ASX and MEDIA RELEASE

10 December 2015

Maiden Underground Ore Reserve

Tomingley Gold Operations

- **Maiden underground ore reserve estimated at 524,400 tonnes grading 3.66g/t gold for 61,600 ounces**
- **These reserves are within the total project resource of 11.25 million tonnes grading 1.9g/t gold (687,000 ounces)**
- **Open pit operations have been converting around 100% of Inferred Resource ounces to mine reserves**
- **Estimate only accesses ore from Wyoming One and Caloma Two**
- **Potential exists to include Caloma with additional drilling to upgrade the resource category**
- **Further drilling from underground developments has the potential to extend the overall resource base at depth**
- **Highlights the potential of the Tomingley Gold deposits to sustain a long term underground mining operation**

CONTACT : IAN CHALMERS, MANAGING DIRECTOR, ALKANE RESOURCES LTD, TEL +61 8 9227 5677

INVESTORS : NATALIE CHAPMAN, CORPORATE COMMUNICATIONS MANAGER, TEL +61 418 642 556

MEDIA : HILL KNOWLTON STRATEGIES, CONTACT: IAN WESTBROOK, TEL +61 2 9286 1225 OR +61 407 958 137

Ground Floor, 89 Burswood Road, Burswood WA 6100, AUSTRALIA (PO Box 4384, Victoria Park WA 6979, AUSTRALIA)

Telephone: +61 8 9227 5677 Facsimile: +61 8 9227 8178

www.alkane.com.au mail@alkane.com.au

TOMINGLEY GOLD OPERATIONS (TGO)

Alkane 100%

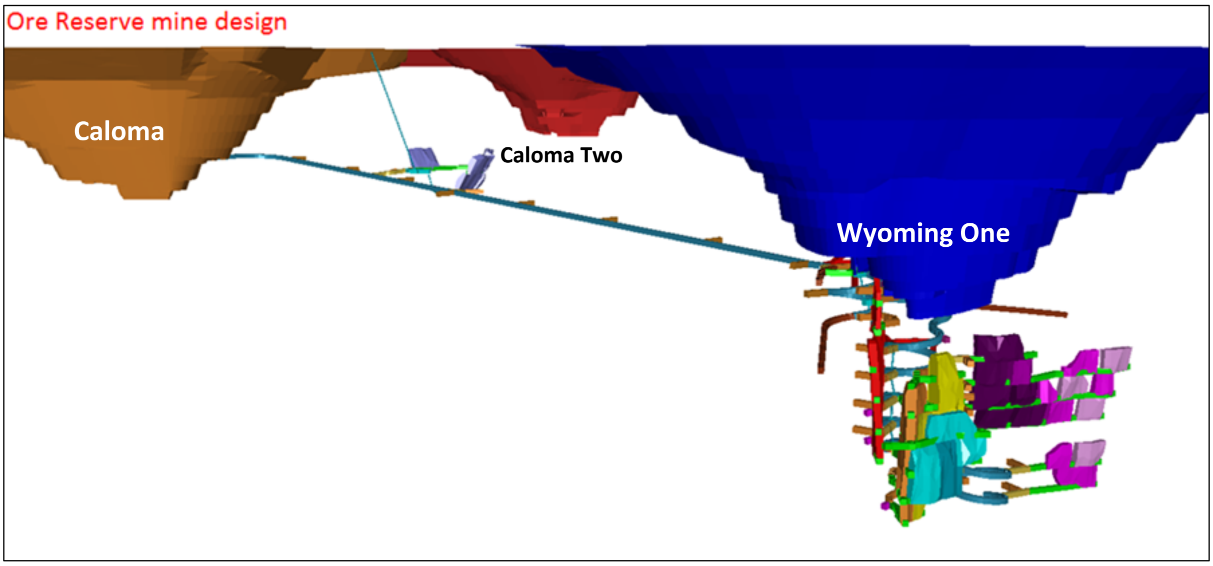
Alkane Resources is pleased to report the maiden underground Ore Reserve for the Tomingley Gold Operations.

Table 1 – Ore Reserve Summary

SOURCE	Tonnes (Kt)	Au (g/t)	Au (Koz)
Proven	223.9	4.03	29.0
Probable	300.5	3.38	32.6
TOTAL ORE RESERVE	524.4	3.66	61.6

*apparent arithmetic inconsistencies are due to rounding

As part of the pre-feasibility study which resulted in this Ore Reserve, a mining options study was undertaken to assess the most technically and financially viable mining methods. Six options were investigated with ore being accessed from some or all of the known deposits with decline portals in the Wyoming Three and/or Caloma open pits. The option chosen accesses ore within the Wyoming One and Caloma Two deposits from a portal in the Caloma open pit.



Tomingley Gold Operations Underground Design (Reserves)

The mining assessment demonstrated that a combination of long-hole open stoping and Avoca type stoping was the most viable option for an underground operation. The mining method was selected for each area after consideration of geotechnical constraints, ore width, cost and financial benefit of each method, number and location of accesses, and speed / timing of ore extraction.

Development will be undertaken by conventional and well understood drill and blast excavation techniques that are common in Australian underground metalliferous mines. All stoping will be done by conventional long-hole drill and blast.

The underground mine was assessed as an owner operator mining operation utilizing well maintained, low hour second hand equipment which would be maintained by staff maintenance personnel.

To enable mine development and stope designs, an initial financial analysis was undertaken using available site processing and administration cost information and benchmarked mining costs from similar sized Australian underground mines to determine the correct cut-off grades to use for the study. This determined that the stoping and development cut-off grades were 2.5 g/t Au and 1.0 g/t Au respectively. A breakdown of the ore reserve material into stope derived and development ore is shown in Table 2.

Table 2 – Ore Reserve Detail

SOURCE	Tonnes (Kt)	Au (g/t)	Au (Koz)
Proven			
Development	**36.9**	**4.10**	**4.9**
Stoping	**187.0**	**4.01**	**24.1**
Sub-total Proven	**223.9**	**4.03**	**29.0**
Probable			
Development	**52.0**	**3.14**	**5.2**
Stoping	**248.5**	**3.43**	**27.4**
Sub-Total Probable	**300.5**	**3.38**	**32.6**
TOTAL ORE RESERVE	**524.4**	**3.66**	**61.6**

The mining assessment indicates that ore production would commence nine months after the start of development and continue for 33 months (2.75 years). During this production period it is anticipated that the higher grade underground ore would be blended with stockpiled low grade ore from the open pits and used to supplement open pit mill feed to maintain a consistent ore throughput and feed grade, thus extending the life of the Tomingley operations.

The reserve assessment is conservative in that all inferred resource material included in stope designs was set to zero grade prior to undertaking the financial assessment. Accordingly, as part of the options study, an underground design was also completed using the entire mining inventory (measured, indicated and inferred resource categories). This design economically extracts an additional 47.7Koz of gold from similar development. Although this additional material cannot be included in a reserve, it should be noted that the current open pit operations have been converting around 100% of inferred resource ounces to mined reserves in the Caloma open pit and some 41% additional ounces were mined from the Wyoming Three open pit compared to the resource block model.

The geological controls to mineralisation at Tomingley are well understood and it is anticipated that further drilling from underground developments will continue to expand the potential resource base. The design used for this reserve estimate extracts ore from Wyoming One over a vertical extent of 180 metres between the +80m RL (15 metres below the designed open pit) and the -100m RL. The study highlights the potential of the Tomingley gold deposits to sustain a long term underground mining operation.

The underground ore reserve lies wholly within the Mineral Resource estimates which were subject of an announcement to the ASX on 21 September 2015.

