

22 July 2021



Quarterly Activities Report to 30 June 2021

Tomingley Gold Operations (Tomingley)

- Gold production above forecast for the quarter at 13,500oz, with site operating cash costs at A\$1,199/oz and AISC of A\$1,669/oz.
- Gold sales of 11,526 ounces for the quarter for revenue of A\$27.7M at an average price of A\$2,401/oz.
- FY2021 gold production was 56,958oz (guidance 50,000oz to 55,000oz) at an AISC of \$1,320/oz (guidance \$1,400/oz to \$1,550/oz).
- FY2022 production guidance for Tomingley is 55,000oz to 60,000oz at an AISC of \$A1,450/oz to \$1,600/oz.

Tomingley Gold Extension Project (TGEP)

- Roswell and San Antonio resources to be mined as part of an expanded Tomingley Gold Operations that extends the mine's life to at least 2031 (see ASX Announcement 3 June 2021).
- The life of mine (LOM) plan shows the production of approximately 745,000oz for the period, with processing ramping to a 1.5 million tonne per annum feed rate.
- The planned production profile (averaged for each period) is:
 - 50,000 – 60,000oz per year for FY22 & FY23;
 - Production escalating from 60,000oz per year through FY24; to
 - 100,000 – 115,000oz for FY25 to FY27; and,
 - 55,000 – 65,000oz for FY28 to FY31.
- Substantial upside potential to extend the Roswell underground and maintain production over the FY28 to FY31 period at or near FY25 to FY27 levels, and beyond.
- The expected AISC over the LOM period is A\$1,350 to A\$1,450 per oz.
- Development of the Roswell and San Antonio deposits requires the diversion of the Newell Highway onto land which Alkane has purchased. This diversion, together with plant upgrades and other capital gives rise to a capital cost of ~\$87M, predominantly expended in FY23.
- The capital cost is expected to be funded from operating cashflow and debt, and preliminary discussions are commencing with potential debt providers.
- With detailed plans and initial consultation now complete, the Environmental Impact Statement is being prepared for submission in the coming quarter. The expected timing of Project Approval is mid-2022.

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Exploration

- The drill program at Boda continues. Results received (see ASX Announcement 3 May 2021) demonstrate further continuity of the high-grade breccia at Boda as well as showing extensions to the mineralised system to the south at Boda Two.
- One diamond core hole, KSDD031, successfully intersected the sulphide cemented breccia down dip with significant assay results of:

KSDD031	383.2m grading 0.80g/t Au, 0.31% Cu from 775m
incl	204m grading 1.40g/t Au, 0.51% Cu from 776m
incl	101m grading 2.47g/t Au, 0.83% Cu from 824m
incl	70m grading 3.04g/t Au, 0.92% Cu from 829m
- Results from several drill holes are being finalised and are expected be released in the coming weeks. The laboratory has experienced abnormal delays due to border and regional movement restrictions of people and samples.
- A reconnaissance drilling program of 75 air-core drill holes totalling 1,354m was completed along nominal 400 m spaced drill traverses across an untested 2km in strike length magnetic anomaly at the Murga Prospect (Finns Crossing), approximately 12km north-west of Boda.
- Assay results for porphyry pathfinder elements such as antimony, arsenic, molybdenum and zinc were anomalous, and in addition to intersecting low grades of gold and copper confirms the prospectivity of the target with further exploration planned.

Corporate

- Cash, bullion and listed investments position totalled A\$73.9M.
- Shareholding of ASX listed gold developer Calidus Resources Ltd (ASX:CAI) was ~9.7% at end of June quarter.
- After gaining majority shareholder approval for a placement to maintain its percentage holding of ASX listed gold developer Genesis Minerals Ltd (ASX:GMD), Alkane invested \$2.2M during the quarter and continues to hold ~19.8% of GMD at end of June quarter.



TOMINGLEY GOLD OPERATIONS

Tomingley Gold Operations Pty Ltd 100%

Tomingley Gold Operations (Tomingley) is a wholly owned subsidiary of Alkane, located near the village of Tomingley, approximately 50km southwest of Dubbo in Central Western New South Wales. The gold processing plant was commissioned in January 2014 and has been operating at the design capacity of 1Mtpa since late May 2014. Mining is based on four gold deposits (Wyoming One, Wyoming Three, Caloma One and Caloma Two).

Operations Performance

Tomingley continues to perform well and is processing underground stope material with recovery as expected. The cutback in the northeast of the Caloma pit is mining ore. Reconciliations of mined material show that the grade mined is higher than forecast.

A total of 13,500 ounces of gold was poured for the quarter. The site cash costs for the quarter were A\$1,199/oz with an all-in sustaining cost (AISC) of A\$1,669/oz.

Gold sold for the quarter was 11,526 ounces at an average sales price of A\$2,401/oz, generating revenue of A\$27.7M. Bullion stocks were 3,246 ounces (fair value of A\$7.7M at quarter end). Site operating cash flow was A\$14.3M for the quarter and A\$78.9M for the financial year.

Guidance for FY22 is 55,000 to 60,000oz at an AISC of \$1,450 to \$1,600/oz.

Tomingley Gold Extension Project

Alkane's intention is to develop the Roswell and San Antonio deposits, which are located 3 – 5km south of Tomingley, as soon as possible.

Alkane has commenced the approval process for this development. Consultation with regulators, landholders and other stakeholders, as well as on ground assessments needed for the Environmental Impact Statement, continues. The Environmental Impact Statement is being prepared for submission in the current September quarter. The expected timing of Project Approval is mid-2022.

The Tomingley LOM plan incorporating these deposits was released in an ASX Announcement on 3 June 2021. This plan shows an intended mine life that extends to at least 2031.

The plan shows the production of approximately 745,000 ounces of gold (ozAu) for the period, with processing ramping to a 1.5 million tonne per annum feed rate, with substantial upside potential to extend the Roswell underground and maintain production at a plus 100,000oz per annum rate.

