640.9m
and	1m grading 0.14% Cu, 0.08g/t Au from 651m

Murga Prospect

Murga is mineralised skarn target associated with a linear magnetic high in the Finns Crossing exploration licence (EL8261). Float samples include 6.4g/t Au 7.6% Cu; 3.8g/t Au 0.12% Cu (collected by Newmont[6]). The target was recently tested with five RC drill holes for a total of 1,250m.

The drilling intersected propylitic (chlorite-epidote-magnetite ±hematite) with narrow zones of calc-potassic (biotite ± actinolite ± epidote ± magnetite) altered andesitic lavas, volcaniclastics, and intrusions ranging from diorites to monzonites. Disseminated pyrite occurred throughout the drilling (up to 3%), along with vein filled and stringers of pyrite to a lesser extent. Trace chalcopyrite was logged sporadically within holes, often associated with magnetite. Gold-copper mineralisation was generally limited to narrow zones associated with the margins of the intrusives, with significant results of:

FCRC006	3m grading 0.09g/t Au, 0.10% Cu from 192m
FCRC007	4m grading 0.15g/t Au, 0.09% Cu from 190m

Outcropping diorite intrusions in the Murga area have been affected by deep magmatic-hydrothermal quartz veining suggesting sections of the prospect area is deeply eroded. However, as illustrated by imbricated thrust faulting at Boda, shallower levels to a porphyry system can be preserved structurally.

Airborne Gravity Gradiometer Survey

Airborne Gravity Gradiometer (AGG) survey using the FALCON system was flown over the entire NMPP area in late 2023. The survey was flown using 300m spaced north-south traverses at a flying height of 80m, imaging the greatest average depth of between 500-600m. The survey identified a significant (approximately 5km diameter and 35km^2) gravity low interpreted to be an intrusive complex (Comobella) central to the extensive low-grade Au-Cu porphyry mineralisation in the Project area. This feature has caldera / graben like characteristics, which are common to significant porphyry deposits globally. The gravity data, together with the magnetic data delineate the northwest trending Hunter Transverse Zone (HTZ), which is also host to the 5km wide Comobella Intrusive Complex (CIC) and to the Boda – Kaiser deposits.

Large gravity lows identified as major intrusive complexes occur at all the major Au-Cu porphyry-related deposits in the Macquarie Arc. Examples include Newmont's Cadia Valley (44Moz Au, 8.5Mt Cu[7]), Evolution's Northparkes (5.2Moz Au, 4.4Mt Cu[8]) and Cowal epithermal Au (9.6Moz Au[9]) deposits. These examples highlight the importance of a large intrusive centre to provide a significant metal and heat source to an area, with the resultant Au-Cu hydrothermal fluids further focused by apophysis (small porphyry intrusions) and structure.

Other prospects highlighted by the AGG include:

Windora - Ballimore Prospects

Windora is a discrete magnetic high complex approximately 1.5km in diameter that is coincident with a depressed gravity signature when compared to the surrounding volcanic rocks. A historical IP survey[6] (Newmont, 2010) mapped a resistivity high coincident with the magnetic complex rimmed by a chargeability high to the east and north. Interpretation of this geophysical response is a magnetic centre of a porphyry system with a peripheral pyrite halo. Drilling by Alkane[4] in 2017 (FCRC002-4) tested the pyrite halo to the Windora complex intersecting Au-Cu porphyry mineralisation associated with phyllic alteration with intercepts of 3m grading 0.05g/t Au, 0.12% Cu from 12m, 3m grading 0.17g/t Au, 0.06% Cu from 30m and 9m grading 0.07g/t Au, 0.05% Cu from 89m (FCRC004).

Newmont[10] (2011) completed six drill holes in the Windora Complex (WIC) and the surrounding areas, recording anomalous values of Au and Cu central to the system and pathfinder metals characteristic to shallow levels of a porphyry system. The highest values of Au and Cu occurred within the wall rock rather than in the propylitic altered monzonite porphyry, suggesting these porphyry dykes are late-mineral in timing and that possibly a higher grade, causative porphyry can be discovered at depth.

Ballimore is a weaker, NNW striking linear magnetic high approximately 1.3km in length. The Ballimore prospect hasn't been drill tested yet.

Glen Hollow Prospect

The Glen Hollow prospect area coincides with the southeast margin of the gravity low mapped as the Comobella Intrusive Complex (CIC). The geology comprises of a package andesites and latites, intruded by significant monzonite with shoshonitic magmatic affinities. Hydrothermal breccia/skarn with anomalous gold and copper mineralisation has been identified as associated with the later monzonites. Previous drill testing by Alkane has returned the significant result[11] (2011) of 45m grading 0.87g/t Au, 0.24% Cu from 60m including 21m grading 1.51g/t Au, 0.41% Cu from 84m.

Exploration to date has tested a small portion of the prospective CIC covering 35km^2.

Haddington Prospect

North of the Glen Hollow prospect and within the core of the Comobella Intrusive Complex (CIC) is the Haddington prospect that is characterised by rocks of slightly higher gravity response. The prospect area has several targets that include skarn mineralisation and extensive zones porphyry related hydrothermal

alteration. The core of elevated gravity within the CIC is interpreted to be a raft or island of preserved volcanics intruded and encompassed by monzonitic intrusions that makeup the CIC.

Previous drilling has indicated broad intercepts of gold-copper, with narrower high-grade values. Including historical drilling[11] (Newcrest, 2003) intervals of 18 metres grading 0.95g/t Au, 0.15% Cu from 64 metres in NKRC003, including 2 metres grading 5.7g/t Au, 0.44% Cu.

Further air-core drilling including bottom of hole litho-geochemistry to map alteration and extend the existing IP survey area over the northern section of the Haddington prospect is planned.

Comobella North Prospect

Comobella North prospect area coincides with the northern margin of the gravity low mapped as the Comobella Intrusive Complex (CIC). The geology comprises a package of andesites and latites, intruded by quartz-monzonite to monzodiorites on the margin of the CIC. Historical work[12] over this prospect included a 3.4 line-km MIMDAS survey by Mount Isa Mines Ltd (2000) that generated two significant chargeability high anomalies. The weaker anomaly was tested by one diamond core drill hole[12] intersecting 1m grading 0.33g/t Au, 0.01% Cu from 280m. The stronger chargeability high anomaly with a coincident multipoint geochemical anomaly from RAB drilling remains untested.

Exploration to date has tested a small portion of what is seen as a very prospective CIC covering 35km^2.

Tompkins Prospect

The recent airborne gravity survey has defined the Tompkins prospect as a magnetic complex positioned along the margin of a linear gravity low, similar to the Kaiser Deposit geophysical response. The 2.2km x 0.6km high magnetic and coincident subdued gravity complex is a blind target covered by Triassic sedimentary rocks and alluvium approximately 40m deep. The prospect has only been tested by historical drilling[12] of seven shallow (<160m) RC drill holes. This broad spaced drilling intersected significant Au-Cu mineralisation, including HTRC037 with 12m grading 0.19g/t Au, 0.08% Cu from 34m and HTRC041 intercepting 8m grading 0.23g/t Au, 0.06% Cu from 130m.

