

27 April 2018



Quarterly Activities Report to 31 March 2018

Dubbo Project (DP)

- Alkane has completed its modular engineering studies and the board is in the process of verifying the financial assumptions associated with this body of work. The engineering confirms that the Dubbo Project can be successfully staged from a technical perspective, and that additional expansion trains can be added through modular expansion. A detailed announcement incorporating the updated financial modelling and update on key product segments is scheduled for release in May.

Tomingley Gold Operations (TGO)

- Continued solid performance sees guidance for the full year narrowed to 75,000 to 80,000 ounces of gold at a reduced all in sustaining costs (AISC²) of A\$975 to A\$1,050.
- Strong site operating cash flow for the quarter at A\$21.2M¹ (YTD: \$44.0M).
- Quarter Results
 - Gold production was in line with forecast at 18,635 ounces.
 - Site operating cash costs were A\$718/ounce with AISC² of A\$962/ounce.
 - Gold sales 21,550 ounces for revenue of A\$36.8M at an average price of A\$1,708/ounce.
 - 6,000 ounces of open forward contracts at 31 March 2018 at average forward price of A\$1,717/ounce.

Corporate

- The Group's cash and bullion position totalled A\$69.0M with A\$60.6M in cash and bullion on hand at fair value of A\$8.4M, an increase of A\$11.2M from the previous quarter.

Exploration

- New gold mineralisation discovered by very wide space aircore drilling 3 km south of TGO at the San Antonio prospect:
 - RWAC023 7 metres grading 1.48g/t Au from 89 metres (to end of hole)
 - Including 1 metre grading 4.66g/t from 95 metres (to end of hole)

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DUBBO PROJECT (DP) – zirconium, hafnium, niobium, yttrium, rare earth elements

Australian Strategic Materials Ltd (ASM) 100%

The 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.

The modularised build study output is complete. The financial assumptions are being reviewed and verified by the board, the updated financials will be released in May.

Financing

Australian Strategic Materials (ASM), a wholly owned subsidiary of Alkane Resources, continues to work towards securing finance for the project. ASM's key focus is on securing offtake contracts for its products and a resultant strategic investor in the project.

Engineering

ASM continues to work with engineers to detail a staged execution model for the project.

Product Marketing

Active engagement with major consumers for offtake agreements for zirconium and rare earths products continued during the quarter, with meetings held in Europe, USA, and China. Leading companies are seeking to reduce their supply chain risks associated with China, following large price increases and supply disruptions last year, and are considering the Dubbo Project as an alternative source of supply.

The Company jointly exhibited at Ceramitec in Munich with Minchem in early April, which is a well-recognised international exhibition for the ceramics industry. The event was well attended, with stakeholders showing increasing concerns about the shortage of zircon for the industry, as well as the trend towards higher zircon prices. The Company also attended the Minor Metals Trade Association (MMTA) held in Montreal, Canada, where a number of meetings were held with key companies interested in hafnium supply from the Dubbo Project.

The Company is presenting at the 7th Annual Investorintel Summit in Toronto in early May, and the Ruidow Global Zircon conference in China in late May.

Zirconium

A global shortage of zircon has resulted in further upward pricing pressures and created further supply uncertainties for zirconium producers. With zirconium products (fused zirconia and zirconium chemicals) relying on zircon for 95% of supply, zircon supply disruptions are set to continue as producers struggle to source adequate supplies. Spot zircon prices have now reached US\$1,600/t or higher, as zircon supply comes from current production, with little or no stocks available from major producers. Zircon prices have now doubled since the lows in 2016 and are forecast to increase further in the third quarter, which will place further pressure on zirconium production costs. Every US\$100/t increase in the zircon price increases zirconium production costs by around US\$155-160/t.

Chinese zirconium oxychloride (ZOC) producers, which produce 95% of global supply, face additional cost pressures from higher process chemicals (caustic soda and hydrochloride acid) and higher environmental compliance costs. Chinese fused zirconia producers are also facing higher prices for carbon graphite electrodes, in addition to a shortage of zircon. Fused zirconia prices have now doubled in the last year and are sitting around US\$5,400/t, FOB China. Reports of shortages of fused zirconia is said to have

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reduced exports from China in favour of domestic customers. Increased focus on dust control and silica fume collection by authorities is expected to be another challenge faced by fused zirconia producers.

ZOC prices remained flat during the quarter, almost unchanged from the end of last year at around RMB18,000/t, FOB China (US\$7,550/t ZrO₂). However, increasing zircon prices and shortage of supply is expected to place further upward pressure on prices and supply.