Development of the Roswell and San Antonio deposits requires the diversion of the Newell Highway onto land which Alkane has purchased. This diversion, together with plant upgrades and other capital gives rise to a capital cost of ~\$87M, predominantly expended in FY23. The capital cost is expected to be funded from operating cashflow and debt, and preliminary discussions are commencing with potential debt providers.

Regional Exploration

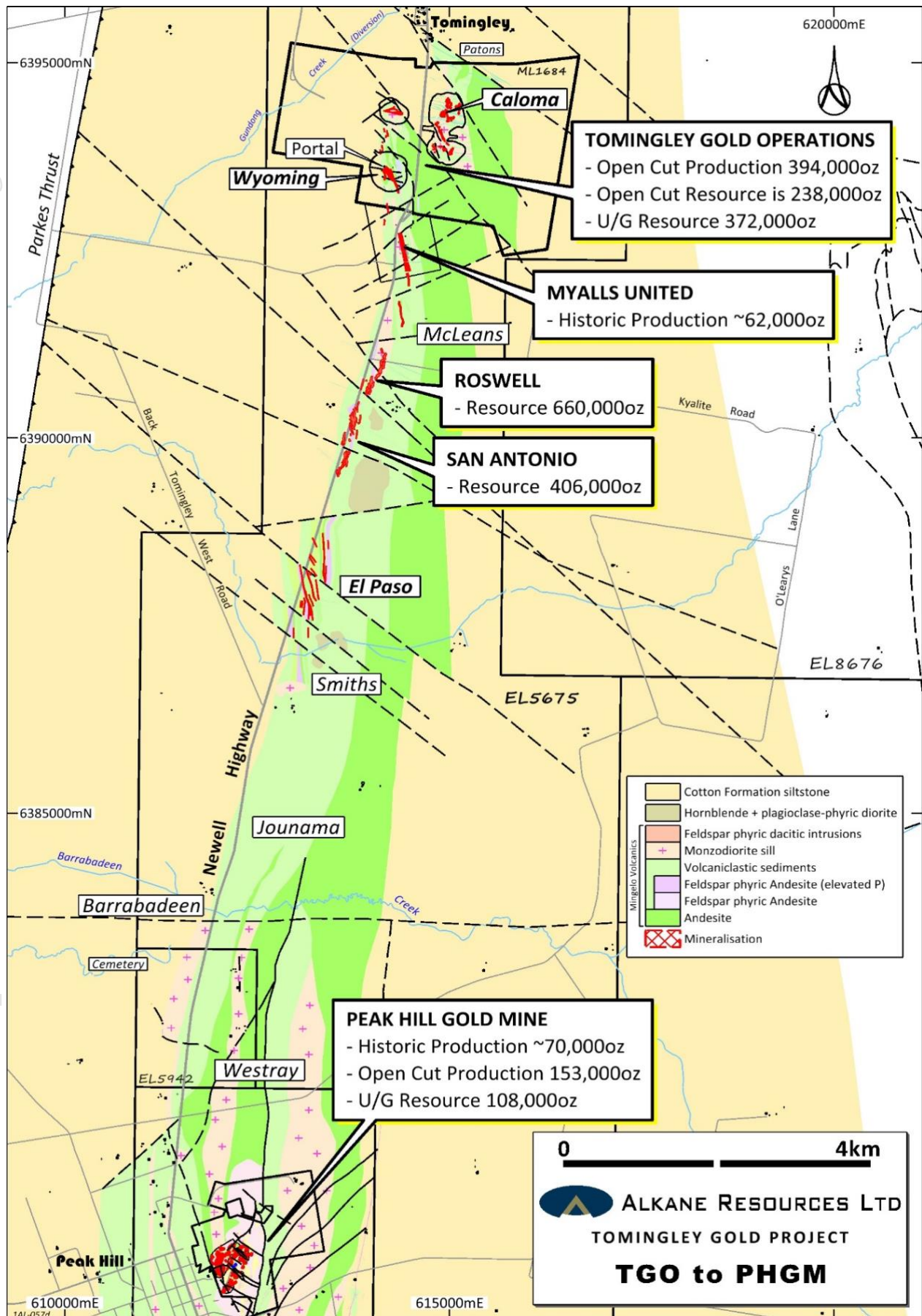
Exploration continues at Macleans to the north of Roswell and El Paso to the south of San Antonio, on land now owned or under contract. Some additional drilling below the Resource at Roswell is also underway.



Tomingley FY 2021 Quarterly and Annual Production Figures

Tomingley Production		FY 2020	Sep Quarter 2020	Dec Quarter 2020	Mar Quarter 2021	Jun Quarter 2021	FY 2021
Open cut							
Waste mined	BCM	-	-	390,159	429,443	399,177	1,218,779
Ore mined	Tonnes	-	-	2,755	10,953	57,638	71,347
Strip Ratio	Ratio	-	-	243.5	67.4	13.7	32.8
Grade	g/t	-	-	0.40	1.15	0.56	0.64
Underground							
Ore mined	Tonnes	341,210	181,831	180,642	169,444	174,971	706,889
Grade	g/t	2.37	1.85	3.41	2.88	2.37	2.63
Ore milled	Tonnes	838,743	254,423	235,217	237,455	201,437	928,531
Head grade	g/t	1.45	1.56	2.50	2.40	2.16	2.14
Recovery	%	88.0	88.4	88.1	91.0	87.1	88.8
Gold poured	Ounces	33,507	11,499	15,919	16,040	13,500	56,958
Revenue Summary							
Gold sold	Ounces	32,995	11,945	16,613	15,844	11,526	55,929
Average price realised	A\$/oz	2,199	2,261	2,302	2,203	2,401	2,286
Gold revenue	A\$M	72.5	27.0	38.2	34.9	27.7	127.8
Cost Summary							
Surface works	A\$/oz					83	17
Mining	A\$/oz	322	606	336	389	545	452
Processing	A\$/oz	517	446	290	295	398	347
Site Support	A\$/oz	158	126	94	119	174	125
C1 Site Cash Cost	A\$/oz	997	1,178	720	803	1,199	940
Royalties	A\$/oz	56	63	71	70	89	73
Sustaining capital	A\$/oz	205	183	326	172	540	296
Gold in circuit movement	A\$/oz	-	66	25	-103	-243	-58
Rehabilitation	A\$/oz	26	19	19	19	22	20
Corporate	A\$/oz	73	66	41	35	62	49
AISC ¹	A\$/oz	1,357	1,575	1,201	997	1,669	1,320
Bullion on hand	Ounces	2,231	1,781	1,083	1,275	3,246	3,246
Stockpiles							
Ore for immediate milling	Tonnes	262,836	139,025	96,029	41,487	71,938	71,938
Grade	g/t	0.83	0.74	1.43	1.23	0.95	0.95
Contained gold	Ounces	6,986	3,319	4,403	1,811	2,856	2,856

