ASX and MEDIA RELEASE

9 September 2022

ALKANE RESOURCES LTD
ABN 35 000 689 216

Resource and Reserve Statements FY22

- **Identified Mineral Resources and Ore Reserves for the Tomingley Gold Project have been updated as at 30 June 2022. The Project includes the current production facility at the Tomingley Gold Operations, the Roswell and San Antonio deposits (the Tomingley Gold Extension Project) and the Peak Hill Gold Project in the Central West region of New South Wales.**
- **Mineral Resources and Ore Reserves for the Tomingley Gold Project have been re-estimated to account for additional resources, mining depletion, changes in gold price and operating costs:**
  - **Total Mineral Resources 25.91 Mt grading 2.10g/t Au (1,748,000oz)**
  - **Total Ore Reserves 11.78 Mt grading 1.77g/t Au (671,000oz)**
- **The Environmental Impact Statement for open cut and underground mining development for the Roswell and San Antonio deposits is progressing through the NSW Department of Planning and Environment. Project Approval is anticipated before the end of the calendar year.**
- **An extensive drilling program was completed on the gold-copper porphyry Boda Prospect within the larger North Molong Porphyry Project (NMPP) located 90km east of Tomingley. The drilling enabled an initial Inferred Resource to be estimated for the Boda deposit in May 2022:**
  - **Mineral Resources (0.3g/t AuEq*) 624 Mt grading 0.51g/t AuEq* (10.1 MEqoz)**

    624Mt grading 0.26g/t Au and 0.14% Cu (5.21 Moz Au; 0.9Mt Cu)
- **Additional drilling is progressing within the NMPP to expand the Boda resource and test separate deposits, including Kaiser.**

The equivalent calculation formula is AuEq(g/t) = Au(g/t) + Cu%/100*31.1035*copper price ($/t)/gold price($/oz). The prices used were US$1,770/oz gold and US$9,750/t copper, and A$:US$0.70. Recoveries are assumed at 85% per economic element from preliminary metallurgical studies. In Alkane's opinion all of the elements included in the metal equivalents calculation have reasonable potential to be recovered and sold.

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Mineral Resource and Ore Reserve Estimates as at 30 June 2022

The Company reports Ore Reserves and Mineral Resources for the Tomingley Gold Project (**TGP**) which includes the Tomingley Gold Operations (**Tomingley** or **TGO**) and the and the Peak Hill Gold Project (**PHGP**) and the Boda Deposit (**Boda**) as at 30 June 2022 in accordance with the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (**JORC 2012**). All projects are located within the Central West region of New South Wales.

At TGO, open pit mining continued through to early 2019 before the operation transitioned to underground mining. Low grade ore stockpiles were initially processed until underground ore became available in early 2020. Late in FY21 a cut back in the Caloma open pit was initiated based on improved gold prices earlier in the year. Resources and Reserves have been estimated for the Roswell and San Antonio deposits (together the Tomingley Gold Extension Project or **TGEP**) and these are included with the TGP. An initial Resource estimation was compiled for the PHGP in October 2019 and is included in the statement.

TGO is operated on a residential basis with personnel residing in Dubbo, Narromine and Parkes, in the Central West of New South Wales.

Extensive RC and core drilling at Boda within the North Molong Porphyry Project (NMPP) facilitated an initial estimated Inferred Resource. Boda is operated from the Company's main exploration base at Orange.

Mineral Resource and Ore Reserve Governance & Internal Controls

Alkane has governance arrangements and internal controls in place with respect to its estimates of Mineral Resources and Ore Reserves and the estimation process within the Tomingley Gold Operations and evaluation projects, such as the Peak Hill Gold Project, including:

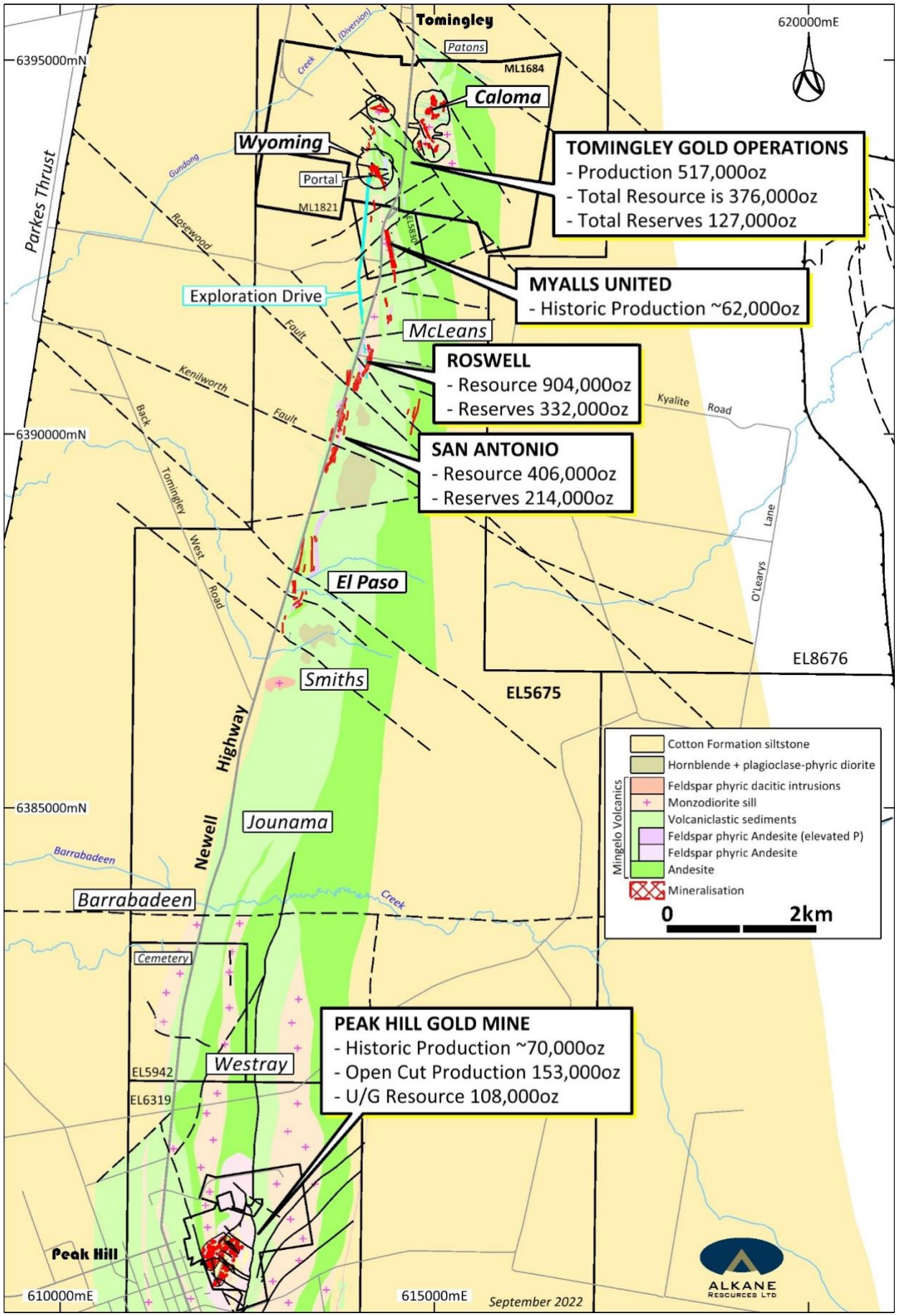
- oversight and approval of each annual statement by the Technical Director;
- establishment of internal procedures and controls to meet JORC Code 2012 compliance in all external reporting;
- independent review of new and materially changed estimates;
- annual reconciliation with internal planning to validate reserve estimates for operating mines; and
- Board approval of new and materially changed estimates.

