ASX and MEDIA RELEASE

5 September 2014



Tomingley Gold Operations Update

- > TGO continues to operate at design with gold output for July and August of 15,398 ounces.
- ➤ All in sustaining costs have reduced to A\$849/oz with steady operations and higher gold recovery.
- Reconciliation of gold recovery to resource estimates remains very positive (+40%).
- ➤ Mineral Resources and Ore Reserves have been re-estimated to account for depletion and actual operating costs and conditions:
 - Total resources are 13.5Mt grading 1.90g/t Au (829,800oz)
 - Total reserves are 4.6Mt grading 2.00g/t Au (294,700oz)
- Ore Reserves have increased by 35%



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 : WESTBROOK COMMUNICATIONS, CONTACT: IAN WESTBROOK, TEL +61 2 9231 0922 OR +61 407 958 137



TOMINGLEY GOLD OPERATIONS (TGO) – gold

Alkane 100%

The TGO is located approximately 50 kilometres south west of Dubbo (Figure 1) and is based upon several open pittable gold deposits. Following construction of a 1Mtpa CIL process plant during 2013 and commissioning early 2014, first gold was poured mid-February. The plant was progressively ramped up to design capacity by the end of May and has been operating at steady state for the last three months.

Operations

As advised in the 30 June Quarterly Report, mining and processing achieved design capacity late May and is now operating at the 1Mtpa rate. Mining continued in two pits: Wyoming Three and Caloma with the majority of effort in the longer life Caloma pit.

Ore reconciliations remain positive in the pits for both tonnes and grade. For the combined pits, the milled tonnes reconcile 9% greater and the milled grade reconciles 30% greater than the modelled resources respectively. Both pits are still mining within oxidised ore and this positive reconciliation may change in the fresh rock. Importantly the larger deposit of Caloma is recording a 24% positive reconciliation of ounces in the upper levels. As this is early in the mine life, this trend continues to be monitored.

TGO Production		FY 2014 (Feb-June) ²	July – August 2014
Waste Mined	Tonnes	4,635,684	1,129,758
Ore mined	Tonnes	545,550	207,778
Grade	g/t	1.42	2.13
Ore milled	Tonnes	359,096	200,171
Head grade	g/t	2.24	2.54
Recovery	%	91.4	95.4
Gold poured	Ounces	20,711	15,398
Gold sold	Ounces	16,374	14,734
Gold revenue	A\$M	23.3	20.8
AISC ¹	A\$/oz	1,604	849
Stockpiles			
Ore for immediate milling	Tonnes	185,701	193,659
Bullion on hand	Ounces	4,386	10,343

¹ AISC = All In Sustaining Cost comprises all site operating costs, royalties, mine exploration, sustaining capex and mine development and an allocation of corporate costs, presented on the basis of ounces produced.

As at 31 August, gold hedged is 25,000oz at average price of A\$1,437/oz.

The results for July – August support FY2015 production estimated of 60,000 – 70,000 ounces.

² Waste stripping commenced October 2013 with ore feed January 2014, and costs reflect this start-up mode.



Mineral Resource and Ore Reserve Estimates as at 30 June 2014

Mineral Resources and Ore Reserves have been updated in accordance with the 2012 edition of the Code for Reports of Exploration Results, Mineral Resources and Ore Reserves (2012 JORC Code). These estimates take into account ore depleted by mining during the year.

-	TOMINGLE'	Y GOLD	PROJECT	MINERA	L RESOUR	CES (as	at 30 June	2014)	
	MEASU		INDICA		INFERF		TOTA		Total Gold
DEPOSIT	Tonnage (Kt)	Grade (g/t Au)	(Koz)						
Open Pittable F		, ,		(3)	(1.13)	(9.41.10)	(1.37)	(3)	(****
Wyoming One	2,171	1.7	442	1.5	735	1.1	3,348	1.6	166.8
Wyoming Three	473	1.8	25	1.5	98	1.1	597	1.6	31.5
Caloma	2,556	2.0	649	1.7	2,464	1.4	5,669	1.7	316.9
Caloma Two	-	-	1,085	2.4	704	1.3	1,789	2.0	112.4
Sub Total	5,200	1.9	2,201	2.0	4,001	1.3	11,402	1.7	627.5
Underground R	esources (cut	off 1.75g/t	Au)						
Wyoming One	229	4.1	296	3.7	869	2.9	1,394	3.3	147.3
Wyoming Three	29	2.6	15	2.4	8	2.5	52	2.5	4.2
Caloma	3	2.1	13	2.3	224	2.5	240	2.4	18.9
Caloma Two	-	-	215	2.7	165	2.5	380	2.6	32.0
Sub Total	261	3.9	539	3.2	1,266	2.8	2,066	3.0	202.4
TOTAL	5,461	2.0	2,740	2.3	5,267	1.7	13,468	1.9	829.8

^{*}apparent arithmetic inconsistencies are due to rounding

Full details are given in Appendix 1.

TOMINGLEY GOLD PROJECT ORE RESERVES (as at 30 June 2014)								
	PROV		PROBA			TOTAL		
DEPOSIT	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Total Gold (Koz)	
Wyoming One	1,662	1.7	202	1.4	1,864	1.6	98.4	
Wyoming Three	379	1.7	10	1.8	389	1.7	21.4	
Caloma	1,744	2.2	184	1.7	1,928	2.2	136.0	
Caloma Two	1	-	239	3.6	239	3.6	27.4	
TOTAL	3,785	1.9	635	2.3	4,420	2.0	283.2	
Stockpiles	186	1.9			186	1.9	11.5	
TOTAL	3,971	1.9	635	2.3	4,606	2.0	294.7	

^{*}apparent arithmetic inconsistencies are due to rounding

Full details are given in Appendix 2.



