

ASX and MEDIA RELEASE

20 June 2023



Update – Extensive Mineralisation Outside Boda Mineral Resource

This announcement is an update of the announcement made on 13 June 2023 titled “Extensive Mineralisation Outside Boda Mineral Resource”. The update has been made at the request of the ASX to provide further detail on the observations by Alkane geologists of the mineralisation seen in drill hole BOD094, which is yet to be assayed.

Please refer to the attached announcement which includes additional information to comply with the various regulations governing the content of such announcements.

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

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

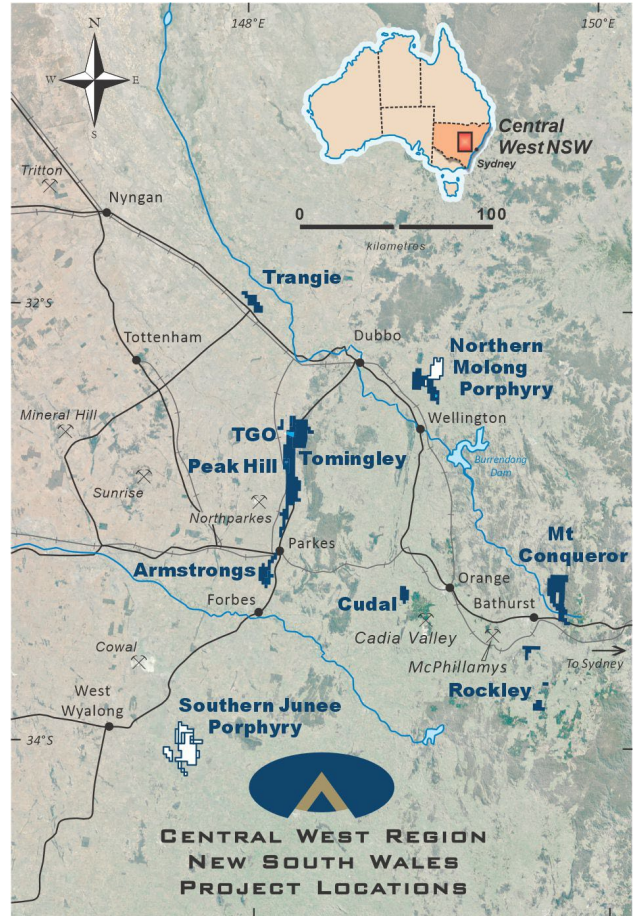
Alkane Resources intends to grow to become one of Australia’s multi-mine gold and copper producers.

The Company’s current gold production is from the Tomingley Gold Operations in Central West New South Wales, where it has been operating since 2014 and is currently expediting a development pathway to extend the mine’s life beyond 2030.

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

Alkane’s exploration success includes the landmark porphyry gold-copper mineralisation discovery at Boda in 2019. With 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 ~9.8% of Calidus Resources (ASX: CAI).



20 June 2023



Extensive Mineralisation Outside Boda Mineral Resource

- Assay results were received from diamond core and RC drilling at Boda Two intersecting zones of extensive gold-copper porphyry mineralisation. Higher grades are associated with intrusive breccias and skarn mineralisation. Significant shallow RC intercepts include:

BOD099 82m grading 0.63g/t AuEq (0.36g/t Au, 0.19% Cu) from 57m
incl 18m grading 1.04g/t AuEq (0.54g/t Au, 0.35% Cu) from 74m
also 10m grading 1.13g/t AuEq (0.88g/t Au, 0.22% Cu) from 106m

- Significant diamond core intercepts include:

BOD112 194m grading 0.41g/t AuEq (0.21g/t Au, 0.14% Cu) from 852m
incl 2.4m grading 2.04g/t AuEq (0.83g/t Au, 0.86% Cu) from 1008.6m
and 315.7m grading 0.60g/t AuEq (0.32g/t Au, 0.20% Cu) from 1139m
incl 28m grading 1.45g/t AuEq (0.95g/t Au, 0.35% Cu) from 1192m
also 28m grading 1.51g/t AuEq (0.65g/t Au, 0.60% Cu) from 1368m

BOD113 145.8m grading 0.58g/t AuEq (0.34g/t Au, 0.17% Cu) from 1204.2m
incl 25m grading 1.02g/t AuEq (0.66g/t Au, 0.25% Cu) from 1233m
and 156.2m grading 0.41g/t AuEq (0.22g/t Au, 0.14% Cu) from 1391m
incl 13.4m grading 0.90g/t AuEq (0.50g/t Au, 0.28% Cu) from 1392m

BOD114 418m grading 0.53g/t AuEq (0.32g/t Au, 0.15% Cu) from 1064m
incl 11m grading 1.17g/t AuEq (0.78g/t Au, 0.27% Cu) from 1065m
also 16m grading 1.13g/t AuEq (0.65g/t Au, 0.33% Cu) from 1113m

- Deep diamond core drilling commenced on the down plunge northwest extension to the Boda Mineral Resource to better understand the geological controls on this extensive gold-copper mineralisation zone. Significant intercepts include:

BOD116 1,395m grading 0.35g/t AuEq (0.19g/t Au, 0.12% Cu) from 545m
incl 540m grading 0.48g/t AuEq (0.26g/t Au, 0.15% Cu) from 546m
incl 16m grading 2.06g/t AuEq (0.91g/t Au, 0.81% Cu) from 701m
also 7m grading 1.85g/t AuEq (0.78g/t Au, 0.76% Cu) from 743m

BOD117 113.4m grading 0.46g/t AuEq (0.33g/t Au, 0.09% Cu) from 373.3m
incl 8m grading 1.63g/t AuEq (0.94g/t Au, 0.49% Cu) from 448m
and 227m grading 0.38g/t AuEq (0.24g/t Au, 0.09% Cu) from 533m
and 123m grading 0.32g/t AuEq (0.13g/t Au, 0.13% Cu) from 1522m
and 117m grading 0.43g/t AuEq (0.18g/t Au, 0.18% Cu) from 1770m

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- **Four high-capacity drill rigs are in operation in the Boda district comprising of two RC and two diamond core rigs. An updated mineral resource estimation for Boda, expected to include Boda Two, is anticipated in Q4 2023 and for Kaiser in Q1 2024.**

Alkane Resources Limited (**ASX: ALK**) is pleased to announce further results from its drilling program at the Company's Northern Molong Porphyry Project in Central New South Wales. The program extends over three kilometres from Kaiser to Boda, down to Boda Two and Boda Three. The Company believes this system has the potential to be a large, tier one gold-copper project.