¹AISC = All in Sustaining Cost comprises all site operating costs, royalties, mine exploration, sustaining capex, mine development and an allocation of corporate costs, calculated on the basis of ounces sold from 1 July 2020. AISC does not include share based payments or net realisable value provision for ore inventory.





CORPORATE

Cash, Bullion and Listed Investments

Description	Jun-21 Quarter A\$M	Mar-21 Quarter A\$M
Cash	19.0	30.1
Bullion	7.7	2.9
Cash and bullion sub-total	26.7	33.0
Listed investments	47.2	39.4
Total cash, bullion and listed investments	73.9	72.4

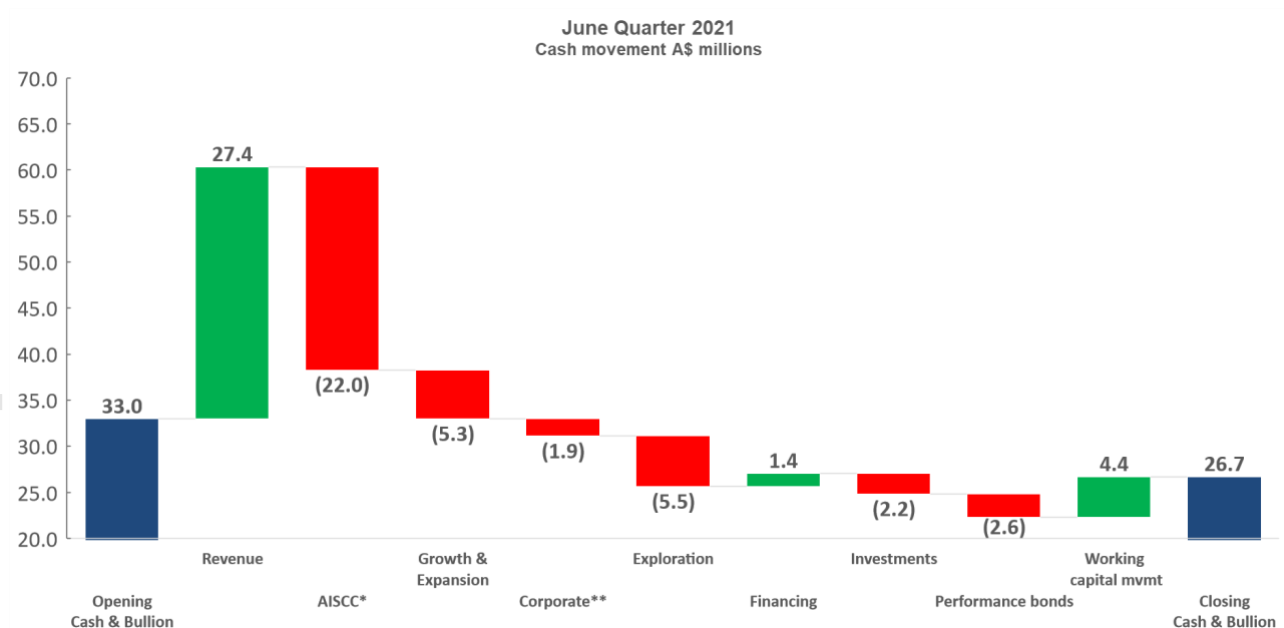
Banking Facilities

In addition to the cash, bullion and listed investment position above, the Company has a \$20 million working capital facility with Macquarie Bank. This was undrawn at the end of the quarter.

At the end of the quarter the Company had \$9.2 million of borrowings relating to mobile equipment financing arrangements.

Cashflows

The waterfall chart below summarises the quarterly movement in cash held (excludes bullion and investments held at the beginning and end of the period):



*AISCC – 11,526ozs sold x \$1,912/oz. The Gold in circuit movement from the AISC table on page 4 is a non-cash movement so is excluded from the cashflow waterfall above.

** Corporate costs of \$720k are included in the AISCC.

During the quarter Tomingley Gold Operations sold 11,526 ounces at an average price of A\$2,401/oz. This included the delivery of 2,750 ounces into forward sales contracts at an average of \$2,320/oz. Further details of the current forward sales can be found below. All in sustaining cash cost for the quarter was \$1,669/oz – a total of \$19.2 million. Growth and expansion expenditure reflects non-exploration costs associated with development of the Caloma underground deposit and Tomingley Gold Extension Project (San Antonio/Roswell deposits).



Exploration expenditure focus was on the Boda project and San Antonio/Roswell deposits. The lease repayments relate to mobile equipment loan repayments made during the quarter.

The Company continues to hold its investments in gold exploration and development companies Calidus Resources Ltd (ASX:CAI) and Genesis Minerals Ltd (ASX:GMD), in line with our strategy of investing in junior gold mining companies that meet our investment criteria of having high exploration potential, and/or require near-term development funding. After gaining majority shareholder approval for a placement to maintain its percentage holding in GMD, Alkane invested \$2.2M during the quarter and continues to hold ~19.8% of GMD. The Company's shareholding of CAI was maintained at ~9.7%.