The table below compares the resources and reserves year on year with 2013 as per the current reporting requirements.

		TOTAL RESOURCES						TOTAL RESERVES				
		2013			2014			2013			2014	
DEPOSIT	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)									
Wyoming One	6,324	1.9	392.4	4,742	2.1	314.1	1,900	1.6	94.5	1,864	1.6	98.4
Wyoming Three	808	1.9	49.9	649	1.7	35.7	500	1.6	28.1	389	1.7	21.4
Caloma	5,453	2.1	369.4	5,909	1.8	335.7	1,200	2.2	86.5	1,928	2.2	136.0
Caloma Two	-	-	-	2,169	2.07	144.3	-	-	-	239	3.6	27.4
Stockpiles										186	1.9	11.5
TOTAL	12,586	2.0	811.7	13,468	1.92	829.8	3,600	1.8	209.1	4,606	2.0	294.7

^{*}apparent arithmetic inconsistencies are due to rounding

The primary differences from 2013 to 2014 are:

- > Addition of maiden resource and reserve calculation for Caloma Two;
- ➤ Ore mined from Caloma and Wyoming Three totals 487,000 tonnes grading 1.63 g/t Au (25.5koz);
- > Open pittable resources for all deposits are restricted by limiting pit shells; and
- ➤ Reserves for Caloma based on the 2012 resource model (previously based on 2010 model).

Competent Person

This update of Mineral Resources and Ore Reserves for the Tomingley Gold Project was co-ordinated by Mr Terry Ransted (MAusIMM), Chief Geologist and full time employee of Alkane Resources Ltd who is a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves (JORC, 2012). The statement of Mineral Resources was compiled by Mr Ransted based on mineral resource block model estimates compiled by Mr Richard Lewis (FAusIMM) (Lewis Mineral Resource Consulting Pty Ltd), who is Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves (JORC, 2012). The Ore Reserve statement included in this report was compiled by Mr Stephen Jones, (FAusIMM), Mining Manager and full time employee of Tomingley Gold Operations Pty Ltd, who is Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves (JORC, 2012). The Ore Reserve statement is based on the Mineral Resources compiled by Mr Ransted and the resource block models estimated by Mr Lewis. Each of Mr Ransted, Mr Lewis and Mr Jones consent to the inclusion in this report on matters based on information compiled by them in the form and context in which it appears.





TGO Site layout June 2014

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.

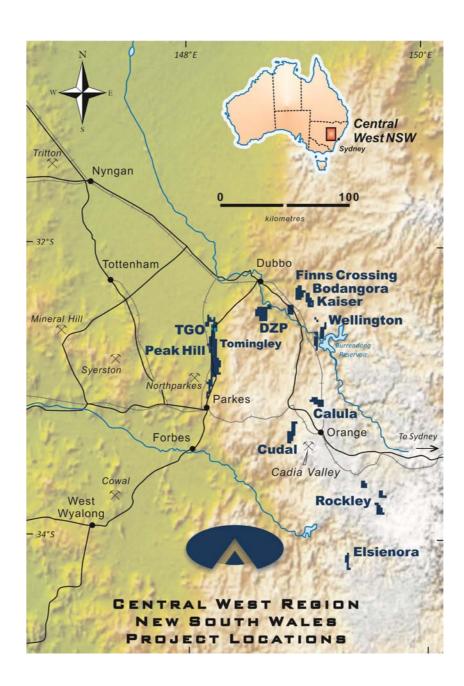


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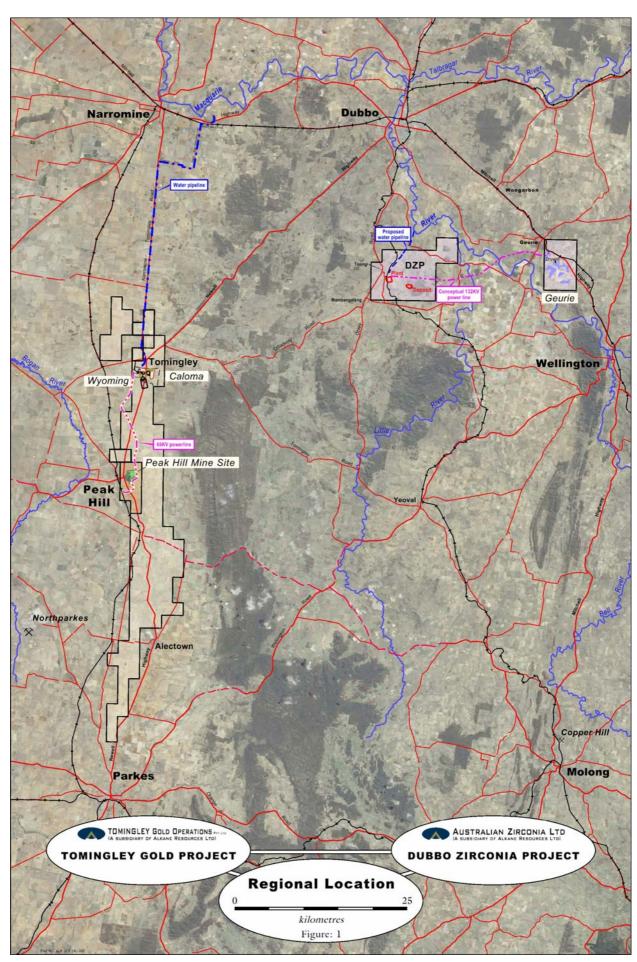
Alkane is a multi-commodity company focused in the Central West region of NSW Australia. Currently Alkane has two advanced projects - the Tomingley Gold Operations (TGO) and the nearby Dubbo Zirconia Project (DZP). Tomingley commenced production early 2014. Cash flow from the TGO will provide the funding 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 a development decision is anticipated Q4 2014. Financing is in progress and this project will make Alkane a strategic and significant world producer of zirconium products and heavy rare earths when it commences production in 2016.

