ASX and MEDIA RELEASE

4 June 2018

ALKANE RESOURCES LTD
ABN 35 000 689 216

Tomingley Underground Resource, Reserve & Development

- Following an extensive core drilling program in 2017, Mineral Resources and Ore Reserves for the Tomingley Gold Operations below the existing open pits have been re-estimated at a cut-off of 2.4g/t gold:
  - Total Mineral Resources **1.45Mt grading 3.7g/t Au (175,000oz)**
  - Total Ore Reserves **0.73Mt grading 3.1g/t Au (74,000oz)**

- An independent mining study has determined that via decline access from the Wyoming One and Caloma pits, the deposits can be viably mined using standard long hole stoping with rib pillars and long hole stoping using cemented rock fill.

- Mining and grade reconciliation to date in the pits provided support to including Inferred Resources in the planned underground mining for a mineral inventory of:
  - Mineral inventory **1.24Mt grading 2.7g/t Au (108,000oz)**

- The base case development would recover 99,000 ounces of gold over a 40 month development and mining period for revenue of A$159 million at a gold price of A$1,600 per ounce. Cash costs were estimated to be A$1,150 to A$1,250 per ounce.

Cash outflow to recover first ore is estimated at A$16 million. The Company's cash and bullion position at the end of the previous quarter was A$69.0 million.

- The company is seeking to continue to generate cash from its gold business by:
  - Appointing a project manager to confirm the development economics and prepare a detailed execution plan for an investment decision by December 2018.
  - Continuing extensive exploration in the immediate mine area to establish further resource potential including re-evaluation of the Peak Hill Gold Mine.
  - Evaluating investment opportunities that expand the gold business.

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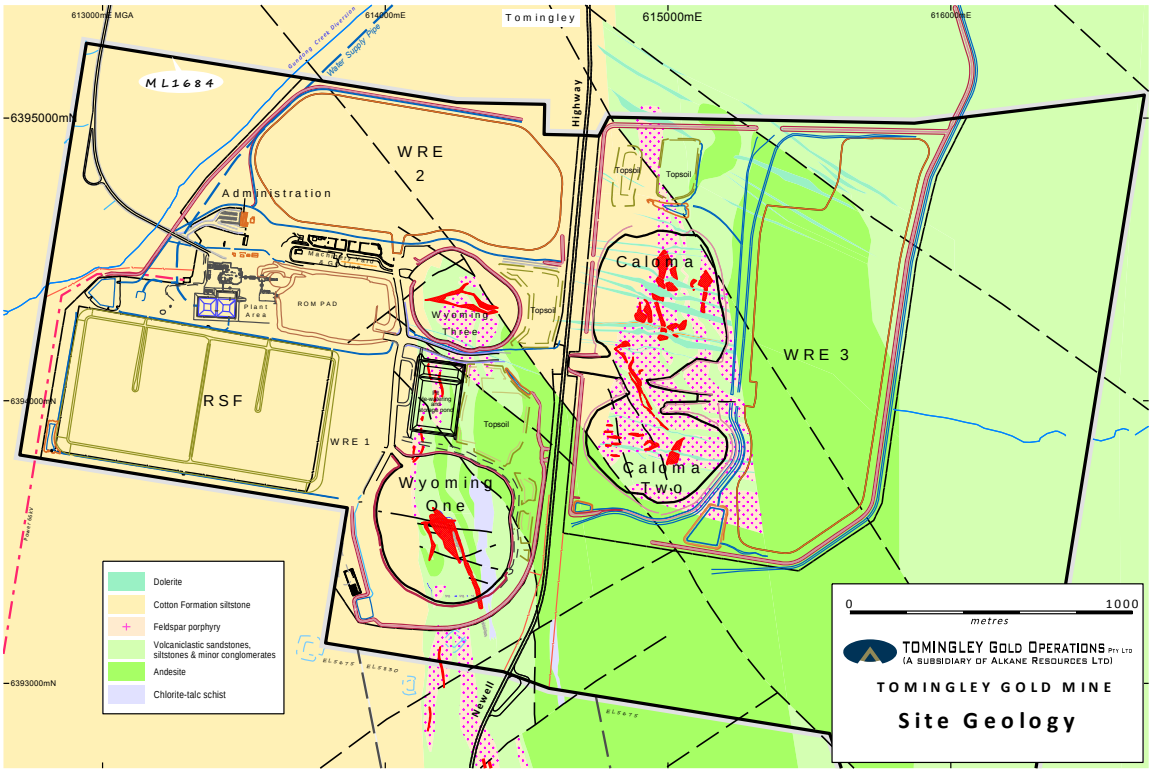
Underground Mineral Resource and Ore Reserve Estimates 2018

Introduction

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. The deposits are orogenic / structural quartz vein and stockwork hosted mineralisation within Ordovician aged andesite "porphyry" and associated volcaniclastic sediments.

Open pit development has proceeded since 2013 on all four deposits. Open cut mining is completed at the Wyoming Three and Caloma pits and is in the final stages for the Wyoming One and Caloma Two pits. Grade / Tonnage reconciliation has been positive throughout (included Measured, Indicated and Inferred Resources) and confirmed the high degree of geological knowledge applied to the deposits.

As at 30 April 2018 4,584,000 tonnes grading 2.16g/t Au have been mined from the open cuts and processed, resulting in 292,900 ounces of gold poured. Stockpiles at the end of April were 1,117,000t @ 0.91g/t Au for 32,800 contained ounces (of which low grade constituted 743,000t @ 0.69g/t Au for 16,500 contained ounces).



Mineral Resources

Wyoming One Underground

During 2017, a 23 core hole program (11,011 metres) was completed targeting the Hangingwall and

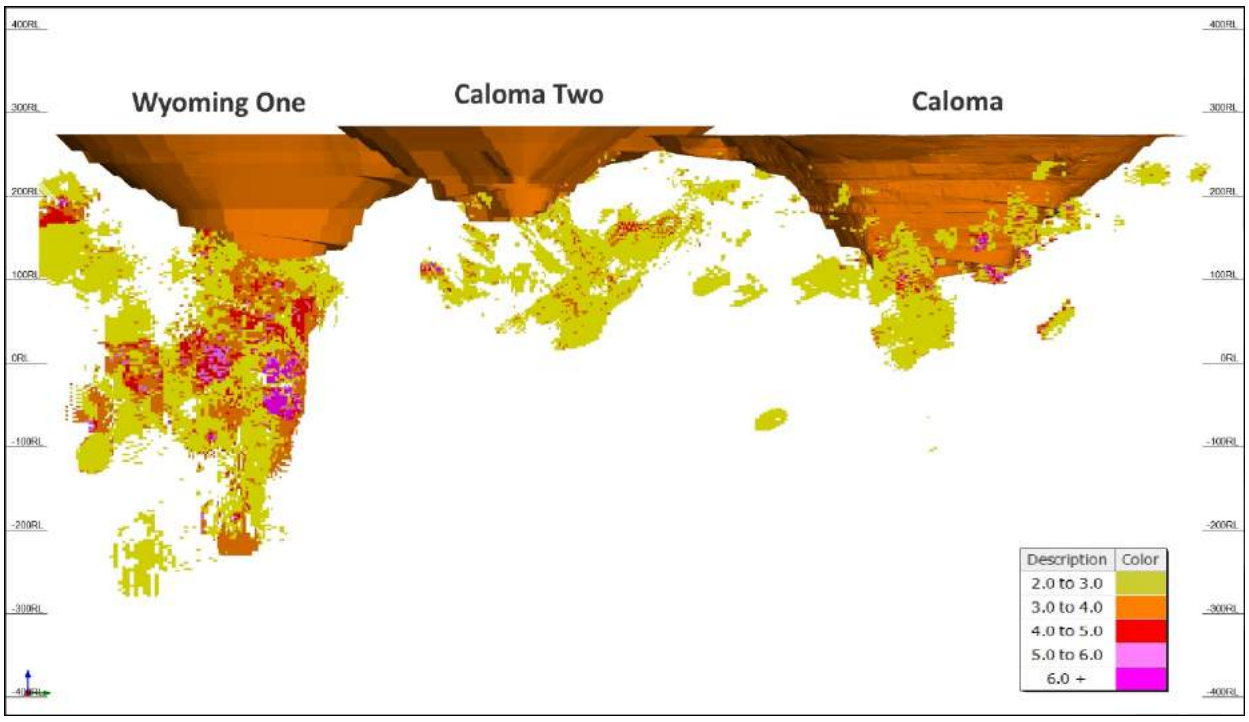
Porphyry zones below the Wyoming One open pit. This program added to the drilling completed in late 2016. The drilling confirmed continuity of the gold mineralisation in the Hangingwall and Porphyry zones, and demonstrated continuity of the systems to -200m RL, 300 metres below the planned base of the open pit.