Table 3 – Mineral Resources

TOMINGLEY GOLD PROJECT MINERAL RESOURCES (as at 30 June 2015)									
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	**2,171**	**1.7**	**442**	**1.5**	**735**	**1.1**	**3,348**	**1.5**	**167**
Wyoming Three	**206**	**1.7**	**122**	**1.7**	**2**	**1.1**	**330**	**1.7**	**18**
Caloma	**2,163**	**1.8**	**582**	**1.7**	**2,008**	**1.5**	**4,753**	**1.7**	**254**
Caloma Two	**-**	**-**	**1,085**	**2.4**	**704**	**1.3**	**1,789**	**2.0**	**112**
Sub Total	**4,540**	**1.8**	**2,231**	**2.0**	**3,450**	**1.4**	**10,220**	**1.7**	**551**
Underground Resources (cut off 2.50g/t Au)									
Wyoming One	**168**	**4.8**	**205**	**4.4**	**361**	**4.2**	**735**	**4.4**	**104**
Wyoming Three	**12**	**3.6**	**20**	**4.5**	**25**	**3.3**	**57**	**3.8**	**7**
Caloma	**0**	**3.1**	**4**	**2.9**	**81**	**3.2**	**84**	**3.2**	**9**
Caloma Two	**-**	**-**	**92**	**3.5**	**63**	**3.2**	**155**	**3.3**	**17**
Sub Total	**180**	**4.7**	**321**	**4.1**	**530**	**3.9**	**1,031**	**4.1**	**136**
TOTAL	**4,720**	**1.9**	**2,552**	**2.3**	**3,979**	**1.7**	**11,251**	**1.9**	**687**

*apparent arithmetic inconsistencies are due to rounding

Prior to this release, Ore Reserves were defined (as at 30 June 2015) for the open pits only and the detail released to the ASX on 21 September 2015.

Table 4 – Open Pit Ore Reserves

TOMINGLEY GOLD PROJECT OPEN PIT ORE RESERVES(as at 30 June 2015)							
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)
Wyoming One	**1,665**	**1.6**	**202**	**1.3**	**1,867**	**1.5**	**94**
Wyoming Three	**173**	**1.6**	**5**	**1.4**	**178**	**1.5**	**9**
Caloma	**1,247**	**1.9**	**72**	**1.5**	**1,319**	**1.8**	**80**
Caloma Cut Back	**222**	**1.5**	**66**	**1.4**	**288**	**1.4**	**14**
Caloma Two	**-**	**-**	**243**	**3.5**	**243**	**3.5**	**27**
							-
Stockpiles	**468**	**0.8**	**-**	**-**	**468**	**0.8**	**12**
TOTAL	**3,775**	**1.6**	**588**	**2.2**	**4,363**	**1.6**	**235**

*apparent arithmetic inconsistencies are due to rounding

TGO Site layout June 2015

Competent Persons

The Information in this report relating to Ore Reserves is based on work undertaken by Mr Michael Leak and supervised by Mr Sean Buxton, both of whom are Members of the Australasian Institute of Mining and Metallurgy. This report has been compiled by Mr Michael Leak who is a casual employee of Tomingley Gold Operations Pty Ltd. Mr Sean Buxton and Mr Michael Leak both have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity 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 Sean Buxton and Mr Michael Leak consent to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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 Terry Ransted, who is a Member of the Australasian Institute of Mining and Metallurgy and an employee of Alkane Resources Ltd. Mr Ransted 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 Ransted consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.

Disclaimer

This report may contain certain forward looking statements and forecasts, including possible or assume, production levels and rates, costs, prices, future performance or potential growth of Alkane Resources Ltd, industry growth or other trend projections. Such statements are not a guarantee of future performance and involve unknown risks and uncertainties, as well as other factors which are beyond the control of Alkane Resources Ltd. Actual results and developments may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors. Nothing in this report should be construed as either an offer to sell or a solicitation of an offer to buy or sell securities.

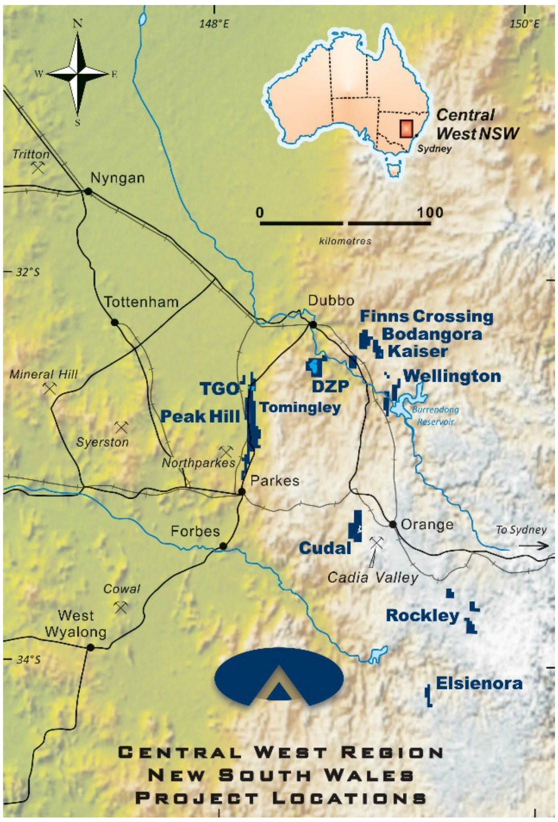
This document has been prepared in accordance with the requirements of Australian securities laws, which may differ from the requirements of United States and other country securities laws. Unless otherwise indicated, all ore reserve and mineral resource estimates included or incorporated by reference in this document have been, and will be, prepared in accordance with the JORC classification system of the Australasian Institute of Mining, and Metallurgy and Australian Institute of Geosciences.

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 Zirconia Project (DZP). Tomingley commenced production early 2014. Cash flow from the TGO will provide the funding to maintain the project development pipeline and will assist with the pre-construction development of the DZP.

The DZP Environmental Impact Statement has been completed and development consent granted by the Planning Assessment Commission. Financing is in progress and this project will make Alkane a strategic and significant world producer of zirconium products, hafnium and heavy rare earths when it commences production in 2018.

Alkane's most advanced gold copper exploration projects are at the 100% Alkane owned Wellington and Bodangora prospects, and Elsienora farm-in. Wellington has a small copper-gold deposit which can be expanded, while at Bodangora a large 12km^2 monzonite intrusive complex has been identified with porphyry style gold copper mineralisation. Encouraging gold mineralisation was recently drilled 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. AC - 118 holes for 9322m – inclusive of 3 pre-collars totalling 294.2m RC - 157 holes for 27,108.9m – inclusive of 29 pre-collars totalling 4552.9m DD - 35 holes totalling 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.
	• *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) 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: 66% RC - 152 holes totalling 26,440.9 m (inclusive of 29 pre-collars totalling 4552.9m) 20% DD - 34 holes totalling 7819.8m 14% AC – 66 holes totalling 5,794.4m

Criteria	JORC Code explanation	Commentary
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 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.*	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

Criteria	JORC Code explanation	Commentary
		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. 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.