Gold Forward Sale Contracts & Put Options and Collars

The Company holds the following forward sale contracts.

Quarter	Average Forward Price A\$/oz	Delivery Ounces
September 2021	2,534	3,000
December 2021	2,396	5,500
March 2022	2,230	7,500
June 2022	2,230	8,000
Total	2,307	24,000

During the quarter the Company delivered into gold forward sales contracts for 2,750 ounces. On 1 April the Company entered into new gold forward sales contracts for 18,000 ounces for delivery in the Dec-21, Mar-22 and Jun-22 quarters. The average delivery price is \$2,230/ounce. These forward sales are included in the table above.

The Company holds put options with monthly expiry dates from July to September 2021. This is for 2,000 ounces per month at an exercise price of \$2,400/ounce. During the June quarter 2,000 ozs of put options were exercised at \$2,400/oz.

A zero-cost collar is also in place for 2,000 ounces covering the September and December 2021 quarters, with a put price of \$2,300/ounce and call price of \$2,910/ounce.

The Company also holds 3,000 oz of put options priced at A\$1,800/oz. These options have expiry dates in September 2021.



NORTHERN MOLONG PORPHYRY PROJECT (NMPP) (gold-copper)

Alkane Resources Ltd 100%

The drill program at Boda continues. Results received (see ASX Announcement 3 May 2021) demonstrate further continuity of the high-grade breccia at Boda as well as showing extensions to the mineralised system to the south at Boda Two, approximately 1km from the main Boda target zone.

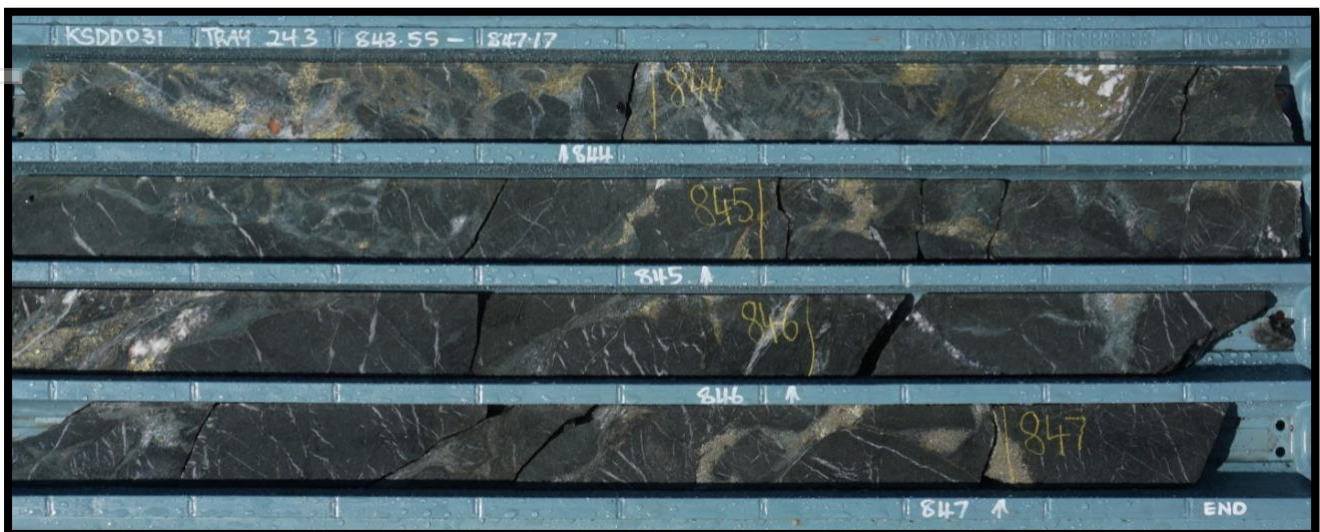
Boda

Two diamond core holes (KSDD029 and KSDD031) spaced 150m part and collared northeast, were planned to test the strike and down plunge extension to the sulphide cemented breccia zone intersected initially by KSDD007 (96.8m grading 3.97g/t Au, 1.52% Cu from 768 metres - ASX Announcement 23 March 2020). KSDD029 swung acutely to the south finishing approximately 200m off target and missing the breccia. KSDD031 intersected the down dip extension of the sulphide cemented breccia zone with significant intercepts of:

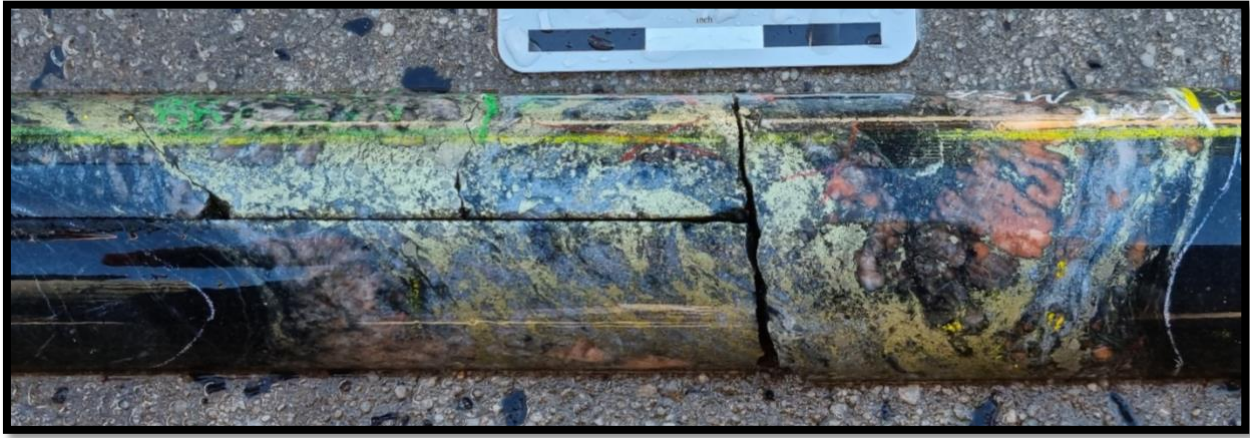
KSDD031	13m grading 0.44g/t Au, 0.35% Cu from 645m
and	383.2m grading 0.80g/t Au, 0.31% Cu from 775m
incl	204m grading 1.40g/t Au, 0.51% Cu from 776m
incl	101m grading 2.47g/t Au, 0.83% Cu from 824m
incl	70m grading 3.04g/t Au, 0.92% Cu from 829m