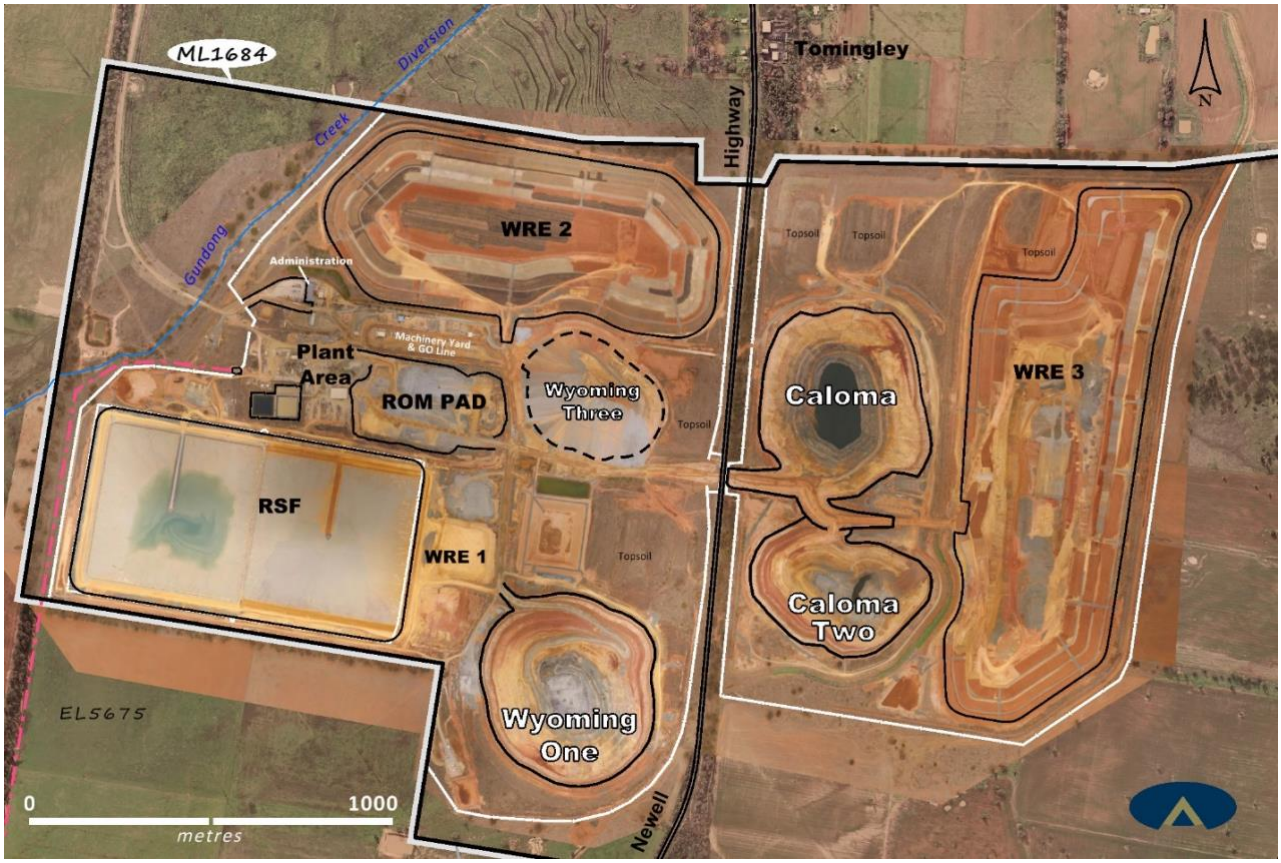
Tomingley Gold Operations – Mineral Resources

Tomingley has been operating since January 2014 and consequently the geology, mineralisation style, metallurgy, recovery, mining parameters and modifying factors have previously been well documented and reported. To ensure the resources have 'reasonable prospects of eventual economic extraction', the open pittable resources have been restricted by an indicative optimised pit shell, estimated at a gold price of A$2,000 per ounce with the potential open pittable component assessed at ≥0.4g/t gold cut-off.

The underground resource is restricted to material below the current final pit design, below the highest stope level currently designed, with potential for eventual extraction by underground mining methods assessed at ≥1.3g/t gold and a gold price of A$2,250 per ounce. As with the open pit resource the estimate was based on a block count method of all material above the cut-off grade. The constraints used are based on all material below current open pit surface +1.3 g/t but below the top RL of current UG stope designs which is in this case below the 180mRL.

These estimates take into account ore depleted by mining during the 2022 financial year and are set out in the tables below.


Tomingley
Patons
ML1684
Caloma
Wyoming
Portal
ML1821
EL5938
Parkes Thrust
Gundong
Rosewood
Exploration Drive
Fault
McLeans
Kenilworth
Fault
Back Tomingley West Road
El Paso
Smiths
Newell Highway
Jounama
Barrabadeen
Barrabadeen Creek
Cemetery
Westray
EL5942
EL6319
Peak Hill
Kyalite Road
Lane
O'Learys
EL8676
EL5675
6395000mN
6390000mN
6385000mN
610000mE
615000mE
620000mE
TOMINGLEY GOLD OPERATIONS
- Production 517,000oz
- Total Resource is 376,000oz
- Total Reserves 127,000oz
MYALLS UNITED
- Historic Production ~62,000oz
ROSWELL
- Resource 904,000oz
- Reserves 332,000oz
SAN ANTONIO
- Resource 406,000oz
- Reserves 214,000oz
PEAK HILL GOLD MINE
- Historic Production ~70,000oz
- Open Cut Production 153,000oz
- U/G Resource 108,000oz
Mingelo Volcanics
Cotton Formation siltstone
Hornblende + plagioclase-phyric diorite
Feldspar phyric dacitic intrusions
Monzodiorite sill
Volcaniclastic sediments
Feldspar phyric Andesite (elevated P)
Feldspar phyric Andesite
Andesite
Mineralisation
0
2km
September 2022
ALKANE RESOURCES LTD