The Hangingwall-Porphyry contact mineralisation has a strike length of over 300 metres and is open to the south. Most of the mineralisation has a near vertical or steep east dip and averages around 6 metres in true width, but can range from 1 metre to 20 metres wide. Other structurally cross cutting zones exist within the porphyry, and while of limited strike length, these are often very high grade within broad low grade envelopes. These targets are not included in the current development model are intended to be evaluated by drilling from underground positions.

Resources were generated by block modelling at a 2.5g/t gold cut-off by geologically domained mineralisation at a gold price of A$2,000/oz. There are 6 geological domains which have been wireframed based on pit mapping and drill hole logging. All the diamond holes in the Wyoming One deposit were geologically and structurally reviewed either through the use of photos or physically looking at the core to confirm the interpretation. Grade-tonnages were assigned using ordinary kriging techniques and a comparison model checked using inverse distance squared (ID2).

Caloma and Caloma Two Underground

At Caloma and Caloma Two, the resources were similarly generated by combining existing grade control models from within the pits, with limited exploration drilling below the planned development. The ore zones are generally westerly dipping (50-60^{o}) and range from 5 to 8 metres in width. The modelled zones are 80-100 metres and 100-200 metres in strike length for Caloma and Caloma Two respectively. The mineralisation remains open down dip to the west.



Section (Looking West) though Wyoming One, Caloma and Caloma Two Grade Shells

Resource Table

The Resource is shown in the table below. Note that these Mineral Resources are wholly inclusive of Ore Reserves. Full details are given in Appendix 1 (Table1, Sections 1-3; JORC 2012).

TOMINGLEY GOLD OPERATIONS UNDERGROUND RESOURCES (May 2018)									
DEPOSIT	MEASURED		INDICATED		INFERRED		TOTAL		Total Gold
	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	(Koz)
Underground Resources (cut off 2.50g/t Au)									
Wyoming One	0	0.0	866	4.0	110	3.2	976	3.9	122
Wyoming Three	10	3.6	6	3.1	4	3.1	20	3.4	2
Caloma	82	3.8	35	3.4	47	3.0	164	3.5	18
Caloma Two	-	0.0	218	3.6	76	3.2	294	3.5	33
Sub Total	**92**	**3.6**	**1,125**	**3.9**	**237**	**3.2**	**1,454**	**3.7**	**175**
TOTAL	**92**	**3.6**	**1,125**	**3.9**	**237**	**3.2**	**1,454**	**3.7**	**175**

Apparent arithmetic inconsistencies are due to rounding & Wyoming Three remains unchanged from the 2015 study

Ore Reserves

The following is a summary of the assumptions used for the mining study on which the Reserve is based. Full details are given in Appendix 2 (Table1, Section 4; JORC 2012).

Mining Method

The primary method to mine the underground resources at Wyoming One, Caloma and Caloma Two will be a Longhole Open Stoping (LHOS) method with cemented rockfill (bottom up). The secondary mining method will be a top-down LHOS with rib pillars and no fill.

Underground Portal

The Wyoming One and Caloma Two deposits will be serviced via a portal within the Wyoming One open cut with a connecting drive under the Newell Highway. Caloma is serviced by a portal within that pit.

Stoping

Stoping configurations are predominantly single-lift stoping (25m vertical interval) with strike length of either 25m or 30m depending on the fill type. The single-lift stoping method involves establishing a rise to commence the stope and then mining the stope back along the strike toward the access by firing into the established rise. The stoping extraction sequence, installation of cables and the use of cemented rockfill assists in controlling stability. Narrower areas are mined using LHOS with rib pillars in the same manner but with no placement of fill.

Infrastructure

Electrical infrastructure already exists at TGO. Power will be reticulated to Wyoming One, using a high voltage cable from the mill. The surface road network is already in place. The existing tailings dam will continue to be lifted in order to accommodate the waste resultant from processing the underground ore.

Processing

All ore will be trucked to the existing TGO processing plant.

Costs, Production and Recoveries

Costs were derived from existing site operations and using comparative estimates from similar operations and discussions with contractors. Modifying factors incorporated a 95% mine recovery, 15% in situ dilution and average of 90% mill recovery to produce just under 100,000 ozs of gold. Providing the

assumptions used are realised this results in an approximately net $40 million cash flow over a 40 month mine life at a gold price of A$1,600 per ounce and a maximum cash drawdown of approximately $16 million from the decision to invest.

Reserve Table

The reported Ore Reserve is based on an internal Measured and Indicated Mineral Resources in the 2018 Tomingley Gold Operations Mining Study at a 2.4g/t Au cut-off and gold price of A$1,350/oz.

UNDERGROUND ORE RESERVES (May 2017)			
SOURCE	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)
Proven	45	2.7	4
Probable	688	3.2	70
TOTAL	**732**	**3.1**	**74**

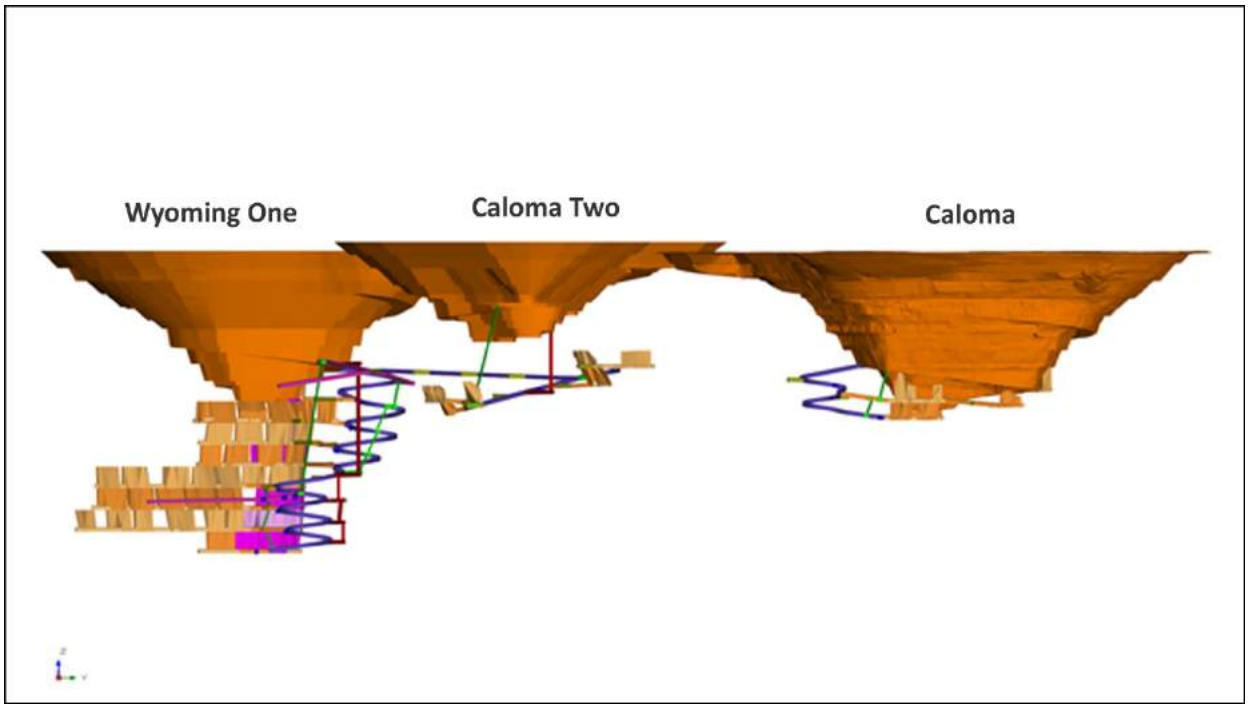
Apparent arithmetic inconsistencies are due to rounding

The mineral inventory for the planned underground mining is:

- **1.24Mt grading 2.7g/t Au (108,000oz)**

The decision to include Inferred Resources in the mineral inventory was supported by the operating experience and reconciliations in the existing open cut pits.

There is a lower level of geological confidence associated with Inferred Resources and there is no certainty that further exploration work will result in the determination of Indicated Resources or that the Inferred Resources will add to the economics of the project. The portion of the Inferred Resource that has been included in the underground mine plan and resultant production estimate lies within the stope designs, and has been classified as Inferred Resource by the Competent Person.