Gollan Prospects

Gollan, Gollan South and Gollan North prospects are all associated magnetic complexes of medium to high strength. The AGG survey has identified a subdued gravity response associated with the 2km x 1km ellipsoid shaped magnetic complex at the Gollan Prospect and the similar sized magnetic complex at Gollan South. Historical drilling[12] at Gollan and Gollan South comprises only 10 RC drill holes, which did not intersect any intrusives, but andesites and volcaniclastics with anomalous Au-Cu mineralisation (including two individual 2m composite assays grading 3.95g/t Au at Gollan and 0.91g/t Au at Gollan South), suggesting the mineralisation and subdued gravity response is associated with deeply emplaced intrusives or is associated with intrusive breccias similar to the Boda District. No drilling has been previously conducted at Gollan North prospect however Newcrest Mining Ltd[12] (1997) sampled andesite outcrop that assayed 4.01% Cu.

Boda 4 Prospect

Approximately 1km south and along strike of the Boda Intrusive Complex (BIC) is the Boda South Intrusive Complex (BSIC). The BSIC comprises of two linear magnetic highs approximately 800m in length and up to 200m wide separated by a north-south trending magnetic low interpreted to be the southern extension of the Solar Fault.

Drilling in the previous year[13] intersected elevated levels of arsenic and zinc, metals which are commonly detected in distal and shallow margins of a porphyry system. In addition, deeper drilling intersected low-grade Cu-Au mineralisation associated with distal propylitic alteration with fine disseminated chalcopyrite.

Recent assay results were received for one rock chip taken from an outcropping hydrothermal epidote-calcite breccia with chalcocite and secondary copper (malachite) mineralisation showing propylitic alteration assemblages. The sample returned elevated and anomalous grades of:

RK0000093 grading 1.20% Cu, 12.2g/t Ag and 0.07g/t Au

Further surface and near surface exploration is planned, including detailed soil sampling and air-core drilling with bottom of hole litho-geochemistry. High-definition ground gravity is planned over Boda 4, extending to over Boda 2-3 and Boda deposits.

Planned Exploration Programs

Baseline environmental studies are underway for the Boda-Kaiser deposits in parallel with scoping studies to progress development of the Boda-Kaiser deposits. Planned exploration over the next 12 months comprises regional work to discover additional porphyry cluster mineralisation surrounding the major Comobella Intrusive Complex (CIC).

Scheduled exploration will comprise mapping, Induced Polarisation (IP) surveying, detailed ground gravity, ANT (Ambient Noise Tomography) passive seismic and air-core drilling utilising bottom of hole litho-geochemistry over the large area surrounding the CIC. Generated high priority targets will be tested by deep RC and diamond core drilling including following up the significant Au-Cu porphyry mineralisation intersected at Driell Creek, as well as the Boda 4 prospect. This exploration forms part of the approximately $6m Alkane exploration budget in FY25.

References

[1] Alkane Resources 2023., Boda Resource Update Increases Gold and Copper Grades Resource Base Now 10.9 Moz AuEq (6.4 Moz Au & 1Mt Cu). ASX Announcement 14 December 2023.

[2] Alkane Resources 2024., Revised Kaiser Resource Estimate Improves Confidence and Grade of Resource Base at Boda District., ASX Announcement 29 April 2024.

[3] Alkane Resources 2023., Further High Grade Gold and Copper Identified at Boda., ASX Announcement 25 August 2023.

[4] Alkane Resources 2017., Further Extensive Gold Copper Mineralisation Identified Within Northern Molong Porphyry Project., ASX Announcement 3 April 2017.

[5] Alkane Resources 2022., Extensive Au-Cu Mineralisation Continues at Korridor and New Drilling Results at Kaiser., ASX Announcement 25 October 2022.

[6] Newmont Exploration 2010., Group Annual Report for ELs 7060, 7061, 7063, 7064, 7284, 7359 and 7392 Wellington for the period 4th February 2009 to 3rd February 2010., NSW DiGS website, R00036318 (GS2010/0406).

[7] Harris, Cooke, Cuison, Groome, Wilson, Fox, Holliday, Tosdal., 2020. Geologic Evolution of Late Ordovician to Early Silurian Alkalic Porphyry Au-Cu Deposits at Cadia, New South Wales, Australia, SEG Special Publication 23.

[8] CMOC 2023., China Molybdenum Company Limited, 2022 Annual Report, http://www.cmocinternational.com/

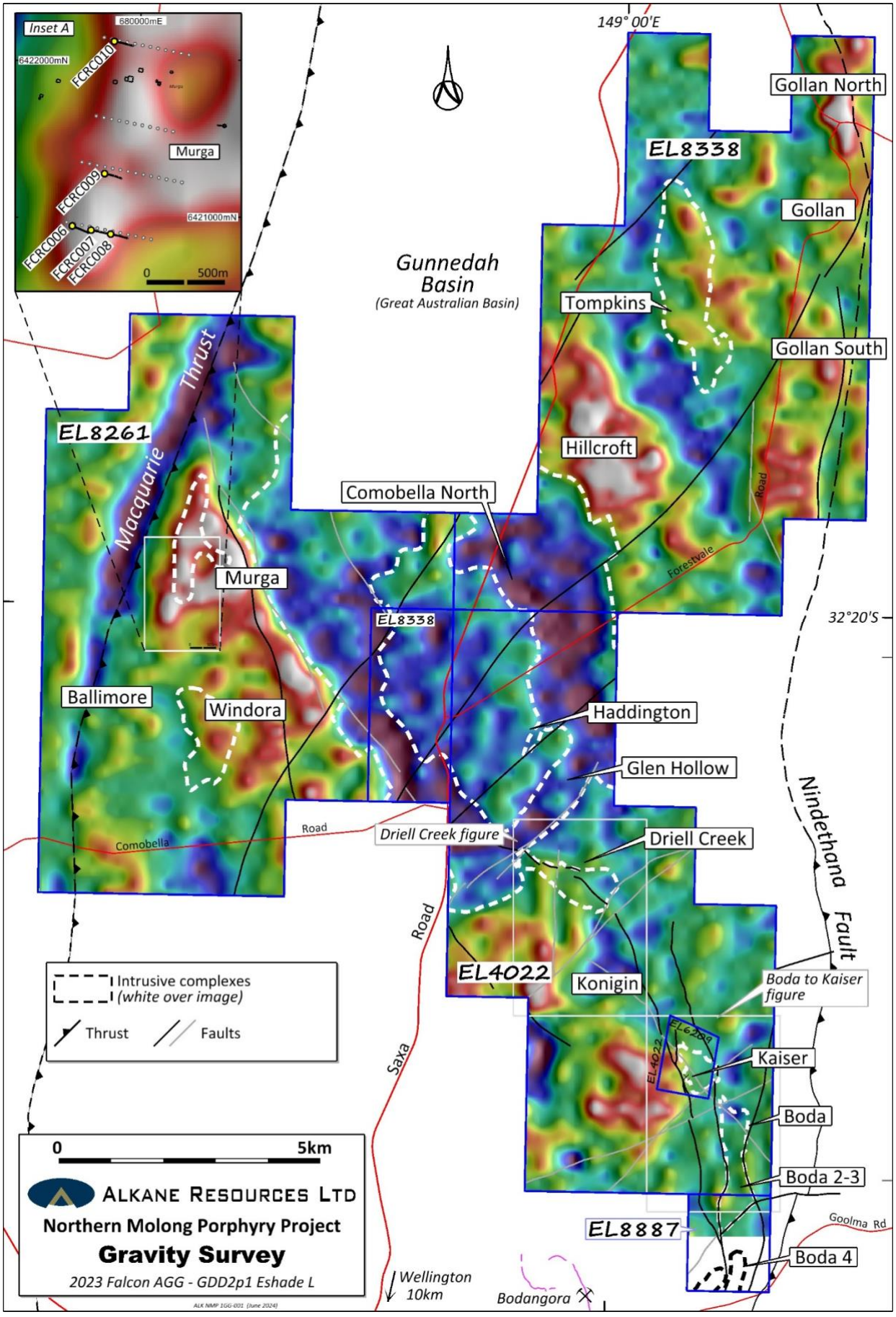
[9] Evolution 2023., Mining Annual Mineral Resources and Ore Reserves Statement.