Criteria	JORC Code explanation	Commentary
		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.
	• *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. Sample submission sheets were delivered with the samples and also emailed to the laboratory. All

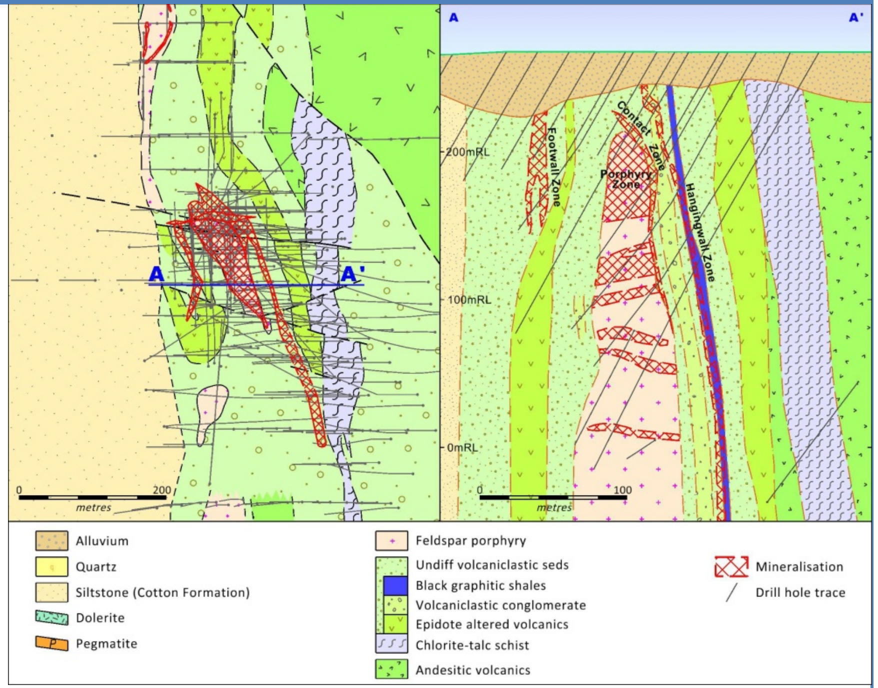
Criteria	JORC Code explanation	Commentary
		sample submissions were documented via ALS tracking system and all assays were reported via email. Sample pulps were returned to site and were stored for an appropriate length of time (minimum 3 years). The Company has in place protocols to ensure data security.
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

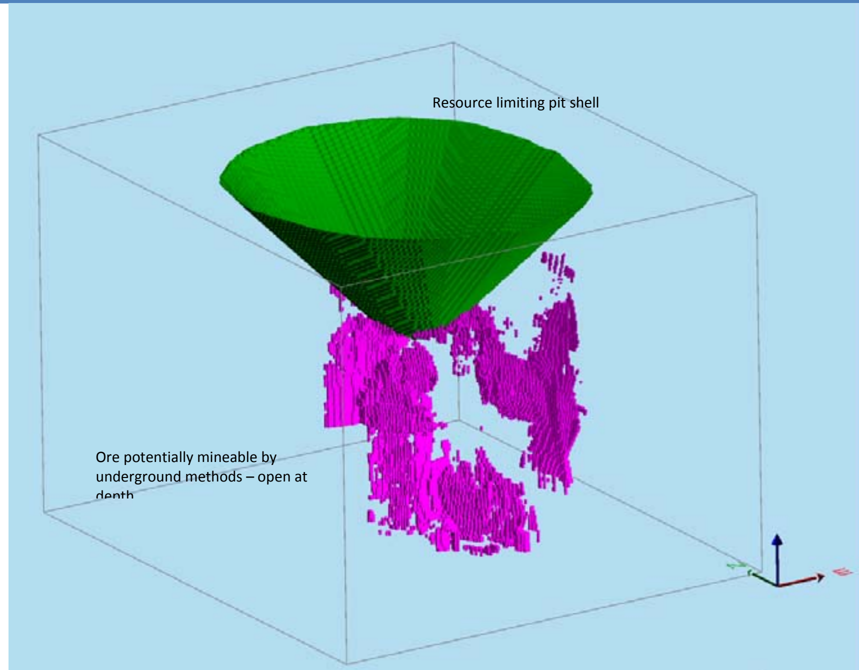
(Criteria listed in the preceding section also apply to this section.)

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.
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: *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); *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); *‘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

Criteria	JORC Code explanation	Commentary
		and to the south of the '376' zone; *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* *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 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 be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Cross sections and a plan showing geology with drill collars were included with previously reported exploration results. A typical plan and cross section are included below.



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 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 open pit has been designed for the Wyoming One deposit and mining is scheduled to commence in 2015. 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.
	• *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.

Criteria	JORC Code explanation	Commentary
		

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 Terry Ransted, Chief Geologist, Alkane Resources Ltd, who has been involved with the project since 2001.

Criteria	JORC Code explanation	Commentary
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.
	• *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 assisted estimation method was chosen include a description of computer software and parameters used.*	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 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

Criteria	JORC Code explanation	Commentary
		domain was controlled by a Dynamic Anisotropy model that provided a unique dip and dip-azimuth for each block.
	• *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 drillhole 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. 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.

Criteria	JORC Code explanation	Commentary
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 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.
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.
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.
	• *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

Criteria	JORC Code explanation	Commentary
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.
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: accuracy of the interpretation and geological domaining; accuracy of the drill hole data (location and values); orientation of local anisotropy; and estimation parameters which are reflected in the global resource classification.
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*	The 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 ≥1.75g/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 Wyoming One to date.

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

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 Three area has been evaluated using air core (AC), reverse circulation (RC) and diamond drilling (DD) techniques between June 2002 and October 2003 although not all of this drilling lies within the current resource outline. AC - 189 holes for 12,855.1m RC - 86 holes for 12,886.3 m – inclusive of 3 pre-collars totalling 269.3m DD - 3 holes totalling 398.7m 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.
	• *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) 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: 62% RC - 77 holes totalling 11,874.3 m (inclusive of 3 pre-collars totalling 269.3m) 2% DD - 3 holes totalling 398.7m 36% AC – 107 holes totalling 6,772.6m
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

Criteria	JORC Code explanation	Commentary
		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 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.*	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

Criteria	JORC Code explanation	Commentary
		(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. 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 Three 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.

Criteria	JORC Code explanation	Commentary
	• *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.*	Early drilling at Wyoming Three was completed along east-west lines spaced 25m apart assuming stratigraphy and lode orientation was similar to the earlier drilled Wyoming One prospect. Once the east-west lode orientation was confirmed all subsequent drilling was completed along north-south sections spaced 25m apart with holes at 20m intervals 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.
	• *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 early drilling at Wyoming Three was completed along east-west sections assuming stratigraphy and lode orientation was similar to the earlier drilled Wyoming One prospect. Once the east-west lode orientation was confirmed all subsequent drilling was completed along north-south sections. The chosen drilling direction (south 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 Wyoming Three however east-west drilling will not provide optimum intersection of the 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. Sample 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