Alkane's most advanced gold copper exploration projects are at the 100% Alkane owned Wellington and Bodangora prospects. Wellington has a small copper-gold deposit which can be expanded, while at Bodangora a large 12km² monzonite intrusive complex has been identified with porphyry style copper-gold mineralisation. Encouraging gold-zinc mineralisation and alteration associated with a monzonite intrusive, has been identified at Cudal.







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	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.
	examples should not be taken as limiting the broad meaning of sampling.	AC - 118 holes for 9322m – inclusive of 3 pre-collars totaling 294.2m
		RC - 157 holes for 27,108.9m – inclusive of 29 pre-collars totaling 4552.9m
		DD - 35 holes totaling 7,951.6m
		AC samples were collected in large plastic bags at one metre intervals via a cyclone
		RC samples were collected at one metre intervals via a cyclone.
		DD sample intervals were defined by geologist during logging to honour geological boundaries.
	Include reference to measures taken to ensure sample representivity and the	AC and RC drilling completed to industry standards.
	appropriate calibration of any measurement tools or systems used.	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 totaling 26,440.9 m (inclusive of 29 pre-collars totaling 4552.9m) 20% DD - 34 holes totaling 7819.8m 14% AC – 66 holes totaling 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. 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. These data were 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 were 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 were hard keyed into Excel spreadsheets for transfer and storage in an access database with verification protocols in place.
		All primary assay data were received from the laboratory as electronic data files which were imported into sampling database with verification procedures in place. QAQC analysis was

Criteria	JORC Code explanation	Commentary
		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 were also verified on import into mining related software.
	Discuss any adjustment to assay data.	No assay data were 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	Drill holes were laid out using hand held GPS (accuracy \pm 2m) then surveyed accurately (\pm 0.1m) by licensed surveyors on completion.
	estimation.	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 Reservestimation 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 structure 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 mineralise structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	d It is not thought that drilling direction will bias assay data at Wyoming One however eastwest drilling will not provide optimum intersection of the '376' lode structures.
Sample	The measures taken to ensure sample security.	All samples were bagged in tied numbered calico bags, grouped into larger tied polyweave

Criteria	JORC Code explanation	Commentary
security		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 Wyoming data were 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

Criteria	JORC Code explanation	Commentary
		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 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: a easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length.	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. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	Previously reported exploration results include the drilled width and an estimate of true width.

Criteria	JORC Code explanation	Commentary
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. 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. Appropriate maps and sections (with scales) and tabulations of intercepts should be included, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should be included for any significant discovery being reported These should be included for any significant discovery being reported These should be included for any significant discovery being reported These should be included for any significant discovery being reported These should be included for any significant discovery being reported These should be included for any significant discovery being reported These should be included for any significant discovery being reported These should be included for any significant discovery being reported These should be included for any significant discovery being reported These should be included for any significant discovery being reported These should be included for any significant discovery being reported These should be included for any significant discovery being reported These should be included for any significant discovery being reported These should be included for any significant discovery being reported These should be included for any significant discovery being reported These should be included for any significant discovery being reported These should be included for any significant discovery being repor	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. Alluvium Quartz Guartz Siltstone (Cotton Formation) Dolerite Pegmatite Pegmatite Pegmatite Pegmatite Policy included with previously reported with previously repo
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.

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.	The upper portions of the Wyoming One deposit is well constrained by drilling however the high grade structures remain open at depth. Resource limiting pit shell Ore potentially mineable by underground methods – open at depth

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	 Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Minera Resource estimation purposes. 	Logging data were entered into Excel via drop down menus. All raw data were 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 outcomes those visits. (If no site visits have been undertaken indicate why this is the case.)	ome of 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

Criteria	J	ORC Code explanation	Commentary
			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 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 reflagging 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

Criteria	JORC Code explanation	Commentary
		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 dipazimuth 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 $(2.5 \text{m x} 2.5 \text{m x} 5 \text{m})$ 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 $2.5 \text{m x} 2.5 \text{m x} 2.5 \text{m}$ 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	The tonnages were estimated on a dry tonnage basis.

Criteria	J	ORC Code explanation	Commentary
		method of determination of the moisture content.	
Cut-off parameters	•	The basis of the adopted cut-off grade(s) or quality parameters applied.	The cut-off grade (0.50 g/t Gold) for open pittable resources is relevant for the current mining operation for similar material in the adjacent deposits.
Mining factors or assumptions	•	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	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

Criteria	JORC Code explanation	Commentary
		the RC drilling. The RC drilling was conducted using industry-standard methods and was not affected by high water flows so there is no reason not to accept the RC results.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The classification reflects the Competent Persons view of the deposit and its supporting data
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	The Wyoming One resource estimate was reviewed by Behre Dolbear in January 2012. The review raised some questions about the method of resource classification. The classification scheme was justified in a subsequent LMRC memo to Alkane in February 2012. This reviewed the resources classes in relation to the anisotropic distance to the nearest sample. For almost all the Measured Resources, the nearest sample was at less than half the anisotropic search distance of the first estimation pass with a mean of 23% of the search distance. For Indicated Resources, the nearest sample was no more than 87% of the maximum anisotropic search distance with a mean of 46% of the search distance All Measured and Indicated Resources were estimated in the first search pass.
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 totaling 269.3m DD - 3 holes totaling 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 totaling 11,874.3 m (inclusive of 3 pre-collars totaling 269.3m) 2% DD - 3 holes totaling 398.7m 36% AC - 107 holes totaling 6,772.6m
Drill sample	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.

