

21 October 2019



Quarterly Activities Report to 30 September 2019

Tomingley Gold Operations

- Development of the underground operation continues on budget and on schedule.
- Quarter Results
 - Low grade stockpiles were processed during the quarter ahead of underground stope production commencement.
 - Gold production was above forecast at 7,497 ounces.
 - Site operating cash costs were A\$1,000/ounce with AISC of A\$1,268/ounce.
 - Gold sales were 6,997 ounces for revenue of A\$15.0M at an average price of A\$2,151/ounce.
- Guidance for FY20 has been increased to 30,000 to 35,000 ounces of gold at an AISC of A\$1,250 to A\$1,400 per ounce, largely due to the continued over-reconciliation of the low grade stockpile material.
- Ore in addition to the existing underground resource model has been identified, and together with a review of cut-off grade for stope design is expected to lead to increased tonnage and potential mine life extensions. The mine plan modelling is being updated in the coming quarter to factor in any additional mineralisation.
- On the back of strong results from exploration and resource drilling to the immediate south of Tomingley, the Company is expediting the process to move to mine development. The Company has commenced consultation with some of the key stakeholders, including landholders and regulators as part of the approvals process.
- Purchasing of an additional underground fleet and supporting infrastructure is underway in order to progress mine and exploration development as soon as approvals are received.

Exploration

- The results of exploration drilling at the Northern Molong Porphyry Project (Boda drilling) were reported during the quarter (ASX Announcement 9 September 2009). Drill intercept highlights include:

KSDD003	502m @ 0.48g/t gold, 0.20% copper from 211 metres
incl	313m @ 0.62g/t gold, 0.17% copper from 228 metres
incl	12m @ 3.28g/t gold, 0.67% copper from 419 metres
and	35.8m @ 0.21g/t gold, 0.49% copper from 735 metres to EOH
- Resource drilling has continued at the Roswell and San Antonio prospects, results will be incorporated into the first Resource Model, expected to be released in late November.

CONTACT : NIC EARNER, MANAGING DIRECTOR, ALKANE RESOURCES LTD, TEL +61 8 9227 5677
INVESTORS : NATALIE CHAPMAN, CORPORATE COMMUNICATIONS MANAGER, TEL +61 418 642 556
MEDIA : HILL+KNOWLTON STRATEGIES: MARCHA VAN DEN HEUVEL, TEL +61 2 9286 1226 OR +61 468 960 457



- The Company will continue with resource definition drilling, expected to comprise of a further 50,000m of predominantly RC drilling, over the remainder of the financial year.
- Planning is currently underway for an exploration program to test targets between El Paso and the Peak Hill Gold Mine within the financial year.

Corporate

- Cash, bullion and listed investments position totalled A\$73.9M
 - A\$53.5M in cash, bullion on hand at fair value of A\$4.9M, and A\$15.5M of listed investments at market value.
- Agreed to subscribe for a 15% strategic stake in ASX listed gold developer Genesis Minerals Ltd (ASX:GMD).
- Continues to hold 13.7% of ASX listed gold developer Calidus Resources Ltd (ASX:CAI).

Dubbo Project

- The commercial scale pilot plant being constructed as part of the investment in Clean Metal Processing Technology with Ziron Tech of South Korea is due to be commissioned in the March quarter.
- A demerger and listing of Australian Strategic Materials is under active consideration by the Alkane Board. Consultation with regulators is underway.



TOMINGLEY GOLD OPERATIONS

Tomingley Gold Operations Pty Ltd 100%

Tomingley Gold Operations (TGO) 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

TGO continues to perform very well. Underground development from the base of the Wyoming One pit continues and is both ahead of schedule and on budget. TGO processed low grade stockpiles through the quarter, and will process the low grade stockpile for the remainder of the year before processing the underground ore. Some underground development ore will be processed this quarter to confirm grade and recovery assumptions.

A total of 7,497 ounces of gold were poured for the quarter. The site cash costs for the quarter were A\$1,000/oz with an all-in sustaining cost (AISC) of A\$1,268/oz.

Guidance for FY20 has been increased to production of 30,000 to 35,000 ounces of gold at an AISC of A\$1,250 to A\$1,400 per ounce. This is largely due to the continued over-reconciliation of the low grade stockpile material, which will be processed until mid-December. At this time the processing plant will enter a scheduled shutdown until mid-February and restart processing of underground ore at a 50% capacity rate, as planned.

Gold sold for the quarter was 6,997 ounces at an average sales price of A\$2,151/oz, generating revenue of A\$15.0M. Bullion stocks were 2,226 ounces (fair value of A\$4.9M at quarter end).

Site operating cash flow¹ was A\$4.8M for the quarter.

Underground Mining Development

Underground development has continued ahead of schedule with both the main decline and vent portals progressing. Main decline development has now gone past the first ore level, with grade control drilling continuing. Development to date is shown in the figure below.

Additional ore to the original resource model has been identified, and together with a review of cut-off grade for stope design give positive indications of increased tonnage and potential mine life extensions. The mine plan is currently being reviewed and updated accordingly in the coming quarter.

The mining team is achieving excellent productivity with development of over 300 metres per month achieved off the single jumbo for the last six months.