Wyoming One, Caloma and Caloma Two Mine Design (Looking West) for Mineral Inventory

Resource and Reserve Comparison

The tables below compares the Mineral Resources and Ore Reserves year on year with 2015/2017 as per the current reporting requirements. Apparent arithmetic inconsistencies in both tables are due to rounding.

Comparison of 2017 / 2018 TGO Underground Mineral Resources

	TOTAL UNDERGROUND RESOURCES					
	2017			2018		
DEPOSIT	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)
Wyoming One	738	4.40	104	976	3.9	122
Wyoming Three	20	3.80	2	20	3.4	2
Caloma	21	2.90	2	164	3.5	18
Caloma Two	133	3.30	14	294	3.5	33
TOTAL	**912**	**4.2**	**122**	**1,454**	**3.7**	**175**

Comparison of 2015 / 2018 TGO Underground Ore Reserves

	TOTAL UNDERGROUND RESERVES					
	2015			2018		
SOURCE	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)
Proven	224	4.0	29	45	2.7	4
Probable	301	3.4	33	688	3.2	70
TOTAL	**524**	**3.7**	**62**	**732**	**3.1**	**74**

The primary differences from 2015/2017 to 2018 are:

- Grade control drilling in the open cuts provided greater geological control to the mineralised domains.
- Substantial additional sub-pit drilling at Wyoming One extended Indicated Resource mineralisation but additional detail from grade control drilling resulted in a reduction of Measured Resource. This reduced the Proven Ore Reserve but increased the Probable Reserve.

Development

To advance the development of the underground, a project manager will be appointed to confirm the economic assumptions and prepare a detailed execution plan. Whilst the company is confident the underground development should proceed a final investment decision will be made by December 2018.

Extensive exploration in the immediate mine area continues to establish further resource potential including re-evaluation of the Peak Hill Gold Mine.

The company is seeking to continue to generate cash from its gold business, as well as generate growth through both exploration and corporate investment.

Forward-Looking and Cautionary Statements

Some statements in this announcement regarding estimates or future events are forward-looking statements. They include indications of, and guidance on future earnings, cash flow, costs and financial performance. Forward-looking statements include, but are not limited to, statements preceded by words such as "planned", "expected", "projected", "estimated", "may", "scheduled", "intends", "anticipates", "believes", "potential", "could", "nominal", "conceptual", and similar expressions. Forward-looking statements, opinions and estimates included in this announcement are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward-looking statements are provided as a general guide only and should not be relied upon as a guarantee of future performance. Forward-looking statements may be affected by a range of variables that could cause actual results to differ from estimated results and may cause the company's actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward-looking statements. These risks and uncertainties include but are not limited to liabilities inherent in mine development and production, geological, mining and processing technical problems, the inability to obtain mine licences, permits and other regulatory approvals required in connection with mining and processing operations, competition for among other things, capital, acquisitions of reserves, undeveloped lands and skilled personnel, incorrect assessments of the value of acquisitions, changes in commodity prices and exchange rate, currency and interest rate fluctuations, various events which could disrupt operations and/or the transportation of mineral products, including labour stoppages and severe weather conditions, the demand for availability of transportation services, the ability to secure adequate financing and management's ability to anticipate and manage the foregoing factors and risks. There can be no assurance that forward-looking statements will prove to be correct.

Statements regarding plans with respect to the company's mineral properties may contain forward-looking statements in relation to future matters that can only be made where the company has a reasonable basis for making those statements. The company believes that it has a reasonable basis for making the forward-looking statements in this announcement, including with respect to any production targets and financial estimates, based on the information contained in this announcement.

This announcement has been prepared in compliance with the JORC Code (2012) and current ASX Listing Rules.

Competent Person

The information in this report that relates to the Mineral Resource estimates is based on, and fairly represents, information which has been compiled by Mr Craig Pridmore, Geology Superintendent Tomingley Gold Operations, who is a Member of the Australasian Institute of Mining and Metallurgy and an employee of Alkane Resources Ltd. Mr Pridmore has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken 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 Pridmore consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.

The information in this report that relates to the Ore Reserve estimate is based on, and fairly represents, information which has been compiled by Mr Christopher Hiller (Hiller Enterprises Pty Ltd), an independent consultant, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Hiller has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken 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 Hiller consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.

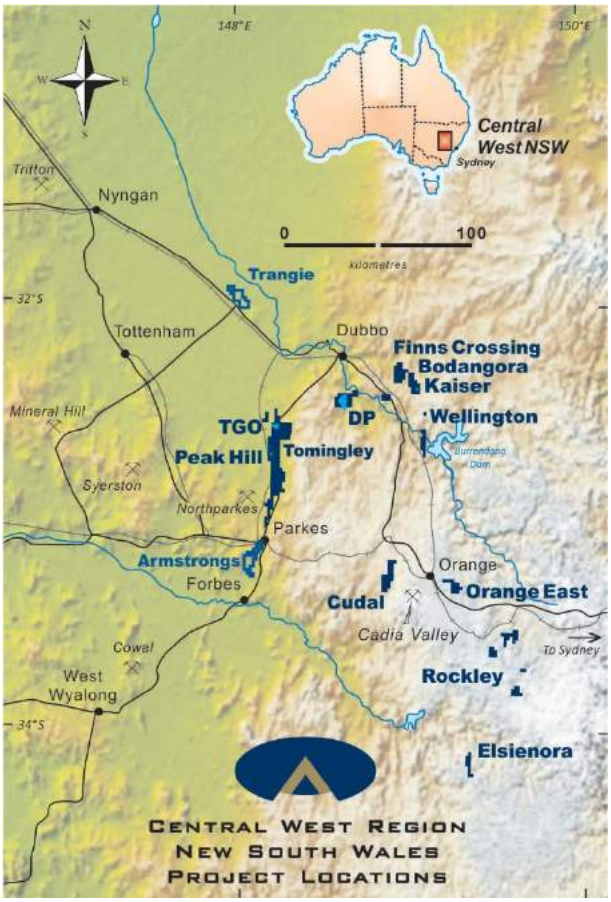
Unless otherwise advised above, the information in this report that relates to exploration results, Mineral Resources and Ore Reserves is based on information compiled by Mr D Ian Chalmers, FAusIMM, FAIG, (director of the Company) who has sufficient experience which is relevant to the style of mineralisation 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.

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 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. As it is an advanced poly-metallic 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.

Alkane's most advanced gold copper exploration projects are at the 100% Alkane owned Bodangora, Wellington, Rockley and Elsienora 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 Elsienora.



APPENDIX 1

JORC Code, 2012 Edition – Table 1 report – Wyoming One
(For Caloma 2 and Caloma 1 JORC Table report refer to ASX release 04/09/17)

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	The Wyoming One area has been evaluated using air core (AC), reverse circulation (RC) and diamond drilling (DD) techniques between May 2001 and December 2017 although not all of this drilling lies within the current resource outline. AC - 185 holes for 14593.8m – inclusive of 3 pre-collars totaling 294.2m RC - 150 holes for 25356m – inclusive of 29 pre-collars totaling 4552.9m RC Grade Control – 863 hole for 21770m DD - 83 holes totaling 29,469m AC samples were collected in large plastic bags at one metre intervals via a cyclone RC samples were collected at one metre intervals via a cyclone. DD sample intervals were defined by geologist during logging to honour geological boundaries. The resource model includes Grade Control holes drilled within the Wyoming 1 pit. These RC Grade control holes have limited impact on the Wyoming 1 Underground estimation, but were essential to the creation of the entire geological model.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	AC and RC drilling completed to industry standards. Core was laid out in suitably labelled core trays. A core marker (core block) was placed at the end of each drilled run (nominally 3 or 6m) and labelled with the hole number, down hole depth, length of drill run. Core was aligned and measured by tape, comparing back to this down hole depth consistent with industry standards.
	• *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.*	AC drilling samples collected at 1m intervals via a cyclone into large plastic bags. RC Drilling – the entire RC sample was collected at 1m intervals and delivered into a large plastic bag via a cyclone. DD Drilling – sample intervals were defined by geologists during logging to honour geological boundaries and cut in half with a saw. All samples sent to the laboratory were crushed and/or pulverised to produce a ~100g pulp for assay process. All 1m RC & AC samples and core samples were fire assayed using a 50g charge and all RC and AC composite samples fire assayed using a 30g charge. Visible gold was occasionally observed in both core and AC/RC samples
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by*	Initial reconnaissance drilling was completed to fresh rock using 75mm or 100mm air core with follow-up and deeper drilling completed by RC (usually 126 - 140mm diameter). Detailed resource definition drilling was completed primarily by RC techniques using a 130mm or 140mm diameter face sampling hammer. DD holes were pre-collared using either RC