Criteria	J	ORC Code explanation	Commentary
recovery			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. 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.

Criteria	JORC Code explanation	Commentary
		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. These data were 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 were 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 were hard keyed into Excel spreadsheets for transfer and storage in an access database with verification protocols in place.
		All primary assay data were 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 were also verified on import into mining related software.
	Discuss any adjustment to assay data.	No assay data were 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 structure 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.

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 Wyoming Three however eastwest 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 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 were 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.)

JORC Code explanation	Commentary
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.
Acknowledgment and appraisal of exploration by other parties.	All reported drilling has been completed by ALK.
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
	 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 security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. Acknowledgment and appraisal of exploration by other parties.

Criteria	JORC Code explanation	Commentary
		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: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length.	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. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	Previously reported exploration results include the drilled width and an estimate of true width.

Criteria	JORC Code explanation	Commentary
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not limited to a plan view of drill hole collar locations and appropriate sectional views.	
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 pract 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 stresults; bulk samples — size and method of treatment; metallurgical test results; but density, groundwater, geotechnical and rock characteristics; potential deleterious of contaminating substances.	rvey k
Further work	The nature and scale of planned further work (eg tests for lateral extensions or dep	Mining within the Wyoming Three open pit commenced in February 2014.

Criteria	JORC Code explanation	Commentary
	extensions or large-scale step-out drilling).	
	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. Resource limiting pit shell Ore potentially mineable by underground methods – open at depth

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	Logging data were entered into Excel via drop down menus. All raw data were 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	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.

Criteria	J	ORC Code explanation	Commentary
interpretation	٠	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.
			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	٠	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 reflagging 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

Criteria	JORC Code explanation	Commentary
		domain was controlled by a Dynamic Anisotropy model that provided a unique dip and dipazimuth 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 6 th June, 2014 that mine to mill 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	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

Criteria	JORC Code explanation	Commentary
parameters		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 basis of the mining assumptions made. 	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.
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 bulk density for bulk material must have been measured by methods that	The specific gravity measurements were applied on a dry basis. SG measurements completed on all material types – see above.
	 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. 	30 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.

Criteria	JORC Code explanation	Commentary
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The classification reflects the Competent Persons view of the deposit and its supporting data
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	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 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	The resources are global, being based on drill hole data at exploration spacing.
	local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	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 6 th 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 totaling 453m DD - 26 holes totaling 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 totaling 35,457.5 m (inclusive of 12 pre-collars totaling 453m) 16% DD -26 holes totaling 7976.1m 11% AC - 100 holes totaling 5,550m

Criteria	J	ORC 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. 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

Criteria	JORC Code explanation	Commentary
		composites assaying ≥0.2g/t Au were riffle split and resubmitted for analysis. 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. These data were 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 were 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 were hard keyed into Excel spreadsheet for transfer and storage in an access database with verification protocols in place.
		All primary assay data were 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 were also verified on import into mining related software.
	Discuss any adjustment to assay data.	No assay data were 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	Drill holes were laid out using hand held GPS (accuracy \pm 2m) then surveyed accurately (\pm 0.1m) by licensed surveyors on completion.
,	estimation.	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	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.
structure		The chosen drilling direction (east at inclination of -60°) appears optimal based on reconciliation from the early mining periods.

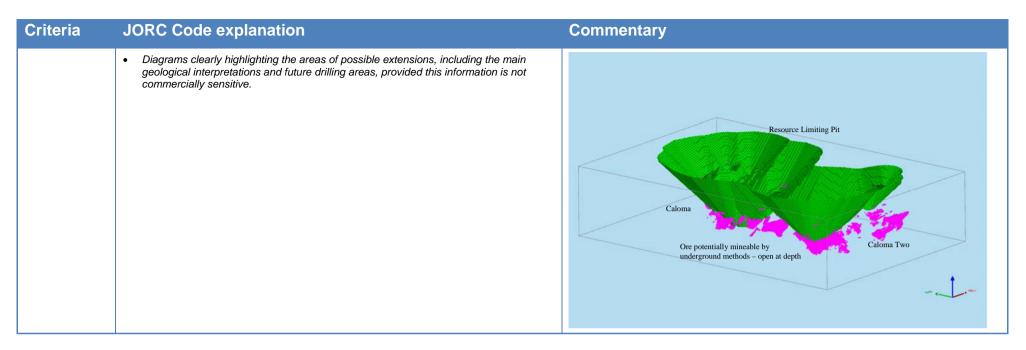
Criteria	JORC Code explanation	Commentary
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	It is not thought that drilling direction will bias assay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

Criteria	JORC Code explanation	Commentary
		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: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length.	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. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (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.

Criteria	JORC Code explanation	Commentary
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. Appropriate maps and sections (with scales) and tabulations of intercepts should be 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. Feldspar porphyry
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 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.



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 were entered into Excel via drop down menus. All raw data were 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	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.