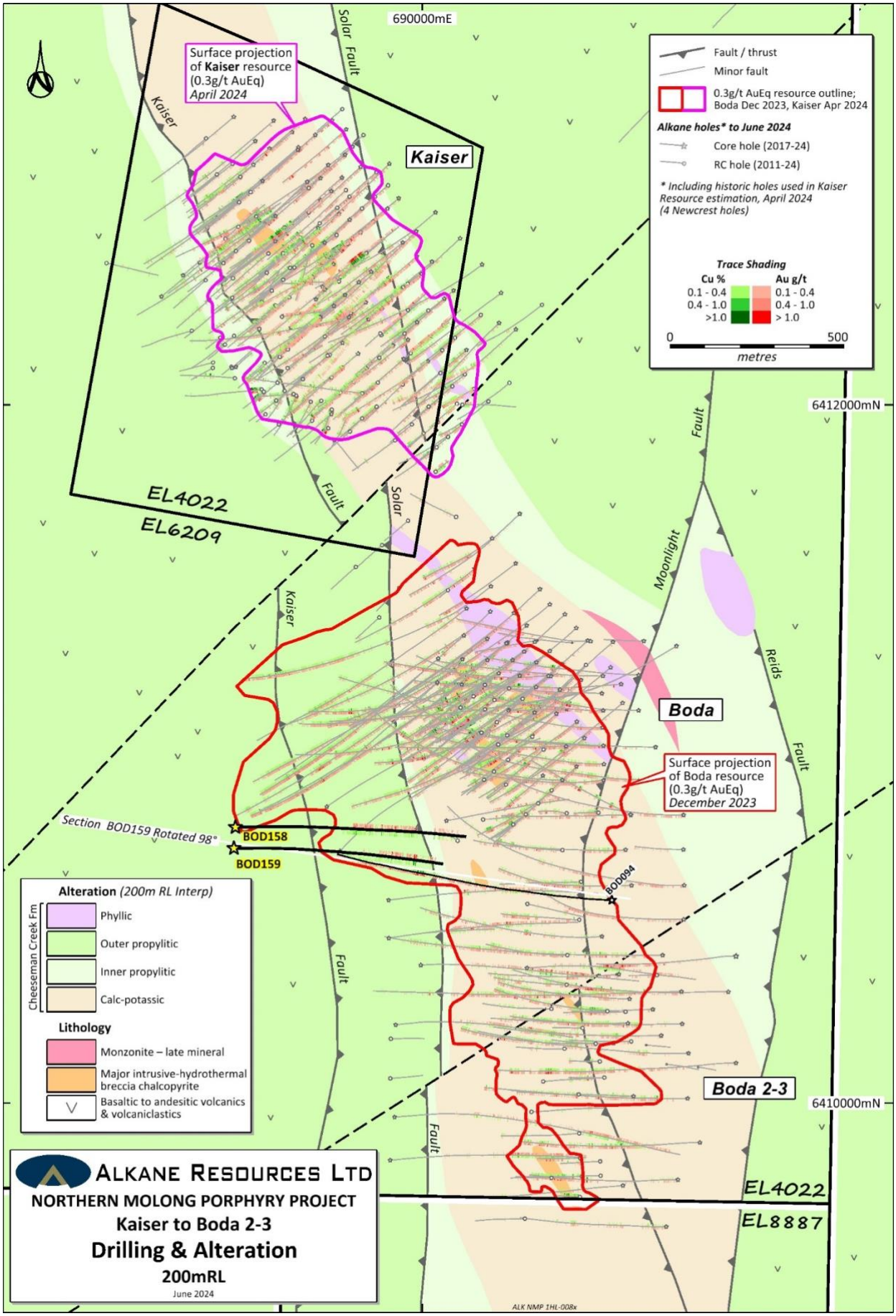
[10] Newmont Exploration 2011., Annual Report for EL 7064 Finns Crossing for the period 4th February 2010 to 3rd February 2011., NSW DiGS website, R0001578 (GS2011/1325).

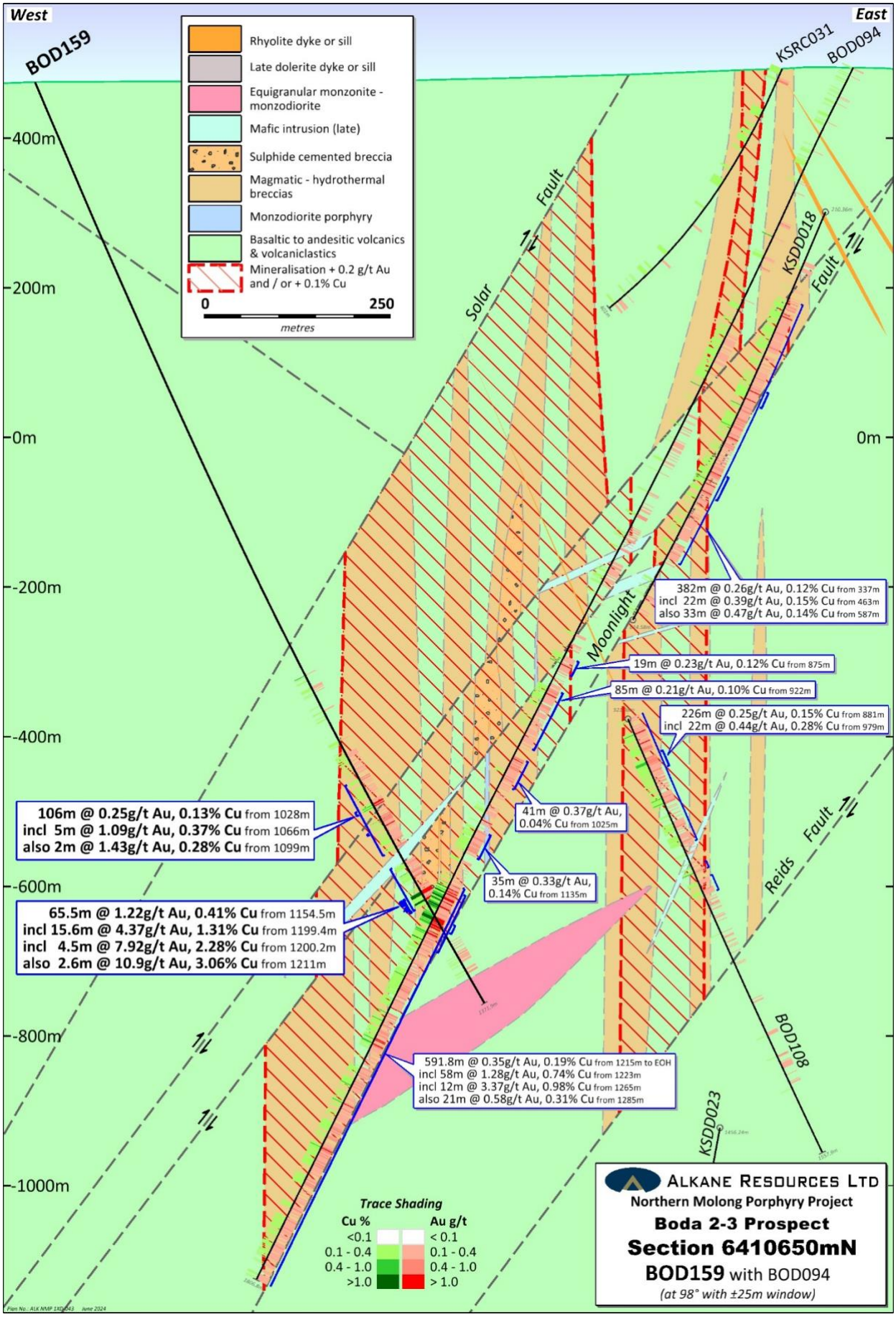
[11] Alkane Resources 2011., Discovery of Porphyry Style Gold-Copper Mineralisation at Bodangora., ASX Announcement 19 April 2011.