Tomingley Project Extension

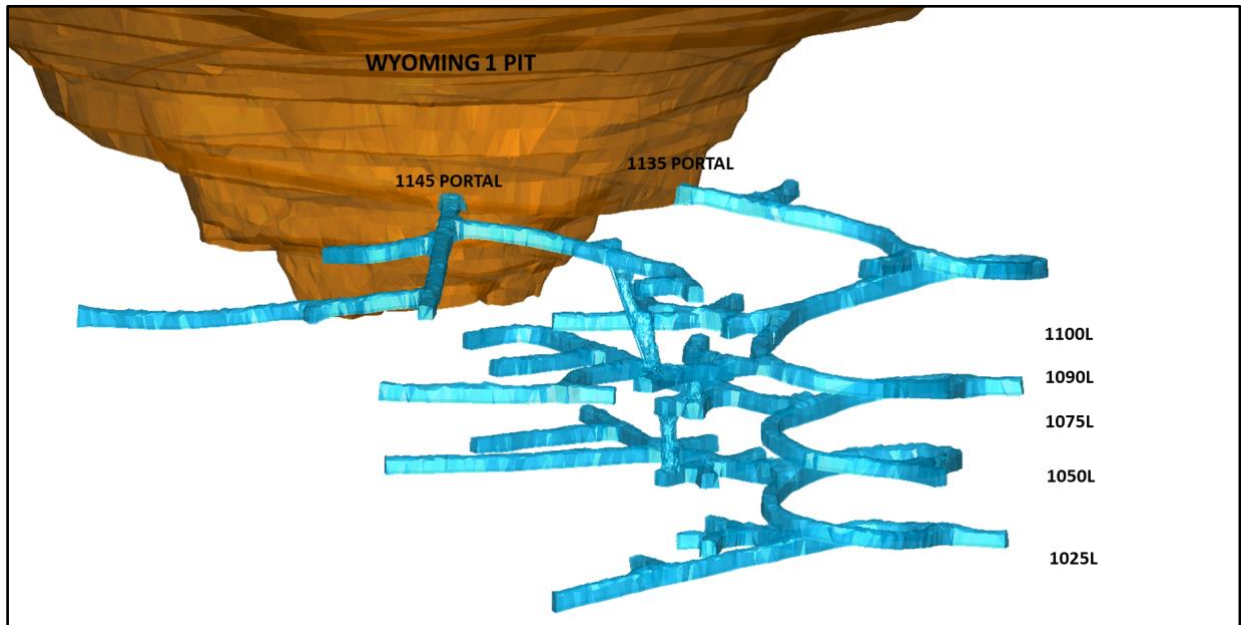
The very encouraging results being seen from exploration and resource drilling to the immediate south of Tomingley (ASX Announcements 9 July, 12 August and 23 September 2019) have led the Company to take steps that could enable future mine development in that area.

The Company has commenced consultation with some of the key stakeholders, including landholders and regulators. It is intended to first seek approval to develop an exploration drive, and should exploration and other assessments prove warranted, to then seek approval for mining development both underground and open cut.



Purchasing of an additional underground fleet (jumbo, loader, truck, IT) as well as supporting infrastructure is underway in order to progress exploration development as soon as approvals are received. This will be purchased in the coming quarter and is forecast to cost ~\$4.5M.

Tomingley Underground Development as at 30 September 2019





TGO FY 2020 Quarterly and Annual Production Figures

TGO Production		FY 2019	Sep Quarter 2019	FY 2020
Ore mined	Tonnes	400,187	26,392	26,392
Grade	g/t	1.68	1.73	1.73
Ore milled	Tonnes	998,703	289,282	289,282
Head grade	g/t	1.68	0.96	0.96
Recovery	%	91.7	87.4	87.4
Gold poured	Ounces	48,969	7,497	7,497
Revenue Summary				
Gold sold	Ounces	52,068	6,997	6,997
Average price realised	A\$/oz	1,777	2,151	2,151
Gold revenue	A\$M	92.5	15.0	15.0
Cost Summary				
Mining ³	A\$/oz	254	31	31
Processing	A\$/oz	401	768	768
Site Support	A\$/oz	93	201	201
C1 Site Cash Cost	A\$/oz	749	1,000	1,000
Royalties	A\$/oz	49	47	47
Sustaining capital	A\$/oz	42	70	70
Rehabilitation	A\$/oz	52	30	30
Corporate	A\$/oz	55	122	122
AISC ²	A\$/oz	947	1,268	1,268
Bullion on hand	Ounces	1,727	2,226	2,226
Stockpiles				
Ore for immediate milling	Tonnes	677,029	430,227	430,227
Grade	g/t	0.71	0.77	0.77
Contained gold	Ounces	15,368	10,583	10,583

¹**Operating cashflow** = As prescribed by AASB 107 Statement of Cashflows where exploration outflows and development outflows are grouped under investing cashflows. Note that the Quarterly Cashflow (Appendix 5B) includes those outflows under operating cashflows. Tomingley underground development expenditure was included under investing cashflows in Appendix 5B as production from underground has not commenced.

²**AISC** = 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 produced. AISC does not include share based payments or net realisable value provision for ore inventory.

³Surface works only for Sep Qtr 2019

Regional Exploration

An extensive exploration program focused on the immediate area to the south of the TGO mine has continued as part of the plan to source additional ore feed, either at surface or underground, in the future for TGO. At the start of the quarter Alkane defined an Exploration Target of approximately 15.8 to 23.8 million tonnes at a grade ranging between 1.7 to 2.2 g/t gold across its three primary prospects, Roswell, San Antonio and El Paso, which have over 2,500 metres of combined strike length (ASX Announcement 8 July 2019). The potential quantity and grade of the Exploration Target is conceptual in nature and therefore is an approximation. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. The Exploration Target has been prepared and reported in accordance with the 2012 edition of the JORC Code.