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

Alkane Managing Director, Nic Earner, said:

"We continue to see mineralisation extending to the south of Boda into Boda Two. This includes higher grade areas within the Boda Two system.

"In our recent drilling we believe we have intersected a 'causative' monzodiorite dyke or pencil intrusive at Boda Two. We will use these results, expected in August 2023, to assist us in locating further higher-grade areas within the mineralisation.

"There is a lot of drilling still to come to further define the full 3km mineralised zone from Kaiser to Boda and then Boda Two and Three beyond. The Company looks forward to releasing results of this program as we work towards an upgraded mineral resource towards the end of the year."

****The equivalent calculation formula is $AuEq(g/t) = Au(g/t) + Cu\%/100 * 31.1035 * copper\ price(\$ / t) / gold\ price(\$ / oz)$. The prices used to calculate AuEq are based on 6-month averages of US\$1,900/oz gold and US\$8,700/t copper, and A\$:US\$0.67. Recoveries are assumed equal for Au and Cu at 85% from preliminary metallurgical studies. Alkane considers the elements included in the metal equivalents calculation have a reasonable potential to be recovered and sold.***

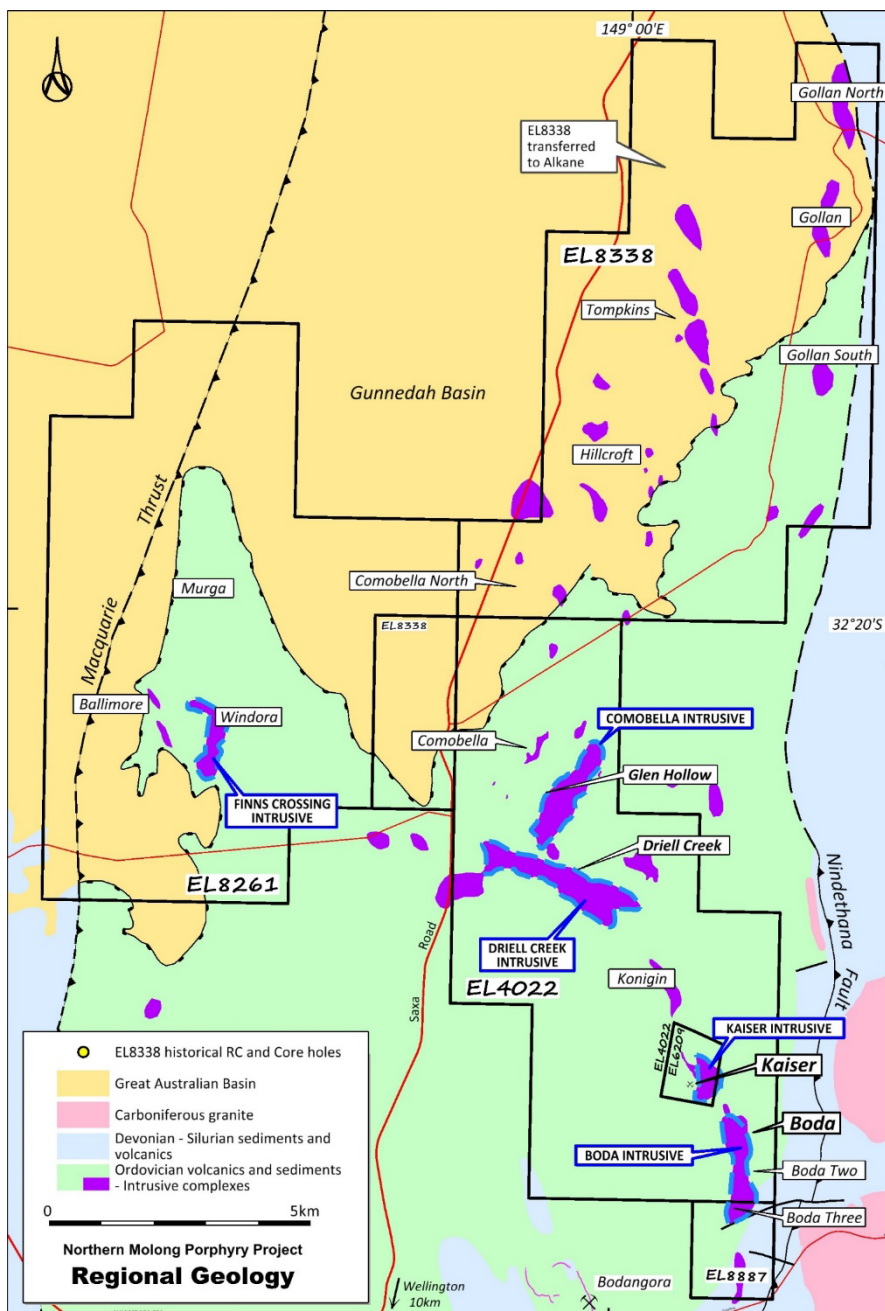


Northern Molong Porphyry Project (NMPP)

Alkane Resources Ltd 100%

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

Exploration in the NMPP has identified five discrete magnetic/intrusive complexes – Kaiser, Boda, Comobella, Driell Creek and Finns Crossing – within a 15km northwest trending corridor. The corridor is defined by intermediate intrusives, lavas and breccias, extensive alteration and widespread, low-grade, gold-copper mineralisation. Two significant gold-copper resources have now been defined within the corridor at Boda and Kaiser (ASX Announcement 27 February 2023). Drilling continues to improve the confidence of the Boda and Kaiser deposits and to test mineralised zones outside their resource envelopes.





Boda Two Prospect

The Boda Two prospect was originally defined by the magnetic high Boda Intrusive Complex (BIC) and a coincident 1,100m x 500m gold-copper soil anomaly. Boda Two was further delineated by an electrical geophysics survey (3D-IP) that identified a strongly conductive target (ASX Announcement 19 May 2020) that was drill tested with KSD022 intersecting substantial pyrite mineralisation with significant gold grades of 292m @ 0.66g/t Au from 867m (ASX Announcement 9 November 2020). Recent exploration has defined this mineralisation as dislocated from the southern Boda resource envelope by the Reids Fault. The Boda Two prospect is located immediately south and outside of the Boda resource. Ongoing drilling will combine this mineralisation into the updated Boda Mineral Resource Estimation anticipated for in Q4 2023.