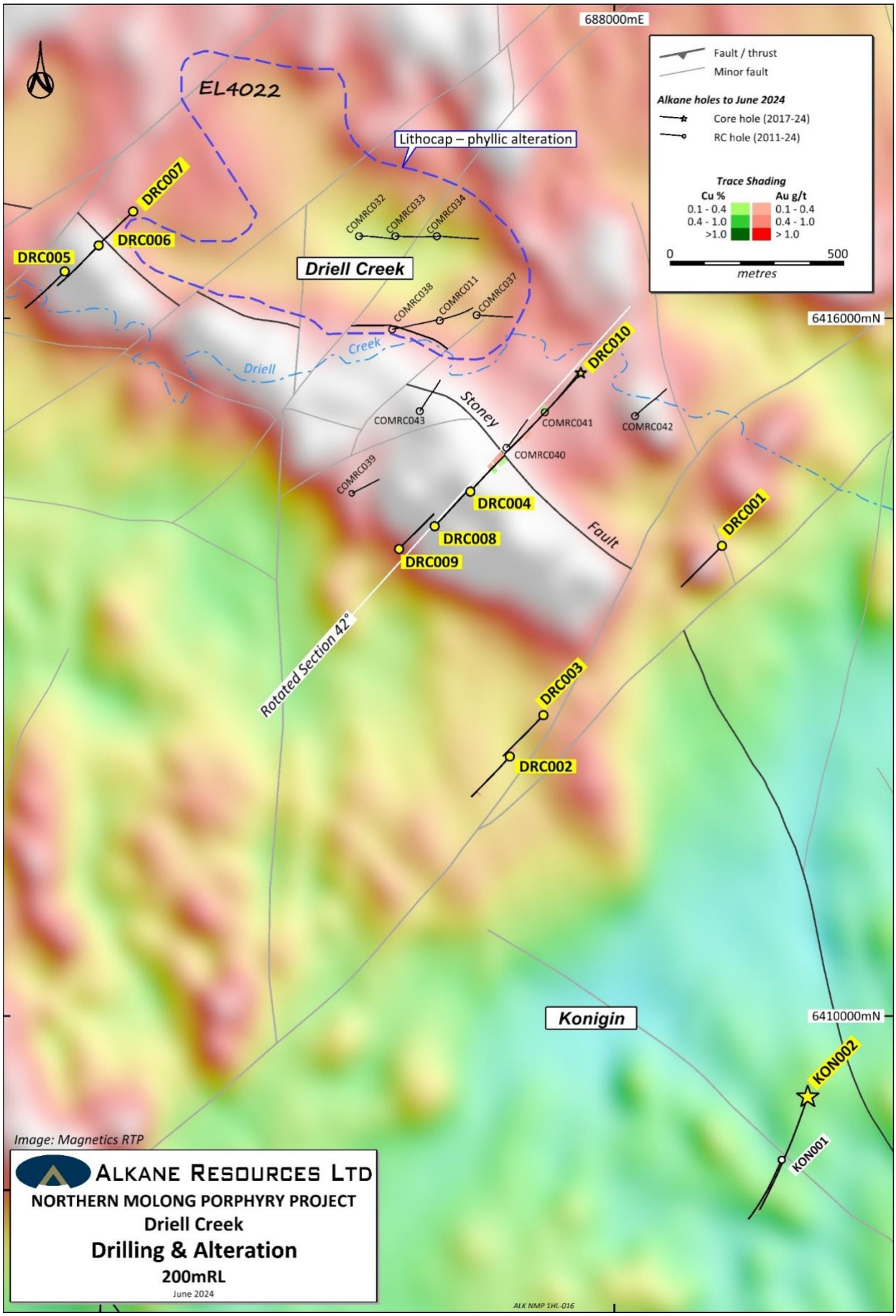
[12] Alkane Resources 2023., Acquisition of Exploration Tenements in NSW Completed with Initial Tenement Review., ASX Announcement 30 May 2023.

[13] Alkane Resources 2023., Boda Drilling Further Extends Mineralisation., ASX Announcement 4 August 2023.


Inset A
680000mE
6422000mN
FCRC010
Murga
FCRC009
6421000mN
FCRC006
FCRC007
FCRC008
0
500m
149° 00'E
Gollan North
EL8338
Gollan
Gunnedah
Basin
(Great Australian Basin)
Tompkins
Gollan South
Thrust
EL8261
Macquarie
Hillcroft
Comobella North
Road
Forestvale
Murga
EL8338
32°20'S
Ballimore
Windora
Haddington
Glen Hollow
Nindethana
Fault
Comobella
Road
Driell Creek figure
Driell Creek
Road
EL4022
Konigin
Boda to Kaiser
figure
EL6259
EL4022
Kaiser
Saxa
Boda
Boda 2-3
EL8887
Goolma Rd
Boda 4
Intrusive complexes
(white over image)
Thrust
Faults
0
5km
ALKANE RESOURCES LTD
Northern Molong Porphyry Project
Gravity Survey
2023 Falcon AGG - GDD2p1 Eshade L
Wellington
10km
Bodangora
ALK NMP 1GG-001 (June 2024)