Mineral Resources

TOMINGLEY GOLD OPERATION MINERAL RESOURCES (as at 30 June 2022)									
DEPOSIT	MEASURED		INDICATED		INFERRED		TOTAL		Total Gold
	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	(Koz)
Open Pittable Resources (cut off 0.40g/t Au)									
Caloma One	106	2.0	16	1.8	0	0.0	122	2.0	8
Sub Total	**106**	**2.0**	**16**	**1.8**	**0**	**0.0**	**122**	**2.0**	**8**
Underground Resources (cut off 1.3g/t Au)									
Wyoming One	1050	2.8	916	2.5	232	1.8	2,198	2.6	181
Wyoming Three	46	2.2	24	2.0	20	1.9	90	2.1	6
Caloma One	162	2.5	501	2.1	507	2.0	1,170	2.1	79
Caloma Two	167	2.6	1098	2.2	181	1.8	1,446	2.2	103
Sub Total	**1,425**	**2.7**	**2,539**	**2.3**	**940**	**1.9**	**4,904**	**2.3**	**369**
TOTAL	**1,531**	**2.7**	**2,555**	**3.6**	**940**	**3.4**	**5,026**	**2.3**	**377**

Apparent arithmetic inconsistencies are due to rounding

These Mineral Resources are wholly inclusive of Ore Reserves.

Full details are given in Appendix 1.

Tomingley Gold Operations – Ore Reserves

As with the Mineral Resource estimates, **Open Pit Ore Reserves** include the previously designed Caloma north-east cut-back in the production plan. All other reserve estimates remained unchanged and were reported in the ASX Announcement of 23 September 2019. Full details and JORC tables were included in those announcements and the Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement, and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which any Competent Person's findings are presented have not been materially modified from the original market announcement.

The open pit ore reserves for Caloma One are based on the latest site operating information. This includes:

- EOM December 2018 survey surface which delineates completion of previous open pit mining activity;
- latest grade control and resource block models;
- pit designs based upon review by geotechnical consultants; and
- Life of Mine cost and revenue models for the operation.

An initial estimate of **Underground Ore Reserves** was completed in 2018 at a 2.50g/t Au cut-off and was reported in ASX Announcements of 4 and 11 June 2018. Underground development commenced mid-2019 and is on schedule, with recovery and delivery of ore to the plant ROM commenced early 2020. Following increase in gold prices in 2020 and substantial operating data, the cut-off grade was revised, and the reported 2022 Ore Reserve is based on the Measured and Indicated Mineral Resources within the defined underground resource base at 1.3g/t Au cut-off and gold price of A$2,000 per ounce and application of the current site based mine design.

These estimates take into account ore depleted by mining during the 2022 financial year and are set out in the tables below.

Current mining activities comprise of underground mining of Wyoming One, Caloma One and Caloma Two orebodies. The cut back of the Caloma One pit is currently underway and will be completed in the next six months. TGO is operated on a residential basis with personnel residing in Dubbo, Narromine and Parkes in the Central West of New South Wales.

Two mining methods are used to mine the underground resource including, Longhole Open Stoping (LHOS) with loose or cemented rockfill and top-down LHOS with rib pillars and no fill. The choice of mining method is determined by value of the resource, orebody width and geotechnical factors.

Stoping configurations are predominantly single-lift stoping (25m vertical interval) with strike length of 20-30m. The stoping method involves establishing a slot using conventional long-hole drill and blast techniques and then the stoping front is retreated along strike. The installation of brow cables and the use of a concurrent strike-retreat blasting sequence assist in controlling ground stability. Depending on the mining method used cemented rockfill or loose rockfilled is filled into the stopes upon completion of mining. For the LHOS with rib pillars there is no fill placement.

Ore production is scheduled at 900 ktpa which is trucked to surface using a fleet of four underground trucks (MT65). The truck fleet is matched with four Caterpillar R2900 loaders operating on a combination

of tele-remote and manual control. Normal drilling fleet includes two development jumbos (DD420/422i) and two production drills (DL431/432).