Criteria	JORC Code explanation	Commentary
	what method, etc).	techniques or un-oriented PQ3 (83mm diameter) core drilling. Pre-collars were completed to competent material, with holes cased off and completed to depth using HQ3 (61mm diameter) core. The 2016/2017 Diamond drilling was collared with PQ3 and were reduced to HQ3 when the ground became competent. The HQ3 core was oriented using the 'BallMark', 'EzyMark' or 'Ace' (Reflex Act) core orientation tool depending upon the contractor and time period of when the drill program was drilled. Within the resource area drilling was comprised of: 28% RC - 150 holes totaling 25,356 m (inclusive of 29 pre-collars totaling 4552.9m) 32% DD - 83 holes totaling 29469m 24% RC Grade control – 863 holes totaling 21770m 16% AC – 185 holes totalling 14593.8m
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	AC and RC - sample recovery was visually estimated and was generally very good (>90%) aided by the use of oversized shrouds through oxide material. Samples were even in size. Samples were rarely damp or wet. Sample quality was assessed by the sampler by visual approximation of sample recovery and if the sample was dry, damp or wet. A riffle splitter were used to ensure a representative sample was achieved for 1 metre samples. DD - core loss was identified by drillers and calculated by geologists when logging. Generally ≥95% was recovered and any loss was usually in portions of the oxide zone. Triple tube Large diameter, triple tube core (PQ3) was used through the oxide material to ensure the greatest recovery.
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	*RC drilling was completed using oversized shrouds to maintain sample return in oxide zone and all samples were split using riffle or cone splitters. Use of RC rigs with high air capacity assists in keeping samples dry.* Triple tube coring was used at all times to maximise core recovery with larger diameter (PQ3) core used in the oxide and saprolite zones.
	• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	There is no known relationship between sample recovery and grade.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	*AC & RC - each one metre interval was 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).* *DD - all core was laid out in core trays and 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). A brief geotechnical log was also undertaken collecting parameters such as core recovery, RQD, fracture count, and fracture type and orientation. With the 2016/2017 Diamond program, specific zones of the core has full geotechnical analysis undertaken. This included Alpha, Beta measurements for all fractures and internal structures, fracture fill type etc*
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*	*All logging was qualitative with visual estimates of the various characteristics. Magnetic susceptibility data is quantitative.* *AC & RC - A representative sample of each one metre interval is retained in chip trays for future reference.*

Criteria	JORC Code explanation	Commentary
		DD - Core was photographed and all un sampled core is retained for reference purposes.
	• *The total length and percentage of the relevant intersections logged.*	All DD core and AC/RC chip samples have been geologically and geotechnically logged by qualified geologists.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	DD - zones of visual mineralisation and/or alteration were marked up by the geologist and cut in half using an Almonté (or equivalent) core cutting saw. Samples submitted for analysis were collected from the same side in all cases to prevent bias. Sampling intervals were generally based on geology, were predominantly over 1m intervals but do not exceed 1.2 metres in length. The minimum core sample length was 0.3m. All mineralised zones were sampled, plus ≥6m of visibly barren wall rock. Laboratory Preparation – drill core was oven dried prior to crushing to <6mm using a jaw crusher, split to 3kg if required then pulverised in an LM5 (or equivalent) to ≥85% passing 75µm. Bulk rejects for all samples were discarded. A pulp packet (±100g) is stored for future reference
	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*	*AC/RC – samples were collected at 1m intervals via a cyclone into large plastic bags. Spear samples were collected from each 1m sample and composited to 3m for initial analysis. Individual 1m samples from all composites assaying ≥0.2g/t Au were riffle split and resubmitted for analysis.* *Rare damp or wet samples were recorded by the sampler.* Laboratory Preparation – the entire RC sample (3kg) was dried and pulverised in an LM5 (or equivalent) to ≥85% passing 75µm. Bulk rejects for all samples were discarded. A pulp packet (±100g) is stored for future reference.
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	Alkane (ALK) sampling techniques are of industry standard and considered adequate.
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	AC – field duplicate samples were not regularly submitted for reconnaissance AC drilling RC – field duplicate samples collected at every stage of sampling to control procedures. DD – external laboratory duplicates used.
	• *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.*	RC - Duplicate samples were riffle split from bulk sample. Duplicates show generally excellent repeatability, indicating a negligible "nugget" effect.
	• *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	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	*For all 1m samples used in the resource estimate gold was determined using a 50g charge fused at approximately 1100°C with alkaline fluxes, including lead oxide. The resultant prill was dissolved in aqua regia and gold determined by flame AAS. For 3m composite samples gold was determined using a 30g charge (more rarely 50g charge).* For other geochemical elements, samples were digested in aqua regia with each element concentration determined by ICP Atomic Emission Spectrometry or ICP Mass Spectrometry. These additional elements were generally only used for geological interpretation purposes, are not of economic significance and are not routinely reported.

Criteria	JORC Code explanation	Commentary
	• *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.*	Not applicable to this report or deposit.
	• *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.*	*Commercially prepared Certified Reference Materials (CRM) and blanks were inserted at 1 in 50 samples. CRM's were not identifiable to the laboratory.* *Field duplicate samples were inserted at 1 in 50 samples (alternate to CRM's) for RC drilling programs.* *Laboratory QAQC sampling includes insertion of CRM samples, internal duplicates and screen tests. This data was reported for each sample submission.* *Failed standards result in re-assaying of portions of the affected sample batches.*
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	Drill data was compiled and collated, and reviewed by senior staff. External consultants do not routinely verify exploration data until resource estimation procedures are deemed necessary.
	• *The use of twinned holes.*	Twinned holes have not been used at Wyoming One as twinning provides verification only for extremely limited areas of a deposit.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	*All drill hole logging and sampling data was hard keyed into Excel spreadsheet for transfer and storage in the Datashed database with verification protocols in place.* All primary assay data was received from the laboratory as electronic data files which were imported into sampling database with verification procedures in place. QAQC analysis was undertaken for each laboratory report. Digital copies of Certificates of Analysis (COA) are stored in a central database with regular (daily) backup. Original survey data is stored on site. Data was also verified on import into mining related software.
	• *Discuss any adjustment to assay data.*	No assay data was adjusted.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	*Drill holes were laid out using hand held GPS (accuracy ± 2m) then surveyed accurately (± 0.1m) by licensed surveyors on completion.* *RC & AC drill holes were surveyed using a single shot electronic camera at a nominal 30m down hole intervals.* DD holes were surveyed at nominal 30m down hole during drilling to maintain drilling direction and then at 6m intervals on retrieval of rod string using a multi shot electronic camera.
	• *Specification of the grid system used.*	All drill holes were originally laid out in AMG66 grid however since mining commenced in February 2014 have been transformed to MGA94 grid system to conform to reporting requirements for mine operations.
	• *Quality and adequacy of topographic control.*	The area is very flat. A site based digital terrain model was developed from accurate (± 0.1m) survey control by licenced surveyors.
	• *Data spacing for reporting of Exploration Results.*	The majority of drilling at Wyoming One within the open pit was completed along east-west lines spaced 25m apart. However once the east-west lode orientation was confirmed for the '376' zone (this zone is the high grade mineralisation on the eastern contact of the porphyry