Criteria	J	ORC Code explanation	Commentary
interpretation	•	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 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 reflagging 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

Criteria	JORC Code explanation	Commentary
		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-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 dipazimuth 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 ($2.5 \text{m} \times 2.5 \text{m} \times 5 \text{m}$) 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 $2.5 \text{m} \times 2.5 \text{m} \times 2.5 \text{m}$ 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 ($50m \times 50m$ 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

Criteria	JORC Code explanation	Commentary
		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 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

Criteria	JORC Code explanation	Commentary
		main mineralised domains were classified as Inferred. Measured resources were further restricted to the first search pass.
	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

Criteria	JORC Code explanation	Commentary
		spacing and number of data used.
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 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 totaling 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	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.
	problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	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	The resource is based on 195 RC drill holes totaling 28,260 metres and 17 diamond core drill (DD) holes totaling 3,631 metres.
,	diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	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	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

Criteria	J	ORC Code explanation	Commentary
recovery			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. 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

Criteria	JORC Code explanation	Commentary
		recorded by the sampler. Laboratory Preparation – the entire RC sample (3kg) was dried and pulverised in an LM5 (or equivalent) to ≥85% passing 75µm. Bulk rejects for all samples were discarded. A pulp packet (±100g) is stored for future reference.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Alkane (ALK) sampling techniques are of industry standard and considered adequate.
	 Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 	RC – field duplicate samples collected at every stage of sampling to control procedures. DD – external laboratory duplicates used.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	RC - Duplicate samples were riffle split from the riffle/conical split calico from the drill rig. Duplicates show generally excellent repeatability, indicating a negligible "nugget" effect.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are industry standard and considered appropriate.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	Gold was determined using a 50g charge fused at approximately 1100°C with alkaline fluxes, including lead oxide. The resultant prill was dissolved in aqua regia and gold determined by flame AAS.
laboratory tests		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. These data were 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 were 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 were hard keyed into Excel spreadsheets for transfer and storage in an access database with verification protocols in place.
		All primary assay data were 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

Criteria	JORC Code explanation	Commentary
		(daily) backup. Original survey data is stored on site. Data were also verified on import into mining related software.
	Discuss any adjustment to assay data.	No assay data were 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	Drill holes were laid out using hand held GPS (accuracy \pm 2m) then surveyed accurately (\pm 0.1m) by licensed surveyors on completion.
·	estimation.	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 (\pm 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	Whether the orientation of sampling achieves unbiased sampling of possible structure 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.
structure	 If the relationship between the drilling orientation and the orientation of key mineralise structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	
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

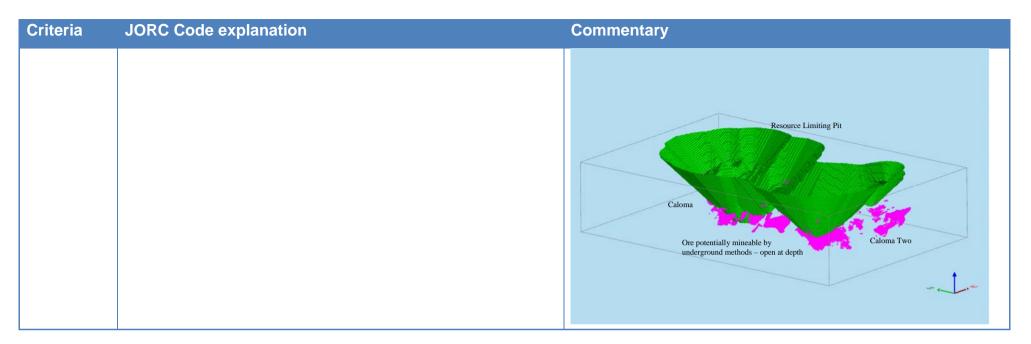
Criteria	JORC Code explanation	Commentary
		(minimum 3 years). The Company has in place protocols to ensure data security.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	The Company does not routinely have external consultants verify exploration data until resource estimation procedures are deemed necessary. The Caloma Two data has not been audited nor reviewed by external parties however the data for other deposits within the TGP was reviewed in 2010 and 2011 by Behre Dolbear (BDA). BDA did not express any specific concerns with respect to the data other than to recommend the completion of some round robin assaying and completion of additional density determinations, both of which were undertaken for the Caloma Two resource drilling.

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	The Caloma Two Deposit lies within ML 1684 which is held in the name of Tomingley Gold Operations Pty Ltd, a wholly owned subsidiary of Alkane Resources Ltd.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	ML1684 expires on 11 February 2034.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	All reported drilling has been completed by ALK.
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: a easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole	Too numerous and not practical to summarise all drill hole data used. All drilling results have been reported previously

Criteria	JORC Code explanation	Commentary
	 down hole length and interception depth hole length. 	
	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. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (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
		Alluvium Quartz Guistone (Cotton Formation) Dolerite Pegmatite Dolerite Pegmatite Dolerite And Dolerite Pegmatite Dolerite And Dolerite And Dolerite Dolerite And Dolerite Dolerite And Dolerite Dolerite Dolerite And Dolerite Do
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.



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.

Criteria	JORC Code explanation	Commentary		
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	A steep dipping interpretation was initially proposed however this was inconsistent with structural measurements obtained from oriented drill core.		
	The use of geology in guiding and controlling Mineral Resource estimation.	Geological (lithological) logging was used to develop a geological model. Alteration and mineralisation estimates along with grade guided the interpretation of the ore envelope wireframes at a nominal 0.25g/t Au lower cut-off.		
		The majority of mineralisation is hosted by a quartz veined and altered feldspar ± augite porphyritic andesite of probable sub-volcanic origin.		
		Dolerite dykes post-date mineralisation and all mineralised lodes are terminated at the dolerite contacts.		
	The factors affecting continuity both of grade and geology.	Mineralisation is directly associated with alteration and quartz veining.		
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	Strike length ~ 360m Width ~ 100m		
	William Nessance.	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	13 mineralisation wireframes (domains) and 5 dolerite wireframes were interpreted a used as constraints for the resource modelling. Four surfaces were also used to separa material types - topography, alluvium, saprolite and base of oxidation surfaces.		
teeriinques	assisted estimation method was chosen include a description of computer software and parameters used.	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 reasonal 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 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.		