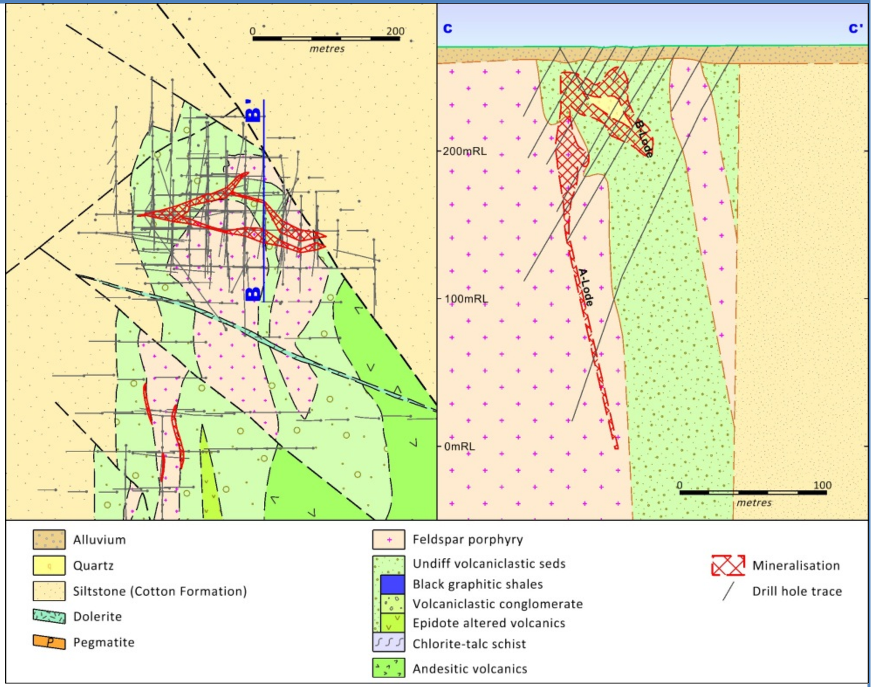
Criteria	JORC Code explanation	Commentary
		reported via email. Sample pulps were returned to site and were stored for an appropriate length of time (minimum 3 years). The Company has in place protocols to ensure data security.
Audits or reviews	• *The results of any audits or reviews of sampling techniques 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.

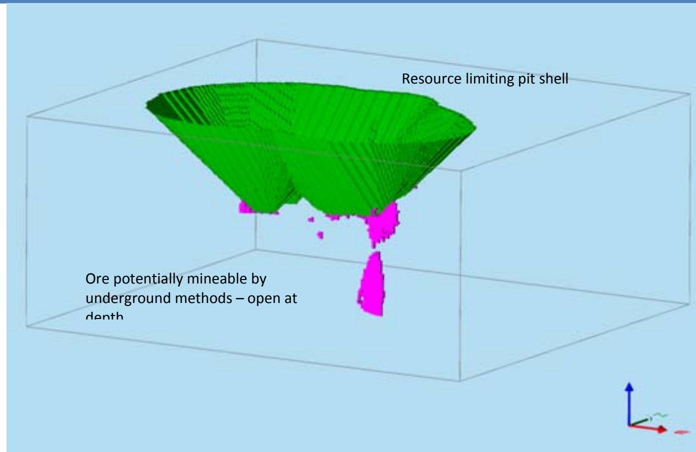
Section 2 Reporting of Exploration Results

(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 Three deposit lies within ML 1684 which is held in the name of Tomingley Gold Operations Pty Ltd, a wholly owned subsidiary of Alkane Resources Ltd.
	• *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	ML1684 expires on 11 February 2034.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	All reported drilling has been completed by ALK.
Geology	• *Deposit type, geological setting and style of mineralisation.*	Geological nature of the Tomingley Deposits is well documented elsewhere. Mineralisation is associated with quartz veining and alteration focused within sub-volcanic basaltic-andesite sills and adjacent volcaniclastic sediments. The deposits appear to have formed as the result of a rheological contrast between the porphyritic sub-volcanic sills and the surrounding volcaniclastic sediments, with the sills showing brittle fracture and the sediments ductile deformation, and have many similarities to well documented orogenic - lode-style gold deposits. Mineralisation at Wyoming Three is developed within a series of sub-parallel, sub-vertical ‘quartz lodes’ which dip steeply to the north and hosted dominantly within the sub-volcanic sills.
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

Criteria	JORC Code explanation	Commentary
	• *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 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 be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Cross sections and a plan showing geology with drill collars were included with previously reported exploration results. A typical plan and cross section are included below.

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 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).*	Mining within the Wyoming Three open pit commenced in February 2014.
	• *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 Wyoming Three deposit is well constrained by drilling. Two deeper core holes completed in 2012 indicated limited potential for underground resources.

Criteria	JORC Code explanation	Commentary
		

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 Caloma and Wyoming Three open pits, view mineralisation and alteration in drill core and assess the drill sampling and QAQC techniques. The quoted resources were compiled by Mr Terry Ransted, Chief Geologist, Alkane Resources Ltd, who has been involved with the project since 2001.
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 Three deposit was been drilled at a close-spacing in several different drilling campaigns, reducing the likelihood that the geological interpretation will change significantly.

Criteria	JORC Code explanation	Commentary
		Reconciliation with grade control drilling and early mining confirms the 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 Wyoming Three deposit consists of several sub-parallel, steeply dipping mineralised zones within a feldspar porphyry host and located close to a major NW-SE trending regional structure. These mineralised zones trend east-west over a strike length of 260 metres and range from a few metres to about 10 metres in width. Flat dipping linking structures between the steeper zones are evidenced but difficult to model accurately. Mineralisation is associated with extensive alteration and quartz veining of the feldspar porphyry and volcanic rocks.
	• *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 an east-west striking corridor 260m long and 115m wide. Mineralisation extends from about 12m below the surface for more than 260m 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 parameters used.*	Four mineralisation wireframes (domains) were interpreted by the Alkane geologists most familiar with the deposit to constrain estimation. An enclosing background domain was modelled by LMRC 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 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 mineralised 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 wireframing 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 10g/t gold to 30.0 g/t gold. Even before top-cutting, the maximum coefficient of variation for the mineralized domains ranged from 1.83 to 2.0, indicating that the estimation would not be difficult. The number of drill hole composites in all domains were too few for reliable variography. 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.
	• *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 lower but tonnes were similar. Pre-stripping of waste from Wyoming Three (and Caloma) commenced in late 2013 with mining of ore in February 2014. Alkane reported on 6th June, 2014 that mine to mill

Criteria	JORC Code explanation	Commentary
		reconciliation for the combined Wyoming Three and Caloma production has been positive for both tonnes and grade.
	• *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 drillhole 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. 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 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 maximum un-cut gold composite grade was 79.75g/t. 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). A check estimate was made without use of 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.
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 Wyoming Three deposit is currently being 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 10%. More dilution may need to be added as part of the mining reserve process.

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.*	The metallurgy of the Tomingley deposits is well studied. It is likely that Wyoming Three will have similar metallurgical characteristics. Production to date has not revealed any unexpected metallurgical problems.
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.
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.*	No specific gravity measurements were completed on Wyoming Three material however the lithologies and mineralisation is very similar to that at Wyoming One where numerous specific gravity measurements were undertaken 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.
	• *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 mineralised 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 Three was estimated using high proportion if Reverse Circulation (RC) drill hole data. Comparisons with Diamond Drill hole data (DD) showed that the RC data were slightly lower in grade than the DD data for this deposit. 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 resource estimates were 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 Wyoming One resource classes in relation to the anisotropic distance to the nearest sample and concluded that the classification was justified by the

Criteria	JORC Code explanation	Commentary
		data support. Wyoming Three being a smaller resource has not been further studied.
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 Three deposit is relatively small and consists of 4 mineralisation zones; consequently there are relatively few drill hole data in most zones. 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: accuracy of the interpretation and geological domaining; accuracy of the drill hole data (location and values); orientation of local anisotropy; and estimation parameters which are reflected in the global resource classification.
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*	The 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.
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	Production from Wyoming Three (and Caloma) commenced in early 2014. Alkane reported on 6th June, 2014 that mine to mill reconciliation for the combined Wyoming Three and Caloma production has been positive for both tonnes and grade.

JORC Code, 2012 Edition – Table 1 report – Caloma

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 August 2011 although not all of this drilling lies within the current resource outline. AC - 342 holes for 19,955.4m RC - 327 holes for 35,907.5 m – inclusive of 12 pre-collars totalling 453m DD - 26 holes totalling 7976.1m 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 drilling since Nov 2007, approximately 12.5% (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 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 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. Within the resource area, drilling was comprised of: 72% RC - 323 holes totalling 35,457.5 m (inclusive of 12 pre-collars totalling 453m) 16% DD -26 holes totalling 7976.1m 11% AC – 100 holes totalling 5,550m

Criteria	JORC Code explanation	Commentary
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. 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 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.