690000mE
6412000mN
6410000mN
Surface projection of Kaiser resource (0.3g/t AuEq) April 2024
Kaiser
Solar Fault
Fault / thrust
Minor fault
0.3g/t AuEq resource outline; Boda Dec 2023, Kaiser Apr 2024
Alkane holes* to June 2024
Core hole (2017-24)
RC hole (2011-24)
* Including historic holes used in Kaiser Resource estimation, April 2024 (4 Newcrest holes)
Trace Shading
Cu %
0.1 - 0.4
0.4 - 1.0
>1.0
Au g/t
0.1 - 0.4
0.4 - 1.0
> 1.0
0
500
metres
EL4022
EL6209
Fault
Solar
Moonlight
Reids
Boda
Surface projection of Boda resource (0.3g/t AuEq) December 2023
Section BOD159 Rotated 98°
BOD158
BOD159
BOD094
Alteration (200m RL Interp)
Cheeseman Creek Fm
Phyllic
Outer propylitic
Inner propylitic
Calc-potassic
Lithology
Monzonite – late mineral
Major intrusive-hydrothermal breccia chalcopyrite
Basaltic to andesitic volcanics & volcaniclastics
Boda 2-3
EL4022
EL8887
ALKANE RESOURCES LTD
NORTHERN MOLONG PORPHYRY PROJECT
Kaiser to Boda 2-3
Drilling & Alteration
200mRL
June 2024
ALK NMP 1HL-008x


West
East
BOD159
KSRC031
BOD094
KSDD018
Rhyolite dyke or sill
Late dolerite dyke or sill
Equigranular monzonite - monzodiorite
Mafic intrusion (late)
Sulphide cemented breccia
Magmatic - hydrothermal breccias
Monzodiorite porphyry
Basaltic to andesitic volcanics & volcaniclastics
Mineralisation + 0.2 g/t Au and / or + 0.1% Cu
0
250
metres
Solar Fault
Moonlight
Reids Fault
400m
200m
0m
-200m
-400m
-600m
-800m
-1000m
382m @ 0.26g/t Au, 0.12% Cu from 337m
incl 22m @ 0.39g/t Au, 0.15% Cu from 463m
also 33m @ 0.47g/t Au, 0.14% Cu from 587m
19m @ 0.23g/t Au, 0.12% Cu from 875m
85m @ 0.21g/t Au, 0.10% Cu from 922m
226m @ 0.25g/t Au, 0.15% Cu from 881m
incl 22m @ 0.44g/t Au, 0.28% Cu from 979m
106m @ 0.25g/t Au, 0.13% Cu from 1028m
incl 5m @ 1.09g/t Au, 0.37% Cu from 1066m
also 2m @ 1.43g/t Au, 0.28% Cu from 1099m
41m @ 0.37g/t Au, 0.04% Cu from 1025m
35m @ 0.33g/t Au, 0.14% Cu from 1135m
65.5m @ 1.22g/t Au, 0.41% Cu from 1154.5m
incl 15.6m @ 4.37g/t Au, 1.31% Cu from 1199.4m
incl 4.5m @ 7.92g/t Au, 2.28% Cu from 1200.2m
also 2.6m @ 10.9g/t Au, 3.06% Cu from 1211m
591.8m @ 0.35g/t Au, 0.19% Cu from 1215m to EOH
incl 58m @ 1.28g/t Au, 0.74% Cu from 1223m
incl 12m @ 3.37g/t Au, 0.98% Cu from 1265m
also 21m @ 0.58g/t Au, 0.31% Cu from 1285m
BOD108
KSDD023
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
ALKANE RESOURCES LTD
Northern Molong Porphyry Project
Boda 2-3 Prospect
Section 6410650mN
BOD159 with BOD094
(at 98° with ±25m window)


688000mE
6416000mN
6410000mN
EL4022
Lithocap – phyllic alteration
Driell Creek
Konigin
Fault / thrust
Minor fault
Alkane holes to June 2024
Core hole (2017-24)
RC hole (2011-24)
Trace Shading
Cu %
Au g/t
0.1 - 0.4
0.4 - 1.0
>1.0
0.1 - 0.4
0.4 - 1.0
> 1.0
0
500
metres
DRC007
DRC006
DRC005
DRC010
DRC004
DRC008
DRC009
DRC001
DRC003
DRC002
KON002
KON001
COMRC032
COMRC033
COMRC034
COMRC038
COMRC011
COMRC037
COMRC043
COMRC041
COMRC042
COMRC040
COMRC039
Driell
Creek
Stoney
Fault
Rotated Section 42°
Image: Magnetics RTP
ALKANE RESOURCES LTD
NORTHERN MOLONG PORPHYRY PROJECT
Driell Creek
Drilling & Alteration
200mRL
June 2024
ALK NMP 1HL-016