Criteria	JORC Code explanation	Commentary
Data spacing and distribution		intrusive contact) this portion of the deposit was assessed by south drilled holes was completed along north-south sections spaced 25m apart. The Underground infill drilling during the 2016/2017 campaign was drilled to ensure the drill hole intercept spacing within each lode was covered to a nominal 30m pattern. The drilling direction of these holes was optimised best as practical to the orientation of the mineralisation and geology to remove/reduce any potential sample bias for the estimation. The drill hole spacing is similar to that used at other Tomingley deposits and has been established to be sufficient. Grade control drilling has been undertaken during mining on a 10m x 10m grid to a nominal 20 vertical metres.
	• *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.*	The drill hole spacing has been shown to be appropriate by the visible continuity of mineralisation and geology between drill holes.
	• *Whether sample compositing has been applied.*	Sample compositing was not applied until resource estimation stage. RC & AC – samples were composited to 3m with 1m resamples assayed if the composite returned a gold value of >0.2g/t gold. One metre samples override 3m composites in the database. DD – core was sampled to geology.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	Much care was given to attempt to intersect mineralisation at an optimal angle but in complex ore bodies this can be difficult. As noted above, drilling at Wyoming One was initially completed along both east-west and north-south lines, depending upon which portion of the deposit was being assessed.
	• *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 at Wyoming One however east-west drilling will not provide optimum intersection of the '376' lode structures. The recent 2016/2017 drilling campaign specifically targeted the High grade mineralisation associated with the previously known "376" structure (now referred to as the High Grade porphyry lode). These holes were orientated to intersect this mineralisation at an optimal angle and to confirm the mineralisation thickness.
Sample security	• *The measures taken to ensure sample security.*	All samples were bagged in tied numbered calico bags, grouped into larger tied polyweave bags and transported to the laboratory in Orange by Alkane personnel or courier. S ample submission sheets were delivered with the samples and also emailed to the laboratory. All sample submissions were documented via ALS tracking system and all assays were reported via email. Sample pulps were returned to site and were stored for an appropriate length of time (minimum 3 years). The Company has in place protocols to ensure data security.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	The Company does not routinely have external consultants verify exploration data until resource estimation procedures are deemed necessary. The Wyoming data was reviewed in 2010 and 2011 by Behre Dolbear (BDA) as part of the due diligence phase of the development of the project. BDA did not express any specific concerns with respect to the data other than to recommend the completion of some round

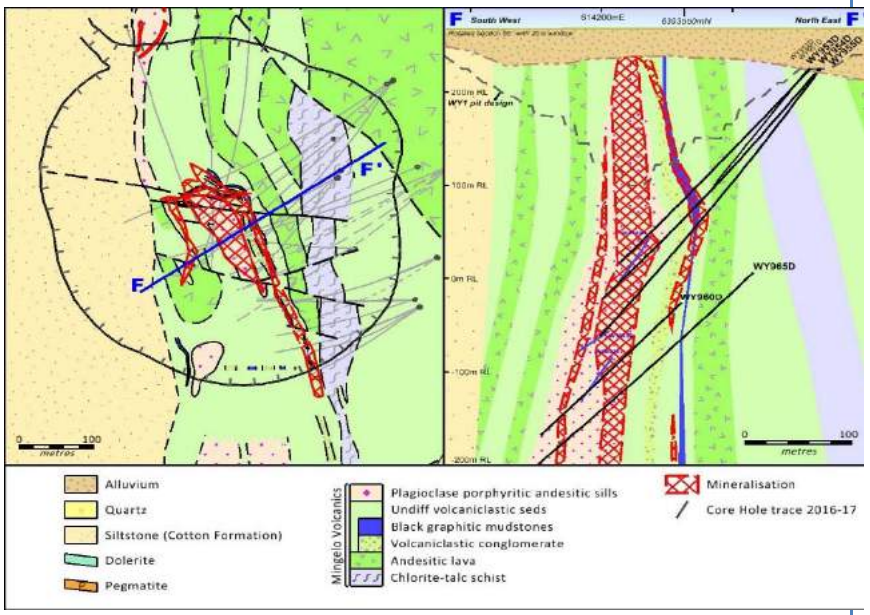
Criteria	JORC Code explanation	Commentary
		robin assaying and completion of additional density determinations, both of which were undertaken for the Caloma Two and Wyoming 1 resource drilling.

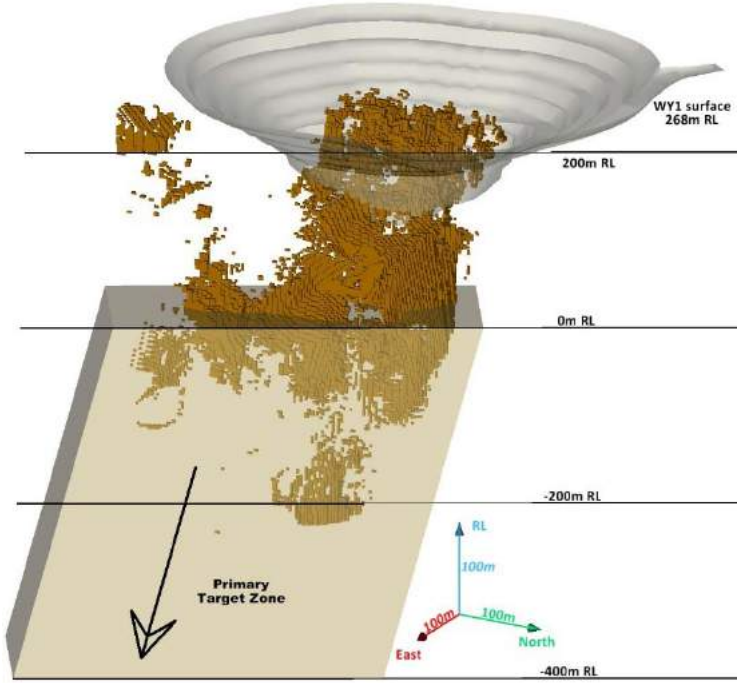
Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	The Wyoming One deposit lies within ML 1684 which is held in the name of Tomingley Gold Operations Pty Ltd, a wholly owned subsidiary of Alkane Resources Ltd.
	• *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.*	ML1684 expires on 11 February 2034.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	All reported drilling has been completed by ALK.
Geology	• *Deposit type, geological setting and style of mineralisation.*	Geological nature of the Tomingley Deposits is well documented elsewhere. Mineralisation is associated with quartz veining and alteration focused within sub-volcanic basaltic-andesite sills and adjacent volcaniclastic sediments. The deposits appear to have formed as the result of a rheological contrast between the porphyritic sub-volcanic sills and the surrounding volcaniclastic sediments, with the sills showing brittle fracture and the sediments ductile deformation, and have many similarities to well documented orogenic - lode-style gold deposits. Mineralisation at Wyoming One is developed within a number of different zones which have been domained based on the geology, style of mineralisation and continuity of high mineralisation that can be separated: *Porphyry* – mineralisation hosted by a quartz stockwork within the carapace of a sub-volcanic sill with dimensions roughly 60m x 150m. High grade mineralisation is developed along the eastern and northern contact of the sediment and porphyry. This High Grade mineralisation on the contact has been domained separately for the estimation and is currently referred known as the “High Grade porphyry lode” mentioned below. Within the main porphyry body there appears to be structures that dip 45° to the NE which is only evident through the location and continuity of grade in this orientation from the close spaced open pit RC Grade control drilling. *Hangingwall* – a linear zone of mineralisation situated approximately 30m to hanging wall of the ‘porphyry’ mineralisation and hosted within quartz veins within silicified fine grained sediments and a brecciated carbonaceous mudstone. This zone is is lithologically

Criteria	JORC Code explanation	Commentary
		constrained with these fine grained sediment package which folds around the northern end of the porphyry (*northern* zone); *'High Grade Porphyry Lode"'* –This zone was previously known as the '376" structure interpreted to be a bounding structure and primary fluid conduit. This High Grade zone of mineralisation is developed at the eastern and northern contact of the porphyry and incorporates some of the contact metasediments which were impacted by the mineralisation. *Footwall* – a low grade zone located in a similar stratigraphic position to the hangingwall zone but footwall to the porphyry
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.*	Too numerous and not practical to summarise all drill hole data used. All drilling results have been reported previously
	• *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.*	Exclusion of drill hole data will not detract from the understanding of this report. All drill data has been previously reported, holes are close spaced and in an operating mine area.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.*	*Previously reported results have been –* *For uncut gold grades;* *Intercepts were defined (bounded) by 0.5g/t gold outer limit and may contain some internal waste;* Only intervals grading ≥1 g/t gold were reported; Grades were calculated by length weighted average.
	• *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.*	Exploration results have been previously reported as length weighted average grades with internal high grade intercepts reported separately.
	• *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	No metal equivalents are reported.
Relationship between mineralisation widths and	• *These relationships are particularly important in the reporting of Exploration Results.* o *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* o *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').*	Previously reported exploration results include the drilled width and an estimate of true width.

Criteria	JORC Code explanation	Commentary
intercept lengths		
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	*Cross sections and a plan showing geology with drill collars were included with previously reported exploration results. A typical plan and cross section are included below.* 
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Data relating to all exploration drill holes has been reported in previous documentation of exploration results.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	No additional or new drilling results are being reported at this time.

Criteria	JORC Code explanation	Commentary
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	An assessment of mining the higher grade portions of the 'hangingwall', 'High Grade Porphyry" zones by underground methods has been completed as part of the feasibility study and ore from this has been included in the long term mining schedule. Additional drilling may be completed to compliment this assessment of mining resources below the open pit.
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	The upper portions of the Wyoming One deposit is well constrained by drilling however the high grade structures remain open at depth. 

Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	Logging data was entered into Excel via drop down menus. All raw data was loaded directly to the Access database from the assay, logging and survey derived files. (Datashed is the Companies Drill hole Database platform.
	• *Data validation procedures used.*	There are validation checks to avoid duplications of data. The data were further validated for consistency when loaded into Datashed and desurveyed. An extensive check on the consistency and adequacy of down-hole survey data was carried out in 2009. This has continued through to the completion of the 2017 Diamond Drill campaign
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* *(If no site visits have been undertaken indicate why this is the case.)*	No site visit was undertaken by an external consultant since the release of the previous 2014 Underground release. Since the last release the geological/structural model of the Wyoming 1 deposit has been updated based on the mapping of the geology exposed within the open pit. The model also reflects the evaluation and interpretation of the in RC Grade control drilling and 2016/2017 Diamond drilling campaign. All geostatistical analysis for the resource estimation was undertaken by Cube Consultancy who are based in Perth. The quoted resources were compiled by Mr Craig Pridmore, Geology Superintendent, Tomingley Gold Operations Pty Ltd, who has worked at TGO site since March 2015.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	The geological model was built on structural data from core lithological logging, in pit Grade control logging, and pit mapping. The domain wireframes were built by the Alkane geologists most familiar with the deposit.
	• *Nature of the data used and of any assumptions made.*	Structural measurements from oriented drill core were used to assist in the geological interpretation along with lithological, alteration and mineralisation logging of RC chips and drill core
	• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*	The Wyoming One deposit was been drilled at a close-spacing in several different drilling campaigns and in several different drilling directions, reducing the likelihood that the geological interpretation will change significantly.
	• *The use of geology in guiding and controlling Mineral Resource estimation.*	Geological (lithological) logging and in pit mapping was used to develop a geological model. Alteration and mineralisation estimates along with grade guided the interpretation of the ore envelope wireframes at a nominal 0.25g/t Au lower cut-off.. Gold mineralisation at Wyoming One has a close spatial relationship to feldspar porphyry which intrudes into andesitic volcaniclastic rocks and metasedimentary pelitic rock sequences. Mineralisation is associated with extensive alteration and quartz veining of the porphyry and volcanic rocks. In pit mapping has generally verified the geological interpretation on a macroscopic scale.
	• *The factors affecting continuity both of grade and geology.*	Mineralisation is directly associated with alteration and quartz veining.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	The mineralisation occurs in several zones within a NNW-striking corridor 300m long and 220m wide. Mineralisation extends from about 25m below the surface for more than 400m vertical depth.

Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	Five mineralisation wireframes (domains) were interpreted by the Alkane geologists most familiar with the deposit to constrain the estimation. This includes an enclosing background domain which was modelled to capture minor mineralization outside the main domains. Four surfaces were also used to separate material types - topography, alluvium, saprolite and base of oxidation surfaces. The material type classification was used to allocate density values. The drill hole data were flagged by the domain wireframes in priority order, to prevent double use the data in the intersecting zones. The samples were composited to 1m, the most common sample length and flagged by the topography, alluvium, saprolite and base of oxidation surfaces. Top-cuts were selected for each domain based on histograms, probability plots and cutting statistic plots. The top-cuts ranged from 7g/t gold to 40.0 g/t gold. After top-cutting, the maximum coefficient of variation for the mineralized domains ranged from 1.21 to 3.64 indicating that the estimation would not be difficult. In January 2017 Cube consultancy reviewed the drill data in Wyoming 1. The composite gold grades were first transformed to Standard Gaussian space in order to elucidate the underlying spatial structure. A Gaussian Variogram was then produced before back-transformed to real space for use in in Wyoming 1 DOK process. Reasonably robust variogram models were obtained for all estimation domains. Each domain used in the estimation had its own variogram model. The Underground Resource model incorporates the entire Wyoming 1 project and includes the estimation for the open pit. The Estimation technique used was Ordinary Kriging. A check estimate was made using the Inverse Distance Squared method. The minimum samples, maximum samples and search parameters used in the ID2 check estimate are were the same as the Kriged estimation values. Surpac was used for estimation. The orientation of the search ellipse for each domain was controlled by a Dynamic Anisotropy model that provided a unique dip and dip-azimuth for each block. Grade control drilling data is incorporated with exploration data and a new block model generated using the same parameters as the resource model for that sector of the ore body subject to the grade control drilling. .
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	The estimates were compared to those of previous published resource estimate made by Alkane. The variance between the models is based on modifications to the geological domains and mineralised domains which have been updated. These modifications were based on the in-pit geological mapping, greater definition through Grade control drilling and an additional 31 extra diamond holes drilled into the Underground resource in 2016 and 2017.
	• *The assumptions made regarding recovery of by-products.*	No assumptions made - Estimates were made for gold, arsenic and copper; only gold is of economic significance.
	• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*	No deleterious elements identified for estimation

Criteria	JORC Code explanation	Commentary
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*	The primary block size was unrotated (2.5mE x 5mN x 2.5mRL) because of the narrow steeply dipping nature of the mineralized zones. Sub-blocking of 2.5mE x 2.5mN x 2.5mRl was also used were estimated. These block sizes were employed in the open pit based on the practical mining considerations and the fact he variogram nugget effects are low. These block sizes were used in the underground resource estimate below the open pit. The maximum search radius used was 60m with a search radius ratio of 4:1
	• *Any assumptions behind modelling of selective mining units.*	No assumptions were made.
	• *Any assumptions about correlation between variables.*	No assumptions made
	• *Description of how the geological interpretation was used to control the resource estimates.*	Only data from the same domain were used to make estimates. No soft boundaries were used between domains
	• *Discussion of basis for using or not using grade cutting or capping.*	The top-cut analysis was undertaken by using a combination of histograms, log-probability plots of composite gold grade and cutting statistic plots (plots of cut-off grade against Coefficient of Variation (CV) and total metal). Using the statistical information above the top cuts were picked using the following criteria 1) By visual inspection of the log-probability plots of composite gold grade, with a view towards identifying the point at the upper tail where the robustness of the distribution breaks down and where the plot goes off trend. 2) By visual 3D inspection of the spatial location of the grade outliers and the spatial relationship to neighbouring values. While the principal estimate was made using top-cuts, a check estimate was made without top-cutting.
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	The estimates were verified using several different techniques and checked for local variability by comparing the estimated block grades with the average of the top-cut composites in each block.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	The tonnages were estimated on a dry tonnage basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	The cut-off grade (0.50 g/t Gold) for open pit able resources is relevant for the current mining operation for similar material in the adjacent deposits.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	Mining of ore from the Wyoming One ore body commenced in 2016 and to date reconciliations, save for poorly defined inferred mineralisation in the background domain, have been as expected. The main part of the Wyoming One deposit is currently being mined by open pit methods. No dilution factors in the resource model were applied.

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	The metallurgy of the Tomingley deposits is well studied. The upper portion of the Wyoming 1 deposit is currently being mined through open pit mining methods. A total of 1.2K tonnes have been mined up to February 2018, with 0.8K tonnes of Wyoming 1 having been processed. During this time no material metallurgical issues have arisen, with recoveries ranging between 92-94%.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	Project approval for the TGP was granted in July 2012 for mining from three open pits (Wyoming One, Wyoming Three and Caloma) and underground from Wyoming One deposit. Mining from the Wyoming Three and Caloma open pits commenced in December 2013 with processing of ore in February 2014. Mining of ore from the Wyoming One open pit commenced in January 2016 and is currently ongoing.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	Specific gravity measurements were completed by commercial laboratories on DD core samples of the different material types (alluvium, saprolite, totally oxidized and fresh). Oxidation was far more important than variations in lithology or alteration. The specific gravity measurements were applied on a dry basis. In December 2015 a large in-house density analysis campaign occurred on all the deposits with over 3,182 additional measurements taken. Using wet/dry density methods. All diamond hole drilled in the 2016/2017 campaign had SG measurements undertaken using the wet/dry method (SG = Mass of object/ (Mass of object) – (Mass of object in water). All measurements in the fresh material were constrained to each geological domain. The average Specific gravity reading was applied to each domain and used in the estimation.
	• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.*	SG measurements completed on all material types – see above.
	• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	No assumptions made – SG determined and individual values applied to each material type based on wire-framed domain.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*	The resources were classified using drill density, geological confidence and mineralisation continuity. The actual break-points for the different resource classes were chosen by inspection of the model in relation to the drilling density. Any blocks outside the main mineralized/geological domains were classified as Inferred.
	• *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).*	Wyoming One Underground resource model which includes Grade control RC was estimated using high proportion of Reverse Circulation (RC) drill hole data. The Underground portion of the resource below the Open pit has been predominantly drilled using diamond drilling techniques