Criteria	J	ORC Code explanation	Commentary
			The primary search was equal to the variogram ranges; secondary searches were made using 2x and 3x the primary search. Only the material estimated in the primary and secondary searches were included in the resources.
			Sub-blocks were estimated but these were regularized to 2.5m x 2.5m x 2.5m blocks in March 2014 as this is more compatible with the mine planning software currently in use at the mine and the proposed mining methodology.
	•	Any assumptions behind modelling of selective mining units.	No assumptions were made.
	•	Any assumptions about correlation between variables.	No assumptions were made
	•	Description of how the geological interpretation was used to control the resource estimates.	Only data form the same domain were used to make estimates.
	•	Discussion of basis for using or not using grade cutting or capping.	The drill hole data were declustered using the polygonal method for statistical analysis and determination of top-cuts.
			The top cuts were selected using a combination of histograms, probability plots and cutting statistic plots (plots of cut-off grade against Coefficient of Variation (CV) and total metal).
	•	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Estimates were made by Ordinary Kriging, with check estimates by Inverse Distance Squared (ID2) and Nearest Neighbour methods.
			The estimates were verified using several different techniques and checked for local and global variability. The checks included comparison with estimates made by different estimation methods, and against the declustered composites.
Moisture	•	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	The tonnages were estimated on a dry tonnage basis.
Cut-off parameters	•	The basis of the adopted cut-off grade(s) or quality parameters applied.	The cut-off grade (0.50 g/t Gold) for open pittable resources is being used for the other Tomingley deposits. This takes into account current mining costs and metallurgical recovery for similar material.
Mining factors or assumptions	•	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining	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.
		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 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	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.
иобитрионо		assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	The Caloma deposit is currently being mined and processed with no significant differences in metallurgical recoveries from those estimated in the feasibility study.
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	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.

Criteria	JORC Code explanation	Commentary
	environmental impacts, particularly for a greenfields project, may not always be we advanced, the status of early consideration of these potential environmental impact should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	s Caloma Two deposit.
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 measurement 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 t 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 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 factors that could affect the relative accuracy and confidence of the estimate.	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.

Criteria	JORC Code explanation	Commentary		
	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 Caloma Two.		

APPENDIX 2

Section 4 Estimation and Reporting of Ore Reserves
(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation		,	11 7		nentary					
Mineral Resource estimate for conversion to Ore Reserves	Ore Reserve.			conversi of Lewis Resourc Wyomin of produ the end The follo were co	The mineral resources for the Tomingley Project that were used as a basis for the conversion to the ore reserve estimated reported here were estimated by Mr Richard Lewis of Lewis Mineral Resource Consultants Pty Ltd (LMRC) using data supplied by Alkane Resources Ltd (Alkane). The models produced incorporated all mineralisation in the Wyoming One, Wyoming Three, Caloma and Caloma Two deposits to permit reconciliation of production to date. The depletion of these resource models utilised surveyed data from the end of month production records in June 2014. The following table comprises the Mineral Resources for the Tomingley Gold Project which were compiled by Mr Terry Ransted, Chief Geologist for Alkane, based on the resource models provided by LMRC.						
		7	TOMINGLE	GOLD	PROJECT	MINERA	L RESOUR	CES (as	at 30 June	2014)	
			MEASU		INDICA	TED	INFER	RED	TOTA		Total Gold
		DEPOSIT	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 F	lesources (cut	off 0.50g/t	Au)						
		Wyoming One	2,171	1.71	442	1.54	735	1.08	3,348	1.55	166.8
		Wyoming Three	473	1.77	25	1.54	98	1.05	597	1.64	31.5
		Caloma	2,556	2.04	649	1.72	2,464	1.43	5,669	1.74	316.9
		Caloma Two	-	-	1,085	2.41	704	1.25	1,789	1.95	112.4
		Sub Total	5,200	1.88	2,201	2.02	4,001	1.32	11,402	1.71	627.5
	Underground Resources (cut off 1.75g/t Au				Au)						
		Wyoming One	229	4.09	296	3.71	869	2.93	1,394	3.29	147.3
		Wyoming Three	29	2.59	15	2.43	8	2.50	52	2.53	4.2
		Caloma	3	2.13	13	2.25	224	2.46	240	2.44	18.9
		Caloma Two	-	-	215	2.68	165	2.52	380	2.61	32.0
		Sub Total	261	3.90	539	3.23	1,266	2.79	2,066	3.04	202.4
		TOTAL	5,461	1.97	2,740	2.26	5,267	1.68	13,468	1.92	829.8
Site visits	Comment on any site visits undertal those visits. (If no site visits have been undertal those visits with the visits undertal those visits undertal those visits undertal those visits undertal those visits.	ndertaken indicate	why this is the ca	ase.)	Tomingl Mining N	ey Gold Ope Manager on s	erations Pty Ltd ite.	(TGO), a w	s, Mr. Stepher hole owned su	bsidiary of <i>i</i>	Alkane, as the
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.)			procession and Wyon and One and stage cr	ng plant bas oming Three d Caloma T ushing, singl	ed on the mining the state on the state of the stage ball milling the stage ball milling.	ng and treatr to mine ore f gley Proces ing and gravi	pit mining opera ment of ore fror from two further sing Plant inco ty/CIL gold reco ore and 1.0mtp	n two open open pits b rporates convery circuit.	pits – Caloma being Wyoming nventional two The plant has	