For the remainder of the quarter the program has focussed on both increasing the drilling density within the Roswell and San Antonio prospects as well as testing strike extensions. The first series of results have been published in two separate announcements (ASX Announcements 12 August and 23 September 2019). Significant results from the quarter's drilling include:

San Antonio prospect:

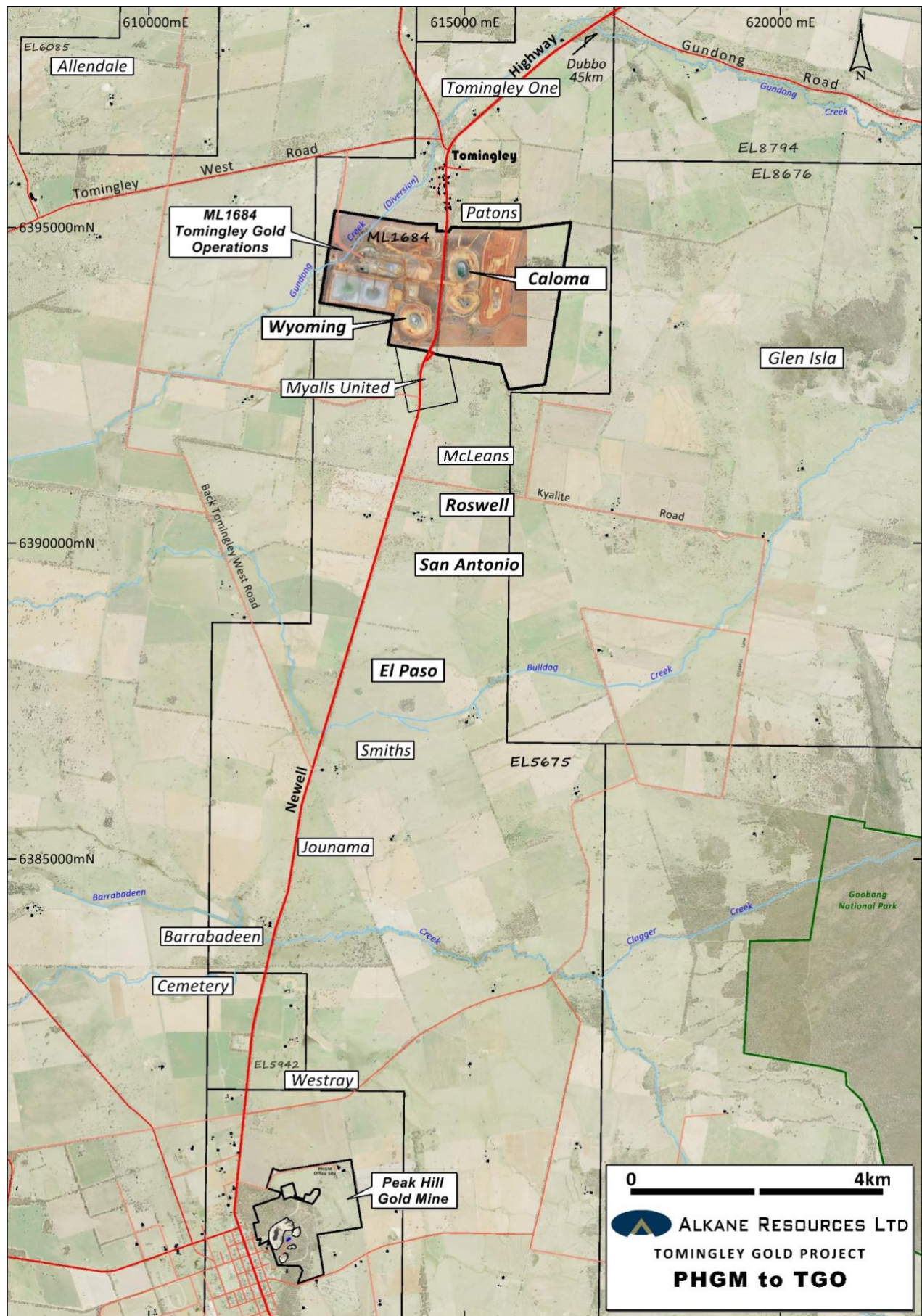
RWRC075 incl	36 metres grading 5.09g/t Au from 30 metres; 12 metres grading 9.02g/t Au from 51 metres.
RWRC078 and incl	15 metres grading 1.66g/t Au from 30 metres; 39 metres grading 3.59g/t Au from 75 metres; 3 metres grading 10.7g/t Au from 84 metres.
RWD004 incl and incl	12 metres grading 2.12g/t Au from 164 metres; 2 metres grading 7.65g/t Au from 173 metres; 9.7 metres grading 8.01g/t Au from 215.3 metres; 2 metres grading 23.2g/t Au from 219 metres.
RWRC097 incl	42 metres grading 2.61g/t Au from 42 metres; 12 metres grading 6.70g/t Au from 48 metres.
RWRC101 incl	24 metres grading 6.30g/t Au from 147 metres; 12 metres grading 9.92g/t Au from 147 metres.
RWRC103 and incl	9 metres grading 2.33g/t Au from 24 metres; 44 metres grading 2.76g/t Au from 45 metres; 3 metres grading 16.6g/t Au from 57 metres.