KSDD031 has determined an approximate 100m down dip extension below previous drilling to the steeply northeast plunging sulphide cemented breccia. The breccia is hosted within shallow dipping stratigraphy comprising of mafic to intermediate lavas, sills and volcanoclastics with intense calc-potassic alteration. Approximately 100m down hole from the breccia is an equigranular feldspar-hornblende monzonite intrusive (1,100m – 1,220m down hole) that is variable mineralised hosting sheeted quartz veins with chalcopyrite – pyrite ± molybdenum. The timing of the monzonite with the breccia mineralisation is uncertain and is being resolved.

The breccia shows apparent sulphide zonation with the upper intercepts more pyrite rich, zoning towards the centre to more chalcopyrite rich with increasing Au-Cu grades. The breccia has now been intersected by drill holes KSDD007, KSDD011, KSDD012, KSDD028, KSDD031 and KSRC033D and at this early stage indicates that the breccia is approximately 50m in true width, thickening up plunge. The breccia is open along strike to the northwest, and down dip. Diamond core drilling tested down plunge (awaiting results) and RC drilling commenced in June 2021 to test its shallow expression up plunge.



KSDD031 – Chalcopyrite-pyrite-magnetite-calcite-actinolite cemented crackle breccia in calc-potassic altered volcanic from 843.5m



KSDD031 – 0.3m grading 43.4g/t Au, 7.8% Cu from 886.4m – Chalcopyrite-calcite-kspar altered monzonite finger within the breccia.

Boda Two Prospect

The drilling at Boda Two has identified a broad zone of low-grade gold-copper porphyry mineralisation with a gold enriched pyrite zone of mineralisation positioned on its eastern margin. Further drilling is planned to continue to define the extensions to the mineralisation and to identify high-grade zones focused within breccias and intrusions.

Drill Program

Results from several drill holes are being finalised and are expected to be released in the coming weeks. The laboratory has experienced abnormal delays due to border and regional movement restrictions of people and samples. The drilling program continues with one RC and two diamond rigs on site.

Murga Magnetic Prospect

As part of the ongoing exploration program of the NMPP, reconnaissance shallow air-core drilling was conducted at Murga (Finns Crossing) prospect approximately 12km northwest of Boda and positioned within the same northwest structural corridor that hosts both the Kaiser and Boda porphyry discoveries.

A reconnaissance drilling program of 75 air-core drill holes totalling 1,354m was completed along nominal 400 m spaced drill traverses across an untested 2 km in strike length magnetic anomaly at the Murga Prospect.

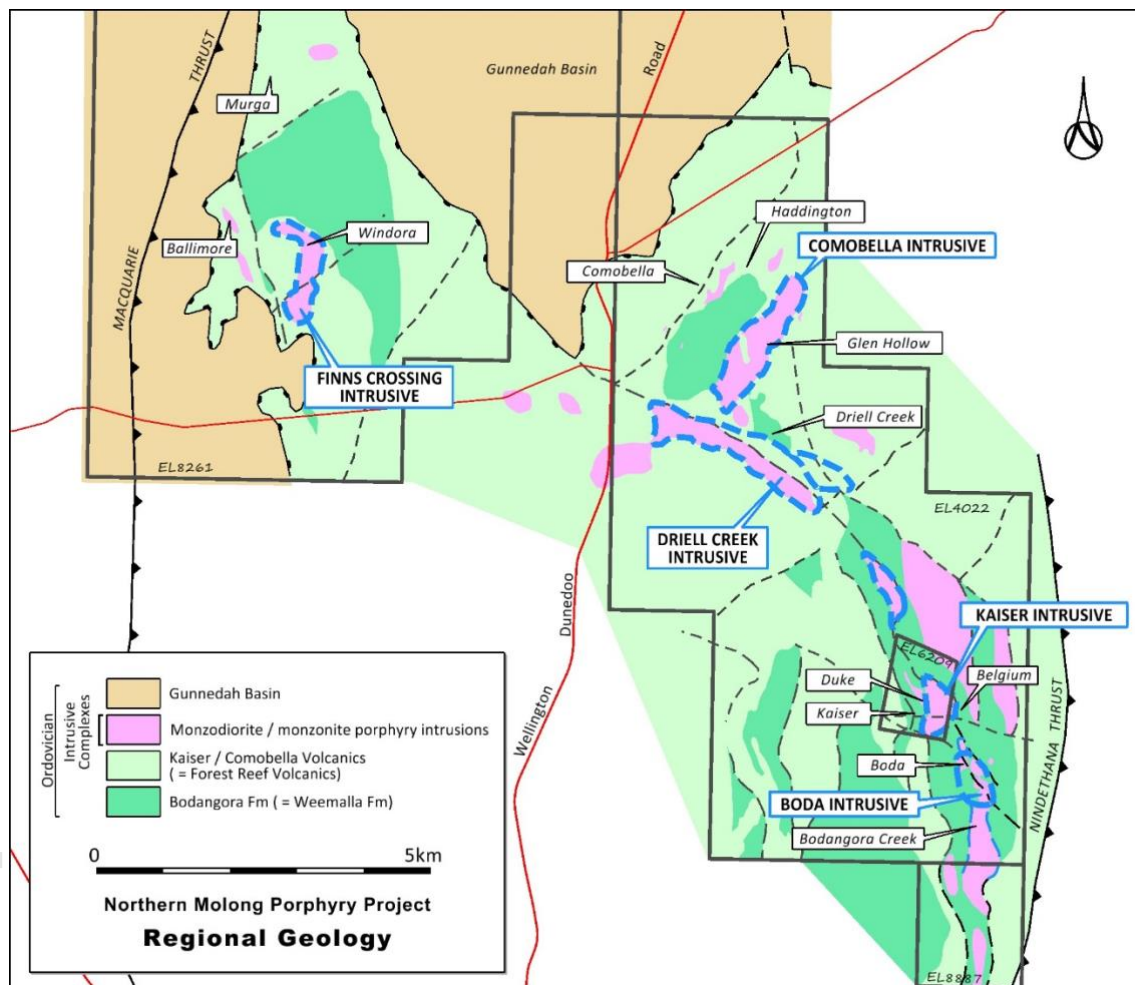
The drilling has defined a shallowly dipping cover sequence of sands with a basal conglomerate over most of the area, deepening to the north. The drilling reached 'refusal' on basement volcanic rock similar in nature to Boda, comprising of andesitic volcanics and intrusives, and volcanoclastics with a strong propylitic alteration overprint associated with substantial magnetite and pyrite mineralisation. Assay results for porphyry pathfinder elements such as antimony, arsenic, molybdenum and zinc were anomalous, and in addition to intersecting low grades of gold and copper confirms the prospectivity of the target with further exploration planned. Significant results of gold and/or copper are presented in Table 1.