		 Construction of the treatment plant ended in January 2014 with first gold poured as part of commissioning in February 2014. The Tomingley Gold Mine was subject to a Definitive Feasibility Study including the estimation of an initial Mineral Resource and Ore Reserve for the Wyoming One, Wyoming Three and Caloma open pits (2009, 2009 and 2012 respectively). The current Ore Reserve has been calculated by site personnel using the designed pits at the end of 30 June 2014. Pre-strip mining of waste within the Wyoming Three and Caloma open pits commenced in November 2013 and the mining of ore in January 2014. The pre striping was completed by a Contractor and the mining fleet is dry hired and operated by TGO personnel. The Site has been operational since January 2014 and is achieving the design objectives set out in the DFS. The Modifying Factors in the DFS are being achieved. The end of June 2014 mine survey information has been used to differentiate material mined from in-situ material.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	 A lower block cut off grade of 0.5g/t Au has been applied to the 'diluted' resource block model in calculating this Ore Reserve. The lower cut has been selected with consideration to mineability and incremental cash operating margins (i.e. processing costs). The lower cutoff has been calculated based upon a \$1600 per ounce gold price using lower than average metallurgical recoveries and the estimated processing and administration cost at the end of the mine life. It would also appear from Grade Control drilling that there is a natural cutoff for the orebody around the 0.5g/t Au boundary.
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). 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. 	 Open cut truck excavator mining, with free dig material in the transported, saprolite and upper oxide zones and drill and blast in the lower oxide and fresh materials. Equipment size and methods selected typical of moderate scale open pit gold mining. 190 and 120 tonne class excavators, 90 tonne mechanical drive haul trucks. Both the Caloma and the Wyoming Three pits were pre stripped by a mining contractor. In pit ramps at 24 m wide and 1:8.5 gradient to the last 20 to 40 metres vertical of each pit. Mining is on five metre high benches and is mined in two two and a half metre high flitches.
	The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.	 In Pit ore boundaries are defined by Reverse Circulation Grade control drilling on 10 metre by 10 metre to 10 metre by 5 metre patterns depending on the size and quality of the mineralisation being grade controlled. Geotechnical parameters as advised by specialised geotechnical consultants for Wyoming Three, and Caloma. No geotechnical studies have been undertaken at Caloma Two however given the proximity to the Caloma open pit and the very similar geological environment, parameters are expected to be similar.
	The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).	Ore block mining size of 2.5 metre X 2.5 metre X 2.5 metre, based upon the regularised block size in the ore reserve model.
	The mining dilution factors used.	 Reserve is based on a resource model that has been regularised to allow for dilution and ore loss. On comparison with the sub-block resource model, the regularised resource models have the following inherent dilutions. Wyoming One – 5%, Wyoming Three – 10%,

		Caloma – 14% and Caloma Two 14%. The regularisation takes into account the overall dimensions and geometry of the individual ore zones.
	The mining recovery factors used.	Assumed 100% recovery of the regularised model, due to large dilution from regularised models and the ore lost in the regularisation process.
	Any minimum mining widths used.	Mining assumes facing up ore zones. The ore has a 2.5m minimum width in regularisation process by applying a minimum width
	The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	 Inferred resources contained in the mineralised ore wireframes are included in the LOM schedule. Proportion of inferred in pit resource at commencement for total project – 24% of the total ore tonnes and 16% the total ounces.
	The infrastructure requirements of the selected mining methods.	
Metallurgical factors or	The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.	Ore from the Tomingley Project will be treated at the Tomingley Gold Plant which is described above.
assumptions	Whether the metallurgical process is well-tested technology or novel in nature.	The technology is well tested
	The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.	The LOM plan uses 96% metallurgical recovery for oxide and 91% for fresh for an overall recovery of 93%. Each pit, except Caloma Two, has had specific metallurgical testwork undertaken for the DFS which is made up of leach and gravity recovery. The metallurgical testwork is representative of all material types and areas of the ore bodies. The range of recoveries used are within the parameters of the individual pit recoveries. Caloma Two has no known reason to have different metallurgical characteristics to Caloma.
	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.	The most recent (July 2014) oxide operational recoveries were 94.85% for oxide from Caloma and Wyoming Three. There has been an improvement in metallurgical recovery in August 2014.
	For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	N/A – no minerals defined by a specification
Environmental	 The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported. 	 All environmental approvals are in place for operating within the Wyoming One, Wyoming Three and Caloma pit and the Wyoming One underground operation. Development approval is required prior to commencement of the Caloma Two open pit. The waste dump for Caloma Two will be incorporated into WRE3, Caloma's waste dump. The proposed Caloma Two operation is within the existing granted mining lease. There is sufficient volume in the RSF design to allow for all of the material in the LOM, including Caloma Two and Wyoming One underground.
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. There are no additional major works for Caloma Two although some surface drainage works will be required. The site relies upon local employment drawing employees from Tomingley, Peak Hill, Dubbo and Parkes Region.