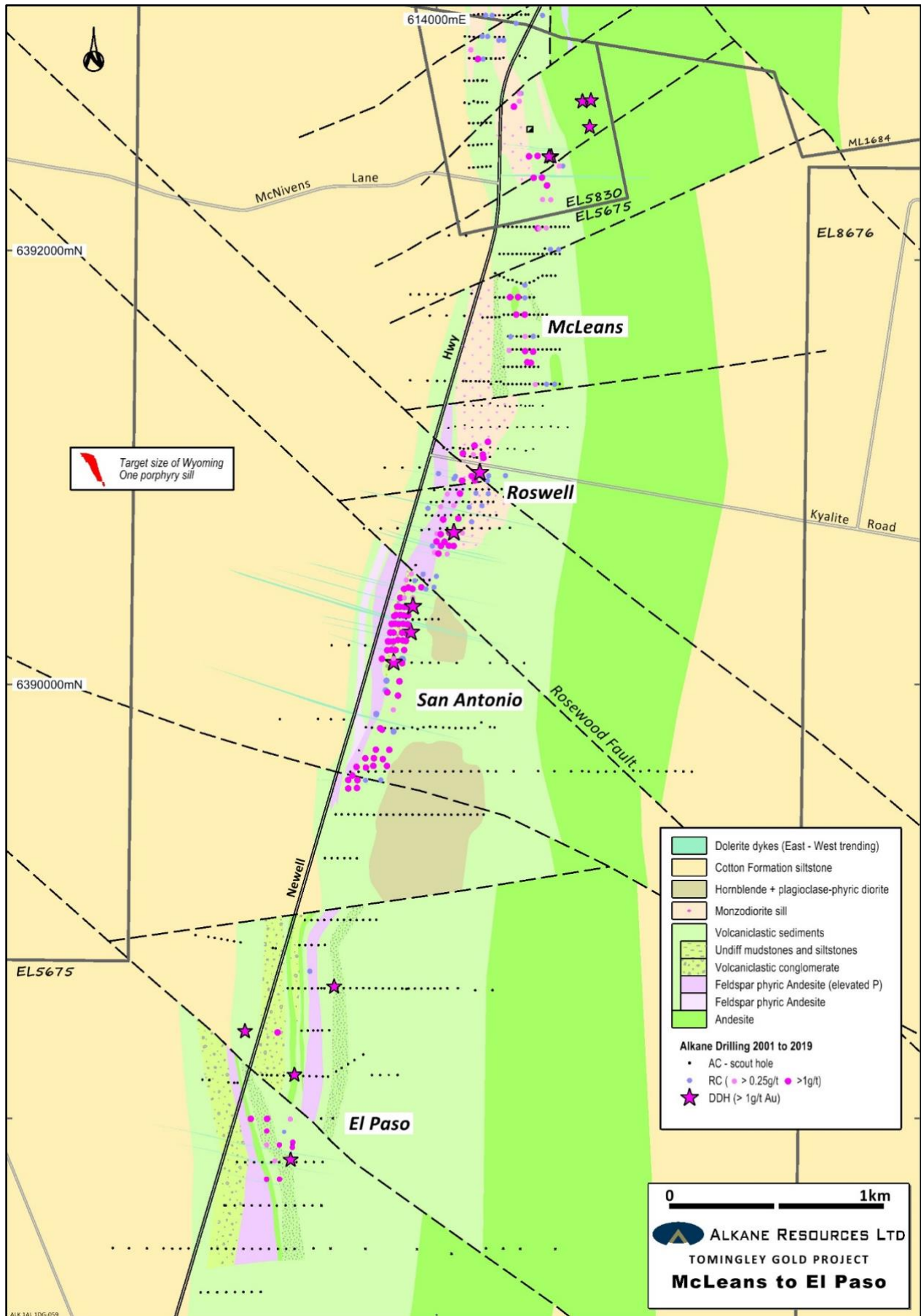
Roswell prospect:

RWRC090 incl	45 metres grading 3.66g/t Au from 195 metres; 9 metres grading 9.64g/t Au from 220 metres.
RWRC109 incl also	24 metres grading 5.33g/t Au from 186 metres; 3 metres grading 16.0g/t Au from 188 metres; 3 metres grading 21.8g/t Au from 194 metres.

These drill results, as well as slightly deeper drilling occurring in the current quarter, will be incorporated into the first Resource Model, expected to be released in late November. The Company will continue with resource definition drilling, expected to comprise of a further 50,000m of predominantly RC drilling, over the remainder of the financial year.

Planning is currently underway for an exploration program to test targets between El Paso and the Peak Hill Gold Mine within the financial year.







Peak Hill Gold Mine (PHGM)

The Peak Hill Gold Mine (PHGM) is located 15km south of Alkane's operating Tomingley Gold Operations (TGO) processing facility, was operated by Alkane from 1996 to 2005 as an open cut heap leach and is now substantially rehabilitated. PHGM remains an active Mining Lease.

