ASX and MEDIA RELEASE

4 September 2017

Tomingley Resource and Reserve Statements FY17

- **Mineral Resources and Ore Reserves for the Tomingley Gold Operations have been re-estimated to account for depletion, increased geological knowledge with depth and actual operating costs and conditions:**
  - **Total Mineral Resources** **9.23Mt grading 1.7g/t Au (508,000oz)**
  - **Total Ore Reserves** **2.68Mt grading 1.9g/t Au (166,000oz)**
- **Total Ore Reserves includes the Underground Reserve advised in December 2015 and which is currently subject to a detailed core drilling program and revised feasibility scheduled for completion late 2017:**
  - **Underground Ore Reserves** **0.524Mt grading 3.7g/t Au (62,000oz)**
- **Strong FY17 operating performance of 68,836 ounces with A$117.3 million revenue at AISC of A$1,335/ounce.**
- **FY17 operating cash flow after development costs was A$32.7 million returning a pre-tax profit of A$17.1 million.**
- **FY18 Guidance 65,000 – 70,000 ounces at AISC of A$1,100 - A$1,200.**
- **Drilling continued to test underground ore positions at Tomingley, and near mine regional exploration drilling has located several encouraging targets.**

Mineral Resource and Ore Reserve Estimates as at 30 June 2017

The Company reports Ore Reserves and Mineral Resources for the Tomingley Gold Operations as at 30 June 2017 in accordance with the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC 2012).

These estimates take into account ore depleted by mining during the 2017 financial year and are set out in the tables below.

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Mineral Resources

TOMINGLEY GOLD OPERATIONS MINERAL RESOURCES (as at 30 June 2017)										
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)
Open Pittable Resources (cut off 0.50g/t Au)									
Wyoming One	1,716	1.7	400	1.6	625	1.1	2,741	1.6	137
Wyoming Three	86	2.0	16	1.3	33	1.4	135	1.7	8
Caloma One	954	1.6	1,016	1.2	824	1.2	2,794	1.3	120
Caloma Two	-	0.0	956	2.1	927	1.1	1,883	1.6	97
Stockpiles	762	1.0					762	1.0	23
Sub Total	**3,518**	**1.6**	**2,388**	**1.73**	**2,409**	**1.3**	**8,315**	**1.4**	**385**
Underground Resources (cut off 2.50g/t Au)									
Wyoming One	169	4.8	206	4.4	363	4.2	738	4.4	104
Wyoming Three	10	3.6	6	3.1	4	3.1	20	3.4	2
Caloma One	-	0.0	5	3.0	16	2.9	21	2.9	2
Caloma Two	-	0.0	80	3.4	53	3.2	133	3.3	14
Sub Total	**179**	**4.7**	**297**	**4.1**	**436**	**4.0**	**912**	**4.2**	**122**
TOTAL	**3,697**	**1.8**	**2,685**	**1.9**	**2,845**	**1.7**	**9,227**	**1.7**	**508**

Apparent arithmetic inconsistencies are due to rounding

These Mineral Resources are wholly inclusive of Ore Reserves.

Full details are given in Appendix 1 (Table1, Sections 1-3; JORC 2012).

Ore Reserves

TOMINGLEY GOLD OPERATIONS ORE RESERVES (as at 30 June 2017)							
DEPOSIT	PROVED		PROBABLE		TOTAL		Total Gold
	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	(Koz)
Open Pittable Reserves (cut off 0.50g/t Au)							
Wyoming One	1,033	1.7	134	1.5	1,167	1.6	63
Wyoming Three	0	0	0	0	0	0	0
Caloma One	58	2.2	0	0	58	2.2	4
Caloma Two	-	-	167	2.7	167	2.7	14
Stockpiles	762	1.0	-	-	762	1.0	22
Sub Total	**1,853**	**1.4**	**301**	**2.2**	**2,154**	**1.5**	**104**
Underground Reserves (cut off 2.50g/t Au)							
Wyoming One*	224	4.0	300.5	3.4	524.4	3.7	62
Sub Total	**224**	**4.0**	**300.5**	**3.4**	**524.4**	**3.7**	**62**
TOTAL	**2,077**	**1.7**	**602**	**2.8**	**2,678**	**1.9**	**166**

Apparent arithmetic inconsistencies are due to rounding

Full details are given in Appendix 2 (Table1, Section 4; JORC 2012). The Underground Reserves* were advised in the ASX release of 9 December 2015 and these reserves are currently subject to a detailed core drilling program and revised feasibility study, scheduled to be completed late 2017.

The table below compares the Mineral Resources and Ore Reserves year on year with 2016 as per the current reporting requirements.

Comparison of 2016 / 2017 TGO Mineral Resources and Ore Reserves

DEPOSIT	TOTAL RESOURCES						TOTAL RESERVES					
	2016			2017			2016			2017		
	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)
Wyoming One	3,805	2.1	257	2,741	1.6	137	1,447	1.7	78	1,167	1.6	63
Wyoming Three	155	2.0	10	135	1.7	8	0	0.0	0	0	0.0	0
Caloma One	3,719	1.4	165	2,794	1.3	120	1,322	1.5	63	58	2.2	4
Caloma Two	1,944	2.1	129	1,883	1.6	97	318	3.2	33	167	2.7	15
Stockpiles	701	0.8	18	762	1.0	23	701	0.8	18	762	1.0	22
Underground	912	4.2	123	912	4.2	123	524	3.7	62	524	3.7	62
TOTAL	11,236	1.9	702	9,227	1.7	508	4,312	1.6	254	2,678	1.9	166

Apparent arithmetic inconsistencies are due to rounding

The primary differences from 2016 to 2017 are:

- Ore mined from Caloma One, Caloma Two and Wyoming One during the period
- Mining at Wyoming Three completed in 2016
- Caloma One mining nearing completion at the end of the period

The current life of mine plan sees the open cut pits finishing in Q1 FY2019. A small cutback of the Caloma One pit to the north east utilising smaller equipment has been designed and whilst not scheduled is an option for TGO should the economics allow it in the future. Low grade stockpiles of approximately 700,000 tonnes are also available for milling, but are at present not scheduled until the potential underground material is available to be blended with it.

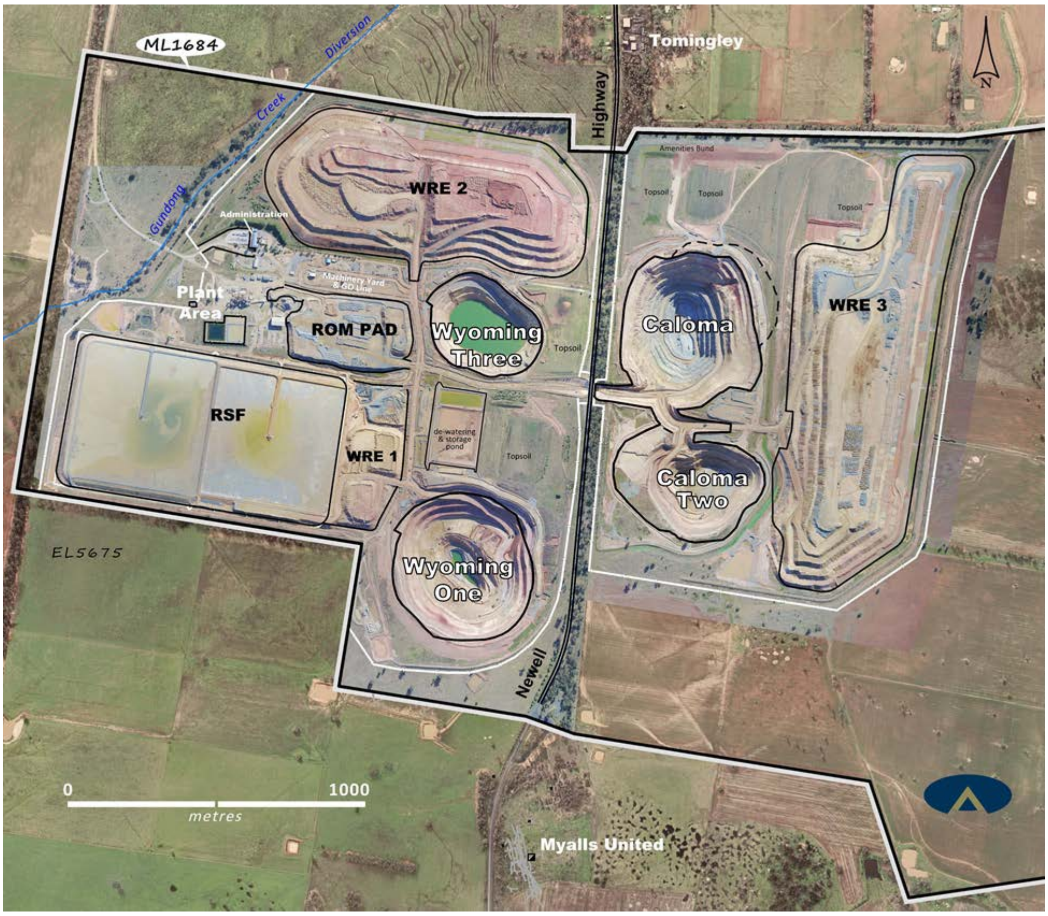
Underground Mining Study

The drilling program targeting strike extensions and in-fill areas with the aim of lifting the gold ounces per vertical metre in any future designs continues with completion expected in October. At that time the geological models will be updated and a mine plan evaluated for development.

Regional Exploration

Regional air core, RC and core drilling commenced early 2017 to drill traverses spaced 400 to 800 metres apart, testing an initial area from the southern boundary of TGO mine site to the Cemetery target just north of the Peak Hill mine site, approximately 12 kilometres. Results were reported in ASX announcements on 10 April 2017 and 10 August 2017. The drilling intersected extensive alteration and veining hosted within the prospective Mingelo Volcanic Belt at the El Paso target (previously called Eulinda Park) about 5 km south of the TGO.