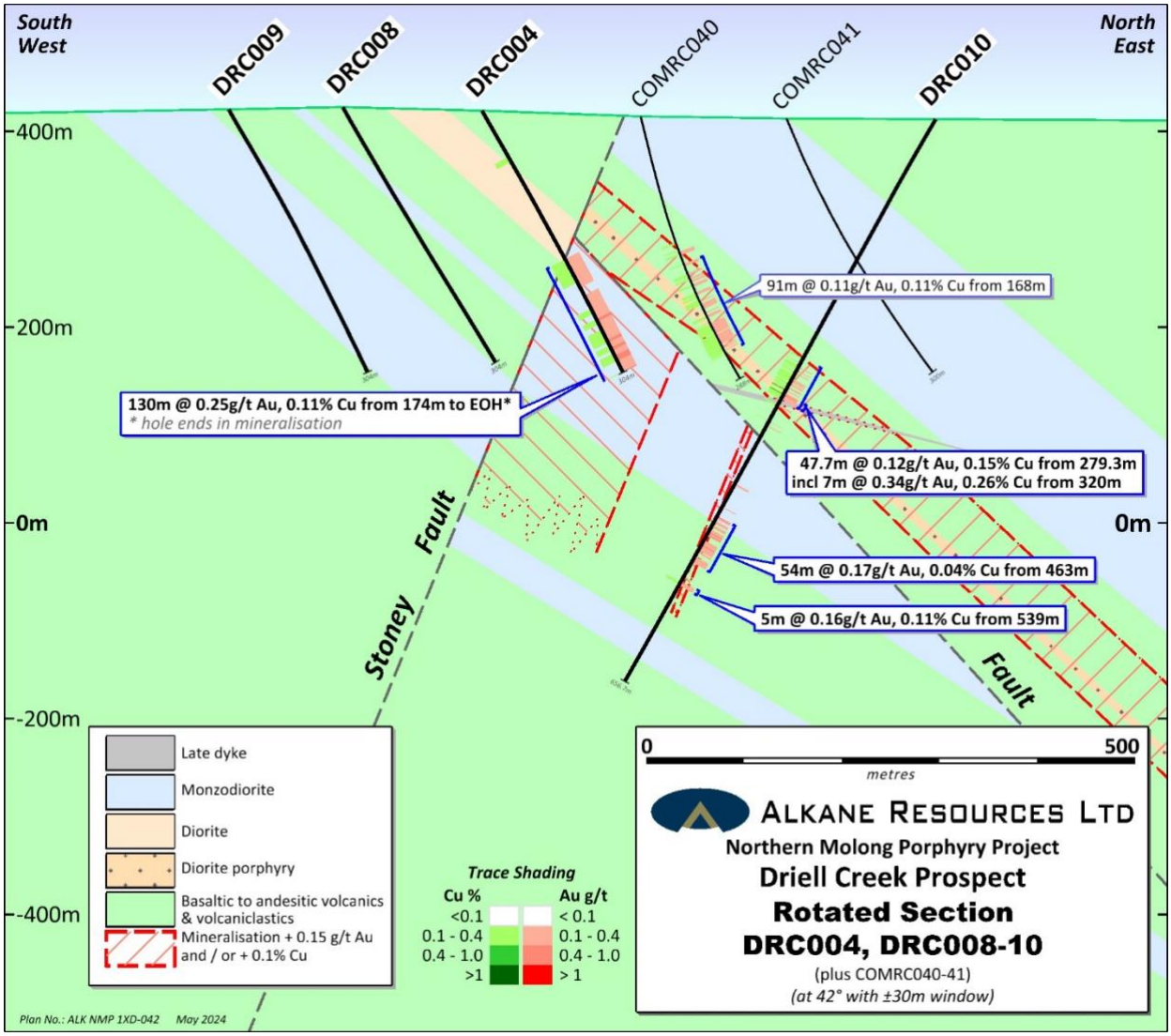

South West
North East
DRC009
DRC008
DRC004
COMRC040
COMRC041
DRC010
400m
200m
0m
-200m
-400m
91m @ 0.11g/t Au, 0.11% Cu from 168m
130m @ 0.25g/t Au, 0.11% Cu from 174m to EOH*
* hole ends in mineralisation
47.7m @ 0.12g/t Au, 0.15% Cu from 279.3m
incl 7m @ 0.34g/t Au, 0.26% Cu from 320m
54m @ 0.17g/t Au, 0.04% Cu from 463m
5m @ 0.16g/t Au, 0.11% Cu from 539m
Stoney Fault
Fault
Late dyke
Monzodiorite
Diorite
Diorite porphyry
Basaltic to andesitic volcanics & volcaniclastics
Mineralisation + 0.15 g/t Au and / or + 0.1% Cu
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
> 1
0
500
metres
ALKANE RESOURCES LTD
Northern Molong Porphyry Project
Driell Creek Prospect
Rotated Section
DRC004, DRC008-10
(plus COMRC040-41)
(at 42° with ±30m window)
Plan No.: ALK NMP 1XD-042 May 2024

Table 1 – Boda 2-3 Drilling Significant Results – June 2024 (>0.3g/t AuEq*)												
Hole ID	**Easting (MGA)**	**Northing (MGA)**	**RL**	**Dip**	**Azi (Grid)**	**Total Depth**	**Interval From (m)**	**Interval To (m)**	**Intercept (m)**	**AuEq* (g/t)**	**Au (g/t)**	**Cu (%)**
BOD158	689465	6410790	472	-67	88	1620.9	796.7	800.8	4.1	0.30	0.05	0.18
and							852	1304.6	452.6	0.40	0.21	0.14
incl							865	895	30	0.89	0.41	0.35
also							1153	1165	12	0.88	0.51	0.27
also							1244	1249	5	0.96	0.60	0.26
also							1264	1268	4	1.00	0.56	0.32
and							1413.6	1421.9	8.3	0.81	0.43	0.28
and							1444.2	1456	11.8	0.55	0.25	0.22
and							1475	1480	5	0.52	0.22	0.22
and							1526	1534	8	0.39	0.18	0.15
BOD159	689460	6410730	475	-67	89	1371.9	872	873	1	0.77	0.12	0.47
and							990	1004	14	0.40	0.17	0.17
and							1028	1134	106	0.43	0.25	0.13
incl							1066	1071	5	1.59	1.09	0.37
also							1099	1101	2	1.81	1.43	0.28
and							1154.5	1220	65.5	1.78	1.22	0.41
incl							1199.4	1215	15.6	6.16	4.37	1.31
incl							1200.2	1204.7	4.5	11.0	7.92	2.28
also							1211	1213.6	2.6	15.1	10.9	3.06
and							1297	1310	13	0.34	0.20	0.10

Gold and copper intercepts are calculated using a lower cut of 0.2g/t AuEq. Internal dilution (< cut off) is less than 27% of reported intercepts. Only significant intercepts of >0.3g/t AuEq are reported. True widths are estimated to be approximately 50% of intersected width.

* The prices used to calculate AuEq are based on 12-month averages of US$2,000/oz gold and US$8,800/t copper, and A$:US$0.66. Metal recoveries at Boda 2-3 are estimated at 87% for Cu and 81% for Au from metallurgical studies.

Table 2 – Driell Creek Drilling Significant Results – June 2024 (>0.15g/t Au and/or >0.1% Cu)											
Hole ID	**Easting (MGA)**	**Northing (MGA)**	**RL**	**Dip**	**Azimuth (Grid)**	**Total Depth**	**Interval From (m)**	**Interval To (m)**	**Intercept (m)**	**Au (g/t)**	**Cu (%)**
DRC001	688309	6415347	426	-61	223	304	103	105	2	0.15	0.06
DRC002	687701	6414744	435	-61	223	304	255	264	9	0.61	0.02
DRC003	687797	6414862	438	-61	223	304	231	245	14	0.25	0.02
and							249	255	6	0.17	0.01
DRC004	687588	6415503	421	-61	41	304*	54	66	12	0.03	0.10
and							174	304	130*	0.25	0.11
DRC005	686426	6416134	398	-60	222	304	210	213	3	0.39	0.01
DRC006	686523	6416209	404	-61	224	304	*No significant results*				
DRC007	686622	6416306	409	-60	225	304	54	57	3	0.04	0.10
and							78	108	30	0.13	0.10
incl							96	102	6	0.26	0.15
DRC008	687486	6415404	425	-61	43	304	*No significant results*				
DRC009	687384	6415338	423	-61	42	304	*No significant results*				
DRC010	687905	6415843	413	-60	222	656.7	279.3	327	47.7	0.12	0.15
incl							320	327	7	0.34	0.26
and							333	335	2	0.12	0.19
and							463	517	54	0.17	0.04
and							539	544	5	0.16	0.11

* RC hole ended in mineralisation.

Gold and copper intercepts are calculated using a lower cut of 0.1g/t Au and 0.05% Cu respectively. Internal dilution (< cut off) is less than 15% of reported intercepts. True widths are unknown at this early exploration stage.

Table 3 – Konigin Drilling Significant Results – June 2024 (>0.15g/t Au and/or >0.1% Cu)											
Hole ID	**Easting (MGA)**	**Northing (MGA)**	**RL**	**Dip**	**Azimuth (Grid)**	**Total Depth**	**Interval From (m)**	**Interval To (m)**	**Intercept (m)**	**Au (g/t)**	**Cu (%)**
KON002	688555	6413768	447	-58	203	834.7	268	269	1	0.01	0.12
and							281	282	1	0.16	-
and							368	374.3	6.3	0.17	0.01
and							507	508.4	1.4	0.02	0.11
and							515	516	1	0.05	0.29
and							640.9	642	1.1	0.04	0.14
and							651	652	1	0.08	0.14

Gold and copper intercepts are calculated using a lower cut of 0.1g/t Au and 0.05% Cu respectively. Internal dilution (< cut off) is less than 20% of reported intercepts. True widths are unknown at this early exploration stage.