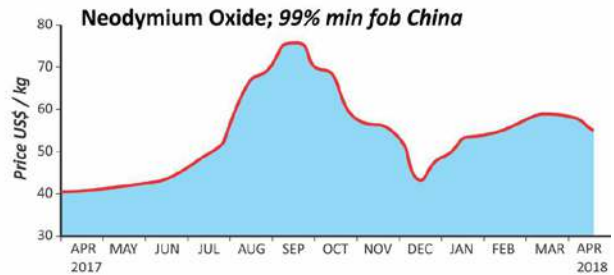
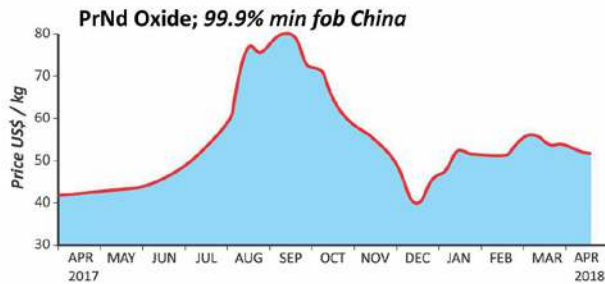
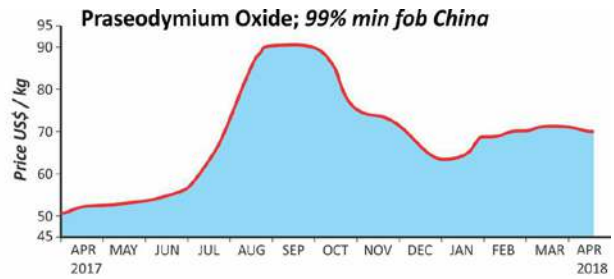
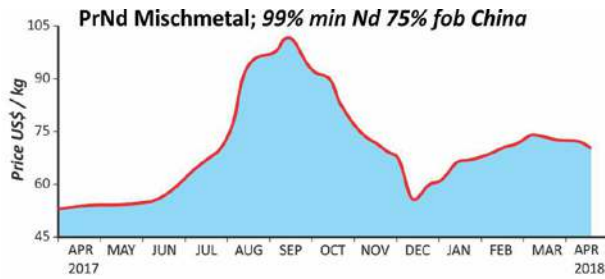
Rare Earths

Media focus has created a growing awareness of the potential raw material requirements for mobile electrification of devices, products, and electric vehicles (EVs), and has seen unprecedented demand for rechargeable battery materials. Lithium and cobalt have attracted much of the attention, as they are two of the key raw materials used in lithium-ion rechargeable batteries. Roskill's presentation at this month's MMTA in Montreal "EV raw materials: an electrified demand" forecasts that fully-electric vehicles could account for as much as 26% of total sales by 2027, and 45% by 2030. The EV landscapes is expected to remain diverse, with plug in and full EVs gaining market share overall. Lithium demand is forecast to increase from 45% of lithium demand in 2017 to 88% by 2030. Forecast demand for cobalt, graphite, and other battery materials are also set to increase in parallel.

What is only starting to be appreciated is high growth in portable battery materials will also create a similar increase in demand for electric motors, where rare earth permanent magnets (REPMs) are preferred for their high performance and efficiency. This is thought to be behind Tesla's switch to REPMs for its 2017 Model 3 long range EV. This new market should translate into unprecedented demand for REPMs, which includes praseodymium, neodymium, dysprosium, and terbium. Roskill forecasts that a 40% share of global New Electric Vehicles sales by 2027 would require around 40,000tpa of REPMs, while a 70% share would need around 70,000tpa of REPMs. To put this into perspective, Industrial Minerals Company of Australia (IMCOA) estimates global REPM magnet demand for all REPM applications in 2017 was 50-60,000t, with a significant part of this supply coming from undocumented (illegal) Chinese production.

Chinese magnet suppliers, which produce around 80% of all REPM's, are actively seeking additional resources outside China as they understand the need for additional supply. ASM is ideally placed to meet this demand if developed as it has a large resource and a proven process. Whilst price is important, supply is critical.

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Source: Asian Metal

Hafnium

The MMTA conference in Montreal hosted an aviation discussion panel, where key industry leaders discussed different topics on current and future supply of minor metals. A question about future additional supply of hafnium to meet growing demand was posed, given the flat outlook for the nuclear industry, which is the main source of hafnium as a by-product from producing zirconium metal. It was acknowledged that new hafnium supply is needed, with the Dubbo Project being one of the few new sources which could meet increased demand.

Niobium

Niobium prices remained stable during the quarter, with increasing support from a strengthening ferro-vanadium market, which has seen prices almost triple in the last year. Ferro-niobium is a substitute for ferro-vanadium so prolonged higher prices and increased demand is expected to underpin the niobium market.

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TOMINGLEY GOLD OPERATIONS (TGO)

Tomingley Gold Operations Pty Ltd 100%

The TGO is based on four gold deposits (Wyoming One, Wyoming Three, Caloma and Caloma Two) located about 14 kilometres north of the Company's inactive Peak Hill Gold Mine, and approximately 50 kilometres southwest of Dubbo.

Operations

TGO continues to perform well with one fleet operating between the Caloma Two and Wyoming One pits. Open pit mining remains on schedule to finish in Q1 FY2019.

A total of 18,635 ounces of gold were poured for the quarter taking year to date production to 59,398 ounces. Production for the quarter was in line with guidance reflecting expected higher mill feed grades from the December 2017 quarter. The site cash costs for the quarter were A\$718/oz (YTD: A\$772/oz) with the all in sustaining cost (AISC²) was A\$963/oz (YTD: A\$997/oz).

Guidance for the full year has been narrowed to 75,000 to 80,000 ounces of gold at an AISC² of A\$975 to A\$1,050. Guidance for the coming quarter is 15,000 to 20,000 ounces of gold.