Mineralisation at El Paso has been identified over a strike length of at least 1200 metres being open to the north where land access difficulties hampered the regional air core program. Approximately 2.5 km of the prospective belt within 5 km of the TGO remains untested. This broad spaced drilling has confirmed that the mineralisation has the potential to host Tomingley style gold deposits, and similar tenor results led to the Tomingley discovery and current mining operation.



Competent Person

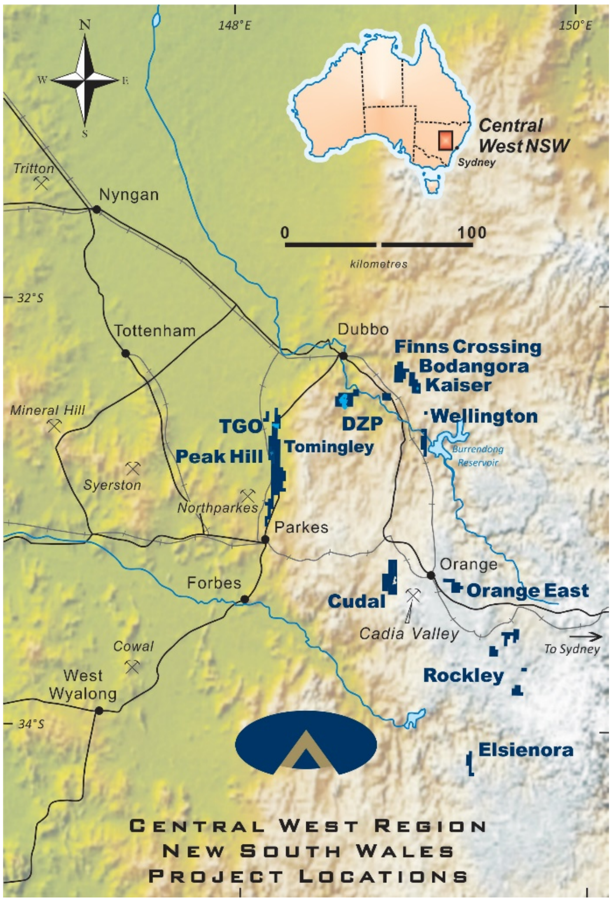
The information in this report that relates to the Mineral Resource estimates is based on, and fairly represents, information which has been compiled by Mr Craig Pridmore, Geology Superintendent Tomingley Gold Operations, who is a Member of the Australasian Institute of Mining and Metallurgy and an employee 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 John Millbank (Proactive Mining Solutions), an independent consultant, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Millbank 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 Millbank 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 the TGO has provided the funding to maintain the project development pipeline and will assist with the pre-construction development of the DP.



The NSW Planning Assessment Commission granted development approval for the DP on 28 May 2015 and on 24 August 2015 the Company received notification that the federal Department of the Environment gave its approval for the development. Mining Lease 1724 was granted on 18 December 2015 and the Environment Protection Licence was approved on 14 March 2016. Financing is in progress and this project should make Alkane a strategic and significant world producer of zirconium, hafnium and rare earth products with production targeted for 2019.

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

APPENDIX 1

JORC Code, 2012 Edition – Table 1 report – Wyoming One

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 2005 although not all of this drilling lies within the current resource outline. o AC - 118 holes for 9322m – inclusive of 3 pre-collars totaling 294.2m o RC - 157 holes for 27,108.9m – inclusive of 29 pre-collars totaling 4552.9m o RC Grade Control – 533 hole for 11586m o DD - 35 holes totaling 7,951.6m 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. Note: the resource model does not include Grade Control holes as the model predates the Grade control Drilling.
	• *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 what method, etc).*	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 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)

Criteria	JORC Code explanation	Commentary
		core. HQ3 core was oriented using the 'BallMark', 'EzyMark' or 'Ace' (Reflex Act) core orientation tool depending upon the contractor. Within the resource area drilling was comprised of: o 66% RC - 152 holes totaling 26,440.9 m (inclusive of 29 pre-collars totaling 4552.9m) o 20% DD - 34 holes totaling 7819.8m o 14% AC – 66 holes totaling 5,794.4m
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.
	• *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. DD - Core was photographed and all unsampled 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	• *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

Criteria	JORC Code explanation	Commentary
and sample preparation		generally based on geology, were predominantly over 1m intervals but do not exceed 1.2 metres in length. All mineralised zones were sampled, plus ≥2m 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.
	• *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.

Criteria	JORC Code explanation	Commentary
		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 an access 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 with 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 and distribution	• *Data spacing for reporting of Exploration Results.*	The majority of drilling at Wyoming One was completed along east-west lines spaced 25m apart however once the east-west lode orientation was confirmed for the '376' zone this portion of the deposit was assessed by south drilled holes was completed along north-south sections spaced 25m apart. Hole were drilled at a nominal 20m interval along sections. Both east-west and north-south drill holes have been used in the resource calculation. 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.

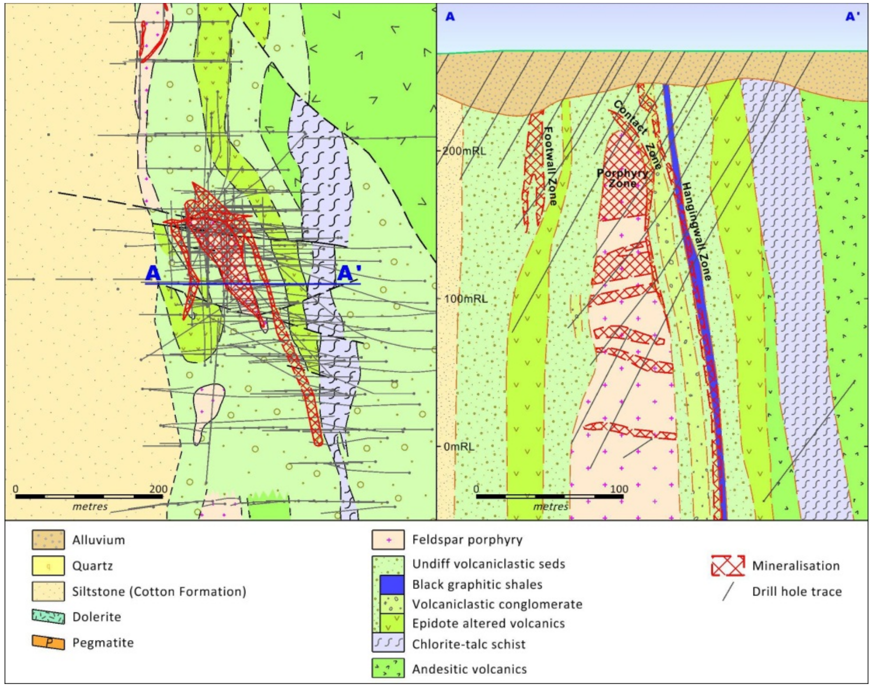
Criteria	JORC Code explanation	Commentary
	• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*	The drill hole spacing has been shown to be appropriate by the visible continuity of mineralisation 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 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.
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 robin assaying and completion of additional density determinations, both of which were undertaken for the Caloma Two resource drilling.

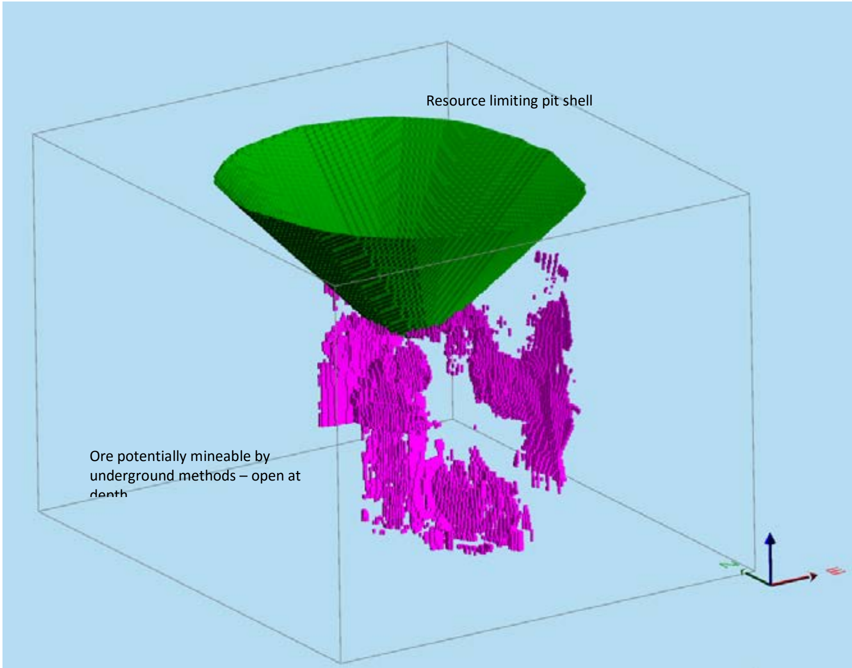
Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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.

Criteria	JORC Code explanation	Commentary
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: o *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 contact of the zone ('contact' zone); o *hangingwall* – a linear zone of mineralisation situated approximately 30m to hangingwall of the 'porphyry' mineralisation and hosted within silicified and brecciated carbonaceous mudstone. This zone is interpreted to fold around the northern end of the porphyry (northern zone); o *'376'* – east west zone of high grade mineralisation developed at the northern contact of the porphyry. Interpreted to be a bounding structure and primary fluid conduit. Other high grade east-west structures e.g. '831' appear to be developed en-echelon and to the south of the '376' zone; o *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 – o For uncut gold grades; o Intercepts were defined (bounded) by 0.5g/t gold outer limit and may contain some internal waste; o Only intervals grading ≥1 g/t gold were reported;

Criteria	JORC Code explanation	Commentary
		o 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 intercept lengths	• *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.
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 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. 

Criteria	JORC Code explanation	Commentary
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.
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', '376' and '831' zones by underground methods was 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 listed in section 1, and where relevant in section 2, also apply to this section.)