Criteria	JORC Code explanation	Commentary
		For 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 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.*	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). 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.

Criteria	JORC Code explanation	Commentary
	• *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 & 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.*	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. 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.
	• *Whether sample compositing has been applied.*	Sample compositing was not applied until resource estimation stage. RC & AC – 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. 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.

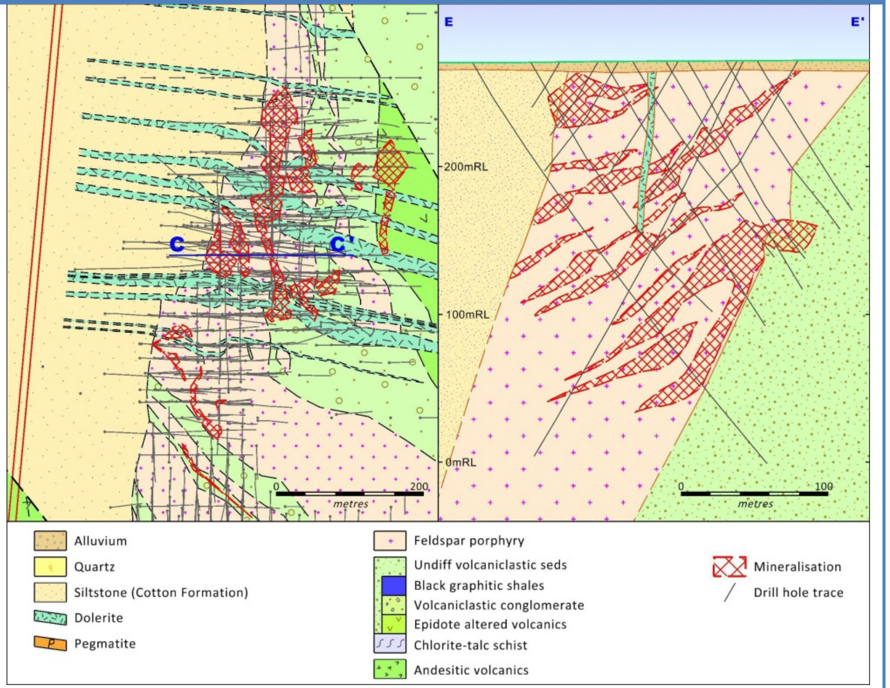
Criteria	JORC Code explanation	Commentary
	• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	It is not thought that drilling direction will bias 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. Sample 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 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.

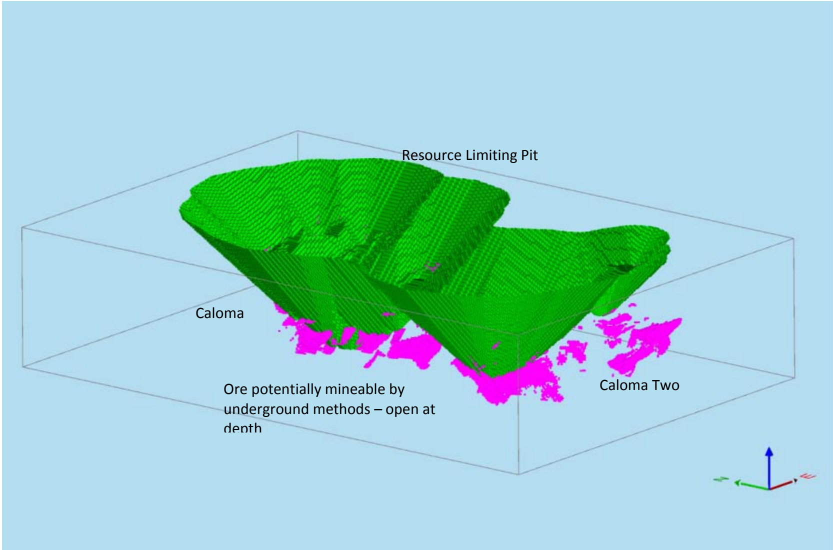
Section 2 Reporting of Exploration Results

(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 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 post mineralisation dolerite dykes.

Criteria	JORC Code explanation	Commentary
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 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.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
</td></tr>
<tr><td>Balanced reporting</td><td>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.</td><td>Data relating to all drill holes has been reported in previous documentation of exploration results.</td></tr>
<tr><td>Other substantive exploration data</td><td>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.</td><td>No additional or new drilling results are being reported at this time.</td></tr>
<tr><td>Further work</td><td>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</td><td>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.</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	• *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 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 Terry Ransted, Chief Geologist, Alkane Resources Ltd, who has been involved with the project since 2001.
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

Criteria	JORC Code explanation	Commentary
		drill core.
	• *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 early mining confirms the 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 shallow west-dipping mineralised structures within the steep west dipping feldspar porphyry host. 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, and appear to extend across the full width of the porphyry. Mineralisation is associated with extensive alteration and quartz veining of the porphyry and volcanic rocks. The mineralisation is interrupted by a series of barren post-mineralisation dolerite dykes.
	• *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 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 parameters used.*	17 mineralisation wireframes (domains) were interpreted by the Alkane geologists most familiar with the deposit to constrain estimation. Six, cross cutting, barren dolerite wireframes were also modelled. An enclosing background domain was modelled by LMRC to capture minor mineralization outside the main domains. Four surfaces were also used to separate material types - topography, alluvium, saprolite and base of oxidation surfaces. The material type classification was used to allocate density values. The drill hole data were flagged by the domain wireframes in priority order, to prevent double use of the data in any 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 wireframeing 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 for the mineralised zones. After top-cutting, the maximum coefficient of variation for the mineralised domains ranged from 0.88 to 1.88 indicating that the estimation would not be difficult. The number of drill hole composites in all but one of the mineralised domains was less than 700, too few for reliable variography. The one domain with more data (ore06a) was irregular in shape and orientation. A longer range variogram model was fitted despite evidence of some shorter range structures, possibly caused by the changes in orientation. The variogram for this domain was used for all the mineralised domains. Separate variogram models were fitted for the dolerite and background domains. The principal estimation was made using inverse distance squared (ID2), but kriged and a nearest-

Criteria	JORC Code explanation	Commentary
		neighbour estimates were also made. An additional kriged estimate was made using the name nominal variogram for all domains to provide a measure of the availability of drill hole data during estimation. 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.
	• *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. Pre-stripping of waste commenced from Caloma and Wyoming Three in late 2013 and the mining of ore in February 2014.
	• *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 multiple directions of drilling, the drill hole spacing is locally much less than 25m. Sub-blocks were estimated. This model was regularised 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. 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 in the short direction) reflects the continuity on the mineralisation 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. As part of the validation process, the variability of the estimates was compared to that calculated from the data and the variogram using the Indirect Lognormal Correction. This showed that the estimates for the domains with most data were over-smoothed, but the ID2 model was better than the kriged model. This is not unusual for deposits drilled at exploration spacing. During mining, tonnes may be less and grades higher.
	• *Any assumptions about correlation between variables.*	No assumptions made
	• *Description of how the geological interpretation was used to control the resource estimates.*	Soft boundaries were used between the dismembered parts of domains that were intersected by later barren dolerite dykes.
	• *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 using Inverse Distance Squared (ID2) and checked using Kriging and 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

Criteria	JORC Code explanation	Commentary
		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 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. 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 11%. The cross-cutting barren dolerite dykes increase the dilution. The resources are depleted for production and limited to above RL 35m.
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 Caloma deposit was well studied in the Feasibility Study. 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 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.
	• *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 and search pass; 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 mineralised domains were classified as Inferred. Measured resources were further restricted to the first search pass.