Table 4 – Murga Drilling Significant Results – June 2024 (>0.15g/t Au and/or >0.1% Cu)											
Hole ID	**Easting (MGA)**	**Northing (MGA)**	**RL**	**Dip**	**Azimuth (Grid)**	**Total Depth**	**Interval From (m)**	**Interval To (m)**	**Intercept (m)**	**Au (g/t)**	**Cu (%)**
FCRC006	679563	6420944	377	-60	112	250	192	195	3	0.09	0.10
FCRC007	679683	6420918	372	-61	100	250	190	194	4	0.15	0.09
FCRC008	679808	6420892	366	-60	101	250	*No significant results*				
FCRC009	679769	6421277	370	-60	100	250	129	132	3	0.16	0.01
FCRC010	679832	6422121	362	-61	102	250	*No significant results*				

* pre-collar RC hole ended in mineralisation.

Gold and copper intercepts are calculated using a lower cut of 0.1g/t Au and 0.05% Cu respectively. Internal dilution (< cut off) is less than 5% of reported intercepts. True widths are unknown at this early exploration stage.

Table 5 – Boda 4 Rock Chip Assay Results – June 2024					
Sample ID	**Easting (MGA)**	**Northing (MGA)**	**Au (g/t)**	**Ag (g/t)**	**Cu (%)**
RK000093	689880	6408130	0.07	11.7	1.195

Competent Person

Unless otherwise advised above or in the Announcements referenced, the information in this report that relates to exploration results, mineral resources and ore reserves is based on information compiled by Mr David Meates, MAIG, (Exploration Manager NSW) who has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Meates consents 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 Nic Earner, Managing Director.

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

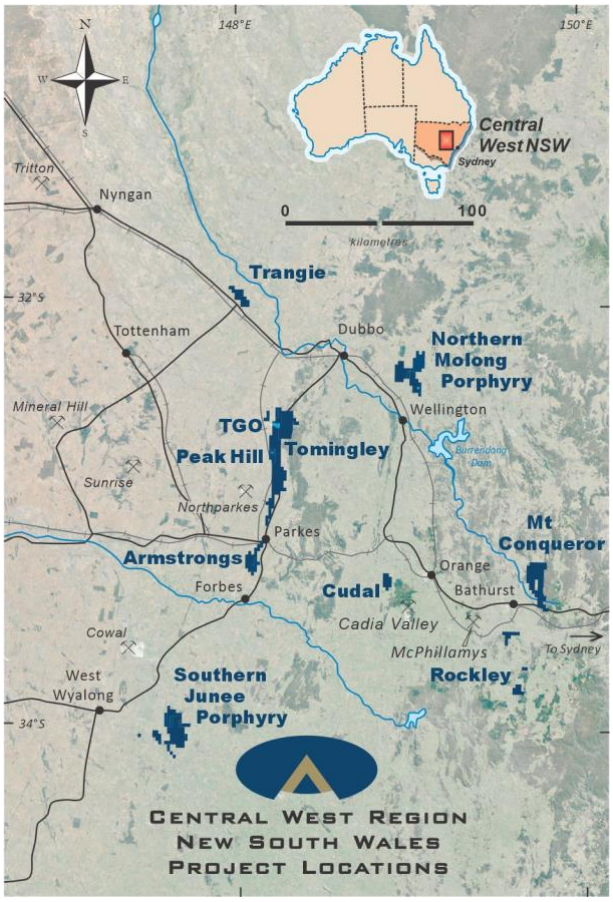
Alkane Resources intends to grow to become one of Australia's multi-mine gold and copper producers.

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

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

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

Alkane's gold interests extend throughout Australia, with strategic investments in other gold exploration and aspiring mining companies, including ~6.7% of Calidus Resources (ASX: CAI).



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

JORC Code, 2012 Edition – Table 1 NORTHERN MOLONG PORPHYRY PROJECT – June 2024

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	• *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* • *RC drilling was undertaken by Strike Drilling Pty Ltd* • *RC samples are collected at one metre intervals via a cyclone on the rig. The cyclone is cleaned regularly to minimise any contamination* • *Rock chip sample was taken from an outcrop at Boda 4 prospect*
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• *Sampling and QAQC procedures for drilling are carried out using Alkane protocols as per industry best practice.* • *The rock chip sample was biased towards mineralisation to establish its tenure and prospectivity for future drill testing.*
	• *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 is sampled with a Corewise automatic core saw.* • *RC Drilling – the total sample (~20-30kg) is delivered via cyclone into a large plastic bag which is retained for future use if required. A sub-sample of approximately 1kg is spear sampled from each plastic bag and composited to make a 3 metres sample interval. If strong mineralisation is observed by the site geologist this is sampled as a final 1m interval instead. The 1m intervals forming composite samples assaying ≥0.10 g/t Au or ≥0.10 % Cu are re-split using a cone splitter on the rig into a separate calico at the time of drilling and re-submitted to the laboratory for re-assay.* • *Rock chip sampling – a sample of several kgs was taken.* • *Gold was determined by fire assay fusion of a 50g charge with an AAS analytical finish* • *A multi-element suite was determined using a multi-acid digest with a ICP Atomic Emission Spectrometry or ICP Mass Spectrometry 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*	• *Reverse circulation (RC) drilling using 110mm rods 144mm face sampling hammer* • *Triple tube diamond drilling with PQ3/HQ3 wireline bit producing 83mm diameter (PQ3) and*

Criteria	JORC Code explanation	Commentary
	what method, etc).	*61.1mm diameter (HQ3) sized orientated 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 or RC precollars used in the oxide zones.* • *RC sample quality is assessed by the sampler by visual approximation of sample recovery and if the sample is dry, damp or wet.*
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	• *Sample quality is qualitatively logged* • *Core drilling completed using HQ triple tube where possible to maximise core recovery.* • *A high capacity RC rig was used to enable dry samples collected. Drill cyclone is cleaned between rod changes and after each hole to minimise cross-hole contamination.*
	• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• *There is no known relationship between sample recovery and grade*
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	• *Each one metre interval is 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 drill holes were geologically logged into Geobank Mobile, followed by validation before importing into Alkane's central Geobank database* • *All drill holes were 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 preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	• *Core sawn with half core samples submitted for analysis*
	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*	• *Each one metre interval is spear sampled with 3m composite samples collected in a calico sample bag and forwarded to the laboratory. Where strong mineralisation is observed by the site geologist, instead of compositing, this is individually sampled from the cone splitter on the RC rig as a 1 metre interval into a calico bag and forwarded to the laboratory.* • *The 1m intervals forming composite samples assaying ≥0.10 g/t Au or ≥0.10 % Cu are*