Costs	•	The derivation of, or assumptions made, regarding projected capital costs in the study.	No allowance was made for capital costs in this reserve analysis although pre-stripping of waste may be capitalised. The economic analysis is based on total cash costs.
	•	The methodology used to estimate operating costs.	Operating costs – Mining and Process Current wage rates. Projected fuel price for 2014/15 Current contract rates for equipment hire, drilling contractor and explosive supplier. Current explosives costs and estimates of requirements for blast hole drilling, blasting, excavation and processing based on the varying rock types. Current work rates and OEM specs for excavator productivity. Truck hours based on OEM specs and projected haul cycles from mine plan. Contract Prices for Processing Consumables Current contract prices for power and estimated usage Associated onsite administration cost
	•	Allowances made for the content of deleterious elements.	N/A – No deleterious elements extracted
	•	The source of exchange rates used in the study.	Gold price is expressed in Australian dollars and no exchange rate is required.
	•	Derivation of transportation charges.	No transportation charges have been applied in economic analysis as these are included in the mining costs. Ore will be delivered directly from the pit to the ROM beside the existing plant within estimated contract rates. Gold transportation costs to the Mint are included in the refining component of the milling charges assumed in the study.
	•	The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	Processing operating costs outlined above.
	•	The allowances made for royalties payable, both Government and private.	Royalties payable at rate of 4% ad velorum to the NSW State Government have been considered. There are no other royalties due.
Revenue factors	•	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.	 Assume 100% ore mining recovery of the regularised Model. Selling costs and Royalties included in costs to give a net revenue per ounce. No deleterious metals present that incur penalties. A base gold price of AUD\$1,450/oz in this ore reserve assessment. Exchange rates, royalties and transport charges dealt with above.
	•	The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	No assumptions made
Market assessment	•	The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.	 There is a transparent quoted derivative market for the sale of gold; The Dore Gold is sent to the Perth Mint at commercial rates for refining. The Tomingley Gold Operations Pty Ltd sell the gold into the open market. The current gold hedge book is 24,000 ounces at AUD1,444 per ounce for delivery over the period July 2014 to 30 April 2015. Majority of production is sold into the spot market.
	•	A customer and competitor analysis along with the identification of likely market windows for the product.	N/A There is a transparent quoted derivative market for the sale of gold
	•	Price and volume forecasts and the basis for these forecasts.	N/A There is a transparent quoted derivative market for the sale of gold
	•	For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	N/A – not assessing industrial minerals
Economic	•	The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.	 The operation is currently operating at a processing rate of 1.1 MTPA and has built up 2.5 months of ore grade stockpile. The preliminary analysis carried out did not estimate the NPV but rather simple cash

			flow based on a variety of possible gold prices; or • For all deposits the optimal pit shell was chosen as that with the highest discounted cash flow from the Whittle Four-X pit Optimisation. The pits were designed from the chosen shell. The Whittle optimisation have low variations across the AUD1200-1600 Revenue range.
	•	NPV ranges and sensitivity to variations in the significant assumptions and inputs.	Sensitivity analysis was included in the Whittle optimization and simple cash flow analysis. As noted above there were very low variations in the Whittle optimisations for gold prices ranging from \$1200 - 1600
Social	•	The status of agreements with key stakeholders and matters leading to social licence to operate.	The TGO site is located on flat farm land with the Newell Highway separating Caloma and the Wyoming (pits and processing) side of operations. Surrounding the site is the village of Tomingley (600 m to the north) and local operating farms. All key stakeholder agreements are in place, including a Voluntary Planning Agreement (VPA) with the Narromine Shire Council. The Company has close working relationships with the local communities.
Other	•	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:	
		Any identified material naturally occurring risks.	A risk analysis was undertaken as part of the Feasibility Study and Environmental Assessment and no naturally occurring risks were identified.
		The status of material legal agreements and marketing arrangements.	Majority of production is sold into the spot market although a small portion is hedged at a price higher than the current spot price (see details above).
		The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	The operation is situated on a granted Mining Lease which expires in 2034. All statutory and government approvals have been obtained although a development approval is required prior to the commencement of mining at Caloma Two.
Classification	•	The basis for the classification of the Ore Reserves into varying confidence categories.	The classification of the Tomingley Gold Project Ore Reserve (June 2014) has been carried out in accordance with the recommendations of the JORC code 2012.
	•	Whether the result appropriately reflects the Competent Person's view of the deposit.	
	•	The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	No probable reserves have been derived from Measured Resources – all measured resources converted to Proved Reserves.
Audits or reviews	•	The results of any audits or reviews of Ore Reserve estimates.	The Ore Reserves have been derived from work undertaken by mining consultants prior to 2014. The current designs are in line with the work undertaken by the consulting firms.
Discussion of relative accuracy/ confidence	•	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.	The resource block models from which the mining reserve has been derived was based on a geostatistical estimation completed by Lewis Mineral Resource Consultants who were satisified with the resource categories quoted. Within the reserve estimation process the effects of included dilution have been accounted for to produce an anticipated selective mining unit grade. The effects of this dilution are more pronounced in narrow zones of mineralisation, leading to overall grade reduction and loss of some narrow zones to waste through a drop below cut off grade.

- The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.
- 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.

It is recognised that this may not be possible or appropriate in all circumstances.
 These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.

- The material included in the LOM schedule is only material that has been estimated inside of designated ore zones. The estimated material outside of the ore zones has not been included.
- o The Reconciliation of Proved and Probable Reserve and the material mined and processed to date has exceeded the Reserve in both grade and ore tonnes. The reconciliation has been exceeded when the inferred material within the ore zones has been added to the Reserve Figures. The reconciliation at Wyoming Three has been particularly high and consistent over 40 vertical metres.
- The assumption that the high grade (plus 1 g/t) and the low grade (0.5-1.0 g/t) could be wholly separated has not been proved. This has resulted in more high grade material and less low grade material. This will affect the stockpiling strategy as set out in the DES
- A component of the positive reconciliation may be due to the supergene affect at the base of transported material.
- The materials mined and processed to date have been transported, saprolite, oxide and drill and blast oxide material. There has been no fresh material processed. The positive nature of the reconciliation may not continue into the fresh material.
- Indications to date are that the Reserve should be considered to be conservative in both tonnes and grade. It is likely that the pits will recover more tonnes and possibly grade than what is contained in the Proved and Probable Reserve. There is a case that the inferred material inside of the outlined ore zones should be considered in the LOM calculations.