Table 1 - Murga Drilling Significant Results – July 2021 (>0.1g/t Au and/or >0.05% 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 (%)
FCAC015	679847	6422537	353	-90	-	36	35	36**	1	0.09	0.05
FCAC035	679914	6422115	356	-90	-	13	3*	9	6	0.23	0.03
FCAC036	679865	6422125	357	-90	-	6	9	3	3	0.12	0.04
FCAC046	679863	6421615	367	-90	-	14	13	14**	1	0.10	0.02
FCAC059	679968	6420879	362	-90	-	11	0	6	6	0.09	0.05
and							10	11	1	0.09	0.07
FCAC063	679772	6420919	369	-90	-	6	0	3	3	0.17	0.03
FCAC067	679576	6420959	376	-90	-	27	15*	18	3	0.50	0.02

* at base of alluvials; ** bottom of hole



GLEN ISLA – GUNDONG (gold); ARMSTRONGS (gold); ELSIENORA (gold); CUDAL (gold-zinc); ROCKLEY PROJECT (gold); TRANGIE (nickel-copper +) and MT CONQUEROR (gold)

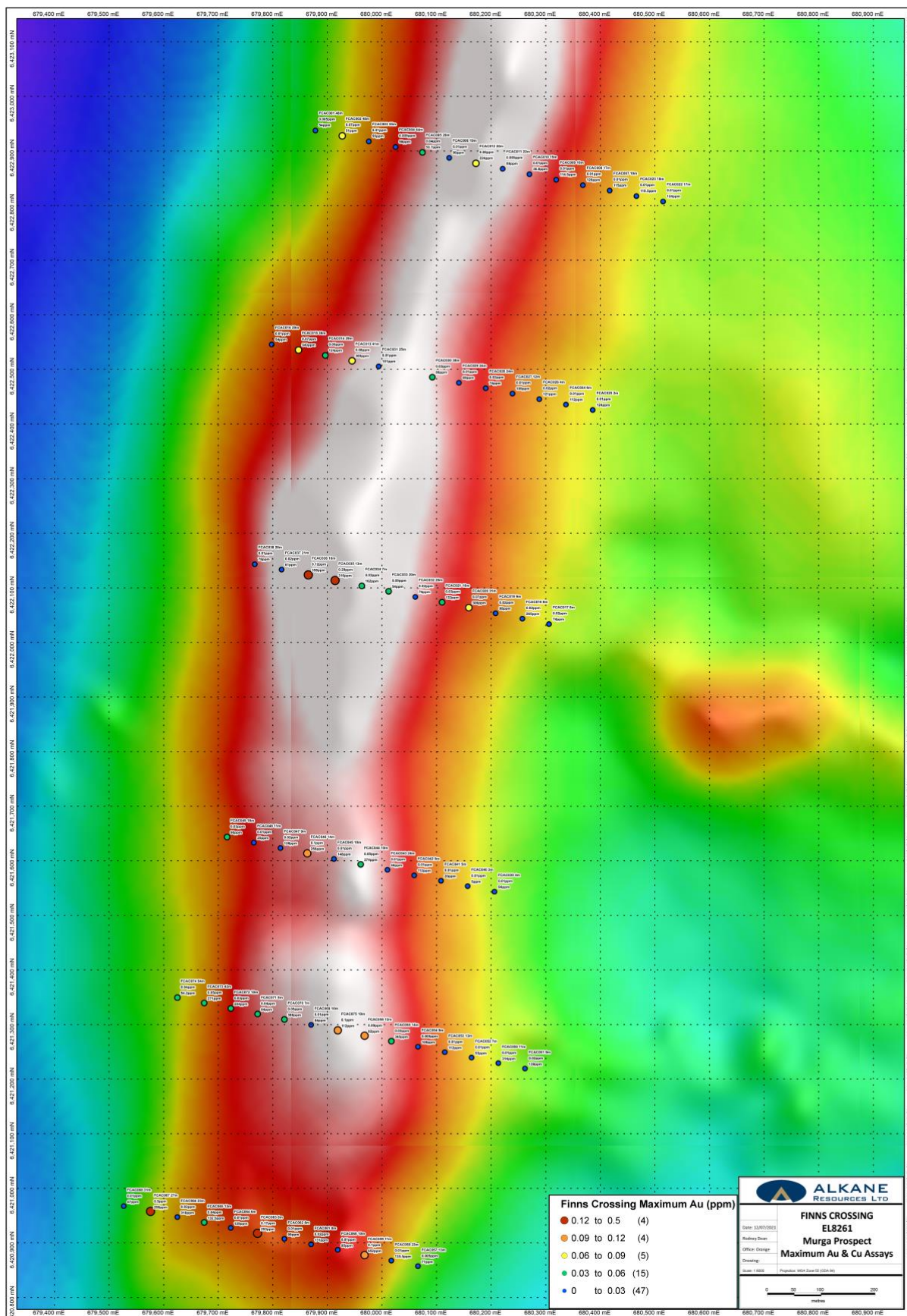
(all Alkane Resources Ltd 100%)

All were inactive.