Gold sold for the quarter increased to 21,550 ounces (YTD: 56,344 ounces) at an average sales price of A\$1,708/oz (YTD: A\$1,696/oz) generating revenue of A\$36.8 million (YTD: A\$95.6 million). Bullion on hand decreased by 2,886 ounces to 4,870 ounces (fair value of A\$8.4 million at quarter end). Run of mine ore stockpiles increased during the quarter by 234,426 tonnes with the increase consisting of predominately medium grade ore.

Site operating cash flow¹ was A\$21.2 million (YTD: A\$44.0 million) reflecting increased production and partial drawdown of bullion stockpiles with a higher spot A\$ gold price.

The hedge book at quarter end consisted of 6,000 ounces of forward contracts at an average forward price of A\$1,717/oz. The remaining 6,000 ounces of call options expired on 31 March 2018 unexercised.

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TGO FY 2018 Quarterly Production Figures

TGO Production		FY 2017	Sep Quarter 2017	Dec Quarter 2017	Mar Quarter 2018	FY 2018
Waste mined	BCM	7,679,110	1,807,545	507,498	470,598	2,785,641
Ore mined	Tonnes	1,222,868	289,627	330,613	505,840	1,126,080
Strip Ratio	Ratio	16.6	16.0	4.1	2.5	6.6
Grade	g/t	2.08	2.55	1.96	1.80	2.04
Ore milled	Tonnes	1,087,983	281,191	264,416	272,125	817,732
Head grade	g/t	2.15	2.80	2.21	2.41	2.48
Recovery	%	91.5	92.7	92.9	91.2	92.3
Gold poured	Ounces	68,836	24,122	16,641	18,635	59,398
Revenue Summary						
Gold sold	Ounces	69,929	21,610	13,184	21,550	56,344
Average price realised	A\$/oz	1,678	1,685	1,694	1,708	1,696
Gold revenue	A\$M	117.3	36.4	22.3	36.8	95.6
Cost Summary						
Mining	A\$/oz	748	501	503	436	482
Processing	A\$/oz	295	208	260	240	233
Site Support	A\$/oz	84	56	78	42	57
C1 Site Cash Cost	A\$/oz	1,127	766	840	718	772
Royalties	A\$/oz	49	54	51	48	51
Sustaining capital	A\$/oz	47	34	27	27	30
Rehabilitation	A\$/oz	71	97	99	140	111
Corporate	A\$/oz	41	31	41	29	33
AISC²	A\$/oz	1,335	982	1,058	962	997
Bullion on hand	Ounces	1,814	4,303	7,756	4,870	4,870
Stockpiles						
Ore for immediate milling	Tonnes	761,829	770,136	829,356	1,063,782	1,063,782
Grade	g/t	0.95	0.86	0.87	0.91	0.91
Contained gold	Ounces	23,300	21,086	23,195	31,140	31,140

¹Operating 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.

²AISC = 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.

Underground Mining Study

Resource modelling to define the revised TGO underground resources is nearing completion, with an updated Reserve for the new model expected during May.

Regional Exploration

Numerous prospects have been identified over the 60 km strike extent of complexly folded and faulted Ordovician aged Mingelo volcanics, intrusives and sediments stretching from TGO to Parkes. Much of the belt is covered by younger, transported sand and clay sediments which mask the basement geology and mineralisation.

As part of the ongoing regional exploration program to define additional gold resources for the mining operation at TGO, assay results were received from drilling comprising 2 core drill holes totaling 829.9 metres, 4 RC drill holes totaling 723 metres and 99 air core drill holes totaling 8,837 metres at various



prospect locations including;

- diamond core drilling at El Paso prospect characterizing stratigraphy and continuity of oxide mineralisation into fresh rock;
- nominal 400 metre spaced air core drill traverses across untested Tomingley mine stratigraphy (San Antonio prospect) from north of El Paso to McLeans prospect;
- two air core drill traverses testing mineralisation at Tomingley Two with west orientated drilling;
- completing an air core drill traverse at Buddong prospect;

El Paso Prospect

Assay results from two diamond cored drill holes completed in December 2017 at El Paso prospect, EPD003 and EPD004, were received in this quarter. EPD004 intersected significant quartz veining with visible gold along the western contact of an intensely sericite altered porphyritic andesite. Assays have confirmed the continuation of a high gold grade structure approximately 200 metres below previous air core drill hole EPAC089 (11 metres at 2.82g/t Au), with the following intersection:

**EPD004 2.6 metres grading 6.31g/t Au from 336 metres (visible gold)
and 1.0 metre grading 2.59g/t Au from 342 metres
and 3.0 metres grading 1.24g/t Au from 346 metres**

Core hole EPD003 was completed to test an area of previous poor air drilling penetration, proximal to a northwest trending strike slip structure. The core hole intersected quartz veining and sericite bleaching of volcanoclastic conglomerates and sandstones with coarse pyrite-arsenopyrite mineralisation trending a similar orientation to the northwest structure. Results confirmed gold association with this structural trend of:

**EPD003 1.0 metre grading 0.92g/t Au from 58.0 metres
and 3.1 metres grading 0.84g/t Au from 124.0 metres**

Plus 1g/t gold mineralisation has been defined over a strike length of 1,200 metres at El Paso but the drilling is very wide spaced, only tested to date by nominal 200 metre spaced air core drill traverses. RC drilling is planned to define the gold resource potential in the areas of shallow to moderate (<40 m) cover.