Criteria	JORC Code explanation	Commentary
	• *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.
	• *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 and Caloma resource estimates were reviewed by Behre Dolbear in January 2012 as part of a financing due diligence process. The review raised some questions about the method of resource classification. The Caloma classification scheme was justified in a subsequent LMRC memo to Alkane in February 2012 which reviewed the resource 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 and the mean anisotropic distance was 20% of the search distance. • For Indicated Resources, the nearest sample was no more than 87% of the maximum anisotropic search distance and the mean anisotropic search distance was 40% of the search distance. • The mean number of samples used for estimation was 23.4 for Measured Resources, 17 for Indicated Resources and 10.7 for Inferred Resources. • All Measured and Indicated Resources were estimated in the first search pass. • The resources are in fact estimated using an adequate amount of data. Subsequent to the Behre Dolbear review, Hellman and Schofield (H&SC) were commissioned by Alkane (at the request of Behre Dolbear) to review the resource categorisation. Their draft report of 14 May, 2012 stated: "H&SC cannot endorse the classification of the published resource because of the risk associated with the geological interpretations of the mineralised domains as well as the classification method. It is recommended that an alternative estimation approach be adopted that uses fewer and larger domains with larger blocks combined with increased data points. The current classification does not adequately reflect the risk associated with the subdivision of the deposit into numerous domains some of which are thin and irregularly shaped and whose continuity appear highly uncertain. In H&SC's view the quoted resource estimates are likely to overstate the grade and understate the tonnage though the contained metal may be similar." The mineralised zone domains and barren dolerite domains used by LMRC for the estimation were modelled by Alkane geologists most familiar with Tomingley mineralisation. Behre Dolbear in their review of the Tomingley deposits stated that: "Although all deposits occur below surficial cover and the database is predominantly open hole drilling, the Alkane interpretations of mineralised boundaries appear generally reasonable". The mineralised zones are narrow and dipping and this in conjunction with the cross-cutting later barren dolerite dykes required that a small block size be used. Some dilution was added when the sub-block model was regularised to 2.5m x 2.5m x 2.5m blocks. As discussed in the section on classification of the resource estimate, the resource classes are supported by the data spacing and number of data used.

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 Caloma deposit consists of 17 mineralisation zones and 6 barren dolerite dyke domains; consequently there are relatively few drill hole data in most zones. Several of the mineralised domains are parts of the same domain, separated by barren dolerite dyke. Only one domain had an adequate number of composites for variography (1421). The variogram for this domain was used for all mineralised domains. 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: accuracy of the interpretation and geological domaining; accuracy of the drill hole data (location and values); orientation of local anisotropy; and estimation parameters which are reflected in the global resource classification.
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*	The 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 ≥1.75g/t gold.
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	Production of ore commenced from Caloma (and Wyoming Three) in February 2014. Initial mine to mill reconciliation has been positive for both tonnes and grade for the combined production.

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. AC - 105 holes for 7,367.5m RC - 201 holes for 29,078m (inclusive of 2 pre-collar totalling 72m) DD - 17 holes totalling 4,097.60m 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.*	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 totalling 28,260 metres and 17 diamond core drill (DD) holes totalling 3,631 metres. Detailed resource definition drilling was completed 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) 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: 88% RC – 187 holes totalling 27,345m (inclusive of 1 pre-collar totalling 42m) 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

Criteria	JORC Code explanation	Commentary
		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.
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.

Criteria	JORC Code explanation	Commentary
		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. 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.

Criteria	JORC Code explanation	Commentary
	• *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.
	• *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. Sample 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.

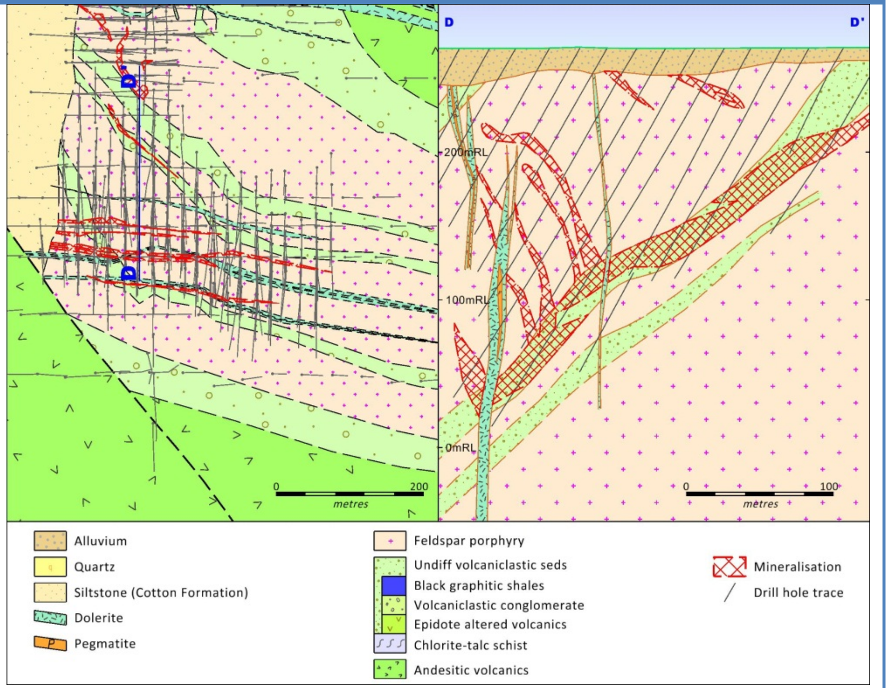
Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	The Company does not routinely have external consultants verify exploration data until resource estimation procedures are deemed necessary. The Caloma Two data has not 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.

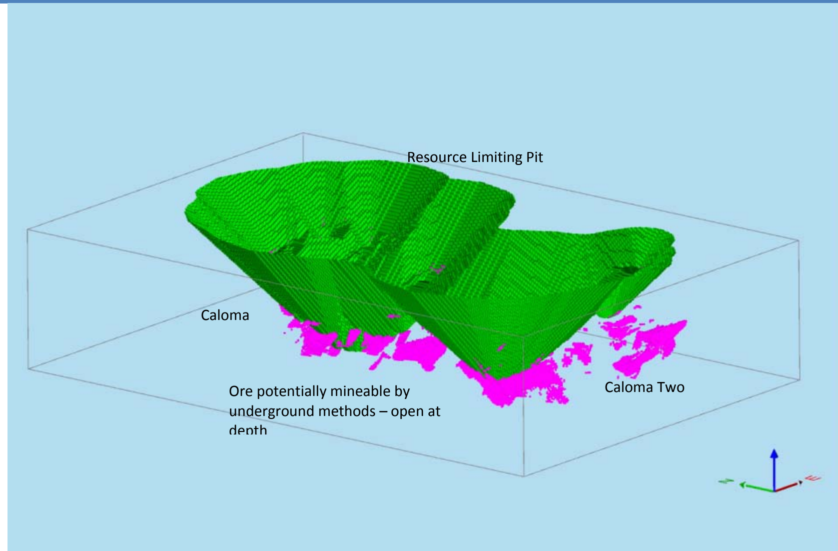
Section 2 Reporting of Exploration Results

(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.
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

Criteria	JORC Code explanation	Commentary
	• *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 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. 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.
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.

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 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).*	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.