A ten hole large diameter core diamond drilling program was completed to provide mineralised samples from within the Proprietary deposit for metallurgical test work. This program showed significant gold mineralisation consistent with the existing Peak Hill Gold Mine (PHGM) Mineral Resource (ASX Announcement 18 October 2019). Significant intercepts include:

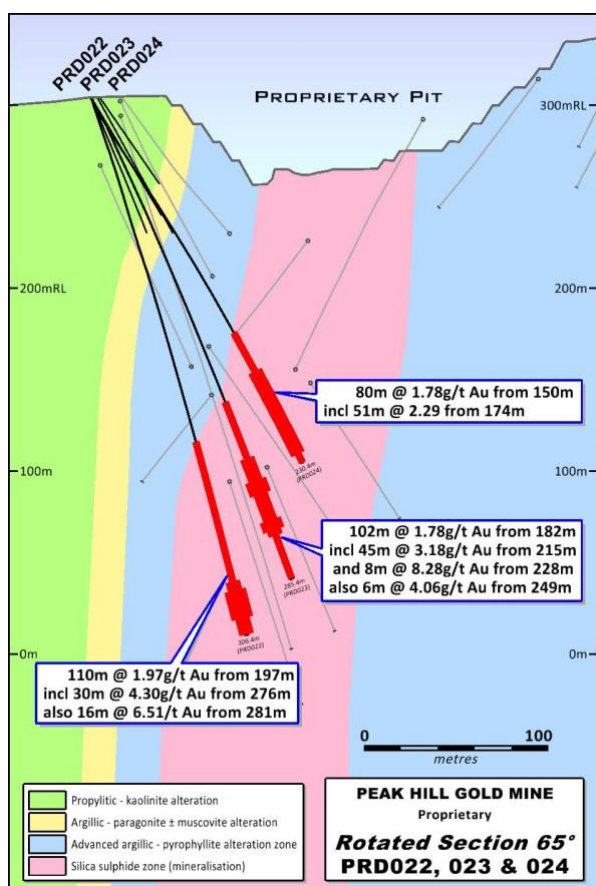
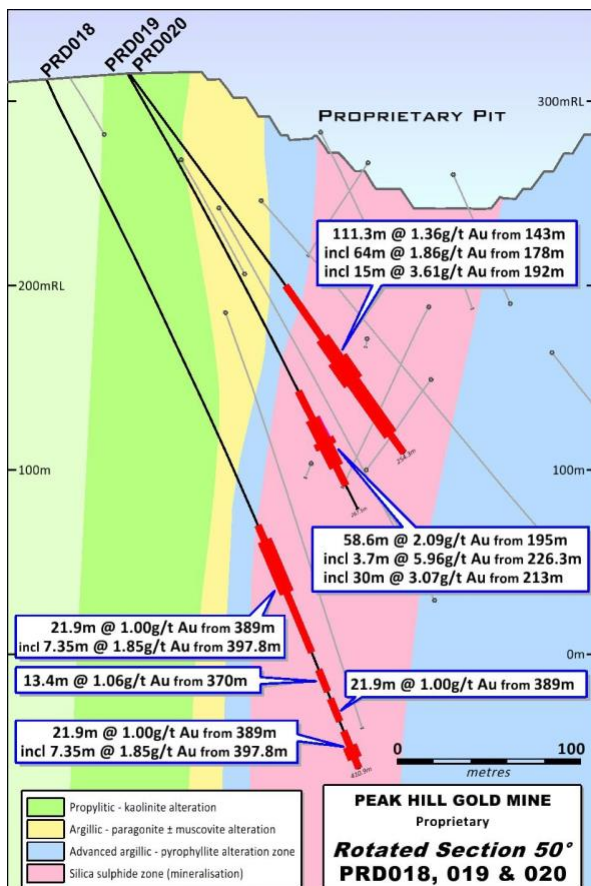
PRD022 110 metres grading 1.97g/t Au from 197 metres;
Incl 30 metres grading 4.30g/t Au from 276 metres;
Also 16 metres grading 6.51/t Au from 281 metres.

PRD023 102 metres grading 1.78g/t Au from 182 metres;
incl 45 metres grading 3.18g/t Au from 215 metres;
and 8 metres grading 8.28g/t Au from 228 metres;
also 6 metres grading 4.06g/t Au from 251 metres.

Unlike the prospects between TGO and PHGM, the Proprietary deposit is moderately refractory in nature at depth. The metallurgical test work is designed to test modern gold recovery techniques on the samples with a view to understanding the opportunity for future underground development at PHGM.

The initial testwork program intends to test the following methods of treating predominantly refractory ores that have become standard within the industry, namely flotation with fine regrind, atmospheric leaching and bacterial leaching.

The program is expected to be completed with results available for assessment in Q1 2020.



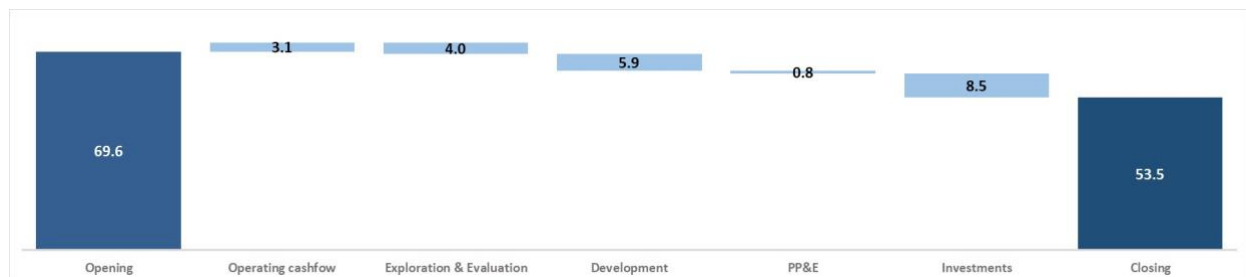


CORPORATE

Cash, Bullion and Listed Investments

Description	Sep-19 Quarter A\$M	Jun-19 Quarter A\$M
Cash	53.5	69.6
Bullion	4.9	3.4
Cash and bullion sub-total	58.4	73.0
Listed investments	15.5	7.8
Total cash, bullion and listed investments	73.9	80.8

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



In accordance with its strategy of investing part of its cash balance in junior gold mining companies and projects that meet its investment criteria, namely potential investments that have high exploration potential and/or require near term development funding, the Company continues to hold its investment into gold exploration company Calidus Resources Ltd (ASX:CAI).