San Antonio Prospect

The regional air core drilling program has now mapped the prospective Mingelo Volcanic – Cotton Formation sediments contact that lies beneath a shallow to deep alluvial cover sequence from north of Peak Hill Gold Mine to the TGO with nominally 400 metre spaced air core drill traverses. Economic mineralisation at TGO is positioned within the Mingelo Volcanics immediately east of this important contact/structure. The orogenic style gold mineralisation is focused on structural zones generated by a competency contrast between ‘brittle’ porphyritic andesite sills and ‘ductile’ volcanoclastic meta-sediments. The recent drilling highlighted San Antonio as an exciting prospect area with gold mineralisation focused proximal to the Cotton – Mingelo contact and hosted within a porphyritic andesite with the encouraging air core drill hole result ending in high grade mineralisation of:

**RWAC023 7 metres grading 1.48g/t Au from 89 metres (to end of hole)
Including 1 metre grading 4.66g/t from 95 metres (to end of hole)**

Tomingley Two Prospect

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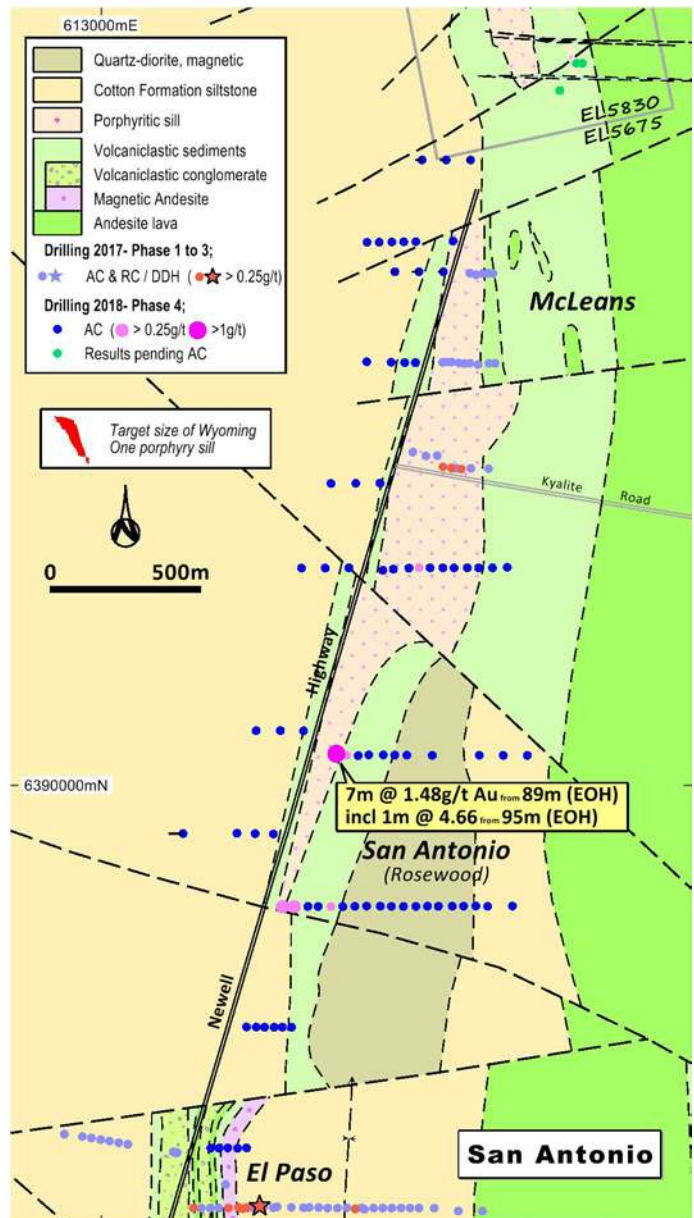
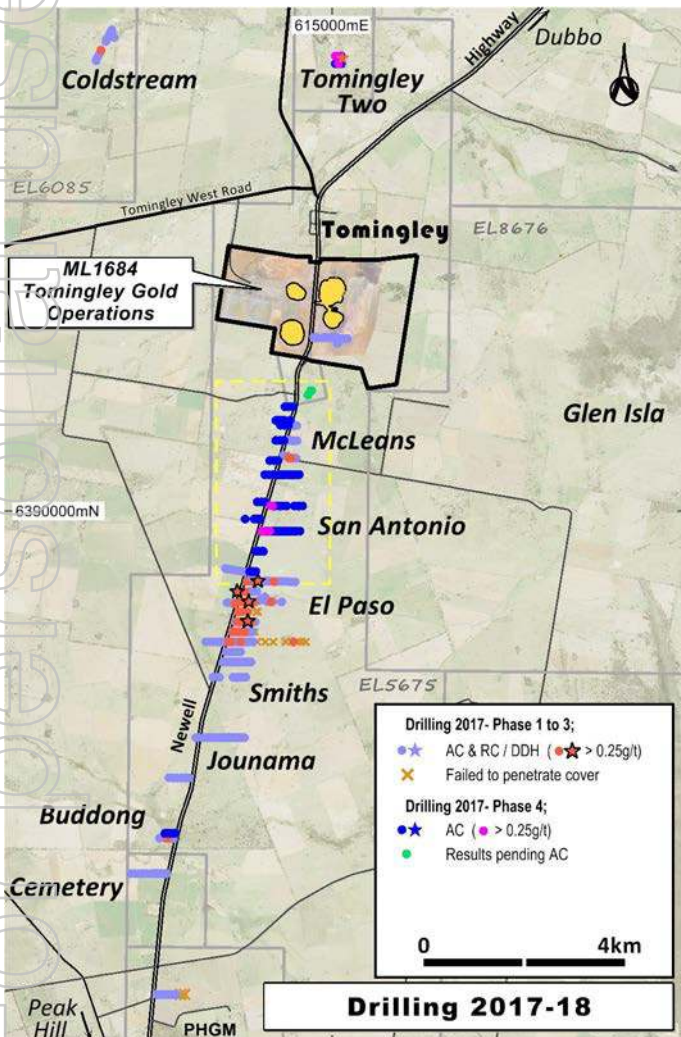