Criteria	JORC Code explanation	Commentary
		

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 Terry Ransted, Chief Geologist, Alkane Resources Ltd, who has been involved with the project since 2001.
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.

Criteria	JORC Code explanation	Commentary
	• *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.
	• *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.

Criteria	JORC Code explanation	Commentary
		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 basis of the mining assumptions made.*	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.
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. Separate environmental approval is required prior to the commencement of mining from the Caloma Two deposit.

Criteria	JORC Code explanation	Commentary
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.
	• *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
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: accuracy of the interpretation and geological domaining; accuracy of the drill hole data (location and values); orientation of local anisotropy; and estimation parameters which are reflected in the global resource classification.
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*	The 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

Criteria	JORC Code explanation	Commentary
		off and material outside of the indicative pit with potential for eventual extraction by underground mining methods assessed at ≥1.75g/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

Section 4 Estimation and Reporting of Ore Reserves - Tomingley Gold Operations Underground 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 resources used as a basis for the conversion to the ore reserve are those outlined in Appendix 1. The following table comprises the Mineral Resources for the Tomingley Gold Project which were compiled by Mr Terry Ransted, Chief Geologist for Alkane and released to the ASX on 21 September 2015.

TOMINGLEY GOLD PROJECT MINERAL RESOURCES (as at 30 June 2015)

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	2,171	1.7	442	1.5	735	1.1	3,348	1.5	167
Wyoming Three	206	1.7	122	1.7	2	1.1	330	1.7	18
Caloma	2,167	1.9	582	1.7	2,008	1.5	4,757	1.7	259
Caloma Two	-	-	1,085	2.4	704	1.3	1,789	2.0	112
Sub Total	**4,543**	**1.8**	**2,231**	**2.0**	**3,450**	**1.4**	**10,224**	**1.7**	**556**
Underground Resources (cut off 2.50g/t Au)									
Wyoming One	168	4.8	205	4.4	361	4.2	735	4.4	104
Wyoming Three	12	3.6	20	4.5	25	3.3	57	3.8	7
Caloma	0	3.1	4	2.9	81	3.2	84	3.2	9
Caloma Two	-	-	92	3.5	63	3.2	155	3.3	17
Sub Total	**180**	**4.7**	**321**	**4.1**	**530**	**3.9**	**1,031**	**4.1**	**136**
TOTAL	**4,724**	**1.9**	**2,552**	**2.3**	**3,979**	**1.7**	**11,255**	**1.9**	**692**

Criteria	JORC Code explanation	Commentary
	• *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	The Mineral Resources reported are inclusive of the Ore Reserves.
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.)*	Sean Buxton is a full time staff member of Tomingley Gold Operations Pty Limited in his role as Operations Manager, he is based on site at Tomingley Gold Operation. Michael Leak is a casual employee of Tomingley Gold Operation and has visited site on two occasions: • In March 2015 to conduct a site visit to gather the required data, understand the site layout and limitations and discuss logistics with site operational personnel • In May 2015 to undertake a high level review of the work undertaken in the initial options assessment, to ratify the assumptions made and ensure practicality of the work undertaken.
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.)*	A prefeasibility study has been undertaken with respect to all underground mining options for all deposits at Tomingley Gold Operations. The Tomingley Gold Mine is an operational open pit mining operation with an operating CIP processing plant based on the mining and treatment of ore from the Caloma open pit and overburden is being mined from the Wyoming One open pit. Mining within the Wyoming Three pit cease in November 2015. It is also planned to mine ore from a pit at the Caloma Two deposit. 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 Site has been operational since January 2014 and is achieving design objectives.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	To enable mine development and stope designs to be undertaken, an initial financial analysis was undertaken using available cost information and benchmarked costs from similar sized Australian underground mines to determine the correct cut-off grades to use for the study. This determined that the correct cut-off grade (COG), based on benchmarked costs and Alkane corporate guidance on Gold price was 2.5 g/t Au for stoping and 1 g/t Au for incremental development ore.
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).*	A mining method assessment was undertaken to define the best mining method for any underground mining at TGO. Options assessed were: • Block or sublevel caving, • Cut and Fill, • Longhole open stoping, • Avoca Stoping.
	• *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.*	This assessment, in conjunction with a 2010 geotechnical assessment, indicated that longhole open stoping and areas of Avoca stoping would provide the best balance between stability, recovery and cost.
	• *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.*	In 2010, Mining One was commissioned to prepare a geotechnical assessment as part of the Definitive Feasibility Study (DFS) into Underground Mining at Wyoming 1. The Mining One Scope included: • Review and audit of geotechnical data from previous drilling, including borehole logs, core photographs and laboratory testing results, as supplied by Alkane Resources, • Rock mass assessment based on drilling and testing data provided to Mining One and assigning of rock mass quality parameters for geotechnical domains, • Structural assessment and assigning of major structural sets for geotechnical domains, • Geotechnical design including, specification of stoping dimensions, ground support requirements for development and the proposed in-pit portal and an assessment of required crown pillar thickness, • Preparation of a report documenting the results and recommendations of the feasibility study. This study has used the Mining One recommendations as a basis and where, in the author's opinion, industry norms have become more conservative, a more conservative approach to that recommended in 2010 has been used.
	• *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).*	A detailed mine design was undertaken in Datamine and interrogated utilising Studio 5DP. This was then exported to EPS for scheduling.
	• *The mining dilution factors used.*	No set dilution factors were used; stopes were designed as diluted stope shapes with a minimum of 0.5m of dilution material on both the hangingwall and footwall.
	• *The mining recovery factors used.*	Mining Recovery for all stopes was set to 95%
	• *Any minimum mining widths used.*	A minimum mining width of 3.5m was included in the assessment.
	• *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.*	No Inferred material is used in the assessment of ore reserves. The following was undertaken to enable a design using only the geological confidence allowed for the reporting of an Ore Reserve and to ensure adequate conservatism in the process:

		• Stope shapes were designed on the basis of Measured and Indicated Resource classifications only, • Stopes were evaluated and all Inferred grades were set to zero (no contained metal from Inferred Resources), • Any stopes that fell below the stoping Cut-off grade due to the absence of Inferred ounces were eliminated
	• *The infrastructure requirements of the selected mining methods.*	The selected mining methods do not require any infrastructure above the standard: • Surface administrative and ablution facilities • Electrical reticulation • Portal • Ventilation infrastructure • Workshop facilities • As the mining methods predominantly leave stopes open or backfilled with loose rock fill, the small portion of cemented rock fill is anticipated to be mixed underground in stockpiles before delivery to the stopes, this method does not require any permanent infrastructure.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.*	TGO currently mines and processes fresh rock material from two active pits through a 1 Mtpa CIL plant (described above).
	• *Whether the metallurgical process is well-tested technology or novel in nature.*	The metallurgical performance and processing costs are well known and tested at TGO.
	• *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.*	This study assumes a metallurgical recovery of 92% in line with currently achieved performance of the TGO mill.
	• *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.*	Operational recoveries for the last two months were 91.5% and 93.5% for material from Caloma and Wyoming Three. No ore has been mined from Wyoming One or Caloma Two however metallurgical testwork for the DFS indicated similar recoveries for all deposits.
	• *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
Environmen-tal	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• TGO was subject to numerous environmental studies as part of the Environmental Assessment (EA)for the Tomingley Gold Project during the approvals phase and all required approvals were granted prior to the commencement of mining. The EA included documentation regarding the proposed underground mine which is still relevant today. • The only change to that documented in the EA is that the portal(s) would now be located in the Caloma open pit, it is assumed that this minor change does not constitute a change to the intent with respect to the EA and no further environmental studies would be required. • Waste rock dumps storing fresh rock waste from open pit operations already exist and no additional concerns are anticipated from placement of underground waste onto these dumps if required.
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. • Labour is sourced from Tomingley, Narromine, Dubbo and Parkes region and as such