The geology at Boda Two comprises a west tilted, thick sequence of basaltic to andesitic volcanics and volcanoclastics which have been intruded by a series of subvertical to steep west dipping dykes, stocks and intrusive breccias that range in composition from diorite to monzodiorite. The gold-copper porphyry mineralisation is centred around the BIC and is associated with broad zones of potassic to calc-potassic alteration. Higher grading gold-copper mineralisation is focused around magmatic to hydrothermal breccias with a chalcopyrite ± bornite ± pyrite sulphide cement.

Drilling at Boda Two is targeting extensions to gold-copper mineralised breccias and to infill the extensive low-grade gold-copper mineralisation. Recent assay results are from seven RC drill holes, including two failed pre-collars, and three RC pre-collared diamond core drill holes for a total of 6,827 metres. Significant results include:

BOD099	82m grading 0.63g/t AuEq (0.36g/t Au, 0.19% Cu) from 57m
incl	18m grading 1.04g/t AuEq (0.54g/t Au, 0.35% Cu) from 74m
also	10m grading 1.13g/t AuEq (0.88g/t Au, 0.22% Cu) from 106m
BOD112	15.6m grading 0.76g/t AuEq (0.34g/t Au, 0.29% Cu) from 485m
incl	5m grading 1.59g/t AuEq (0.78g/t Au, 0.57% Cu) from 476m
and	194m grading 0.41g/t AuEq (0.21g/t Au, 0.14% Cu) from 852m
incl	2.4m grading 2.04g/t AuEq (0.83g/t Au, 0.86% Cu) from 1008.6m
and	315.7m grading 0.60g/t AuEq (0.32g/t Au, 0.20% Cu) from 1139m
incl	28m grading 1.45g/t AuEq (0.95g/t Au, 0.35% Cu) from 1192m
also	28m grading 1.51g/t AuEq (0.65g/t Au, 0.60% Cu) from 1368m
BOD113	145.8m grading 0.58g/t AuEq (0.34g/t Au, 0.17% Cu) from 1204.2m
incl	25m grading 1.02g/t AuEq (0.66g/t Au, 0.25% Cu) from 1233m
and	156.2m grading 0.41g/t AuEq (0.22g/t Au, 0.14% Cu) from 1391m
incl	13.4m grading 0.90g/t AuEq (0.50g/t Au, 0.28% Cu) from 1392m
BOD114	418m grading 0.53g/t AuEq (0.32g/t Au, 0.15% Cu) from 1064m
incl	11m grading 1.17g/t AuEq (0.78g/t Au, 0.27% Cu) from 1065m
also	16m grading 1.13g/t AuEq (0.65g/t Au, 0.33% Cu) from 1113m

The gold equivalent (AuEq) is calculated using preliminary metallurgical work that determined both Au and Cu could be recovered equally at 85%. The calculation formula is $AuEq(g/t) = Au(g/t) + Cu\%/100 * 31.1035 * CuPrice(\$/t)/AuPrice(\$/oz)$. The prices used were based on six month averages of gold at US\$1900/oz and copper at US\$8,700/t, at an exchange rate of A\$:US\$0.67. Alkane considers the elements included in the metal equivalents calculation have a reasonable potential to be recovered and sold.

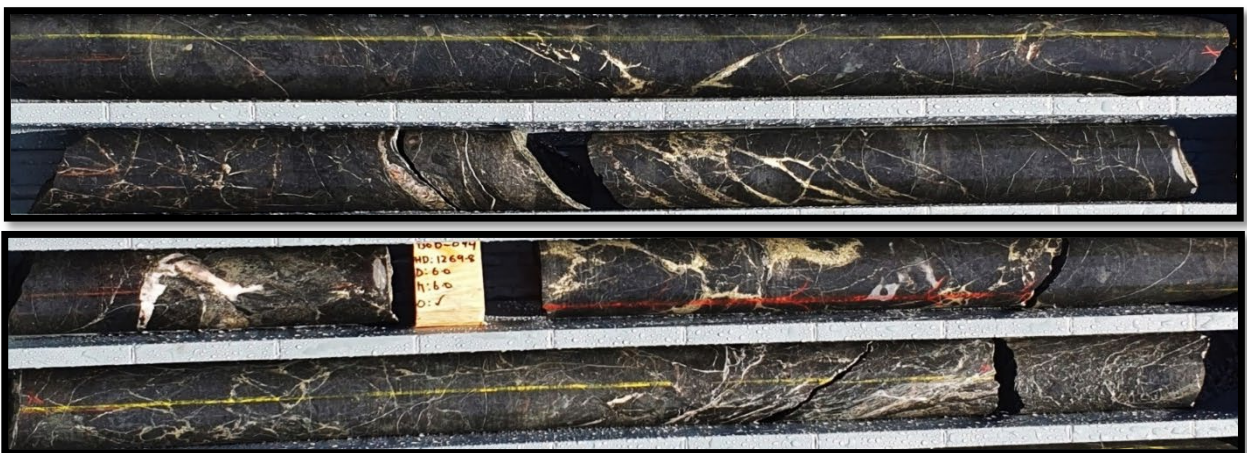


The sequence at Boda Two comprises dominantly volcanoclastics, tilted moderately to the west which strike north in comparison to the sub-horizontal, northwest striking, thick sequence of lavas at Boda. As well as the extensive porphyry style gold-copper mineralisation, the recent drilling has intersected gold-copper skarn mineralisation within drill hole BOD112. The stratigraphically controlled skarn is replacing an estimated 25m thick sequence of calcareous volcanoclastics with a 28m intercept grading 0.65g/t Au and 0.60% Cu from 1368m. The potential strike and width of this strongly mineralised stratigraphic unit is unknown at this stage.

A recently completed drill hole (BOD094) has intersected a 'causative' monzodiorite dyke or pencil intrusive. 'Causative' intrusives are fertile magmatic components to a porphyry system that are often associated with the highest grades of the system. This fertile magmatic component has only been previously identified within the magmatic/intrusive breccias at Boda and Boda Two. This 'causative' intrusion is estimated at 5 metres true thickness with chalcopyrite mineralisation forming within miarolitic cavities, interstitial disseminations and as sulphide veins. The volcanic country rock surrounding this intrusion is host to sulphide cemented (chalcopyrite \pm bornite \pm pyrite) hydrothermal breccias of up to 30 metres thickness. These hydrothermal breccias likely form above other 'causative' intrusives and can be vertically extensive for over several hundred metres. Observations by Alkane geologists for BOD094 from 1,167m to 1301m are summarised in Table 1. Processing of BOD094 has begun with assay results expected in August 2023.