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.
	• *Data validation procedures used.*	There are validation checks to avoid duplications of data. The data were further validated for consistency when loaded into Datamine and desurveyed. An extensive check on the consistency and adequacy of down-hole survey data was carried out in 2009.
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 Mr Lewis prior to the initial resource estimations as the deposit is covered by a sequence of alluvial material and there is nothing to see at surface. Mr Lewis did visit the site on 25 July 2014 when he was able to view mineralisation in the open pit, view mineralisation and alteration in drill core and assess the drill sampling and QAQC techniques. The quoted resources were compiled by Mr Craig Pridmore, Geology Superintendant, 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 and lithological logging. 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 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 near their western contact with a more pelitic sequence. 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.
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*	Eight mineralisation wireframes (domains) were interpreted by the Alkane geologists most familiar with the deposit to constrain the estimation. An enclosing background domain was modelled by Lewis Mineral Resource Consulting Pty Ltd (LMRC) to capture minor mineralization outside the main domains. Four surfaces were also used to separate material

Criteria	JORC Code explanation	Commentary
	assisted estimation method was chosen include a description of computer software and parameters used.	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 immediately outside the mineralised zones were re-flagged, if they contained more than 1.0 g/t gold, in order to capture mineralized samples that would otherwise not be used for estimation. This re-flagging is also useful for the fixed-length RC and AC samples. It also captures samples lost because the wire-framing was carried out in a different mining software package. 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 45.0 g/t gold. After top-cutting, the maximum coefficient of variation for the mineralized domains ranged from 0.84 to 2.25 indicating that the estimation would not be difficult. The number of drill hole composites in all but one of the domains was less than 600, too few for reliable variography. The one domain with more data (the porphyry domain) had a variety of continuity directions, again making variography uncertain. For this reason, estimation was made by inverse distance squared (ID2). A kriged estimate was made using a nominal variogram to provide a measure of the availability of drill hole data during estimation. A check estimate was made using the Nearest Neighbour method. Datamine Studio 3 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. Once sufficient grade control drilling data has been acquired alternative modelling parameters will be investigated.
	• *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 a previous estimate made by Alkane. The grade of the new estimate was slightly higher; tonnes were also higher because an additional domain was estimated. There has not yet been any production from Wyoming One
	• *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
	• *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 small (2.5m x 2.5m x 5m) because of the narrow dipping nature of the mineralized zones. Due to the two directions of drilling, the drill hole spacing is locally much less than 25m. Sub-blocks were estimated. This model was regularized to 2.5m x 2.5m x 2.5m for new reporting as this is more compatible with the mine planning software currently in use at the mine and the mining methodology.

Criteria	JORC Code explanation	Commentary
		The drill hole spacing was 20-25m with both WE and NS holes drilled. The primary search used (50m x 50m in the long directions and 5m or 10m in the short direction) reflects the continuity on the mineralization as seen in section and plan. . Any blocks not estimated in the primary search were re-estimated using a secondary search twice the size of the primary search.
	• *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 form the same domain were used to make estimates.
	• *Discussion of basis for using or not using grade cutting or capping.*	The drill hole data were declustered using the polygonal method for statistical analysis and determination of top-cuts. The top-cuts were selected using a combination of histograms, probability plots and cutting statistic plots (plots of cut-off grade against Coefficient of Variation (CV) and total metal). 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.*	Estimates were made using Inverse Distance Squared (ID2) and checked using the Nearest Neighbour method. Estimates were also compared to a previous Alkane block model. 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 pittable 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 likely to be mined by open pit methods. Some dilution was added when the estimated sub-block model was regularized; this reduced the gold grade above 0.50 g/t cut-off by 5%. More dilution may need to be added as part of the mining reserve process.
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.

Criteria	JORC Code explanation	Commentary
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
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.
	• *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 surfaces
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*	The resources were classified using kriging variance; this provides a relative measure of the availability of data during estimation. It also takes into account the clustering of the data. 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 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 was estimated using high proportion of Reverse Circulation (RC) drill hole data. Comparisons with Diamond Drill hole data (DD) showed that the RC data were slightly higher in grade than the DD data for this deposit. The most likely reason for this is the presence of some coarse free gold that is better handled by the larger sample size of the RC drilling. The RC drilling was conducted using industry-standard methods and was not affected by high water flows so there is no reason not to accept the RC results.
	• *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.*	The Wyoming One resource estimate was reviewed by Behre Dolbear in January 2012. The review raised some questions about the method of resource classification. The classification scheme was justified in a subsequent LMRC memo to Alkane in February 2012. This reviewed the resources classes in relation to the anisotropic distance to the nearest sample. For almost all the Measured Resources, the nearest sample was at less than half the anisotropic search distance of the first estimation pass with a mean of 23% of the search distance. For Indicated Resources, the nearest sample was no more than 87% of the maximum anisotropic search distance with a mean of 46% of the search distance.. All Measured and Indicated Resources were estimated in the first search pass.

Criteria	JORC Code explanation	Commentary
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; consequently there are relatively few drill hole data in most zones. Only one domain (porphyry) has more than 600 drill hole composites. This has limited the accuracy of any fitted variogram models. The use of an approximate variogram model does not greatly affect the accuracy of the kriged grades as kriging is a very robust estimation process. It does, however, limit the accuracy of the variance of the estimates and any confidence limits that might be statistically inferred. No statistical or geostatistical method (non-linear or simulation) was used to quantify the relative accuracy of the estimate within confidence limits. Accuracy of the estimate is strongly dependent on: o accuracy of the interpretation and geological domaining; o accuracy of the drill hole data (location and values); o orientation of local anisotropy; and o 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 resources are global, being based on drill hole data at exploration spacing. The resources have been depleted based on mining to end of June 2017. 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 with the potential open pittable component assessed at ≥0.5g/t gold cut off and material outside of the indicative pit with potential 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 resource model is performing well within expectations, Save for poorly defined inferred mineralisation in the background domain. Reconciled Tonnes, grade and total ounces mined are all within 2-5% of the resource model prediction. Since the start of mining the reconciled tonnes versus the resource Model are -3%, -2% grade for -5% reduction in ounces. Based on the reconciled results and mining practices being implemented the resource model is deemed to have a high level of accuracy. Close spaced Grade control drilling has been completed to the base of the EOM June 2017 surface. This additional data collected with the mapping justified a change in modelling parameters and estimation techniques form ID2 to Ordinary Kriging. This change in estimation method has been used for the open pit grade control block model. Comparisons between the reconciled mined tonnes and grade, the Grade control model and Resource Model have shown that the change in modelling parameters has had little effect in total overall ounces.

APPENDIX 1 (continued)

JORC Code, 2012 Edition – Table 1 report – Caloma One

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 Caloma area has been evaluated using air core (AC), reverse circulation (RC) and diamond drilling (DD) techniques between August 2004 and June2016 although not all of this drilling lies within the current resource outline. In addition RC grade control drilling is undertaken on a campaign basis to assist in ore mark-up in the pit. o AC - 342 holes for 19,955.4m o RC - 335 holes for 37337.5 m – inclusive of 12 pre-collars totaling 453m o RC Grade Control – 2739 holes for 74260 metres o DD - 25 holes totaling 8036.2m 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 and riffle or cone splitter. DD sample intervals were defined by geologist during logging to honour geological boundaries.
	• *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 – prior to November 2007, the entire RC sample was collected at 1m intervals and delivered into a large plastic bag via a cyclone. For resource definition drilling since Nov 2007 and all grade control drilling, approximately 12.5% (2-4kg) of total sample was delivered via cone or riffle splitter into a calico bag (for shipment to laboratory if required) with the remaining sample delivered into a large plastic bag and retained for future use if required. 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 what method, etc).*	Initial reconnaissance drilling was completed to fresh rock using 75mm or 100mm air core with follow-up and deeper drilling completed by RC (usually 130 - 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 techniques or un-oriented PQ3 (83mm diameter) core drilling. Pre-collars were completed to

Criteria	JORC Code explanation	Commentary
		competent material, with holes cased off and completed to depth using HQ3 (61mm diameter) core. HQ3 core was oriented using the "Ace" (Reflex Act) core orientation tool.
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. Riffle and cone splitters 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.
	• *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. Magnetic susceptibility data is not collected for grade control drilling. AC & RC - A representative sample of each one metre interval is retained in chip trays for future reference. DD - Core was photographed and all unsampled 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. All mineralised zones were sampled, plus ≥2m 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

Criteria	JORC Code explanation	Commentary
		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 – for drilling completed prior to Nov 2007 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. For resource definition drilling completed since Nov 2007, for intervals with visual mineralisation and/or alteration the calico sample bag (1m samples) were numbered and submitted to the laboratory for analysis. Intervals without visual mineralisation and/or alteration were spear sampled and composited over three metres. For composited intervals returning grades >0.2g/t Au the calico bags were retrieved for assay of the individual 1 m intervals. Rare damp or wet samples were recorded by the sampler. All grade control drill holes are sampled at 1m intervals with all samples forwarded to the laboratory for analysis. 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.*	RC and grade control – 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 the riffle/conical split calico from the drill rig. Duplicates show generally excellent repeatability, indicating a negligible "nugget" effect. For grade control drilling duplicate samples are split at the drilling rig.
	• *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.
	• *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).

Criteria	JORC Code explanation	Commentary
		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. Screen fire assay checks (75µm mesh) were undertaken on 110 drill core samples. Screen fire assay data overrides all other methods.
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 Caloma Two 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 resource definition drill hole logging and sampling data was hard keyed into Excel spreadsheet for transfer and storage in an access database with verification protocols in place. All grade control drilling data at Tomingley is stored in a "Datashed" Microsoft SQL database. 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. Screen fire assays take precedence over all other assay techniques.
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 downhole intervals. Grade control drill holes complete since March 2015 which are greater than 24m in depth are surveyed down hole. 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 with reporting requirements for mine operations. Grade control drill holes laid out in MGA.
	• *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 and distribution	• *Data spacing for reporting of Exploration Results.*	Drilling was completed on east-west sections spaced nominally 20m apart with holes spaced at 20m intervals along the lines. The line spacing was increased to a nominal 40m in zones thought peripheral to the main ore body and to the north. Grade control drilling is completed on a pattern ensuring a minimum of 10m x 10m pattern when combined with resource definition drill holes.