LEINSTER REGION JOINT VENTURE (nickel-gold)

Alkane Resources Ltd 19.4% diluting, Australian Nickel Investments Pty Ltd (ANI) 79.6%. Two prospects - **Miranda** and **McDonough Lookout**.

Rights and liabilities for the tenement have now been assigned to ANI under an executed deed.





RESOURCES & RESERVES

TOMINGLEY GOLD PROJECT MINERAL RESOURCES (as at 30 June 2020)									
DEPOSIT	MEASURED		INDICATED		INFERRED		TOTAL		Total Gold (Koz)
	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	
	(Kt)	(g/t Au)	(Kt)	(g/t Au)	(Kt)	(g/t Au)	(Kt)	(g/t Au)	
Open Pittable Resources (cut off 0.50g/t Au)									
Wyoming One	624	1.8	428	1.3	107	0.7	1,159	1.5	57
Wyoming Three	86	2.0	16	1.3	33	1.4	135	1.7	8
Caloma	879	1.6	1,016	1.2	824	1.2	2,719	1.3	115
Caloma Tw o	64	2.3	812	2.0	26	1.4	902	2.0	58
Sub Total	1,653	1.6	2,272	1.6	990	1.2	4,915	1.5	238
Underground Resources (cut off 1.3g/t Au)									
Wyoming One	664	2.8	1,390	2.9	427	2.8	2,481	2.9	228
Wyoming Three	46	2.2	24	2.0	20	1.9	90	2.1	6
Caloma	158	2.6	129	2.0	465	1.9	752	2.0	50
Caloma Tw o	-	0.0	785	2.4	426	2.0	1,211	2.3	88
Sub Total	868	2.8	2,328	2.7	1,338	2.2	4,534	2.6	372
TOTAL	2,521	1.8	4,600	2.2	2,328	1.5	9,449	1.9	610

PEAK HILL GOLD PROJECT MINERAL RESOURCES (as at 30 June 2020)						
Deposit	Resource Category	Cut-Off	Tonnes (Mt)	Gold Grade g/t	Gold Metal (Koz)	Copper Metal (%)
Proprietary U/G	Inferred	2g/t Au	1.02	3.29	108	0.15
TOTAL			1.02	3.29	108	0.15

TOMINGLEY GOLD PROJECT SAR MINERAL RESOURCES (as at 16 February 2021)									
DEPOSIT	MEASURED		INDICATED		INFERRED		TOTAL		Total Gold
	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	
	(Kt)	(g/t Au)	(Kt)	(g/t Au)	(Kt)	(g/t Au)	(Kt)	(g/t Au)	
Total Resources (cut off 0.50g/t Au)									
ROSWELL			7,880	2.1	2,190	1.9	10,070	2.0	660.4
SAN ANTONIO			5,930	1.8	1,390	1.3	7,320	1.7	406.0
TOTAL			13,810	2.0	3,580	1.7	17,390	1.9	1,066

TOMINGLEY GOLD PROJECT MINERAL RESERVES(as at 30 June 2020)							
DEPOSIT	PROVED		PROBABLE		TOTAL		Total Gold
	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	(Koz)
Open Pittable Reserves (cut off 0.50g/t Au)							
Wyoming One	0	0.0	0	0.0	0	0.0	0
Wyoming Three	0	0.0	0	0.0	0	0.0	0
Caloma	450	1.7	119	1.2	569	1.6	30
Caloma Two	0	0.0	0	0.0	0	0.0	0
Stockpiles	207	0.8	0	0	207	0.8	6
Sub Total	657	1.1	119	1.2	776	1.4	36
Underground Reserves (cut off 1.3g/t Au)							
TGO underground	573	1.9	1618	2.0	2,191	2.0	140
Sub Total	573	1.9	1,618	2.0	2,191	2.0	140
TOTAL	1,230	1.8	1,737	1.9	2,967	1.8	176



Competent Person

Unless otherwise advised above, the information in this report that relates to exploration results is based on, and fairly reflects, information compiled by Mr David Meates MAIG, (Alkane Exploration Manager NSW) who has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Meates has provided his prior written consent to the inclusion in this report of the matters based on his information in the form and context in which it appears.

Unless otherwise advised above or in the Announcements referenced, the information in this report that relates to mineral resources and ore reserves is based on information compiled by Mr D I Chalmers, FAusIMM, FAIG, (director of the Company) 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 Chalmers consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

Previously Reported Information

The information in this report that references previously reported exploration results and mineral resources is extracted from the Company's ASX market announcements released on the date noted in the body of the text where that reference appears. The previous market announcements are available to view on the Company's website or on the ASX website (www.asx.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of mineral resources or ore reserves, that all material assumptions and technical parameters underpinning the estimates in the original market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