Criteria	JORC Code explanation	Commentary
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The classification reflects the Competent Persons view of the deposit and its supporting data
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	No external reviews undertaken
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*	The Wyoming One deposit consists of 8 mineralisation zones; Reasonable robust variogram models were obtained for all estimation domains (undertaken by Cube consultancy). The variograms show clear evidence of a relatively low nugget effect (between 14% and 20%), with exception of the footwall lode which does not impact on the underground. This coupled with a rapid deterioration in continuity over a distance of several meters, as indicated by the first spherical structure ranges and sills. These features are evident when the composite gold values are visually inspected, with gold values generally being similar within a distance of 2m to 3m but then changing rapidly at greater distances. As a consequence, the second spherical structures does not exercise great influence over an OK estimate, generally having low sill values, with the exception of the hanging wall lode which is more continuous that the rest. No statistical or geostatistical method (non-linear or simulation) apart from ID2 estimation checks were used to quantify the relative accuracy of the estimate within confidence limits. Accuracy of the estimate is strongly dependent on: accuracy of the interpretation and geological domaining; accuracy of the drill hole data (location and values); orientation of local anisotropy; and Estimation parameters which are reflected in the global resource classification.
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*	The quoted underground resources are global, being based on drill hole data at exploration spacing. To ensure the resources have 'reasonable prospects of eventual economic extraction' the resources have been restricted by an indicative optimistic pit shell estimated at a gold price of $2000 per ounce and a gold cut off for eventual extraction by underground mining methods assessed at ≥2.5g/t gold.
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	Mining of ore from the Wyoming One ore body commenced in 2016 and to date reconciliations have shown that the original resource model was performing well within expectations, save for poorly defined inferred mineralisation in the background domain. Reconciled Tonnes, grade and total ounces mined are all within ~10% of the original resource model prediction with and overall increase in ounces. Over the period of mining the Block Estimation model has been modified and improved, with the Open pit and Underground run simultaneously and captured within the same Block model The estimation method has been changed from ID2 (original resource model estimate) to Ordinary Kriging. Close spaced Grade control drilling has been ongoing since the start of the open pit. This additional data collected with the mapping justified a change in modelling parameters and estimation techniques from ID2 to Ordinary Kriging. This change in estimation method has been used for the underground resource model which is an extension of the current open pit grade control block model.

Criteria	JORC Code explanation	Commentary
		Comparisons between the reconciled mined tonnes and grade, the Grade control model (same as the Underground Resource model) have shown that the reconciled mined tonnes are +17%, grade -1% with an overall increase of+16% ounces. This indicates the model being implemented should have a reasonable high level of accuracy.

APPENDIX 2

JORC 2012 Table 1 Checklist of Assessment and Reporting Criteria

Section 4 Estimation and Reporting of Ore Reserves

Criteria	Comments
Mineral Resource estimate for conversion to Ore Reserves	• The underground Ore Reserve estimate is based on the Mineral Resource estimate carried out by Alkane Resources Ltd. Gold grade was estimated using ordinary kriging for all lodes. • The Mineral Resources reported are inclusive of the Ore Reserve. • The Mineral Resource model used to estimate this Reserve is described as; wyoming1_ug_bm_151217.mdl, cal2_june14.mdl and caloma_200717.mdl.
Site visits	• The Competent Person is Christopher Hiller a full-time employee of Hiller Enterprises Pty Ltd and has conducted a site visit on 3rd of April 2018 to TGO. Christopher is a member of the Australasian Institute of Mining and Metallurgy.
Study status	• A feasibility Study was completed by Mining One Consultants for the Wyoming One underground options in 2010. A prefeasibility study was conducted in 2015 by Alkane Resources Ltd with respect to all underground mining options for all deposits at TGO. A further study has been conducted by Hiller Enterprises Pty Ltd and is an update to mine design, schedule and cost model only. A revision was required due to updates to the relevant resource models following recent exploration drilling and further interpretation. • The mine has been in full production since 2014 and is achieving design objectives. • Any further studies undertaken are to extend the mine or optimise the current operating practices.
Cut-off parameters	• Two cut-off grades have been calculated and applied based on current and forecasted costs and modifying factors for the Life-of-Mine plan. A conservative gold price of AU$1,350/oz was provided by Alkane Resources Ltd and was used in this calculation. o Fully Costed cut-off grade of 2.4 g/t and this includes all costs associated with the extraction and processing of ore material o Incremental Development cut-off grade of 0.8 g/t applies to all development ore material.
Mining factors or assumptions	• The TGO Ore Reserve has been estimated based on detailed mine development and stope designs. Modifying factors for dilution and mining recovery have been applied post-geological interrogation to generate the final diluted and recovered Ore Reserve. • The Life-of-Mine plan contained in the Tomingley Gold Operations Mining Study produced by Hiller Enterprises Pty Ltd indicated that two mining methods will be utilised. o Top down long hole open stoping using rib pillars with no fill o Bottom up long hole open stoping using cemented rockfill. • Stope size, development placement and ground support strategies have been designed in line with recommendations from the feasibility Study was completed by Mining One Consultants in 2010. The Mining One Scope included: o Review and audit of geotechnical data from previous drilling, including borehole logs, core photographs and laboratory testing results, as supplied by Alkane Resources, o Rock mass assessment based on drilling and testing data provided to Mining One and assigning of rock mass quality parameters for geotechnical domains, o Structural assessment and assigning of major structural sets for geotechnical domains, o Geotechnical design including, specification of stoping dimensions, ground support requirements for development and the proposed in-pit portal and an assessment of required crown pillar thickness, o Preparation of a report documenting the results and recommendations of the feasibility study.

	• This study has used the Mining One recommendations as a basis and where, in the author's opinion, industry norms have become more conservative, a more conservative approach to that recommended in 2010 has been used. • 21,000m of grade control drilling is planned for Wyoming One and 7,000m for Caloma Two. • The model used to estimate the Ore Reserve is consistent with that which forms the basis of the Mineral Resource estimate for the TGO deposits. The models are internally known as wyoming1_ug_bm_151217.mdl, cal2_june14.mdl and caloma_200717.mdl. • Planned dilution has been accounted for in the creation of the Stope Shapes. Unplanned mining dilution of 15% in Earthworks Production Scheduler (EPS). • A 95% mining recovery factor has been applied to both long hole open stoping using rib pillars and long hole open stoping using cemented rockfill. • Waste development excavations are given a 10% overbreak. No further dilution factors or mining recovery factors have been applied to development ore. • A global minimum mining width of 3m is used. While the ore body width generally exceeds the minimum mining width, where the ore body is narrower stoping outlines are designed to honour the minimum width and include planned dilution. • All ore in the Ore Reserve estimate is classified as a Proved or Probable Ore Reserve. No Inferred Mineral Resources are included in the Ore Reserve. The Inferred Mineral Resources in the Life-of-Mine plan have been removed from the Ore Reserve estimate. • The infrastructure requirements of the stoping methods used are either already in place or have been accounted for in the Life-of-Mine evaluation on which the project costings are based. • The selected mining methods do not require any infrastructure above the standard: o Surface administrative and ablution facilities o Electrical reticulation o Portal o Ventilation infrastructure o Workshop facilities o Cemented rock fill is anticipated to be mixed underground in stockpiles before delivery to the stopes, this method does not require any permanent infrastructure. • The capital and operating costs of this additional infrastructure to support underground mining have been included in the economic evaluation which demonstrates the economic viability of the Ore Reserve.
Metallurgical factors or assumptions	• All TGO ore is trucked to the TGO processing plant which is located adjacent to the Wyoming Three pit. The plant consists of a crushing circuit, single-stage milling circuit and hybrid carbon-in-leach (CIL) circuit with one designated leach tank and numerous adsorption tanks. Gold is recovered from activated carbon into concentrated solution. Electrowinning and smelting are conducted in an adjacent secure gold room. The tailings from the process are thickened and pumped to a paddock type tailings storage facility with multi-spigot distribution. • The technology associated with processing of TGO ore is currently in operation and is based on industry standard practices. • Mine production and cash flow estimates are based on a metallurgical recovery of 92%, which is consistent with current performance. • No deleterious elements extracted. • Operational recoveries range between 91.5% and 93.5% for material from Caloma and Wyoming orebodies. • N/A – no minerals defined by a specification. • A recent study on capacity requirements of the tailings storage facility (TSF) showed that the total capacity that will be created (lift six) will be adequate for the Life-of-Mine plan.