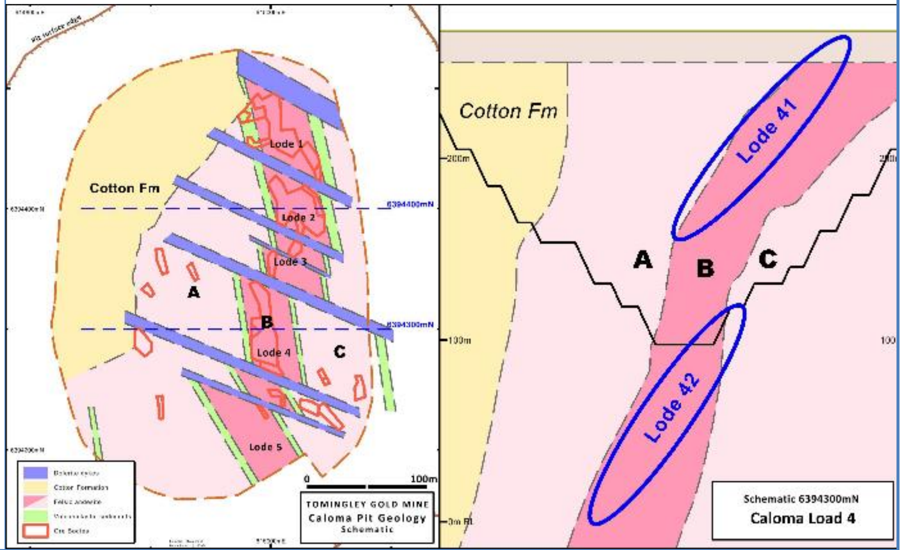
Criteria	JORC Code explanation	Commentary
		The drill hole spacing is similar to that used at other Tomingley deposits and has been established to be sufficient.
	• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*	A Simulation Study for optimal drill spacing has been undertaken. There is a case to reduce the spacing from 10x10 to 10x8. With the minimal mine life and visual continuity of mineralisation between drill holes and when on the ground the 10x10 drill spacing has been deemed appropriate,
	• *Whether sample compositing has been applied.*	Sample compositing was not applied until resource estimation stage. RC & AC -exploration and resource definition drilling samples with no visible mineralisation or alteration 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. All grade control sample assayed at 1m intervals 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. A number of drilling directions were used in the early drilling phases in an attempt to optimise the intersection angle. The chosen drilling direction (east at inclination of -60°) appears optimal based on reconciliation from the early mining periods.
	• *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 Caloma.
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 Caloma data was reviewed in 2010, 2011 and 2014 by Behre Dolbear (BDA) as part of the due diligence phase of the development of the project and bank financing. BDA did not express any specific concerns with respect to the data other than to recommend the completion of some round robin assaying and completion of additional density determinations, both of which were undertaken for the Caloma Two resource drilling. A density campaign on all deposits using drill core was undertaken in December 2015. A total of 3,182 density measurements were taken The aim of the review was to assess variability from fresh rock density values applied in previous Resource and Grade Control models. Data measurement was restricted to materials below the fresh rock transition. Average density values recorded for fresh rock materials within each of the deposits were generally between 1 -

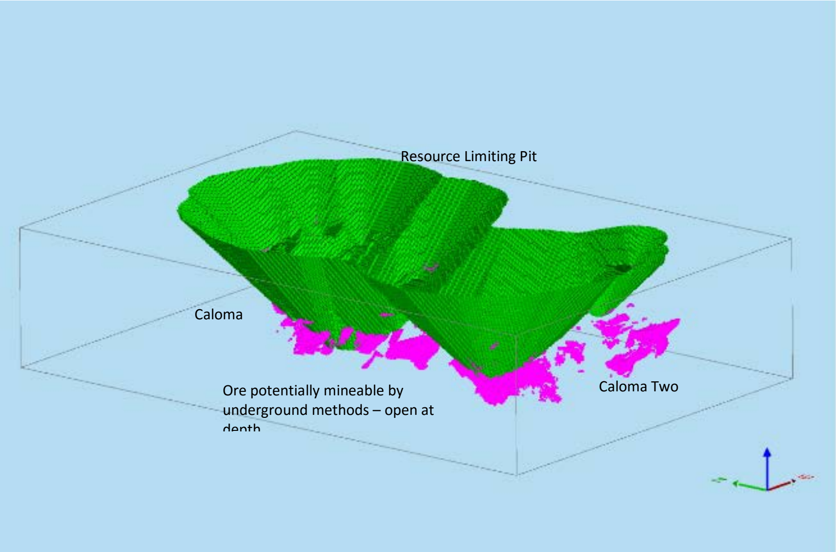
Criteria	JORC Code explanation	Commentary
		2% higher than the current assigned value. These new density values have been assigned to the latest Caloma resource model.

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	• *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 Caloma 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 Caloma is developed within a series of stacked 'quartz lodes' which dip shallowly to the west and hosted dominantly within the sub-volcanic sills. The lodes are cross cut by a number of barren post mineralisation dolerite dykes.
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 – o For uncut gold grades; o Intercepts were defined (bounded) by 0.5g/t gold outer limit and may contain some internal waste;

Criteria	JORC Code explanation	Commentary
		o Only intervals grading ≥1 g/t gold were reported; o 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 intercept lengths	• *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. At Caloma the true width is approximately 80% of the drilled width.
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 section and a plan showing geology with drill collars were included with previously reported exploration results. Typical plan and cross section 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.

Criteria	JORC Code explanation	Commentary
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.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	Mining within the Caloma open pit commenced in February 2014. Additional drilling may be completed to compliment an assessment of mining resources below the open pit by underground methods.
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

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.
	• *Data validation procedures used.*	There are validation checks to avoid duplications of data. The data were further validated for consistency when loaded into Surpac and desurveyed. An extensive check on the consistency and adequacy of down-hole survey data for exploration and resource definition drill holes was carried out in 2009.

Criteria	JORC Code explanation	Commentary
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.)*	The Caloma Resource Model was developed by Mr Craig Pridmore who has been working at the site since March 2015. The quoted resources have been compiled by Mr Craig Pridmore, Geological Superintendent, Tomingley Gold Operations Pty Ltd.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	The initial geological model was built on structural data from core and lithological logging with extensive pit mapping formed the backbone of the Geological/Structural model currently being implemented. The domain wireframes were built by the Alkane geologists most familiar with the deposit. The geological model is continuously being modified and improved as mining progresses. The broad geological model remains much as interpreted however the sub-volcanic sills have been separated into three individual units and constraints on the ore outlines tighten in line with the additional data available.
	• *Nature of the data used and of any assumptions made.*	Structural measurements from oriented drill core were used to assist in the geological interpretation for the resource model along with lithological, alteration and mineralisation logging of RC chips and drill core. Mapping within the open pit has greatly assisted with the refinement of the interpretation of the geology.
	• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*	The Caloma deposit was been drilled at a close-spacing in several different drilling campaigns, reducing the likelihood that the geological interpretation will change significantly. Drill holes were predominantly inclined to the east with some holes inclined to the north or west (early drilling). Reconciliation with grade control drilling and mining confirms this broad interpretation.
	• *The use of geology in guiding and controlling Mineral Resource estimation.*	Geological (lithological) logging 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. The Caloma deposit consists of a series of moderate to shallow west-dipping mineralised structures within the steep west dipping feldspar porphyritic host which is bounded by several thin volcaniclastic sediment lenses. These structures trend north-south over a strike length of 500 metres and range in width from a few metres to in excess of 20 metres. The mineralised structures have been displaced and offset by numerous east-west barren post-mineralisation dolerite dykes. Mineralisation is associated with extensive alteration and quartz veining of the porphyry and volcanic rocks.
	• *The factors affecting continuity both of grade and geology.*	Mineralisation is directly associated with silica, sericite, arsenopyrite, pyrite 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 west-dipping zones within a north-striking corridor 460m long and 420m wide. Mineralisation extends from about 5m below the surface for more than 350m vertical depth.
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*	The resource model has used all the exploration drill data (RC/ DD) and the grade control RC drilling. Grade control drill design was undertaken on a nominal 10m x 10m spacing. The resource model has incorporated sub-domaining of the main geological units and mineralised lodes. This sub-domaining has been incorporated into the resource model based on elements identified through in-pit mapping and increased drill density through the grade