Previous diamond core drilling at the Tomingley Two prospect determined moderate to steep east dipping mineralisation. This was further tested with two air core drill traverses collared 60° west intersecting gold mineralisation over a 150 metre strike length. Significant results include:

- TO228 4 metres grading 1.60g/t Au from 86 metres**
- and 2 metres grading 0.63g/t from 96 metres**
- and 8 metres grading 0.79g/t from 108 metres**
- and 1 metre grading 0.85g/t from 145 metres (to end of hole)**

Buddong Prospect

Air core drilling at Buddong intersected fault brecciated and altered siliciclastic siltstones of the Cotton Formation immediately north of a faulted termination of the Mingelo Volcanics. Further drilling is planned south of this fault to test the previously reported 3 metres grading 5.31g/t Au (BDAC015) hosted within the Mingelo Volcanics.





TOMINGLEY GOLD PROJECT AC DRILLING – 31 March 2017 (>0.25g/t Au)											
Hole ID	Easting (MGA)	Northing (MGA)	Dip	Azimuth (Grid)	Total Depth	Interval From (m)	Interval To (m)	Intercept (m)	Au (g/t)	DH Depth of Cover	Prospect
EPAC114	613220	6387599	-60	90	37	36	37**	1	0.63	26	El Paso
EPAC116	613140	6387599	-60	90	83	53	54	1	0.40	30	
<i>and</i>						63	64	1	0.76		
EPAC119	613019	6387599	-60	90	84	52	53	1	0.65	28	San Antonio
RWAC004	614050	6390720	-60	270	64	62	64**	2	0.34	60	
RWAC010	613777	6390720	-60	270	96	89	96**	7	1.48	39	
<i>incl</i>						95	96**	1	4.66		
RWAC023	613599	6389598	-60	270	98	46*	49	3	0.55	46	
<i>and</i>						55	63	8	0.34		
RWAC024	613637	6389598	-60	270	98	58	61	3	0.30	42	
RWAC027	613759	6389598	-60	270	91	55	56	1	0.86	33	
TO226	615059	6399030	-60	270	132	102*	104	2	0.35	102	
TO227	615089	6399031	-60	270	126	98	101	3	0.59	97	
TO228	615113	6399032	-60	270	146	86	90	4	1.60	82	Tomingley Two
<i>and</i>						96	98	2	0.63		
<i>and</i>						108	116	8	0.79		
<i>and</i>						145	146**	1	0.85		
TO231	615120	6398880	-60	270	126	97	103	6	0.66	95	
<i>and</i>						105	107	2	0.35		

* at base of alluvials; ** bottom of hole

TOMINGLEY GOLD PROJECT CORE DRILLING – 31 March 2018 (>0.25g/t Au)											
Hole ID	Easting (MGA)	Northing (MGA)	Dip	Azimuth (Grid)	Total Depth	Interval From (m)	Interval To (m)	Intercept (m)	Au (g/t)		Prospect
EPD003	613108	6388401	-55	90	441.95	58.0	59.0	1.0	0.92		El Paso
<i>and</i>						124.0	127.1	3.1	0.84		
EPD004	613320	6387808	-55	270	387.95	336.0	338.6	2.6	6.31		
<i>and</i>						342.0	343.0	1.0	2.59		
<i>and</i>						346.0	349.0	3.0	1.24		

Peak Hill Gold Mine (PHGM)

PHGM is located 16km south of TGO, and whilst hosted within the Mingelo Volcanics, the alteration and mineralisation is defined as a High Sulphidation Epithermal System. The oxidised cap of this large sulphide deposit was mined and heap leach processed by Alkane from 1996 to 2005. Core drilling in 1998/99 demonstrated potential for a substantial gold and copper deposit.

A concerted effort has been directed at the PHGM database (discovery and recovery) to enable a resource review to be completed as soon as practical. Some of the earlier drilling database (in-pit grade control) is being converted to enable it to be used by the current mine planning software. Initial review is confirming the location and orientation of high grade shoots within the large low grade Proprietary ore body. An updated Resource model is anticipated in the September 2018 quarter.