Criteria	JORC Code explanation	Commentary
		resplit using a cone splitter on the rig during the time of drilling and re-submitted to the laboratory for re-assay. • *Laboratory Preparation – the entire sample (~3kg) is dried and pulverised in an LM5 (or equivalent) to ≥85% passing 75µm. Bulk rejects for all samples are discarded. A pulp sample (±100g) is stored for future reference.*
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	• *Samples were delivered by Alkane personnel to ALS Minerals Laboratory, Orange NSW. Crushed with 70% <2mm (ALS code CRU-31), split by riffle splitter (ALS code SPL-21), and pulverised 1000grm to 85% <75um (ALS code PUL-32). Crushers and pulverisers are washed with QAQC tests undertaken (ALS codes CRU-QC, PUL-QC).*
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples*	• *Internal QAQC system in place to determine accuracy and precision of assays*
	• *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling*	• *Non-biased core cutting using an orientation line marked on the core* • *Duplicate RC samples are collected for both composite intervals and re-split intervals.*
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• *Sample are of appropriate size*
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• *All samples were analysed by ALS Minerals* • *Gold is determined using a 50g charge fused at approximately 1100°C with alkaline fluxes, including lead oxide. The resultant prill is dissolved in aqua regia with gold determined by flame AAS.* • *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. RC samples that are re-split are digested by aqua regia with a ICP Atomic Emission Spectrometry for Cu only*
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*	• *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	• *The verification of significant intersections by either independent or alternative company personnel.*	• *Drill data is compiled, collated, and reviewed by senior staff. External consultants do not routinely verify exploration data until resource estimation procedures are deemed necessary*

Criteria	JORC Code explanation	Commentary
and 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 Geobank Mobile in the field for validation, transfer, and storage into Geobank database with verification protocols in place* • *All primary assay data is received from the laboratory as electronic data files which are imported into sampling database with verification procedures in place. QAQC analysis is undertaken for each laboratory report*
	• *Discuss any adjustment to assay data.*	• *No 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.* • *Rock chip sample was located using a handheld Garmin GPS (accuracy ±2m).*
	• *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 and distribution	• *Data spacing for reporting of Exploration Results..*	• *For all prospects are at an early exploration stage, and the data spacing is variable with focus on identifying new zones of mineralisation.*
	• *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*	• *No Mineral Resource estimation procedure and classifications apply to the exploration data being reported.*
	• *Whether sample compositing has been applied*	• *RC – each one metre interval is spear sampled with 3m composite samples collected in a calico sample bag and forwarded to the laboratory. Where strong mineralisation is observed by the site geologist, instead of compositing, this is individually sampled from the cone splitter on the RC rig as a 1 metre interval into a calico bag and forwarded to the laboratory.* *The 1m intervals forming composite samples assaying ≥0.10 g/t Au or ≥0.10 % Cu are re-split using a cone splitter on the rig during the time of drilling and re-submitted to the laboratory for re-assay. Composite samples may be reported if re-split assays were not received in time for announcement.* • *DD – Sample intervals are based on alteration and lithology but in general are 1m. No*

Criteria	JORC Code explanation	Commentary
		interval was less than 0.3m or greater than 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.*	• *Early exploration, so too early to understand. Drilling at Boda 2-3 suggests a broadly sub vertical geometry*
	• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material*	• *Estimated true intervals are ~50% of downhole lengths at Boda 2-3. For other prospects too early to estimate.*
Sample security	• *The measures taken to ensure sample security.*	• *All samples are bagged into tied calico bags, before being grouped into polyweave 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 status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	• *All five licences (EL4022, EL6209, EL8261, EL8338 and EL8887) in the Northern Molong Porphyry Project are owned 100% by Alkane. Ajax Joinery retain a 2% net smelter return on any products produced from within EL6209 (Kaiser).*
	• *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• *All exploration licences are in good standing. EL4022 expires on 13 August 2026. EL6209 expires on 11 March 2029. EL8338 expires on 27 January 2030. EL8887 expires on 6 February 2026. EL8261 expires on 30 April 2029.*
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• *Significant historical drilling activity has been conducted within the bounds of 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 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.* *KAISER PROSPECT: Under-reporting of historical exploration drill results from the Kaiser Prospect is suggested by preliminary metallurgical test work by previous explorers and is supported by a drill hole (KSRC001) completed by Alkane. This can be partly explained by the partial digests and analogue equipment commonly used in the 1970s.* *EL6209 (Kaiser) historical records show 14 AC (170m), 78 RC (7591m) and 45 DD holes (7833m) = 15,594m.* *DRIELL CREEK PROSPECT: Historic exploration in the Driell Creek area has been restricted to the completion of wide spaced (500m x 500m) vertical air core drilling for geochemical and geological mapping by CRA Exploration/Rio Tinto.* *HADDINGTON PROSPECT: Historical exploration in the Haddington area has been restricted to the completion of wide spaced (250m x 250m) vertical air core drilling for geochemical and geological mapping by CRA Exploration/Rio Tinto. Newcrest (2003) followed this up with 3 deep RC drill holes with intervals of 18 metres grading 0.95g/t Au, 0.15% Cu from 64 metres in NKRC003, including 2 metres grading 5.7g/t Au, 0.44% Cu.* *WINDORA PROSPECT (Finns Crossing EL8261): Newmont has completed a small IP survey and six reconnaissance RC holes in the Windora Prospect area in 2011. Previously only wide spaced (500m x 500m) vertical air core drilling for geochemical*

Criteria	JORC Code explanation	Commentary
		and geological mapping was completed by CRA Exploration/Rio Tinto. *COMOBELLA NORTH PROSPECT (EL8338): 3.4 line-km MIMDAS survey by Mount Isa Mines Ltd (2000) that generated two significant chargeability high anomalies. The weaker anomaly was tested by one diamond core drill hole intersecting 1m grading 0.33g/t Au, 0.01% Cu from 280m.* *TOMPKINS PROSPECT (EL8338): The prospect has been tested by historical drilling comprising of 7 shallow (<160m) RC drill holes by Clancy/Gold Fields. This broad spaced drilling has intersected significant Au-Cu mineralisation, including HTRC037 intercepting 12m grading 0.19g/t Au, 0.08% Cu from 34m and HTRC041 intercepting 8m grading 0.23g/t Au, 0.06% Cu from 130m.* *GOLLAN PROSPECTS (EL8338): Historical drilling at Gollan and Gollan South comprises of 10 RC drill holes, with anomalous Au-Cu mineralisation (including two individual 2m composite assays grading 3.95g/t Au at Gollan and 0.91g/t Au at Gollan South) by Clancy/Gold Fields. No drilling has been previously conducted at Gollan North prospect however Newcrest Mining Ltd12 (1997) sampled andesite outcrop that assayed 4.01% copper.*
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:* 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.*	• *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). Internal dilution can be significant because of the type of bulk mining techniques used to extract this style of mineralisation but are limited to <20% 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*

Criteria	JORC Code explanation	Commentary
		reported as separate (included) intervals.
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 2-3 is subvertical. True intervals are likely to be ~50% of downhole lengths.* *The geometry is not known at the other reported prospects, exploration stage is too early with only limited drilling conducted.*
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.*	• *Airborne Gravity Gradiometer (AGG) survey was flown over entire NMPP. The AGG data was acquired using the FALCON Airborne Gravity Gradiometer System. The survey was flown using 300m spaced north-south traverses at a flying height of 80m. Analysis showed that the greatest average depth imaged by the survey is between 500-600m. See body of text for survey results and interpretation.*
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 is undertaken at Boda 2-3 to improve the confidence of the Inferred resources to Indicated. Exploration drilling is planned to continue to test the significant Au-Cu porphyry mineralisation intersected at Driell Creek to test its strike and depth potential. Regional exploration comprising of IP, air-core drilling with bottom of hole litho-geochemistry and soil geochemistry surveys are also planned. Planned further work is detailed in the body of text in the announcement.*
	• *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.*