Criteria	JORC Code explanation	Commentary
	parameters used.	control drilling. There are nine Geological domains, these are comprised of the cotton formation, the cross cutting barren dolerites, and the three sub-volcanic sill domains (Feldspar Porphyry's) which are separated by thin volcaniclastic sediments. There are 8 mineralised domains which define the main high grade ore lenses of the deposit and two enclosing background domains to capture minor mineralisation 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 of the data in any 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 10g/t gold to 30.0 g/t gold for the mineralised zones. After top-cutting, the maximum coefficient of variation for the mineralised domains ranged from 1.11 to 4.81 indicating that the estimation would not be difficult. The principal estimation was made using Ordinary Kriging with Inverse Distance Squared checks made. The number of drill hole composites have significantly increased since the original exploration resource model release allowing for reliable variography to be undertaken in the main ore lodes. These variogram models have been incorporated in the resource block model. The orientation of the search ellipse for each domain was controlled by dynamic anisotropy, which uses the bounding mineralised surfaces of the lodes and discrete wireframes for the unconstrained mineralisation. This method provided a unique dip and dip-direction for each block. The principal estimation using Surpac software was ordinary kriging with ID2 checks using the same dynamic anisotropy. A parent block size of 5m x 2.5m x 2.5m with 1.25m sub-blocking was used in the block model. All blocks constrained within the dolerite wireframe domain were classified as waste with a grade of 0 g/t assigned to the blocks.
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	Mining has been ongoing from the Caloma open pit since January 2014. In June 2015, a new geological/structural model was generated based on detailed inpit mapping, relogging of Diamond core holes and logging of Grade control holes. The estimation method was changed from ID2 to Ordinary Kriging and the reconciliation process was reviewed and modified. The geological model has been updated routinely over the past 2 years. Since the change Caloma pit Grade control Model has reconciled very well with the new estimation process. With +7% tonnes, -5% grade for +1% increase in ounces over the past 12 months.
	• *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 for the resource model is 5m x 2.5m x 2.5m, with sub-blocking of 2.5m x 1.25m x 1.25m. The primary search on each domain is variable based on the variograms with a range from 30m to 60m with a Major/Semi ratio of 1 and a Major/Minor ratio of 5.
	• *Any assumptions behind modelling of selective mining units.*	Block size of 5mN x 2.5mE x 2.5m has been used for the following reasons: 1. A rule of thumb is that the block dimensions for OK should not be less than a third to half of the informing data spacing. This increased length in the northing direction would mean that only the easting dimension does not strictly meet this criterion. This should translate to an improvement in estimation accuracy and precision, and therefore also the accuracy of ore allocation. 2. A 5mN x 2.5mE x 2.5mRL block equates to about 80t of fresh rock, which would essentially be a single haul truck load. 3. The continuity of mineralisation in the north-south orientation has a longer range no matter what the dip of the high grade lodes and so there will be only a minor impact on grade resolution for ore block definition.
	• *Any assumptions about correlation between variables.*	No assumptions made
	• *Description of how the geological interpretation was used to control the resource estimates.*	Hard boundaries on all domains within the resource model were used.
	• *Discussion of basis for using or not using grade cutting or capping.*	The top cuts were selected using a combination of histograms, probability plots and cutting statistic plots (plots of cut-off grade against Coefficient of Variation (CV) and total metal).
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	Estimates were made using Ordinary Kriging with Inverse Distance checks. The model was compared to previous grade control models and the resource model. A variety of checks were used to identify variability between models and also the estimated block grades. Each step of the process has validation steps to ensure estimation validity. Some of the checks incorporated comparison of composites to actual raw drill hole data, 2.5m level comparison checks using various grade cuts. Visual checks of the block estimation against composite and raw drill hole data both on plan and section.
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 pittable resources is relevant for the current mining operation of this deposit.
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.*	The main part of the Caloma deposit is being mined by open pit methods. No dilution has been applied to the resource model. The resources are depleted for production.

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 Caloma deposit is currently being mined and processed with no significant differences in metallurgical recoveries from those estimated in the feasibility study.
Environmen-tal 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.
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 for the original resource model were completed by commercial laboratories on drill core samples of the different material types (alluvium, saprolite, totally oxidised 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 samples taken. The results were combined the original exploration density data and used in the current resource estimate.
	• *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 surfaces
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*	*Resource Model* The resources were classified based on drilling density, geological confidence and grade continuity. The actual break-points for the different resource classes were chosen by inspection of the model in relation to the drilling density. As a general rule all areas with a 10m x 10m drill spacing was classified as measured. Zones with a nominal drill spacing of 20m x 25m has been classified as indicated, material that has been drilled to a 30m x 40m spacing is in the inferred category. The classifications are based on the confidence of ounce conversion. Measured would have a 90% conversion probability, indicated would have a 75% confidence level and inferred a 50% confidence in ounce conversion if mined.
	• *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).*	Caloma was estimated using high proportion of Reverse Circulation (RC) drill hole data. The RC drilling was conducted using industry-standard methods and was not affected by high water flows, so there is no reason not to accept the RC results. Statistical studies showed that the RC drilling was of similar grade to the diamond drilling. Reconciliation has shown

Criteria	JORC Code explanation	Commentary
		that the current estimation methods and modelling parameters are performing adequately with the reconciled ounces within 1% of the block model over the past 12 months
	• *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 audits have been carried out on the resource estimation. Cube Consultants have been used to review and update the estimation parameters for the Caloma pit. The scope of work was: 1.Undertake exploratory data analysis on the 1m gold composites provided by Alkane. This included making top cut recommendations as well as an assessment of the suitability of the current estimation methodology. 2. Undertake a spatial structural analysis, for representative high and low grade domains, resulting in the modelling of gold grade variograms for use in the DOK estimation runs. 3. Undertake search neighbourhood analyses to assist with the choice of DOK search parameters. This included a consideration of tightly sampled grade control areas (10mN x 10mE) drilling to more widely sampled areas covered only by resource holes. 4. Deliver an opinion on the suitability of the current 10mN x 10mE grade control drill pattern. 5. Update the estimation parameter file for use in the DOK routine. 6. Produce a technical summary note explaining the process followed by Cube and briefly discussing the new estimation parameters.
	• *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.*	No statistical or geostatistical method (non-linear or simulation) was used to quantify the relative accuracy of the grade control estimate within confidence limits. Accuracy of the estimate is strongly dependent on: o accuracy of the interpretation and geological domaining; o accuracy of the drill hole data (location and values); o orientation of local anisotropy; and o estimation parameters which are reflected in the variogram model used and the parameters used that follow the resource model relatively closely.
	• *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 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 with the potential open pittable component assessed at ≥0.5g/t gold cut off and material outside of the indicative pit with potential 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.*	Reconciliation of the Caloma pit has shown the current geological model and estimation process is performing very well, with minor improvements being made to the model as more information is gathered. Over the past 12 months the reconciled tonnes versus the Model are +7%, -5% grade for +1% increase in ounces. Based on the reconciled results and mining practices being implemented the resource model is deemed to have a high level of accuracy.

APPENDIX 1 (continued)

JORC Code, 2012 Edition – Table 1 report – Caloma Two

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 Caloma Two area has been evaluated using air core (AC), reverse circulation (RC) and diamond drilling (DD) techniques between May 2007 (early reconnaissance) and March 2012. Not all of this drilling lies within the current resource outline, there is some overlap in drilling with the southern end of Caloma (although there is no overlap in resources) and none of the air core drilling samples were used in the resource calculation. o AC - 105 holes for 7,367.5m o RC - 201 holes for 29,078m (inclusive of 2 pre-collar totalling 72m) o RC Grade Control – 252hole for 8377m o DD - 21 holes totaling 4,405.45m RC samples were collected at one metre intervals via a cyclone and riffle or cone splitter. DD sample intervals were defined by geologist during logging to honour geological boundaries. During the 2015 4 Geotech diamond holes were drilled into the Caloma Two deposit. These are included in the total DD holes drilled. Note: the resource model does not include Grade Control holes as the model predates the Grade control Drilling.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	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.*	RC Drilling - approximately 10% (3-4kg) of total sample was delivered via cone or riffle splitter into a calico bag (for shipment to laboratory if required) with the remaining sample delivered into a large plastic bag and retained for future use if required. DD Drilling – sample intervals defined were by geologists during logging to honour geological boundaries and cut in half with a saw. All samples sent to laboratory were crushed and/or pulverised to produce a ~100g pulp for assay process. All RC and core samples were fire assayed using a 50g charge. Visible gold was occasionally observed in both core and 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 what method, etc).*	The resource is based on 195 RC drill holes totaling 28,260 metres and 17 diamond core drill (DD) holes totaling 3,631 metres. Detailed resource definition drilling was completed by RC techniques using a 130mm or 140mm diameter face sampling hammer.

Criteria	JORC Code explanation	Commentary
		DD holes were pre-collared using either RC 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. HQ3 core was oriented using the "Ace" (Reflex Act) core orientation tool. Drilling data used in the establishment of resource wireframes and the resource calculation is comprised of: o 88% RC – 187 holes totalling 27,345m (inclusive of 1 pre-collar totalling 42m) o 12% DD – 16 holes totalling 3,848.0m
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	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. Riffle and cone splitters 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.*	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.
	• *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. RC - A representative sample of each one metre interval is retained in chip trays for future reference. DD - Core was photographed and all unsampled core is retained for reference purposes.
	• *The total length and percentage of the relevant intersections logged.*	All DD core and RC chip samples have been geologically and geotechnically logged by qualified geologists.

Criteria	JORC Code explanation	Commentary
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. All mineralised zones were sampled, plus ≥2m 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.*	RC – for intervals with visual mineralisation and/or alteration, the calico sample bag (1m samples) were numbered and submitted to the laboratory for analysis. Intervals without visual mineralisation and/or alteration were spear sampled and composited over three metres. For composited intervals returning grades >0.2g/t Au the calico bags were retrieved for assay of the individual 1m intervals. 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.*	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 the riffle/conical split calico from the drill rig. 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.*	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 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.
	• *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). Laboratory QAQC sampling includes insertion of CRM samples, internal duplicates and screen tests. This data was reported for each sample submission.

Criteria	JORC Code explanation	Commentary
		Failed standards result in re-assaying of portions of the affected sample batches. Screen fire assay checks (75µm mesh) were undertaken on 110 drill core samples. Screen fire assay data overrides all other methods.
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 Caloma Two 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 an access 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. Screen fire assays take precedence over all other assay techniques.
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 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 with 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 and distribution	• *Data spacing for reporting of Exploration Results.*	Drilling was completed on north-south sections spaced nominally 20m apart with holes spaced at 20m intervals along the lines. The line spacing was increased to a nominal 40m in zones thought peripheral to the main ore body and to the east. The drill hole spacing is similar to that used at other Tomingley deposits and has been established to be sufficient.
	• *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 between drill holes.