During the quarter the Company took up shares in a placement with Genesis Minerals (ASX:GMD). The Company's investment was for ~\$6M and as a result holds 15% of Genesis issued shares. Genesis' Ulysses Gold Project, located close to existing mining infrastructure 30km south of Leonora, has existing JORC Mineral Resources (per Genesis ASX Announcement dated 9 October 2018) of 7.1Mt at 3.3g/t for 760,000 ounces of contained gold, with a high grade underground portion of this resource of 4.1MT at 4.7g/t for 628,000 ounces at a 2g/t cut-off grade. Genesis' other major exploration project interest is in the Barimaia Gold Project, located close to Mount Magnet in WA's Murchison district. The Company has a right to a board seat.

The Company continues to evaluate other opportunities for investment.

Gold Forward Sale Contracts & Puts

At the end of the quarter the Company holds the following forward sale contracts;

Quarter	Average Forward Price A\$/oz	Delivery Ounces
December 2019	1,878	2,990
March 2020	1,867	4,900
June 2020	1,827	5,090
September 2020	1,818	4,130
December 2020	1,847	5,640
March 2021	1,890	5,000
Total	1,854	27,750



The Company also holds 28,400 oz of put options priced at A\$1,800/oz to manage expected revenue from processing the low-grade stockpiles and longer dated gold deliveries.

DUBBO PROJECT – zirconium, hafnium, niobium, yttrium, rare earth elements

Australian Strategic Materials Ltd (ASM) 100%

The Dubbo Project (DP) remains construction ready, with the mineral deposit and surrounding land wholly owned, all material State and Federal approvals in place, an established flowsheet and a solid business case.

Product Development

Recognition of the significance of the Zircon Tech clean metals process joint venture (ASX Announcement 6 June 2019) by major international companies has resulted in increased engagement. The applicability of the process may extend well beyond the Dubbo Project and could offer the prospect of replacing other carbon reduction processes for most of the key industrial metals and alloys, including aluminium, titanium, and magnesium.

The periodic table shown below highlights the potential suitability of the Zircon Tech electrolytic process, showing the main revenue drivers for the Dubbo Project have already been experimentally verified (Zr, Hf, Pr, Nd), while others are suitable but not verified, or are theoretically possible. More than 70% of revenue for the Dubbo Project is ultimately used in the form of metals or alloys, which highlights the importance of the joint venture in South Korea, and the potential for additional value capture across the supply chain compared to selling chemicals or oxides as detailed in the Dubbo Project Update (ASX Announcement 4 June 2018).

Suitability of Ziron Tech Electrolysis process

Suitable and experimentally verified

Suitable but not verified

Theoretically possible

H₂ reduction is better

H																				He
Li	Be												B	C	N	O	F	Ne		
Na	Mg												Al	Si	P	S	Cl	Ar		
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr			
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe			
Cs	Ba	Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn			
Fr	Ra	Lr	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg										

La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No

Multiple parties in South Korea and other countries have expressed interest in seeing the results from the commercial scale pilot plant, which is currently being constructed and is due to be commissioned in the March quarter. The first priority of the plant is the production of zirconium and hafnium metals for high value applications, which addresses current supply chain risks from China, as well as market concentration by a few dominant companies. Successful plant testing is expected to allow the provision



of pure metal and alloy samples, including magnet rare earths, aerospace alloys, and other specialty markets. Successful metal production is expected to assist in obtaining offtake agreements with major companies for metals, creating demand pull for the Dubbo Project itself and potentially accelerating its path to funding.

Product Marketing

Appreciation of the growing risk of supply disruption for rare earths, zirconium and hafnium materials is driving continued interest in supply from the Dubbo Project as a sustainable and responsible alternative from Australia. The ground water crisis in northern China for rare earths and zirconium production is a new risk which has been communicated by Alkane in recent presentations, a risk which has been highlighted by plant closures within China in the past year.

The trade disputes between the United States and China, and South Korea and Japan, combined with the joint venture with Zircon Tech, has created new opportunities and interest in the Dubbo Project and highlighted supply chain vulnerabilities for established companies, particularly for zirconium, hafnium, and rare earths.

Zirconium chemicals development continued during the quarter, with further approvals obtained for samples. Additional zirconium samples are currently being prepared, including an examination of how to increase capacity of the ANSTO demonstration plant to larger scale quantities for metal conversion trials in South Korea.

Alkane presented at the Zircon Industry Association conference in Dubai in early September and will present at the Metal Events rare earths conference in Kuala Lumpur, and also attend the TZMI mineral sands conference in Singapore in November.

Market Prices

Prices for all products continue to be stable across most product groups, with the exception of niobium which has reflected the fall in vanadium prices this year.

Strategy

A demerger and listing of Australian Strategic Materials is under active consideration by the Alkane Board. Consultation with regulators is underway. Further information will be provided once the board has received and evaluated the consultation feedback.