Core drilling is scheduled to commence in the second half of H1FY18 to confirm these structures and provide ore for metallurgical test work.

Glen Isla Prospect

An exploration licence (EL8676) application of 60 km² of has been granted to cover epithermal style alteration and gold mineralisation within Devonian aged Dulladerry Volcanics 6 km east of the Tomingley



Gold Operations (TGO). Historic drilling (Geopeko and Carpentaria) intersected strong phyllic hydrothermal alteration hosting extensive low grade gold with up to 5% pyrite mineralisation within basalt and rhyolite sequences beneath a network of sinters, typical of an upper section of a fertile gold epithermal system. Initial drill testing for deep high grade gold feeder or 'bonanza' structures has commenced.

Armstrongs (gold)

Alkane Resources Ltd 100%

An exploration licence application (ELA 5657) located immediately west of Parkes townsite was lodged to cover Ordovician volcanics and sediments similar to the nearby and previously mined London-Victoria deposits. The geology is also similar to TGO and historic drilling has identified low grade gold mineralisation over a 400 metre strike length. After grant the historic data will be reviewed to determine the potential for economic mineralisation.

Trangie (gold)

Alkane Resources Ltd 100%

The Trangie Exploration Licence Application (ELA 5648) is targeting a geophysical anomaly discovered by state aerial and ground surveys. This anomaly is a coincident magnetic and gravity feature which is different to regional geological character, centred approximately 5km east of the Trangie townsite. It is considered prospect for a number of metals, including nickel, cobalt, titanium, vanadium and rare earths.

NORTHERN MOLONG PORPHYRY PROJECT (NMPP)

includes BODANGORA, KAISER and FINNS CROSSING PROPERTIES (gold-copper)

Alkane Resources Ltd 100%

Exploration activities for the quarter were focussed in the Finns Crossing area as the construction of a wind farm in the Kaiser-Boda targets has impacted access.

Within Finns, the Windora-Murga Prospects are interpreted to lie within the equivalent macroscopic geological and hydrothermal setting of the Cadia Valley porphyry orebodies. The presence of an equivalent zone of early-stage magnetite alteration at both localities, represented by magnetite skarns and early-stage magnetite alteration of volcano sedimentary and plutonic rocks, provides a useful marker unit which defines an arcuate geometry and highlights the prospective zone in the district.

An Induced Polarisation (IP) survey was completed defining a 6 x 1.5km area with coincident and moderate to strong IP chargeability features.

Rockley Project (gold)

Alkane Resources Ltd 100%

Early stage exploration commenced at the Rosedale prospect targeting McPhillamys style gold mineralisation. The exploration conducted for the quarter comprised of a detailed ground magnetic survey and a soil geochemistry survey highlighting a gold-multi element anomaly around the historic Rosedale workings. Drilling is planned in the next quarter.

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ELSIENORA (gold); ORANGE EAST PROJECT (gold–copper); WELLINGTON (copper-gold); CUDAL (gold-zinc); *Alkane Resources Ltd 100%. 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**.*

During the quarter, ANI commenced planning for a heritage survey in support of future gold targeting on M36/330.

CORPORATE

The Group's cash and bullion position totalled A\$69.0 million with A\$60.6 million in cash and bullion on hand at fair value of A\$8.4 million, an increase of A\$11.2 million from the previous quarter. The Group is essentially debt free with only a small insurance premium funding facility in place (unamortised balance of \$0.3 million at quarter end).

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Competent Person

Unless otherwise advised above, 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

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.

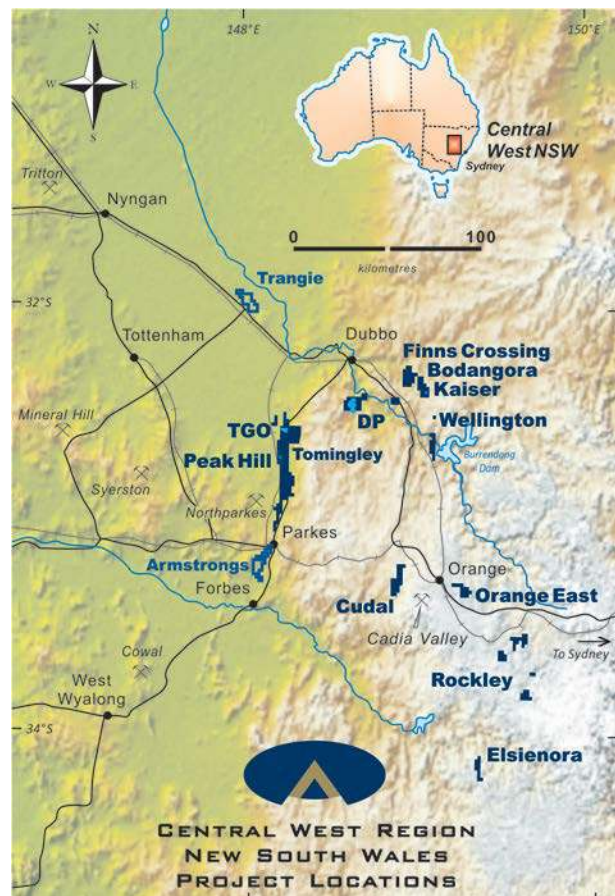
This document has been prepared in accordance with the requirements of Australian securities laws, which may differ from the requirements of United States and other country securities laws. Unless otherwise indicated, all ore reserve and mineral resource estimates included or incorporated by reference 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 multi-commodity company focused in the Central West region of NSW, Australia. Currently Alkane has two advanced projects - the Tomingley Gold Operations (TGO) and the nearby Dubbo Project (DP). Tomingley commenced production early 2014. Cash flow from the TGO has provided the funding to maintain the project development pipeline and has assisted with the pre-construction development of the DP.