BOD094 – 'Causative' monzodiorite with potassic alteration and chalcopyrite forming within miarolitic cavities and as veins from 1250m



BOD094 – 4 metre section of chalcopyrite (\pm bornite \pm pyrite) cemented hydrothermal breccia from 1268m



Table 1 – Visual estimations of chalcopyrite mineralisation for BOD094 from 1167m to 1301m

From (m)	To (m)	Interval (m)	Mineralisation Style	Chalcopyrite (%)
1167	1219.4	52.2	Poorly developed hydrothermal cemented breccia	0.5
1219.4	1249	29.6	Hydrothermal cemented breccia	2
1249	1255.3	6.3	Blebs and veins hosted in 'causative' porphyry	4
1255.3	1280	24.7	Hydrothermal cemented breccia	3
1280	1301	21	Magmatic-hydrothermal cemented breccia	0.5

Visual estimates of mineral abundance should not be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations. Only trace bornite and pyrite was observed in the tabled mineralisation intervals.

Boda NW Extension

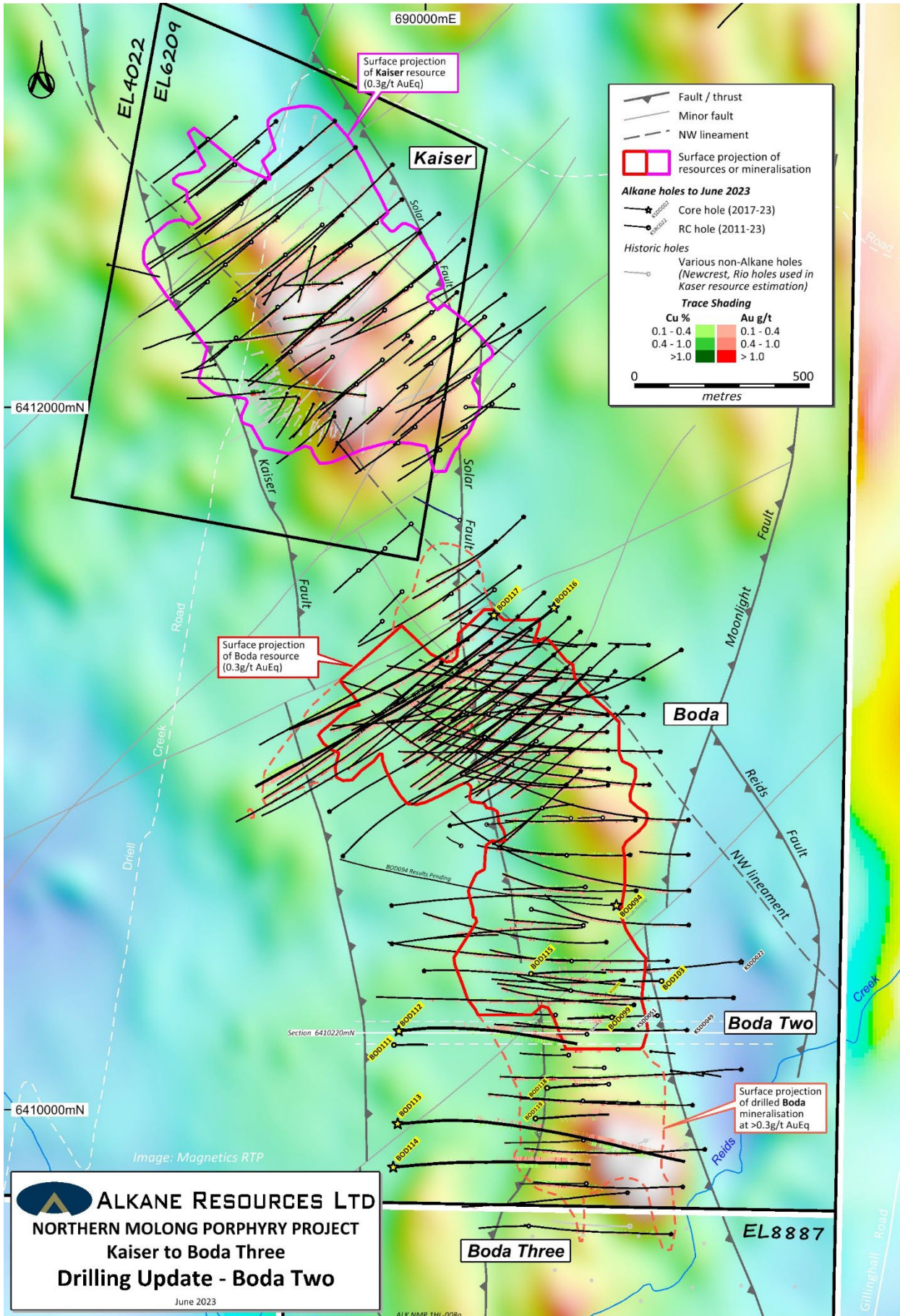
The Boda deposit is truncated to the northwest by the north striking Solar Fault, a 65° west dipping reverse structure over which significant post-mineral displacement has occurred. This structure abuts the apparent northwest plunge to the Boda deposit previously intersected by drill hole BOD091 intercepting 1,041m grading 0.57g/t AuEq* from 698m (ASX Announcement 25 October 2022) that sits outside the initial Boda Mineral Resource Estimation.

Results have been received from two diamond core drill holes for a total of 4,057 metres, testing outside the northwest margin of the Boda Inferred Resource Estimation. Both drill holes intersected extensive gold-copper porphyry mineralisation including significant results of:

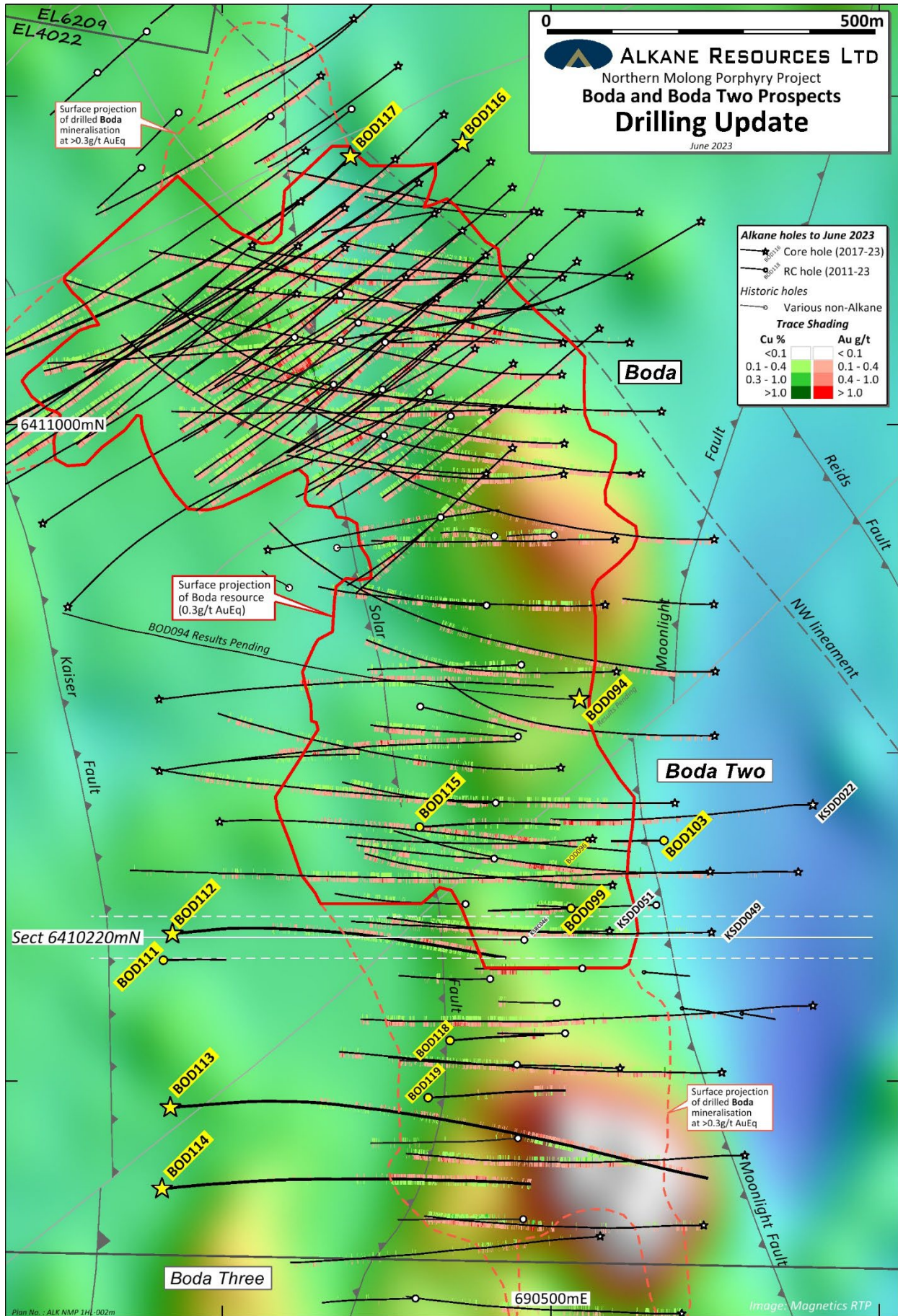
BOD116	1,395m grading 0.35g/t AuEq (0.19g/t Au, 0.12% Cu) from 545m
incl	540m grading 0.48g/t AuEq (0.26g/t Au, 0.15% Cu) from 546m
incl	16m grading 2.06g/t AuEq (0.91g/t Au, 0.81% Cu) from 701m
also	7m grading 1.85g/t AuEq (0.78g/t Au, 0.76% Cu) from 743m
BOD117	113.4m grading 0.46g/t AuEq (0.33g/t Au, 0.09% Cu) from 373.3m
incl	8m grading 1.63g/t AuEq (0.94g/t Au, 0.49% Cu) from 448m
and	227m grading 0.38g/t AuEq (0.24g/t Au, 0.09% Cu) from 533m
and	123m grading 0.32g/t AuEq (0.13g/t Au, 0.13% Cu) from 1522m
and	117m grading 0.43g/t AuEq (0.18g/t Au, 0.18% Cu) from 1770m

A total of four high-capacity drilling rigs are in operation at Boda, Boda Two and Kaiser. Two diamond core drill rigs and one RC drilling rig are currently working at Boda and Boda Two. The planned drilling is infilling areas around high-grading mineralisation to improve confidence in the Boda Mineral Resource Estimation. In addition, testing of extensions to mineralisation outside the calculated Boda Mineral Resource, focusing on the northwest of the Boda resource envelope terminating at the Solar Fault and south of the Boda resource envelope into Boda Two. An updated Boda Mineral Resource Estimation, expected to include Boda Two, is anticipated in Q4 2023.

A second RC drill rig is currently infilling the initial Kaiser Resource Mineral Estimation to improve confidence to define an updated Indicated Resource. This updated resource estimation is expected in Q1 2024.



ALKANE RESOURCES LTD
NORTHERN MOLONG PORPHYRY PROJECT
Kaiser to Boda Three
Drilling Update - Boda Two
 June 2023