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

Alkane Resources Ltd 100%

The Boda and Kaiser Prospects are part of the Northern Molong Porphyry Project (NMPP) which incorporates exploration licences covering an area of 110km² of the northern Molong Volcanic Belt (MVB), in the Central West of New South Wales. The northern MVB, within the eastern Lachlan Orogen is considered highly prospective for large porphyry gold-copper mineralisation, as demonstrated by the world class Cadia Valley porphyry district, located to the south.

The results of exploration drilling at the NMPP were reported during the quarter (ASX Announcement 9 September 2009).

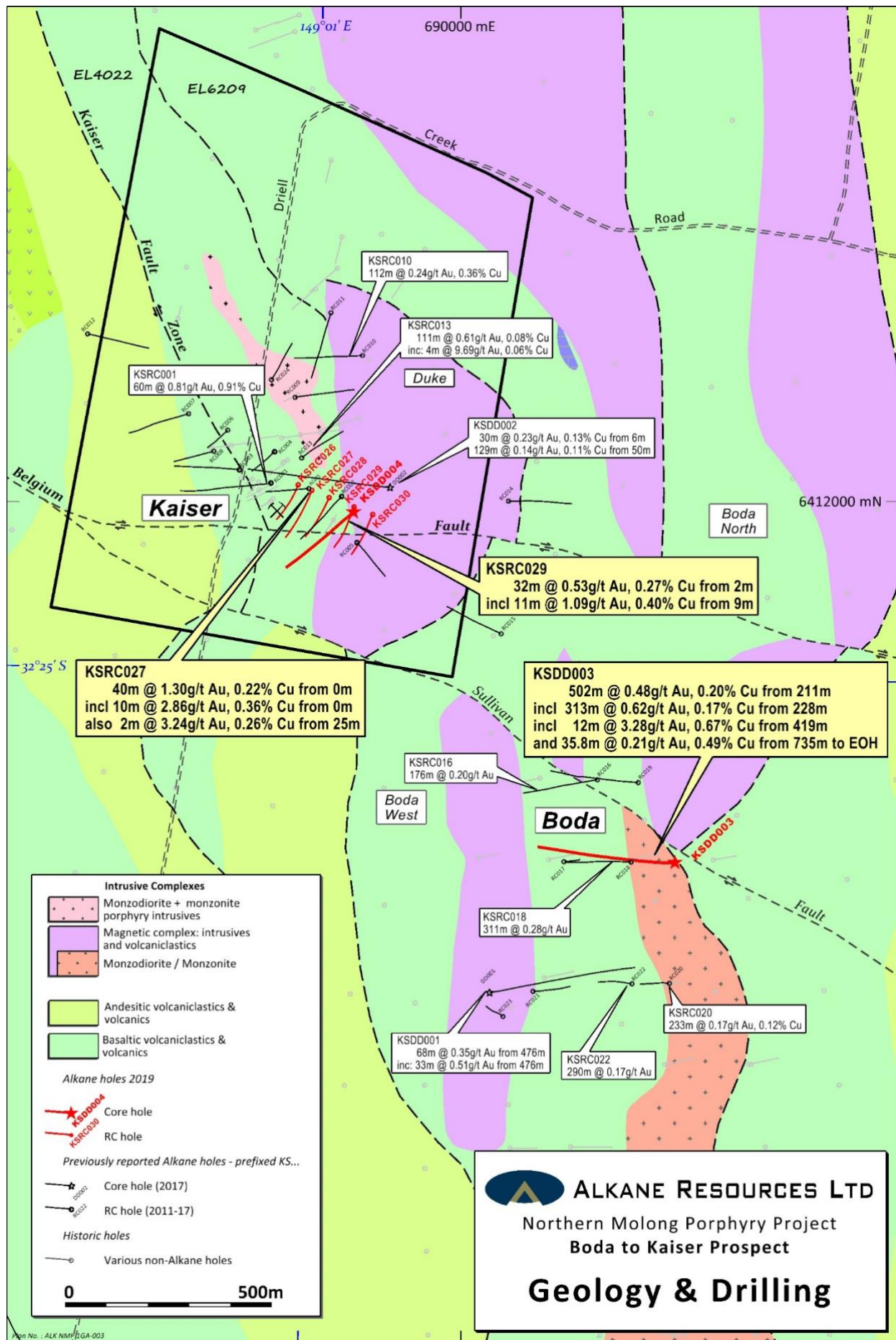
The Boda Prospect was tested with one diamond core drill hole (KSDD003) 200 metres beneath a zone of gold mineralisation previously defined in RC drilling (311m @ 0.28g/t Au from 19m to EOH in KSRC018). KSDD003 assay results indicate an increase in thickness and grade of porphyry gold-copper mineralisation at depth. Drill intercept highlights include:

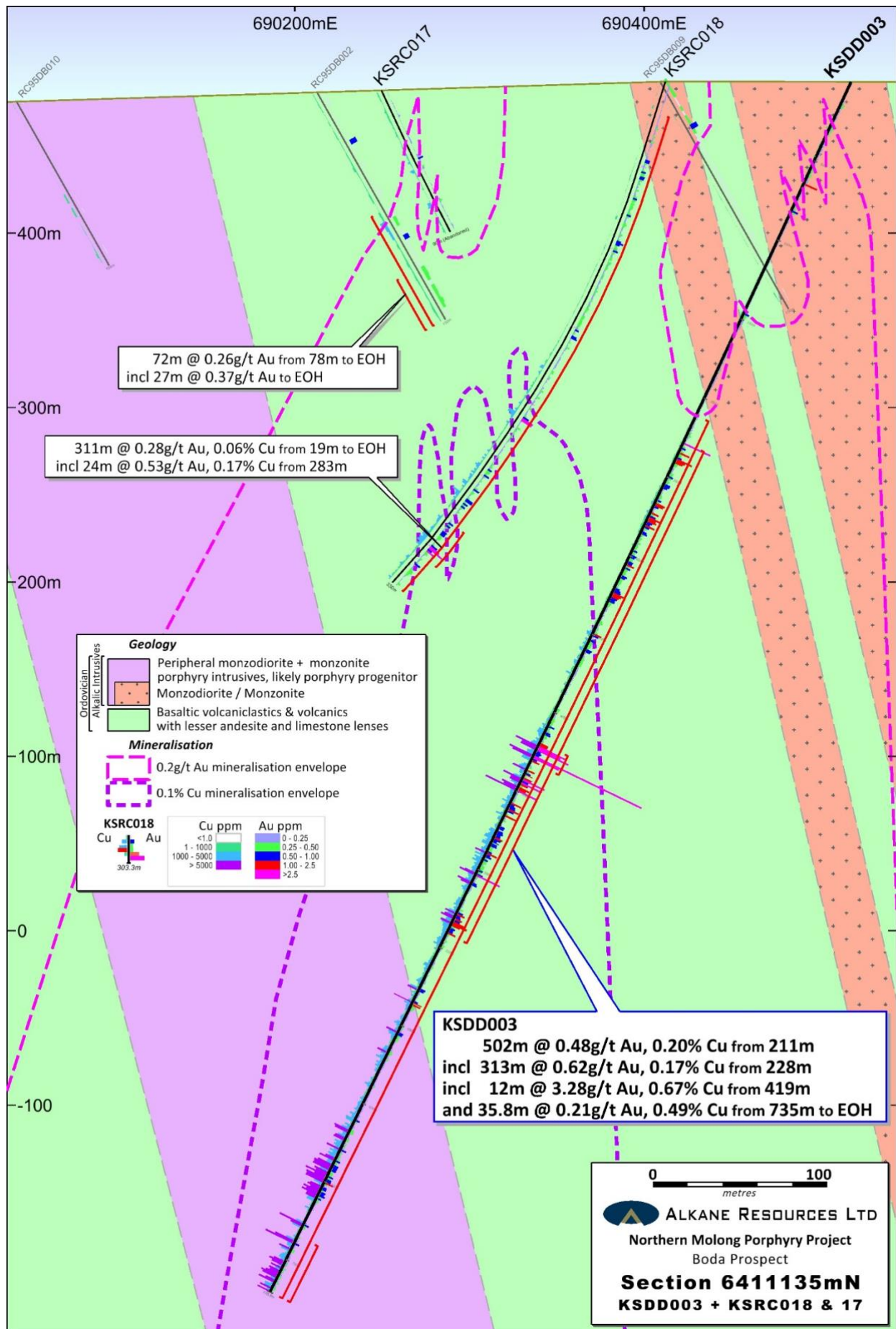
KSDD003	502m @ 0.48g/t gold, 0.20% copper from 211 metres
incl	313m @ 0.62g/t gold, 0.17% copper from 228 metres
incl	12m @ 3.28g/t gold, 0.67% copper from 419 metres
and	35.8m @ 0.21g/t gold, 0.49% copper from 735 metres to EOH

Kaiser Prospect assays confirm strong gold-copper porphyry mineralisation 200 metres southeast of the small near surface Kaiser deposit. Drill intercept highlights include:

KSRC027	40m @ 1.30g/t gold, 0.22% copper from 0 metres
incl	10m @ 2.86g/t gold, 0.36% copper from 0 metres
also	2m @ 3.24g/t gold, 0.26% copper from 25 metres
 KSRC029	 32m @ 0.53g/t gold, 0.27% copper from 2 metres
incl	11m @ 1.09g/t gold, 0.40% copper from 9 metres

The Company intends to test around KSDD003 with further drilling and is currently planning a 3 to 5 hole program that begins with 3 holes stepping out approximately 100 metres from KSDD003 (generally north, south and below from the east) and extending to a depth beyond mineralisation, if possible. The Company has allocated drilling resources and will commence as soon as stakeholder consultation has concluded, a routine part of existing access agreement processes, with expected completion of 3 holes before Christmas.







GLEN ISLA (gold); ELSIENORA (gold); ORANGE EAST PROJECT (gold–copper); WELLINGTON (copper-gold); CUDAL (gold-zinc); ROCKLEY PROJECT (gold); TRANGIE (nickel-copper +); ARMSTRONGS (gold); *Alkane Resources Ltd 100%.*

Prospect activities were limited to data compilation and review, or preparation for field activities.

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**.*

ANI advised that no ground exploration was completed during the quarter.



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 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 exploration targets 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. 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.

ABOUT ALKANE - www.alkane.com.au - **ASX: ALK and OTCQX: ANLKY**

Alkane is a gold production company with a multi-commodity exploration and development portfolio. Alkane's projects are predominantly in the Central West region of NSW, but extend throughout Australia.

Alkane's gold production is from the Tomingley Gold Operations (TGO) which has been operating since early 2014. Alkane has investments in other gold exploration and development companies.

Alkane's most advanced gold exploration projects are in the 100% Alkane owned tenement area between TGO and Peak Hill and have the potential for sourcing additional ore for TGO. Alkane has other 100% owned exploration tenements in Central Western NSW prospective for gold and copper.

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