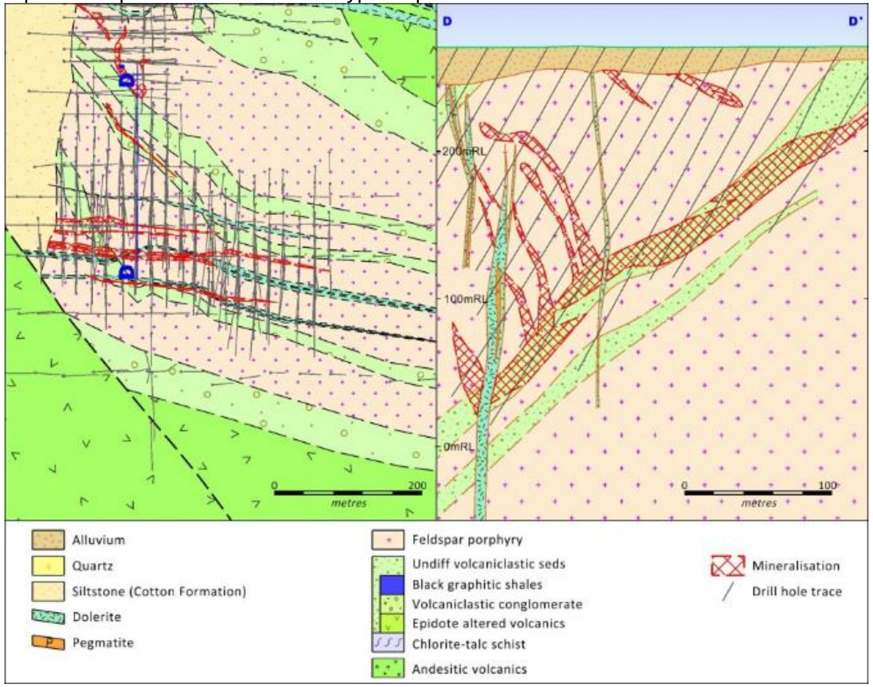
Criteria	JORC Code explanation	Commentary
	• *Whether sample compositing has been applied.*	Sample compositing was not applied until resource estimation stage. RC samples with no visible mineralisation or alteration were composited to 3m with 1m resamples assayed if the composite returned a gold value 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. The chosen drilling direction (south at inclination of -60°) is consistent with structural measurements obtained from oriented drill core.
	• *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 Caloma Two.
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 Caloma Two data has not been audited nor reviewed by external parties however the data for other deposits within the TGP was reviewed in 2010 and 2011 by Behre Dolbear (BDA). BDA did not express any specific concerns with respect to the data other than to recommend the completion of some round robin assaying and completion of additional density determinations, both of which were undertaken for the Caloma Two resource drilling.

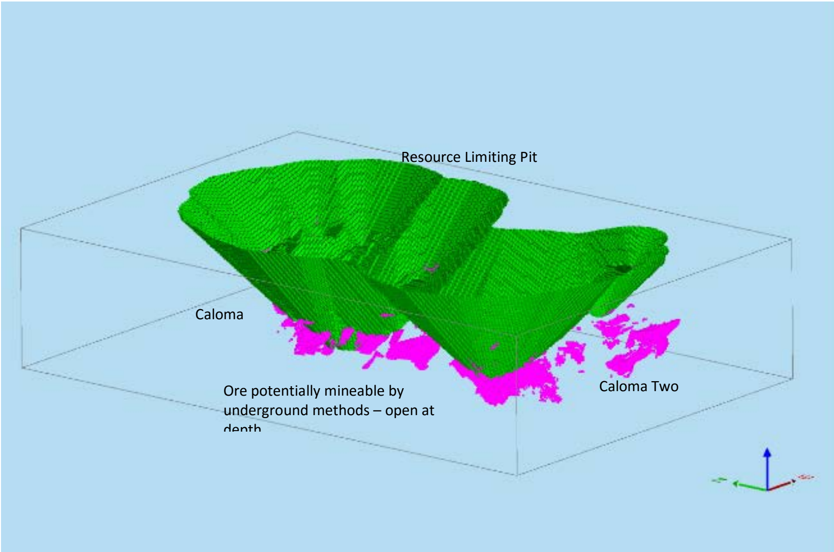
Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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 Caloma Two 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.

Criteria	JORC Code explanation	Commentary
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 Caloma Two is developed within a series of 'quartz lodes' which dip north at flat to moderate angles and hosted dominantly within the sub-volcanic sills. Mineralisation is also developed along a sediment contact zone which appears to be a potential linking structure with the Caloma mineralisation to the north. There is also evidence for the development of an inverted saddle reef at depth. The lodes are cross cut by a number of post mineralisation dolerite dykes.
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. The mineralisation is structurally complex and true widths are variable depending on the ore zone intersected however range between 60% and 80% of drill intersection.

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 section 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 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).*	No further work is planned in the short term however drilling to test the continuation of mineralised structures at depth for an underground resource definition will be contemplated.
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	A pit design has been established and material has been included in the mining schedule. 

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

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 is entered into Excel via drop down menus. All raw data is loaded directly to the Access database from the assay, logging and survey derived files.
	• *Data validation procedures used.*	There are validation checks to avoid duplications of data. The data are further validated for consistency when loaded into Datamine and desurveyed.
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 Mr Lewis prior to the initial resource estimations as the deposit is covered by a sequence of alluvial material and there is nothing to see at surface. Mr Lewis did visit the site on 25 July 2014 when he was able to view mineralisation in the open pit, view mineralisation and alteration in drill core and assess the drill sampling and QAQC techniques. The quoted resources were compiled by Mr Craig Pridmore, Geology Superintendant, Tomingley Gold Operations Pty Ltd, who has worked at TGO site since March 2015..

Criteria	JORC Code explanation	Commentary
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	The geological model is built on structural data from core and lithological logging. The lode strike orientations are similar to Wyoming Three which sits in a similar structural position.
	• *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.*	A steep dipping interpretation was initially proposed however this was inconsistent with structural measurements obtained from oriented drill core.
	• *The use of geology in guiding and controlling Mineral Resource estimation.*	Geological (lithological) logging 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. The majority of mineralisation is hosted by a quartz veined and altered feldspar ± augite porphyritic andesite of probable sub-volcanic origin. Dolerite dykes post-date mineralisation and all mineralised lodes are terminated at the dolerite contacts.
	• *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.*	Strike length ~ 360m Width ~ 100m Depth ~ 20m from below surface to ~ 250m below surface from deepest drilling intercept.
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.*	13 mineralisation wireframes (domains) and 5 dolerite wireframes were interpreted and used as constraints for the resource modelling. Four surfaces were also used to separate material types - topography, alluvium, saprolite and base of oxidation surfaces. The drill hole data were flagged by dolerite and mineralised domain wireframes in priority order, to prevent double use the data in the intersecting zones. The samples immediately outside the mineralised zones were re-flagged, if they contained more than 0.25 g/t gold, in order to prevent any overestimation that could be caused by use of assay boundaries. This re-flagging is also useful for the RC samples that are not broken at barren dyke boundaries. The samples were composited to 1m, the most common sample length and flagged by the topography, alluvium, saprolite and base of oxidation surfaces. The top-cut declustered data had Coefficient of Variation (CV's) of less than 1.7 for the mineralised zones, allowing use of Ordinary Kriging for estimation. Average variogram models were fitted for the mineralised zones and dolerite dykes. Estimates were made by Ordinary Kriging, with check estimates by Inverse Distance Squared (ID2) and Nearest Neighbour methods. Datamine Studio 3 V22 was used. The resources are limited by an indicative pit design to ensure they have reasonable prospects for eventual economic extraction.
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	There are no previous estimates or any production data to provide any validation.

Criteria	JORC Code explanation	Commentary
	• *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
	• *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 small (2.5m x 2.5m x 5m) because of the narrow dipping nature of the mineralisation zones. The average drill hole spacing was 20m and variogram ranges 22m x 26m x 3.5m. The primary search was equal to the variogram ranges; secondary searches were made using 2x and 3x the primary search. Only the material estimated in the primary and secondary searches were included in the resources. Sub-blocks were estimated but these were regularized to 2.5m x 2.5m x 2.5m blocks in March 2014 as this is more compatible with the mine planning software currently in use at the mine and the proposed mining methodology.
	• *Any assumptions behind modelling of selective mining units.*	No assumptions were made.
	• *Any assumptions about correlation between variables.*	No assumptions were made
	• *Description of how the geological interpretation was used to control the resource estimates.*	Only data form the same domain were used to make estimates.
	• *Discussion of basis for using or not using grade cutting or capping.*	The drill hole data were declustered using the polygonal method for statistical analysis and determination of top-cuts. The top cuts were selected using a combination of histograms, probability plots and cutting statistic plots (plots of cut-off grade against Coefficient of Variation (CV) and total metal).
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	Estimates were made by Ordinary Kriging, with check estimates by Inverse Distance Squared (ID2) and Nearest Neighbour methods. The estimates were verified using several different techniques and checked for local and global variability. The checks included comparison with estimates made by different estimation methods, and against the declustered composites.
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 pittable resources is being used for the other Tomingley deposits. This takes into account current mining costs and metallurgical recovery for similar material.
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*	The main part of the Caloma Two deposit is likely to be mined by open pit methods. Some dilution was added when the estimated sub-block model was regularised; this reduced the gold grade above 0.50 g/t cut-off by 16% and increased tonnes by 17%. More dilution may need to be added as part of the mining reserve process. The resources were limited by an indicative pit design to ensure they have reasonable prospects for eventual economic extraction.