The DP is a large in-ground resource of zirconium, hafnium, niobium, yttrium and rare earth elements. It is the most advanced poly-metallic project of its kind outside China, making it 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 70+ years. The DP is construction ready, subject to financing, with the mineral deposit and surrounding land acquired and all material State and Federal approvals in place.

Alkane's most advanced gold copper exploration projects are at the 100% Alkane owned Bodangora, Wellington, Rockley and Elsenora prospects. Wellington has a small copper-gold deposit which can be expanded, while at Bodangora a large monzonite intrusive complex has been identified with porphyry style gold copper mineralisation. Gold and base metal mineralisation has been identified at Rockley and Elsenora.



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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 TOMINGLEY GOLD PROJECT

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 (e.g. 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. 	<p>Air Core (AC) and RC samples are collected at one metre intervals via a cyclone on the rig. The cyclone is cleaned regularly to minimise any contamination.</p> <p>Half core samples collected at generally 1m intervals</p>
	<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. 	<p>Drilling, sampling and QAQC procedures are carried out to industry standards.</p>
	<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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information. 	<p>AC Drilling – the total sample (~15-20kg) 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. The 1m intervals forming composite samples assaying ≥ 0.20 g/t Au or with high As are manually resplit using a Jones riffle splitter and re-submitted to the laboratory for re-assay.</p> <p>RC Drilling – the total sample (~20-30kg) is delivered via cyclone into a large plastic bag which is retained for future use if required. A sub-sample of approximately 1kg is spear sampled from each plastic bag and composited to make a 3 metres sample interval. The 1m intervals forming composite samples assaying ≥ 0.20 g/t Au or with high As are manually resplit using a Jones riffle splitter and re-submitted to the laboratory for re-assay.</p> <p>Core is cut in half using an Almonte diamond cutting saw</p> <p>All samples sent to laboratory are crushed and/or pulverised to produce a ~100g pulp for the assay process.</p> <p>Gold was determined by fire assay fusion of a 50g charge with an AAS analytical finish.</p> <p>A multi-element suite was determined using either an aqua regia or four acid digest with a ICP-AES, ICP-MS analytical finish.</p>
Drilling techniques	<ul style="list-style-type: none"> Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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). 	<p>AC drilling using 75mm rods. All holes drilled to refusal.</p> <p>RC drilling using 100mm rods and 144mm face sampling hammer</p> <p>Core drilling completed as an HQ tail on an AC precollar. Core orientated using a Reflex tool.</p>
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. 	<p>Sample quality is assessed by the sampler by visual approximation of sample recovery and if the sample is dry, damp or wet.</p>
	<ul style="list-style-type: none"> Measures taken to maximise sample recovery and ensure representative nature of the samples. 	<p>AC drilling completed using rig with high volume air capacity in attempt to maintain sample return and achieve hole depth.</p> <p>A high capacity RC rig was used enabling dry samples collected. Drill cyclone and sample buckets are cleaned between rod changes and after each hole to minimise cross-hole contamination.</p> <p>Core drilling completed using HQ triple tube to maximise core recovery.</p>



Criteria	JORC Code explanation	Commentary
	<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. 	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. 	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. 	All logging is qualitative with visual estimates of the various characteristics. A representative sample of each one metre interval is retained in chip trays for future reference. Half core samples are retained in trays for future reference
	<ul style="list-style-type: none"> The total length and percentage of the relevant intersections logged. 	All samples have been geologically logged by qualified geologists.
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. 	Core is cut with half core submitted to the laboratory.
	<ul style="list-style-type: none"> If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. 	Initially each one metre interval is spear sampled with 3m composite samples collected in a calico sample bag and forwarded to the laboratory. The 1m intervals forming composite samples assaying ≥ 0.20 g/t Au or with high As are manually resplit using a Jones riffle splitter and re-submitted to the laboratory for re-assay. Laboratory Preparation – the entire sample (~3kg) is dried and pulverised in an LM5 (or equivalent) to $\geq 85\%$ passing $75\mu\text{m}$. Bulk rejects for all samples are discarded. A pulp sample ($\pm 100\text{g}$) 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. 	ALK sampling techniques are of industry standard and considered adequate.
	<ul style="list-style-type: none"> Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 	Field duplicate samples collected at every stage of sampling to control procedures - ~1:50 alternating with CRM.
	<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. 	Duplicate samples are collected for both composite intervals and re-split intervals. Duplicates generally show excellent repeatability.
	<ul style="list-style-type: none"> Whether sample sizes are appropriate to the grain size of the material being sampled. 	Sample sizes are industry standard and considered appropriate.
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. 	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. For other geochemical elements, samples are digested by aqua regia or by multi acid with each element determined by ICP Atomic Emission Spectrometry or ICP Mass Spectrometry. These additional elements are generally only used for geological interpretation purposes, are not of economic significance and are not routinely reported.
	<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. 	No down hole geophysical logging or hand held XRF analyses undertaken.