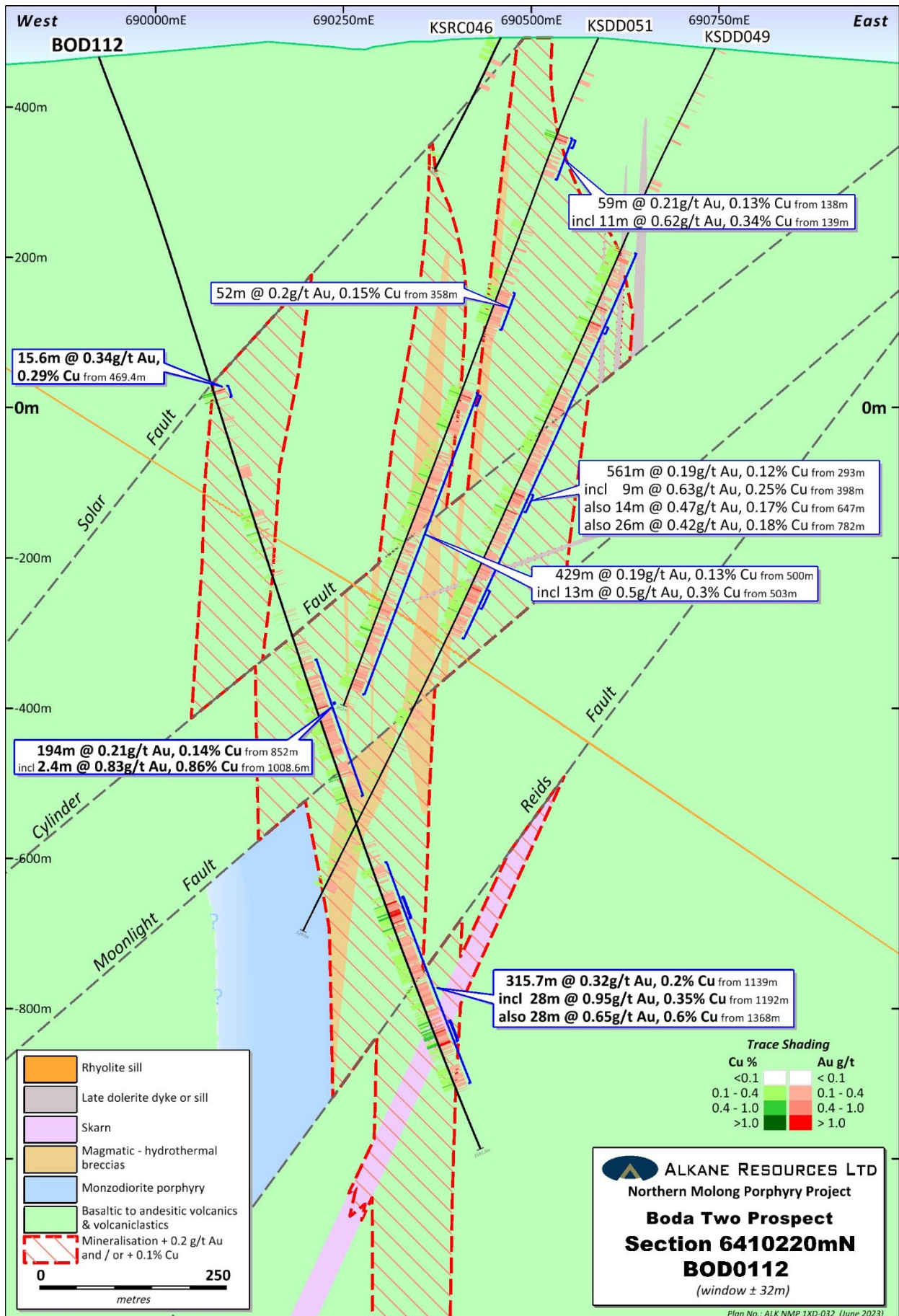




Table 2 – Boda and Boda Two Significant Drilling Results – June 2023 (>0.3g/t AuEq*)

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 (%)
BOD096	690556	6410368	492	-65	265	16	<i>Failed RC pre-collar – no significant results</i>					
BOD099	690531	6410263	496	-65	268	334	57	139	82	0.63	0.36	0.19
							74	92	18	1.04	0.54	0.35
							106	116	10	1.13	0.80	0.22
							160	165	5	0.30	0.09	0.15
							229	231	2	1.02	0.74	0.20
BOD103	690672	6410366	482	-64	269	214	142	146	4	0.30	0.26	0.03
							180	185	5	0.41	0.30	0.08
BOD111	689910	6410184	466	-71	89	244	<i>Failed RC pre-collar – no significant results</i>					
BOD112	689924	6410224	473	-70	83	1541.8	469.4	485	15.6	0.76	0.34	0.29
							471	476	5	1.59	0.78	0.57
							580	594	14	0.31	0.19	0.08
							633	657	24	0.35	0.11	0.17
							667	671	4	0.54	0.23	0.22
							675	679	4	0.36	0.11	0.18
							691	694	3	0.40	0.16	0.17
							725	730	5	0.39	0.14	0.18
							779	782	3	0.43	0.15	0.20
							824	828	4	0.62	0.32	0.22
							852	1046	194	0.41	0.21	0.14
							1008.6	1011	2.4	2.04	0.83	0.86
							1139	1454.7	315.7	0.60	0.32	0.20
							1192	1220	28	1.45	0.95	0.35
							1368	1396	28	1.51	0.65	0.60
BOD113	689924	6409960	460	-66	84	1731.8	521	544	23	0.36	0.15	0.15
							642	658	16	0.35	0.23	0.08
							682	695	13	0.30	0.11	0.13
							743	748	5	0.92	0.51	0.29
							774.5	778	3.5	0.43	0.29	0.10
							798	800	2	0.57	0.43	0.10
							848	849	1	1.69	1.50	0.13
							867	890	23	0.41	0.29	0.09
							912	924	12	0.65	0.32	0.20
							1134	1136	2	0.67	0.49	0.13
							1204.2	1350	145.8	0.58	0.34	0.17
							1233	1258	25	1.02	0.66	0.25
							1391	1547.2	156.2	0.41	0.22	0.14
							1392	1405.4	13.4	0.90	0.50	0.28
							1653	1655	2	0.98	0.86	0.09
BOD114	689908	6409836	449	-70	84	1660	677	681	4	0.59	0.26	0.23
							740	750	10	0.38	0.18	0.14
							774	778	4	0.39	0.17	0.16
							907	916	9	0.33	0.13	0.14



Table 2 – Boda and Boda Two Significant Drilling Results – June 2023 (>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 (%)
and							940	944	4	0.36	0.12	0.17
and							1042	1044	2	0.45	0.26	0.14
and							1064	1482	418	0.53	0.32	0.15
incl							1065	1076	11	1.17	0.78	0.27
also							1113	1129	16	1.13	0.65	0.33
and							1500.7	1524.8	24.1	0.49	0.29	0.14
and							1624	1628	4	0.40	0.21	0.14
and							1644	1654	10	0.56	0.27	0.20
BOD115	690300	6410387	491	-57	84	400	139	145	6	0.33	0.18	0.11
and							173	179	6	0.35	0.18	0.13
and							273	274	1	0.89	0.55	0.24
and							366	391	25	0.40	0.15	0.17
BOD116	690366	6411429	484	-61	229	1992.7	393	404	11	0.55	0.53	0.01
incl							394	395	1	2.86	2.86	-
and							476	495	19	0.45	0.38	0.06
and							526	531	5	0.41	0.40	-
and							545	1940	1395	0.35	0.19	0.12
incl							546	1086	540	0.48	0.26	0.15
incl							627	637	10	0.90	0.81	0.06
also							701	717	16	2.06	0.91	0.81
also							743	750	7	1.85	0.78	0.76
also							771	786	15	0.93	0.50	0.30
and							1921	1940	19	0.31	0.16	0.11
BOD117	690195	6411408	479	-64	226	2064.4	321	343	22	0.40	0.26	0.10
and							373.3	486.7	113.4	0.46	0.33	0.09
incl							448	456	8	1.63	0.94	0.49
and							533	760	227	0.38	0.24	0.09
and							796	852	56	0.32	0.19	0.09
incl							796	802	6	0.72	0.41	0.22
and							942	972	30	0.37	0.19	0.12
and							1000	1035	35	0.37	0.19	0.12
and							1057	1058	1	1.67	1.08	0.41
and							1233	1235	2	0.70	0.31	0.27
and							1269	1275	6	0.52	0.23	0.21
and							1301	1317	16	0.35	0.15	0.14
and							1328	1370	42	0.40	0.14	0.18
and							1402	1421	19	0.32	0.11	0.15
and							1461	1485	24	0.49	0.20	0.20
and							1522	1645	123	0.32	0.13	0.13
and							1734	1744	10	0.42	0.14	0.20
and							1770	1887	117	0.43	0.18	0.18
incl							1772	1782	10	0.81	0.33	0.33
and							1954	1966	12	0.36	0.12	0.17
and							2013	2019	6	0.47	0.16	0.21
and							2027	2028	1	1.08	0.38	0.50
and							2058	2064	6	0.44	0.17	0.19
BOD118	690347	6410062	474	-56	86	274	133	148	15	0.54	0.34	0.14
incl							140	143	3	1.22	0.94	0.20