		the operation requires no accommodation or messing facilities. • Central NSW has many active mining operations within a short distance of TGO and as such the ability to procure labour and infrastructure services for the operation should not pose any major challenges.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.*	Mining capital estimates have been made using, wherever possible, budget pricing obtained from reputable suppliers. The few instances where costs could not be obtained from these sources, costs were obtained by benchmarking of similar sized Australian mines.
	• *The methodology used to estimate operating costs.*	The operating cost estimates have been derived from first principles estimating consumables use combined with budget pricing from reputable suppliers for the cost elements consumed in the mining process. Labour costs have been derived from pay scales of similar sized, geographically relevant underground mines in NSW. Maintenance and machinery productivity costs are based on productivity estimates from reputable manufacturers and their estimate of maintenance costs over the life of an asset.
	• *Allowances made for the content of deleterious elements.*	No deleterious elements are modelled in the Mineral Resources Models nor has there been any concern with this during the 18 months TGO has been producing gold dorè.
	• *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.*	Transport charges for dorè to the Perth Mint are included in the refining charges and based on historical charges incurred by TGo for open pit gold production..
	• *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.*	Site treatment charges are well known due to the current processing of fresh rock ore material from open pits. Refining charges have been assumed to be $1.50 per ounce in accordance with historical charges incurred by TGO by the Perth Mint.
	• *The allowances made for royalties payable, both Government and private.*	A 4% New South Wales state royalty on the net value of Gold and Base metals. A royalty is also payable to Golden Cross Operations Pty Ltd for that portion of ore mined within former Exploration Licence 5830. This royalty is payable at 0.75 cents per tonne for the first 500,000 tonnes mined then 3% Net Smelter Return (NSR) on the next 150,000 ounces produced and 5% NSR thereafter.This has been allowed for in the financial evaluation.
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.*	This study assumes a $AU 1,450 per ounce gold price for the base case. This is below the current spot price which has been relatively steady at around $AU 1,500 for some time. TGO 2015 budgets were all prepared based on a corporate view of gold being at $AU 1,450 per ounce for some time and as such this study has adopted that as the base case price. All costs are in AUD as all services are expected to be sourced in Australia, all revenues are in AUD and as such no exchange rates are required.
	• *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.*	• The gold market is driven by a number of factors and fluctuates dependant on physical supply and demand, political tensions and global instability. In times of uncertainty gold is seen to be a stable and safe “currency” and this has maintained its value for a significant period of time. • Despite fluctuations in the gold price in USD, the price of gold in AUD has been significantly more stable and is anticipated to continue to stay around $1,500 AUD for some time.

		• TGO currently sells most of its gold at spot prices however also has contracts to sell approximately 23,000 ounces around $1600 per ounce. • The Underground mine would contribute only a small portion of the overall volume of output and is unlikely to have any impact on the market.
	• *A customer and competitor analysis along with the identification of likely market windows for the product.*	There is a transparent quoted derivative market for the sale of gold
	• *Price and volume forecasts and the basis for these forecasts.*	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.*	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.*	Economic Inputs to financial analysis: • Revenues from Gold sales, • Costs (described previously) • Discount rate of 10% The Tomingley Underground Financial Evaluation uses the costs as well as the revenue (gold sales), together with the mine schedule to calculate a net cashflow per month for the duration of the project. This cashflow is then discounted to derive at the projects Net Present value (NPV). This NPV excludes depreciation, amortisation and taxes. No inflation of costs has been undertaken as there has been no forward speculation on gold price. It is the net cashflow that drives NPV and this is assumed to remain consistent (i.e. gold price and inflation move in the same direction).
	• *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	Sensitivities have been undertaken for both the entire mining inventory and the reserve version of the financial model. Due to the very conservative nature of eliminating all inferred ounces from the ore reserve, only a 5% cost increase is required to negate the economic benefit shown in this reserve. Conversely though, a mere 5% increase in gold price increases the NPV 250%. As such, one could reasonable expect the project to have an NPV of between 0 and $8.7M (based on a 10% increase from the assumed gold price.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	TGO has a set up a community consultation committee that meets quarterly to discuss the activities on the mine, interaction with the local community and any concerns from local residents, the committee includes: • Independent Chair Person, • TGO Environment and Community Manager, • TGO Operations Manager, • Narromine Shire Council Representative , • 3 x Community Representatives , • An Aboriginal Community Representative. Given that extensive mining operations already exist at TGO, and that the underground operations would happen concurrently with open pit operations, the underground mine is not expected to have any additional adverse effects on the local community.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* o *Any identified material naturally occurring risks.*	This study utilises the DFS as a guideline with some conservatism built in based on industry norms. Should however, the ability to leave some stopes unfilled not be realised, and backfill required, this will increase the mining cost significantly, impacting the financial return of the project. The project is costed on the basis of buying second hand equipment. Alkane would directly employ all underground operators, maintenance personnel, technical staff and

		management. Any inability to reach the desired production rates will increase the overall costs as there is a large proportion of "Fixed" costs in this type of operating model. Using an underground contractor would, without doubt, be a higher cost though less risk.
	o *The status of material legal agreements and marketing arrangements.*	No material legal or marketing agreements in place save for the contract to sell approximately 23,000 ounces of gold at around $1600 per ounce.
	o *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.*	TGO undertook and Environmental Assessment (EA) as part of the feasibility study and approvals for open pit mining. This assessment also looked at the impacts of underground mining. Underground mining was part of the initial application by TGO when seeking environmental approval and as such no other approvals from an environmental standpoint are anticipated. Underground mining would take place on an existingTGO mining lease, the only additional requirement to this would be an amendment to the Mine Operating Plan that would require submission to the NSW Government, Department of Industry, Skills and Regional Development.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.*	Only ounces from Measured and Indicated Resources are reported in the Ore Reserve. As resource classification is based on kriging variance, inferred ore blocks are interspersed with material of other resource classes (Measured and Indicated) and cannot be completely excluded from stope designs. The grade of all inferred ore blocks remaining in stopes was set to zero for the financial analysis.
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The result is in line with expectations given the low capital cost associated with the project (as the site is already established) and due to the locality, the ability to source experience labour locally and not have a requirement for accommodation or messing.
	• *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 - As most stopes contain ounces from both Measured and Indicated Resource categories, the Measured component was reported as a Proved Ore Reserve and the Indicated component reported as a Probable Ore Reserve.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	As this is the first underground ore reserve reported for TGO, it has undergone internal reviews to ensure quality and consistency. No external reviews have been undertaken.
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.* o *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.*	Statistical quantification of the confidence level of the study is not deemed appropriate nor commonly used in a pre-feasibility level study. It is commonly accepted that a pre-feasibility study should have an accuracy of +/- 25% and it is believed the work undertaken to derive this reserve conforms to that expectation.
	o *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.*	The main factors which could affect the confidence of the assessment include: • Stope stability, this has been assessed by a reputable geotechnical consultancy as part of a previous, smaller feasibility study and remains relevant. Additional conservatism has been added in this area reducing the overall extraction ratio of the deposit. • Modifying factors, these are in line with industry accepted norms • Costs, cost have been sourced from budget estimates and benchmarking and the author's knowledge of numerous similarly sized and geologically and geographically similar deposits.

		• Revenue, whilst this is beyond the control of the competent person, the revenue assumptions used in this study are in line with TGO expectations and gold price used below current spot prices,
	o *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.*	There has been no production from underground at TGO.