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established. 	<p>Commercially prepared Certified Reference Materials (CRM) are inserted at 1 in 50 samples. CRM's are not identifiable to the laboratory.</p> <p>Field duplicate samples are inserted at 1 in 50 samples (alternate to CRM's).</p> <p>Laboratory QAQC sampling includes insertion of CRM samples, internal duplicates and screen tests. This data is reported for each sample submission.</p> <p>Failed standards result in re-assaying of portions of the affected sample batches.</p>
Verification of sampling and assaying	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. 	Drill data is compiled and collated, and reviewed by senior staff. External consultants do not routinely verify exploration data until resource estimation procedures are deemed necessary.
	<ul style="list-style-type: none"> The use of twinned holes. 	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. 	<p>All drill hole logging and sampling data is entered directly into field data entry spreadsheets for transfer and storage in an industry standard access database with verification protocols in place.</p> <p>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.</p> <p>Digital copies of Certificates of Analysis (COA) are stored in a central database with regular (daily) backup. Original survey data is stored on site.</p> <p>Data is also verified on import into various software packages.</p>
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. 	Drill holes are laid out using hand held GPS (accuracy $\pm 2m$) then DGPS surveyed accurately ($\pm 0.1m$) by licenced surveyors on completion.
	<ul style="list-style-type: none"> Specification of the grid system used. 	MGA (Zone 55), GDA94
	<ul style="list-style-type: none"> Quality and adequacy of topographic control. 	As noted above, all drill holes DGPS surveyed accurately ($\pm 0.1m$) by licenced surveyors on completion.
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. 	At this early exploration stage, the data spacing is variable as the focus is on geological mapping and 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. 	Reconnaissance drilling only, no resource estimations being undertaken.
	<ul style="list-style-type: none"> Whether sample compositing has been applied. 	3m sample composites collected as described above
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. 	First phase of drilling in many areas but care is given to attempt to intersect structure at an optimal angle.
	<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. 	It is not thought that drilling direction will bias assay data significantly.



Criteria	JORC Code explanation	Commentary
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<p>All samples are bagged in tied numbered calico bags, grouped into larger tied polyweave bags and transported 1.5 hours to ALS in Orange by Alkane personnel. All sample submissions are documented via ALS tracking system and all assays are reported via email.</p> <p>Sample pulps are returned to site and stored for an appropriate length of time (minimum 3 years).</p> <p>The Company has in place protocols to ensure data security.</p>
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<p>The Company does not routinely have external consultants verify exploration data until resource estimation procedures are deemed necessary.</p>

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. 	<p>Drilling completed on exploration licence numbers 5675, 5830, 6085 and 8676 owned 100% by Alkane.</p>
	<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. 	<p>All exploration licences are in good standing.</p> <p>EL5675 expires on 17 January 2023</p> <p>EL5830 expires on 4 April 2022</p> <p>EL6085 expires on 20 May 2018</p>
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<p>Significant exploration has been completed in the area by Alkane since 2001 and the Tomingley Gold Mine was commissioned in 2014.</p> <p>Minor work was completed in the Tomingley area covered by this announcement but many holes did not penetrate the cover sequence.</p>
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<p>Geological nature of the Tomingley Deposits is well documented elsewhere.</p> <p>Mineralisation is associated with quartz veining and alteration focused within porphyritic sub-volcanic andesite sills and adjacent volcanoclastic sediments. The deposits appear to have formed as the result of a competency contrast between the porphyritic sub-volcanic sills and the surrounding volcanoclastic sediments, with the sills showing brittle fracture and the sediments ductile deformation, and have many similarities to well documented orogenic - lode-style gold deposits.</p>
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. 	<p>See body of announcement and figures</p>



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. 	The drilling program is reconnaissance in nature with 105 holes completed. Only drill holes with samples assaying $\geq 0.25\text{g/t Au}$ have been reported. Impractical to list all holes completed.
Data aggregation methods	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. 	Exploration results reported – for uncut gold grades; grades are 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. 	Reported intercepts are calculated using a lower cut of 0.25g/t Au . No top cut has been used.
	<ul style="list-style-type: none"> The assumptions used for any reporting of metal equivalent values should be clearly stated. 	No metal equivalents are reported.
Relationship between mineralisation widths and intercept lengths	<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 (e.g. 'down hole length, true width not known'). 	Drilling is reconnaissance in nature and there is currently no understanding of the true widths. Down hole lengths reported – true widths not known
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. 	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. 	The drilling program is reconnaissance in nature with 105 holes completed. Only drill holes with samples assaying $\geq 0.25\text{g/t Au}$ have been reported. Impractical to list all holes completed.
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. 	No other exploration data is available to assist in interpretation
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). 	It is recommended that further drilling be undertaken within the licences to further define the 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. 	See figures included in the announcement.