Table 2 – Boda and Boda Two Significant Drilling Results – June 2023 (>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 (%)
BOD119	690313	6409975	465	-53	87	412	308	334	26	0.31	0.16	0.10
and							352	362	10	0.30	0.12	0.13
and							404	412	8	0.65	0.52	0.09
incl							406	407	1	3.52	3.42	0.07

Gold and copper intercepts are calculated using a lower cut of 0.2g/t AuEq. Internal dilution (< cut off) is less than 34% of reported intercepts. Only significant intercepts of >0.3g/t AuEq are reported. True widths are estimated as approximately 50% of intersected width.

* The prices used to calculate AuEq are based on 6-month averages of US\$1,900/oz gold and US\$8,700/t copper, and A\$:US\$0.67. Recoveries are assumed equal for Au and Cu at 85% from preliminary metallurgical studies.



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) 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.

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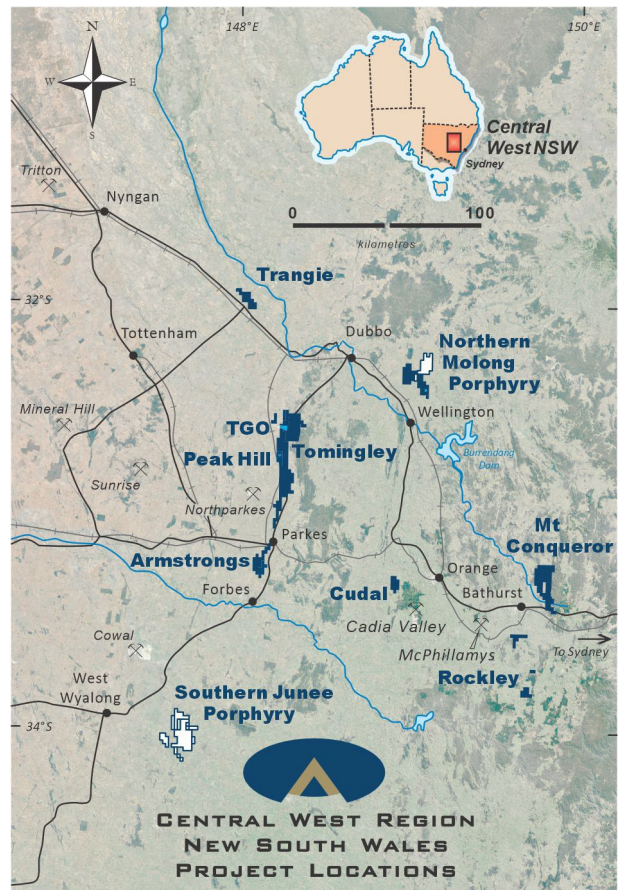
Alkane Resources intends to grow to become one of Australia's multi-mine gold and copper producers.

The Company's current gold production is from the Tomingley Gold Operations in Central West New South Wales, where it has been operating since 2014 and is currently expediting a development pathway to extend the mine's life beyond 2030.

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

Alkane's exploration success includes the landmark porphyry gold-copper mineralisation discovery at Boda in 2019. With 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 ~9.8% of Calidus Resources (ASX: CAI).





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

JORC Code, 2012 Edition – Table 1 NORTHERN MOLONG PORPHYRY PROJECT – June 2023

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 	<ul style="list-style-type: none"> Sampling and QAQC procedures are carried out using Alkane protocols as per industry best practice
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Core was laid out in suitably labelled core trays. A core marker (core block) was placed at the end of each drilled run (nominally 6m) and labelled with the hole number, down hole depth, length of drill run. Core was aligned and measured by tape, comparing back to this down hole depth consistent with industry standards. Half core is sampled with a Corewise automatic core saw. RC Drilling – the total sample (~35kg) is delivered via cyclone into a large plastic bag which is retained for future use if required. A sub-sample of approximately 1kg is spear sampled from each plastic bag and composited to make a 3 metres sample interval. If mineralisation is observed by the site geologist this is sampled as a final 1m interval instead. The 1m intervals forming composite samples assaying ≥ 0.10 g/t Au or ≥ 0.10 % Cu are re-split using a cone splitter on the rig into a separate calico at the time of drilling and re-submitted to the laboratory for re-assay. 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	<ul style="list-style-type: none"> 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). 	<ul style="list-style-type: none"> 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 61.1mm diameter (HQ3) sized orientated core. Wedge holes are completed using NQ3 wireline bit producing 45mm diameter sized orientated core.



Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. 	<ul style="list-style-type: none"> DD - core loss was identified by drillers and calculated by geologists when logging. Generally $\geq 99\%$ 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.
	<ul style="list-style-type: none"> Measures taken to maximise sample recovery and ensure representative nature of the samples. 	<ul style="list-style-type: none"> 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.
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> There is no known relationship between sample recovery and grade
Logging	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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)
	<ul style="list-style-type: none"> Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography 	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> The total length and percentage of the relevant intersections logged 	<ul style="list-style-type: none"> All drill holes were logged in full
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. 	<ul style="list-style-type: none"> Core sawn with half core samples submitted for analysis
	<ul style="list-style-type: none"> If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. 	<ul style="list-style-type: none"> Each one metre interval is spear sampled with 3m composite samples collected in a calico sample bag and forwarded to the laboratory. Where 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 resplit using a cone splitter on the rig during the time of drilling and re-submitted to the



Criteria	JORC Code explanation	Commentary
		<p>laboratory for re-assay.</p> <ul style="list-style-type: none"> 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.
	<ul style="list-style-type: none"> For all sample types, the nature, quality and appropriateness of the sample preparation technique. 	<ul style="list-style-type: none"> 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 1000g to 85% <75µm (ALS code PUL-32). Crushers and pulverisers are washed with QAQC tests undertaken (ALS codes CRU-QC, PUL-QC).
	<ul style="list-style-type: none"> Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples 	<ul style="list-style-type: none"> Internal QAQC system in place to determine accuracy and precision of assays
	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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.
	<ul style="list-style-type: none"> Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> Sample are of appropriate size
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 	<ul style="list-style-type: none"> 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 and Ag only.
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No geophysical tools were used to determine any element concentrations
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Full QAQC system in place including certified standards and blanks of appropriate matrix and concentration levels
Verification of sampling	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. 	<ul style="list-style-type: none"> 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
<i>and assaying</i>	<ul style="list-style-type: none"> <i>The use of twinned holes.</i> 	<ul style="list-style-type: none"> <i>No twinned holes have been drilled at this stage of exploration</i>
	<ul style="list-style-type: none"> <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> 	<ul style="list-style-type: none"> <i>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</i> <i>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</i>
	<ul style="list-style-type: none"> <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> <i>No adjustments made</i>
<i>Location of data points</i>	<ul style="list-style-type: none"> <i>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.</i> 	<ul style="list-style-type: none"> <i>Drillholes are laid out using hand-held GPS (accuracy $\pm 2m$) then DGPS surveyed accurately ($\pm 0.1m$) by licenced surveyors on completion</i>
	<ul style="list-style-type: none"> <i>Specification of the grid system used.</i> 	<ul style="list-style-type: none"> <i>GDA94, MGA (Zone 55)</i>
	<ul style="list-style-type: none"> <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> <i>Drillhole collars DGPS surveyed accurately ($\pm 0.1m$) by licenced surveyors on completion</i>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <i>Data spacing for reporting of Exploration Results..</i> 	<ul style="list-style-type: none"> <i>At Boda drilling is on a nominal 50m x 50m grid. At Boda Two, the data spacing is variable with focus on identifying new zones of mineralisation and optimal drilling direction, although the drilling is approaching a nominal 100m x 100m grid.</i>
	<ul style="list-style-type: none"> <i>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</i> 	<ul style="list-style-type: none"> <i>No Mineral Resource estimation procedure and classifications apply to the exploration data being reported.</i>
	<ul style="list-style-type: none"> <i>Whether sample compositing has been applied</i> 	<ul style="list-style-type: none"> <i>RC – each one metre interval is spear sampled with 3m composite samples collected in a calico sample bag and forwarded to the laboratory. Where 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.</i> <i>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.</i> <i>DD – Sample intervals are based on alteration and lithology but in general are 1m. No</i>



Criteria	JORC Code explanation	Commentary
		<i>interval was less than 0.3m or greater than 1.3m.</i>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i> 	<ul style="list-style-type: none"> <i>Drilling suggests a broadly sub vertical geometry to mineralisation within flat to moderately dipping stratigraphy at the different prospects in the NMPP. A significant NW trending lineament exists from Boda to Kaiser to Konigin. Boda Two and Boda Three strikes north and dips moderately to the west. All drilling is planned normal to the strike of the respective prospect/deposit.</i>
	<ul style="list-style-type: none"> <i>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</i> 	<ul style="list-style-type: none"> <i>Estimated true intervals are ~50% of downhole lengths</i>
<i>Sample security</i>	<ul style="list-style-type: none"> <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> <i>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</i> <i>Sample pulps are returned to site and stored for an appropriate length of time (minimum 3 years).</i> <i>The Company has in place protocols to ensure data security.</i>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> <i>No audits or reviews have been conducted at this stage.</i>



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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All four licences (EL4022, EL6209, EL8261 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.
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All exploration licences are in good standing. EL4022 expires on 13 August 2026. EL6209 expires on 11 March 2029. EL8887 expires on 6 February 2026. EL8261 expires on 30 April 2029.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> 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.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. 	<ul style="list-style-type: none"> See body of announcement



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All drill holes have been reported in this announcement.
Data aggregation methods	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Exploration results reported for uncut gold grades, grades calculated by length weighted average
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Reported intercepts are calculated using a broad lower cut of 0.2g/t AuEq, although grades lower than this may be present internally (internal dilution). Internal dilution can be significant because of the type of bulk mining techniques used to extract this style of mineralisation but are limited to <23% for the purpose of calculation. No top cut has been used. Short intervals of high grades that have a material impact on overall intersection are reported as separate (included) intervals
	<ul style="list-style-type: none"> The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> Gold equivalent values were calculated and used in modelling the mineralisation shells. Metal prices used for the gold equivalent are based on a historical 6-month average and were US\$1900/oz for gold and US\$8700/t for copper, and A\$:US\$0.67 Recoveries are assumed equal for Au and Cu at 85% from preliminary metallurgical studies at Boda and Kaiser.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> 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'). 	<ul style="list-style-type: none"> It is apparent on the sections and the report descriptions that the overall geometry of the porphyry mineralisation at Kaiser, Boda and Korridor prospects are subvertical. Skarn mineralisation has been intersected at Boda Two and is stratigraphically controlled, dipping moderately west. True intervals are likely to be ~50% of downhole lengths
Diagrams	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Plans showing geology with drill collars are included in the body of the announcement.
Balanced reporting	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Comprehensive reporting has been undertaken with all holes listed in the included table.
Other substantive exploration data	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No other exploration data is considered meaningful for reporting.



Criteria	JORC Code explanation	Commentary
<i>Further work</i>	<ul style="list-style-type: none"><li data-bbox="371 233 1245 288">• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i><li data-bbox="371 336 1245 421">• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive</i>	<ul style="list-style-type: none"><li data-bbox="1263 233 2136 331">• <i>Further work is planned drill targeting Boda Two and Three and NW extensions to Boda within the Project. Infill drilling is also planned at Boda to improve confidence in the resource estimation from Inferred to Indicated. Regional exploration planned are soil geochemistry surveys with follow up drilling.</i><li data-bbox="1263 336 2136 363">• <i>See figures included in the announcement.</i>