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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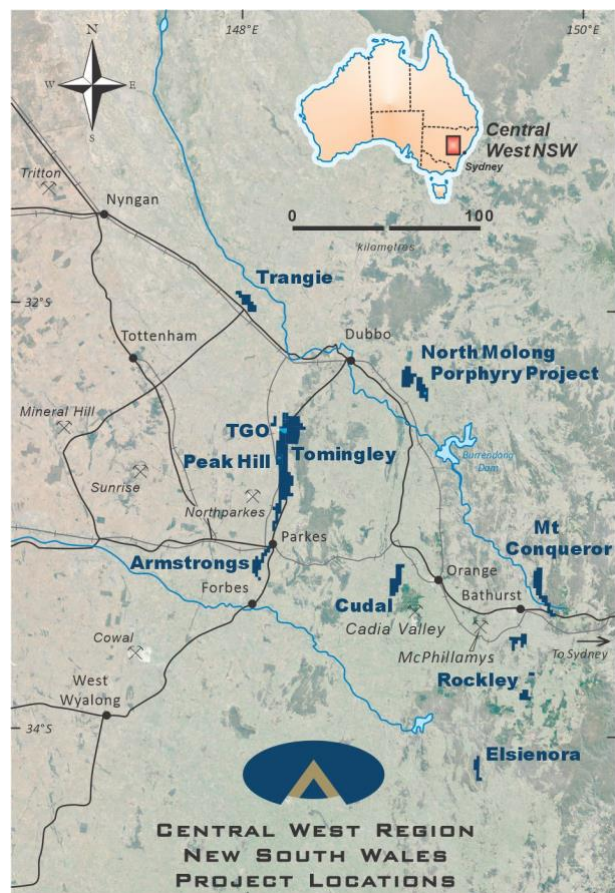
Alkane Resources is poised to become Australia's next multi-mine gold producer.

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

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

Alkane's exploration success includes the landmark porphyry gold-copper mineralisation discovery at Boda in 2019. With a major drill program ongoing at Boda, Alkane is confident of further consolidating Central West New South Wales' reputation as a significant gold production region.

Alkane's gold interests extend throughout Australia, with strategic investments in other gold exploration and aspiring mining companies, including ~19.8% of Genesis Minerals (ASX: GMD) and ~9.7% 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 – Murga Prospect July 2021

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"> Air core (AC) drilling was undertaken by Durock Drilling Pty Ltd AC 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"> AC Drilling – the total sample (~10-20kg) 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. In addition to the composite sampling a bottom of hole 1m interval is sampled individually and submitted to the laboratory separately for assay. Gold was determined by fire assay fusion of a 50g charge with an AAS analytical finish. A multi-element suite was determined either using a multi-acid digest for the 1m samples or an aqua regia digest for the composite samples, both 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"> AC drilling using 75mm rods. All holes drilled to refusal.
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"> AC 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 Drill cyclone is cleaned 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



Criteria	JORC Code explanation	Commentary
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"> N/A
	<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. In addition the bottom of hole 1m is individually spear sampled into a calico bag and forwarded separately to the laboratory. Laboratory Preparation – the entire sample (~2kg) 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"> Duplicate AC samples are collected for both composite intervals and 1m 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.



Criteria	JORC Code explanation	Commentary
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, bottom of hole 1m samples are digested by near-total mixed acid digest with each element determined by ICP Atomic Emission Spectrometry or ICP Mass Spectrometry. Composited samples are digested by aqua regia with a ICP Atomic Emission Spectrometry.
	<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 and assaying	<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
	<ul style="list-style-type: none"> The use of twinned holes. 	<ul style="list-style-type: none"> No twinned holes have been drilled at this early stage of exploration
	<ul style="list-style-type: none"> Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. 	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> No adjustments made
Location of data points	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Drillholes are laid out and then picked up at the completion of drilling using hand-held GPS (accuracy $\pm 3m$).
	<ul style="list-style-type: none"> Specification of the grid system used. 	<ul style="list-style-type: none"> GDA94, MGA (Zone 55)



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> Drillhole collars are surveyed using hand held GPS ($\pm 5\text{m}$) by the geologist on completion.
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results.. 	<ul style="list-style-type: none"> At this early exploration stage, data spacing is variable with the focus on identifying new zones of mineralisation
	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Early stage, reconnaissance drilling, no resource estimations being undertaken
	<ul style="list-style-type: none"> Whether sample compositing has been applied 	<ul style="list-style-type: none"> No sampling compositing has been applied
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 	<ul style="list-style-type: none"> Not understood at this early stage of reconnaissance drilling.
	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Not understood at this early stage of reconnaissance drilling.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> 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	<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.
	<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 2023. EL8887 expires on 6 February 2026. EL8261 expires on 30 April 2023.
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"> MURGA PROSPECT (Finns Crossing): Only shallow reconnaissance air core drilling (49 drill holes) has been previously completed over the southern flank of the Murga magnetic feature by CRAE and Newmont.
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
	<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"> Too many holes to report and only reconnaissance and shallow in nature, only the drill holes with significant results for Au and/or Cu were reported.
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 0.1g/t Au and/or 0.05% Cu although grades lower than this may be present internally (internal dilution). No top cut has been used. Short intervals of high grades that have a material impact on overall intersection are reported as separate (included) intervals
Relationship between mineralisation	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. 	<ul style="list-style-type: none"> Down hole length, true width not known at this early stage of reconnaissance drilling.



Criteria	JORC Code explanation	Commentary
<i>widths and intercept lengths</i>	<p>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported</p> <p>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').</p>	
<i>Diagrams</i>	<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 magnetics with drill collars are included in the body of the announcement.
<i>Balanced reporting</i>	<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"> Too many holes to report and only reconnaissance and shallow in nature, only 7 drill holes with significant results for Au and/or Cu were reported. Remaining 68 of 75 drill holes were unreported and considered not to contain significant Au and/or Cu grade.
<i>Other substantive exploration data</i>	<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"> Other than drilling noted above and minor geophysical data which has been used to assist interpretations, no other material exploration data is available for reporting.
<i>Further work</i>	<ul style="list-style-type: none"> The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). 	<ul style="list-style-type: none"> It is recommended that further drilling is undertaken within the Finns Crossing licence to further define its targets.
	<ul style="list-style-type: none"> Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive 	<ul style="list-style-type: none"> See figures included in the announcement.