Environmental	• TGO is currently compliant with all environmental regulatory agreements under the Environmental Protection Act 1986. • TGO was subject to numerous environmental studies as part of the Environmental Assessment (EA) for the Tomingley Gold Project during the approvals phase and all required approvals were granted prior to the commencement of mining. The EA included documentation regarding the proposed underground mine which is still relevant today. • The only change to that documented in the EA is that the portal(s) would now be located in the Wyoming One and Caloma One open pit, it is assumed that this minor change does not constitute a change to the intent with respect to the EA and no further environmental studies would be required. • Waste rock dumps storing fresh rock waste from open pit operations already exist and no additional concerns are anticipated from placement of underground waste onto these dumps if required. • All external reporting against the environmental licenses are recorded and reported in the Annual Environmental Report available on the Alkane Resources Ltd website.
Infrastructure	• Infrastructure has been constructed for open pit mining and processing. Works on site include access road, a water pipeline, a 66 KV power line, site drainage, topsoil stockpiling, waste dump construction, Residue Storage Dams, Process Water Dams, associated offices, workshops, fuel and laydown areas. Sufficient site infrastructure has been constructed to process ore at 1.25Mtpa. • The capital and operating costs for the following infrastructure upgrades have been estimated to Feasibility Study level and included in the economic evaluation which demonstrates the economic viability of the Ore Reserve. o Surface primary fan o Secondary fans o Portals o Pump station o Mobile equipment o Compressors o HV to portal and workshop o Substation o Rescue equipment • Labour is sourced from Tomingley, Narromine, Dubbo and Parkes region and as such the operation requires no accommodation or messing facilities. • Central NSW has many active mining operations within a short distance of TGO and as such the ability to procure labour and infrastructure services for the operation is not expected to pose any major challenges.
Costs	• All costs used in the estimation of Ore Reserves are based on the Ore Reserve plan. This plan excludes the Inferred Mineral Resources in the Life-of-Mine plan. • Mining capital estimates have been made using, wherever possible, budget pricing obtained from reputable suppliers. The few instances where costs could not be obtained from these sources, costs were obtained by benchmarking of similar sized Australian mines. • The operating cost estimates have been derived from first principles estimating consumables use combined with budget pricing from reputable suppliers for the cost elements consumed in the mining process. Labour costs have been derived from pay scales of similar sized, geographically relevant underground mines in NSW. Maintenance and machinery productivity costs are based on productivity estimates by benchmarking of similar sized Australian mines. • No deleterious elements are modelled in the Mineral Resources Models nor has there been any concern with this during the 18 months TGO has been producing gold dorè. • Gold price is expressed in Australian dollars and no exchange rate is required. A gold price of AU$1350/oz has been used in all calculations. • Transport charges for dorè to the gold refiner are included in the refining charges and based on historical charges incurred by TGO for open pit gold production.

	• Site treatment charges are well known due to the current processing of fresh rock ore material from open pits. Refining charges have been assumed to be AU$1.50/oz in accordance with historical charges incurred by TGO by the refiner. • A 4% New South Wales state royalty of revenue less processing and selling costs has been allowed for in the financial evaluation.
Revenue factors	• A gold price of AU$1350/oz has been used in all revenue calculations for the Ore Reserve pan while AU$1,600 was used in the Life-of-Mine plan contained in the Mining Study conducted by Hiller Enterprises Pty Ltd.
Market assessment	• All gold doré produced at the TGO processing plant is transported a refiner within Australia for refining. • The gold market is driven by a number of factors and fluctuates dependant on physical supply and demand, political tensions and global instability. In times of uncertainty gold is seen to be a stable and safe "currency" and this has maintained its value for a significant period of time. • Despite fluctuations in the gold price in USD, the price of gold in AUD has been significantly more stable and is widely forecast to continue to stay in a range around $1,600 AUD for some time. • TGO currently sells most of its gold at spot prices however also has had contracts from time to time to sell gold in excess of $1,700 per ounce. • The underground mine would contribute only an extremely small portion of the overall volume of global output and is highly unlikely to have any impact on the market.
Economic	• The open-pit operation at TGO is an operating asset and is not subject to project-type analysis. • The underground mining study conducted by Hiller Enterprises Pty Ltd included an economic evaluation. The financial analysis used the costs as well as the revenue from gold sales, together with the mine schedule to calculate a net cashflow per month for the duration of the project. This cashflow is then discounted to derive at the projects Net Present value (NPV). This NPV excludes depreciation, amortisation and taxes. • No inflation of costs has been undertaken as there has been no forward speculation on gold price. It is the net cashflow that drives NPV and this is assumed to remain consistent (i.e. gold price and inflation move in the same direction). • Life-of-Mine plans will be developed or updated on an annual basis. These plans reflect current and projected performances for the Ore Reserve. • Sensitivities have been undertaken for both the entire mining inventory and the reserve version of the financial model.
Social	• Alkane Resources Ltd's social licence to operate is underpinned by the relationship that the Company has built, over many years, with the local community of Tomingley. • TGO has an established community consultation committee that meets quarterly to discuss the activities on the mine, interaction with the local community and any concerns from local residents, the committee includes:. o Independent Chair Person, o TGO Environment and Community Manager, o TGO Operations Manager, o Narromine Shire Council Representative , o 3 x Community Representatives , o An Aboriginal Community Representative. • Given that extensive mining operations already exist at TGO, and that the underground operations would happen concurrently with open pit operations, the underground mine is not expected to have any additional adverse effects on the local community.
Other	• This study utilises the feasibility Study completed by Mining One Consultants as a guideline with some conservatism built in based on industry norms. Should however, the ability to leave some stopes unfilled not be realised, and backfill

	required, this will increase the mining cost significantly, impacting the financial return of the project. • The project is costed on the basis of buying second hand equipment. Alkane would directly employ all underground operators, maintenance personnel, technical staff and management. Any inability to reach the desired production rates will increase the overall costs as there are a large proportion of "Fixed" costs in this type of operating model. Using an underground contractor would, without doubt, be a higher cost though less risk. • The company maintains a risk register to address and mitigate against foreseeable risks typical to an operating gold business. • Contracts are in place for all critical goods and services required to operate the mine. • TGO undertook an Environmental Assessment (EA) as part of the feasibility study and approvals for open pit mining. This assessment also looked at the impacts of underground mining. Underground mining was part of the initial application by TGO when seeking environmental approval and as such no other approvals from an environmental standpoint are anticipated. • The TGO open pit operations are an operating asset in full production with all required government and statutory permits and approvals are in place. Underground mining would take place on an existing TGO mining lease, the only additional requirement to this may be an amendment to the Mine Operating Plan that would require submission to the NSW Government, Department of Industry, Skills and Regional Development.
Classification	• The Ore Reserve includes only Proved and Probable classifications. • The Ore Reserve is in line with expectations given the low capital cost associated with the project and due to the locality. The Competent Person is confident that it is an accurate estimation of the current TGO reserve. • The economically minable component of the Measured Mineral Resource has been classified as a Proved Ore Reserve. • The economically minable component of the Indicated Mineral Resource has been classified as a Probable Ore Reserve.
Audits or reviews	• The Ore Reserve has undergone internal reviews to ensure quality and consistency. No external reviews have been undertaken. •
Discussion of relative accuracy/ confidence	• The Ore Reserve estimate has been prepared in accordance with the guidelines of the JORC Code (2012). The relative confidence of the estimates contained fall with the criteria of Proved and Probable Ore Reserves. • The Ore Reserve has been estimated in line with the Alkane Resources Ltd Ore Reserve process. • The Mining Study completed by Hiller Enterprises is of an accuracy of +/- 15% and it is believed the work undertaken to derive this Ore Reserve conforms to that expectation. • The main factors which could affect the confidence of the assessment include: o Stope stability, this has been assessed by a reputable geotechnical consultancy as part of a previous feasibility study and remains relevant. Additional conservatism has been added in this area reducing the overall extraction ratio of the deposit. o Modifying factors, these are in line with industry accepted norms o Costs, cost have been sourced from budget estimates and benchmarking and the author's knowledge of numerous similarly sized and geologically and geographically similar deposits. o Revenue, revenue assumptions used in this study are in line with TGO expectations and gold price used below current spot prices.