Criteria	JORC Code explanation	Commentary
	basis of the mining assumptions made.	
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.*	Metallurgical test work on Caloma Two material has not been undertaken to date however, the metallurgy of the other Tomingley deposits is well studied. It is likely that Caloma Two will have similar metallurgical characteristics. The Caloma deposit is currently being mined and processed with no significant differences in metallurgical recoveries from those estimated in the feasibility study.
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. Development approval for the Caloma Two open pit was granted in July 2016. The Environmental Protection Licence for the works is still awaited.
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. At least 5 samples if possible were selected for each of the 8 categories; weathered porphyry, weathered mineralised porphyry, fresh porphyry, fresh mineralised porphyry, weathered sediment, weathered mineralised sediment, fresh sediment, and fresh mineralised sediment. 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.
	• *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 surfaces
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*	The resources were classified using the search pass; only estimates made within the defined mineralisation zones in the first search pass were classified as Indicated Resources. The dimensions of the search pass were based on the variogram ranges. No Measured Resources were defined, because of some uncertainly in the geological interpretation of the mineralisation zones, and the use of a high proportion of Reverse Circulation drilling (RC) for exploration.
	• *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).*	The use of RC drilling limits the amount of geological information that can be logged, and boundaries of mineralisation zones cannot be precisely located.
	• *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

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	As this is the first mineral resource estimation for this deposit, there have not been any audits or reviews.
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 Caloma Two deposit consists of 13 narrow mineralisation zones; consequently there are relatively few drill hole data in each zone. This has limited the accuracy of any fitted variogram model and forced the use of average variogram models. The use of an approximate variogram model does not greatly affect the accuracy of the kriged grades as kriging is a very robust estimation process. It does, however, limit the accuracy of the variance of the estimates and any confidence limits that might be statistically inferred. No statistical or geostatistical method (non-linear or simulation) was used to quantify the relative accuracy of the estimate within confidence limits. Accuracy of the estimate is strongly dependent on: o accuracy of the interpretation and geological domaining; o accuracy of the drill hole data (location and values); o orientation of local anisotropy; and o 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 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 with the potential open pittable component assessed at ≥0.5g/t gold cut off and material outside of the indicative pit with potential 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.*	There has not been any production from Caloma Two.

APPENDIX 2

JORC Code, 2012 Edition – Table 1 report

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.*	The Mineral Resource estimate that this reserve is based upon has been complied by Mr Craig Pridmore, Geological Superintendent for Alkane Resources Ltd. Mr Pridmore is employed at the Tomingley Gold Operation. The mineral resource estimates have been completed using block models developed by Mr Richard Lewis of Lewis Mineral Resource Consultants Pty Ltd (LMRC), for Wyoming One and Caloma Two, and Mr Craig Pridmore for Caloma One, using data supplied by Alkane Resources Ltd (Alkane). The models produced incorporated all mineralisation in the Wyoming One, Caloma One and Caloma Two deposits to permit reconciliation of production to date. The depletion of these resource models utilised surveyed data from the end of month production records in June 2017. The following table comprises the Mineral Resources for the Tomingley Gold Project which were compiled by Mr Craig Pridmore, Geology Manager for Alkane, based on the resource models mentioned above.

TOMINGLEY GOLD PROJECT MINERAL RESOURCES (as at 30 June 2017)

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)
Open Pittable Resources (cut off 0.50g/t Au)									
Wyoming One	1,716	1.7	400	1.6	625	1.1	2,741	1.6	137
Wyoming Three	86	2.0	16	1.3	33	1.4	135	1.7	8
Caloma	954	1.6	1,016	1.2	824	1.2	2,794	1.3	120
Caloma Two	-	0.0	956	2.1	927	1.1	1,883	1.6	96
Sub Total	**2,756**	**1.6**	**2,388**	**1.73**	**2,409**	**1.3**	**7,553**		**361**
Underground Resources (cut off 2.50g/t Au)									
Wyoming One	169	4.8	206	4.4	363	4.2	738	4.4	104
Wyoming Three	10	3.6	6	3.1	4	3.1	20	3.4	2
Caloma	-	0.0	5	3.0	16	2.9	21	2.9	2
Caloma Two	-	0.0	80	3.4	53	3.2	133	3.3	14
Sub Total	**179**	**4.7**	**297**	**4.1**	**436**	**4.0**	**912**	**4.2**	**122**
TOTAL	**2,935**	**1.8**	**2,685**	**1.9**	**2,845**	**1.7**	**8,465**	**1.8**	**483**

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.)*	The Competent Person for the Ore Reserves, Mr. John Millbank is an independent consultant engaged by Tomingley Gold Operations Pty Ltd (TGO), a whole owned subsidiary of Alkane. Mr Millbank has contributed to the mine planning processes at TGO since commencement of operations in 2013, and has been closely involved with site operations since this time. A specific site visit for the Ore Reserves calculations was completed from the 24th to the 26th of June 2017.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* *(The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.)*	The Tomingley Gold Mine is an operational open pit mine and CIP processing plant. The mine is based on the extraction and treatment of ore from three operational open pits – Caloma One, Caloma Two, and Wyoming One. Wyoming Three pit has been completed to current economic limits. Mining is currently occurring at Wyoming One, Caloma One and Caloma Two Pits. Caloma One Pit is expected to be complete in the third quarter of 2017. The TGO processing plant utilises two stage crushing, single stage grinding and a gravity/CIL gold recovery circuit. The plant has a designated throughput of 1.25mtpa of oxide ore and 1.0mtpa of fresh (sulphide) ore. The plant has been operational since February 2014. The Tomingley Gold Mine was subject to a Definitive Feasibility Study including the estimation of an initial Mineral Resource and Ore Reserve for the Wyoming One, Wyoming Three and Caloma open pits (2009, 2009 and 2012 respectively). Caloma Two has been subsequently optimized and designed using Whittle and Surpac software by Proactive Mining Solutions and in-house personnel. The current Ore Reserve has been calculated by the Competent Person using the designed pits and associated depletion as at the end of 30 June 2017. The Site has been operational since January 2014 and is achieving the design objectives set out in the DFS. This Reserves Statement is based upon well understood costs and physicals from what is now a mature operation. Cost modelling has been completed to a budget level. The end of June 2017 mine survey information has been used to differentiate material mined from in-situ material.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	A lower block cut-off grade of 0.5g/t Au has been applied to the 'diluted' resource block model in calculating this Ore Reserve. The lower cut has been selected with consideration to mine ability, and incremental cash operating margins (i.e. processing costs). The lower cut-off has been calculated based upon, o a $1550 per ounce gold price excluding royalties, o using process recoveries based on actual achieved for the past reporting year, and o estimated processing and administration costs for the life of mine plan, based upon achieved costs for the past financial year. The cut-off grade has been verified by using costs and metallurgical recoveries from the past financial year, and expected Gold Price. The calculated lower block cut off of 0.5g/t is conservative when historic costs and processing recoveries are applied.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).*	Open cut truck excavator mining, with some free dig material in the upper oxide zones and drill and blast in the lower oxide and fresh materials.
	• *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.*	Equipment size and methods selected typical of moderate scale open pit gold mining. 120 tonne class excavators, 90 tonne mechanical drive haul trucks.

		Wyoming 1 pit has been stripped using the operator's dry hire fleet by using a staged mining design. Caloma Two Stage 1 pit has been mined, and the subsequent stages will also be stripped using the dry hire fleet according to the Life Of Mine plan. Dual lane in pit ramps at 24 m wide and 1:8.5 gradient for the majority of the pits. Single lane ramps at 15m wide have been designed to access the final stages of the mine. These have shown to be successful for the mine so far. Mining is on five metre high benches and is mined in two, two and a half metre high flitches, to reduce mining dilution. These flitch heights are typical for gold mining and match the size of mining equipment selected.
	• *The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc), grade control and pre-production drilling.*	In Pit ore boundaries are defined by Reverse Circulation Grade control drilling on 10 metre by 10 metre to 10 metre by 5 metre patterns depending on the size and quality of the mineralisation being grade controlled. Geotechnical parameters as advised by specialised geotechnical consultants for Wyoming One, Caloma One, and Caloma Two. Site visits are conducted regularly by the consultants, and parameters reviewed. Any modifications to wall design are addressed in design.
	• *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).*	Pit Optimisation parameters have been confirmed to an appropriate level of accuracy through subsequent mining operations, along with reconciliation of actual performance to date. Parameters have been applied directly to designs, and these designs have then been subjected to financial analysis, to confirm profitability. This process has been applied to all the mining pits.
	• *The mining dilution factors used.*	*Wyoming One* Reserve is based on a sub blocked resource model that has been regularised to allow for dilution and ore loss. The regularisation considers the overall dimensions and geometry of the individual ore zones and assigns grade based on a 2.5m vertical extent On comparison with the sub-block resource model, the regularised models have the inherent dilution of -6% on contained metal. On comparison with actual mined to date, reconciled contained ounces are 5% less than the model has predicted, which is within limits. No dilution factor has been applied. *Caloma One* Has been based on a grade control model that uses closely spaced drilling for the first 20 vertical metres of mining. Reconciliation of grade control drilling versus mill production to date in Caloma shows the grade control drilling underestimates by approximately 2% on ounces fed. No dilution factor has been applied. *Caloma Two* Reserve is based on a sub blocked resource model. On comparison with actual mined to date, reconciled contained ounces are 39% more than the model has predicted. No dilution factor has been applied.
	• *The mining recovery factors used.*	Assumed 100% recovery of the models, due to acceptable reconciliation to date.

	• *Any minimum mining widths used.*	Pit Design has been limited to a minimum working width of 24 metres.
	• *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.*	Inferred resources contained in the mineralised ore wireframes are included in the current life of mine schedule. The proportion of inferred in pit resource contained within the life of mine plan at the end of June 2017 is 26% of the total ore tonnes and 14% of the total ounces. Reconciliations to date for Wyoming 1 show the regularized models are generally under reporting tonnes, and grade. Resulting in a total reduction of 5% for contained ounces against mill feed. This is based upon 26% of the original pit ore being mined so far, and includes the inferred in pit resource. Reconciliation excluding the inferred resource over performs the model estimates. Reconciliations to date for Caloma One show the resource model used is over reporting tonnes by 14% and under reporting grade by 6% for a total over report of ounces by 6% against Mill feed. This is based on 99% of the original pit ore being mined thus far, and includes the inferred in pit mining resource. Reconciliation excluding the inferred resource over performs the model estimates. Reconciliations to date for Caloma Two show the regularized models are generally over reporting tonnes by 1 %, and under reporting grade by 31%. This results in Mill feed over reporting 39% contained metal against the model and is based upon 53% of the original pit ore being mined so far. This includes the inferred in pit resource. Reconciliation excluding the inferred resource over performs the model estimates.
	• *The infrastructure requirements of the selected mining methods.*	All required infrastructure is currently in place, including surface works for Caloma Two. Tailings storage facility lifts are currently occurring, and these costs have been included in financial models.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.*	Ore from the Tomingley Project will be treated at the Tomingley Gold Plant which is described above.
	• *Whether the metallurgical process is well-tested technology or novel in nature.*	The technology is well tested
	• *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.*	The DFS plan uses 96% metallurgical recovery for oxide and 91% for fresh for an overall recovery of 93%. Each pit, except Caloma Two, has had specific metallurgical test work undertaken for the DFS which is made up of leach and gravity recovery. The metallurgical test work is representative of all material types and areas of the ore bodies. The range of recoveries used are within the parameters of the individual pit recoveries. Processing of ores thus far, including those from Caloma Two, have shown process recoveries to fall within these limits.
	• *Any assumptions or allowances made for deleterious elements.*	No deleterious elements extracted
	• *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the ore body as a whole.*	Process recovery for the 2016/2017 financial year averaged 91.47%. A blend of 24% oxide and 76% fresh material was processed for the year. This results in process recovery being 1% less than the LOM Plan.
	• *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	N/A – no minerals defined by a specification.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential*	All environmental approvals are in place for operating within the Wyoming One, Wyoming Three and Caloma pits.

	sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	Development approvals were obtained during 2015 for the commencement of the Caloma Two open pit. The waste dump for Caloma Two will be incorporated into WRE3, Caloma's waste dump, for Stage One. Stages Two and Three will backfill the original Stage One pit. The Caloma Two operation is within the existing granted mining lease. There is sufficient volume in the RSF design to allow for all the material in the LOM, including Caloma Two.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	Infrastructure has already been constructed for open pit mining and processing. Works to site included 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 1.25 MTPA. All surface drainage works for Caloma Two have been carried out. The site relies upon local employment drawing employees from Tomingley, Peak Hill, Dubbo and Parkes Region.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.*	No allowance was made for capital costs in this reserve analysis although pre-stripping of waste for Caloma Two may be capitalised. The economic analysis is based on total cash costs. Projected All In Sustaining Costs have been calculated from the LOM Plan and are less than the predicted realised gold price, leaving margin.
	• *The methodology used to estimate operating costs.*	Operating costs – Mining and Process o Current wage rates. o Projected fuel price for 2017/2018 o Current contract rates for equipment hire, drilling contractor and explosive supplier. o Current explosives costs and estimates of requirements for blast hole drilling, blasting, excavation and processing based on the varying rock types. o Current work rates and OEM specs for excavator productivity. o Truck hours based on OEM specs and projected haul cycles from mine plan. o Contract Prices for Processing Consumables o Current contract prices for power and estimated usage o Associated onsite administration cost and a portion of head office costs. Total operating and capital costs for 2016/2017 financial year were 4% lower than the anticipated plan for the year, with 5% higher than anticipated gold ounces mined.
	• *Allowances made for the content of deleterious elements.*	N/A – No deleterious elements extracted
	• *The source of exchange rates used in the study.*	Gold price is expressed in Australian dollars and no exchange rate is required.
	• *Derivation of transportation charges.*	No transportation charges have been applied in economic analysis as these are included in the mining costs. Ore will be delivered directly from the pit to the ROM beside the existing plant within estimated mining costs. Gold transportation costs to the Mint are included in the refining component of the milling charges assumed in the study.

	• *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.*	Processing operating costs outlined above.
	• *The allowances made for royalties' payable, both Government and private.*	Royalties payable at rate of 4% ex-mine value to the NSW State Government have been considered. There are no other royalties' due.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.*	Assume 100% ore mining recovery of the regularised Model. Selling costs and Royalties included in costs to give a net revenue per ounce. No deleterious metals present that incur smelter penalties. A base gold price of AUD$ 1550 /Oz excluding royalties in this ore reserve assessment. Exchange rates, royalties and transport charges dealt with above.
	• *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	No assumptions made
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.*	There is a transparent quoted derivative market for the sale of gold; The Dore Gold is sent to the Perth Mint at commercial rates for refining. The Tomingley Gold Operations Pty Ltd sell the gold into the open market. The current gold hedge book is 17,500 ounces at an average price of $AUD1,716 per ounce. Gold sold outside of the hedge book will be sold to the spot market.
	• *A customer and competitor analysis along with the identification of likely market windows for the product.*	N/A There is a transparent quoted derivative market for the sale of gold
	• *Price and volume forecasts and the basis for these forecasts.*	N/A There is a transparent quoted derivative market for the sale of gold
	• *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	N/A – not assessing industrial minerals
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.*	The operation is currently operating at a processing rate of 1.1 MTPA and has built up 6 months of ore grade stockpile. The preliminary analysis carried out did not estimate the NPV but rather simple cash flow based on a variety of possible gold prices; or For all deposits, the optimal pit shell was chosen as that with the highest discounted cash flow from the Whittle Four-X pit Optimisation. The pits were designed from the chosen shell. The Whittle optimisation have low variations across the AUD1200-1600 Revenue range. Pit designs where then back calculated for undiscounted return using the whittle input costs to ensure profitability within limits.
	• *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	Sensitivity analysis was included in the Whittle optimization and simple cash flow analysis. As noted above there were very low variations in the Whittle optimisations for gold prices ranging from $1200 - 1600

Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	The TGO site is located on flat farm land with the Newell Highway separating Caloma and the Wyoming (pits and processing) side of operations. Surrounding the site is the village of Tomingley (600 m to the north) and local operating farms. All key stakeholder agreements are in place, including a Voluntary Planning Agreement (VPA) with the Narromine Shire Council. The Company has close working relationships with the local communities.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:*	
	• *Any identified material naturally occurring risks.*	A risk analysis was undertaken as part of the Feasibility Study and Environmental Assessment and no naturally occurring risks were identified.
	• *The status of material legal agreements and marketing arrangements.*	Majority of production is sold into the spot gold market.
	• *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	The operation is situated on a granted Mining Lease which expires in 2034. All statutory and government approvals have been obtained. The required development approvals for Caloma Two and the Caloma Cutback have been granted. EPL licence is still outstanding for Caloma Two however this is anticipated to be complete prior to end of Q2 this financial year.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.*	The classification of the Tomingley Gold Project Ore Reserve (June 2016) has been carried out in accordance with the recommendations of the JORC code 2012.
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*	Yes. The Wyoming One, Caloma One and Caloma Two deposits are robust at current gold prices and this has been proven over past three years of operations.
	• *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	No probable reserves have been derived from Measured Resources – all measured resources converted to Proved Reserves.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	The Caloma Cutback was reviewed by site personnel since publication of the 2016 Ore Reserves. The following is a summary of activities undertaken. o Additional infill drilling aimed at the base of the cutback. This was with the intention to raise inferred material to indicated for the in-pit resource. o Inclusion of the drilling in the resource model, cl1_210217.mdl. This model has subsequently been updated with the current data in the latest model cl1_200717. The model was then interpolated for grade using two methodologies. o The attributes were labelled au_krig (ordinary kriging of gold assays) and au_sched. The au_sched process removes all the blocks that have limited drilling data to support mining, or blocks that are smaller than the current SMU. This is done by creating ore block solids that represent a mining ore block, and an average grade for the solid is then calculated using the au_krig attribute. This method reduces the grade of the high grade material, and dilutes with the low grade material within the block. It produces block physicals that closely represent mining SMU.

		o The au_krig attribute is considered as a best case model. The au_sched attribute was considered as a worst-case model, but indicative of results seen in Caloma One mining to date. The worst case reduced contained gold by approximately 5,600 ounces. o Optimisation of the two attributes showed a difference of approximately 25% in cashflow, at a gold price of $1600 per ounce. o Mining equipment was reviewed and different options investigated, including the use of small articulated dump trucks and 120 tonne excavators. o Design versions were tested for viability using Life of Mine schedules and cost forecasts. Costs were applied to alternative equipment from suppliers, and production rates applied through benchmarking of similar operations. o Extensive iterations on pit design, equipment cost and schedules were completed. o At the applied gold price of $1550 per ounce the project became breakeven at best, and a return on expenditure of -5.6% at worst. o Major contributing factors that resulted in the project being unfinancial were gold price per ounce (excluding royalties) of $1550 versus $1650 in 2016 Ore Reserves, increase in drilling density increased confidence and reduced contained gold, and revised modelling method to smooth grades within the ore boundaries for small block sizes. Consequently, the project has been removed from the 2017 Ore Reserves.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.*	The resource block models from which the mining reserve has been derived was based on a geostatistical estimation completed by Lewis Mineral Resource Consultants who were satisfied with the resource categories quoted. Within the reserve estimation process the effects of included dilution have been accounted for to produce an anticipated selective mining unit grade. The effects of this dilution are more pronounced in narrow zones of mineralisation, leading to overall grade reduction and loss of some narrow zones to waste through a drop below cut-off grade.
	• *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 material included in the LOM schedule is only material that has been estimated inside of designated ore zones. The estimated material outside of the ore zones has not been included.
	• *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.*	Reconciliation of Proved and Probable versus mined for Wyoming One and Caloma Two indicates that approximately 75% of inferred in pit resource from Wyoming 1 and 95% of inferred in pit resource from Caloma Two is transferring to actual mined ore tonnes. The assumption that the high grade (plus 1 g/t) and the low grade (0.5-1.0 g/t) could be wholly separated has not been proved, although low grade material is being recovered. This has resulted in more high-grade material and less low-grade material than as predicted in the resource models. A revised technique using grade control drilling and modelling a separate attribute called au_sched has shown some improvement for this. The estimation technique used essentially smooths the grade and allows for low grade within the high grade mineable ore blocks.

	• *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	The materials mined and processed for the year ending June 30, 2017 have included oxide and fresh materials. Approximately 76% of mill feed for the year has been fresh material. Mill performance has been within limits for the fresh material fed to date. Indications to date are that the Reserve should be conservative in both tonnes and grade. It is likely that the pits will recover more tonnes and possibly grade than what is contained in the Proved and Probable Reserve. There is a case that the inferred material inside of the outlined ore zones should be considered in the LOM calculations, particularly in Caloma Two pit where a significant portion of inferred resource is converting to mined ore tonnes.