TOMINGLEY GOLD OPERATION ORE RESERVES(as at 30 June 2022)							
DEPOSIT	PROVED		PROBABLE		TOTAL		Total Gold
	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	(Koz)
Open Pittable Reserves (cut off 0.40g/t Au)							
Caloma	106	2.0	16	1.8	122	2.0	8
Stockpiles	384	1.3	0	0	384	1.3	16
Sub Total	**490**	**1.5**	**16**	**1.8**	**506**	**1.5**	**24**
Underground Reserves (cut off 1.3g/t Au)							
Wyoming One	366	2.1	304	2.2	670	2.1	46
Caloma One	68	1.8	315	1.6	383	1.6	20
Caloma Two	137	1.6	628	1.5	765	1.6	38
Sub Total	**571**	**1.9**	**1,247**	**1.7**	**1,818**	**1.8**	**104**
TOTAL	**1,061**	**1.7**	**1,263**	**1.7**	**2,324**	**1.7**	**127**

Apparent arithmetic inconsistencies are due to rounding

Full Open Pit details are given in Appendix 2 and full Underground details are in Appendix 3.

The tables below compare the Mineral Resources and Ore Reserves year on year with 2020 as per the current reporting requirements.

Comparison of 2021/ 2022 TGO Mineral Resources and Ore Reserves

TOMINGLEY GOLD OPERATION COMPARATIVE RESOURCES						
DEPOSIT	2021			2022		
	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)
Open Pit						
Wyoming One	1,120	1.4	52	0	0	0
Wyoming Three	135	1.7	8	0	0	0
Caloma One	2,450	1.3	105	122	2	8
Caloma Two	962	1.9	58	0	0	0
Sub Total	**4,667**	**1.5**	**223**	**122**	**2.0**	**8**
Underground						
Wyoming One	2238	2.8	201	2198	2.6	181
Wyoming Three	90	2.1	6	90	2.1	6
Caloma One	765	2.2	54	1170	2.1	79
Caloma Two	854	2.4	67	1446	2.2	103
Sub Total	**3947**	**2.6**	**328**	**4904**	**2.4**	**369**
TOTAL	**8,614**	**2.0**	**551**	**5,026**	**2.3**	**377**

Apparent arithmetic inconsistencies are due to rounding

TOMINGELY GOLD OPERATION COMPARATIVE OPEN PIT RESERVES						
	2021			2022		
DEPOSIT	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)
Wyoming One						
Wyoming Three						
Caloma One	476	1.6	25	122	2.0	8
Caloma Two						
Stockpiles	72	1.2	3	384	1.3	16
TOTAL	**548**	**1.6**	**28**	**506**	**1.5**	**24**
	TGO UNDERGROUND RESERVES					
	2021			2022		
SOURCE	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)
Proven	783	2.1	54	571	1.9	35
Probable	1,042	1.9	63	1,247	1.7	68
TOTAL	**1,825**	**2.0**	**117**	**1,818**	**1.8**	**104**
TOTAL	**2,373**	**1.9**	**145**	**2,324**	**1.7**	**128**

Apparent arithmetic inconsistencies are due to rounding

The primary differences from 2021 to 2022 are:

- Residual open pit resources for Wyoming One, Wyoming Three and Caloma Two were reduced to zero due to practical limits to surface mining;
- Caloma 1 cut-back reserves depleted;
- Underground reserves added by development grade control drilling; and
- Underground reserves depleted by mining

Roswell and San Antonio Mineral Resources

The Tomingley Gold Project (TGP) covers an area of approximately 440km^2 stretching 60km north-south along the Newell Highway from Tomingley in the north, through Peak Hill and almost to Parkes in the south. During FY20 an extensive drilling program targeted two prospects at **Roswell** and **San Antonio** within the geologically prospective corridor immediately to the south of TGO.

The geology and mineralisation at Roswell and San Antonio is identical to that at the Tomingley operations and metallurgical tests confirmed a recovery profile similar to TGO. Using the TGO cost structures, simple pit shells were estimated to confirm the resources have 'reasonable prospects of eventual economic extraction' the open pittable resources have been restricted by an indicative optimised pit shell estimated at a gold price of A$2,250 per ounce

Indicated and Inferred Resources were calculated on the **Roswel**l deposit with a nominal 20m drill hole spacing, strike length of 600m to an average depth to -200mRL (approximately 350m below the ground surface) and details are reported in the ASX Announcement 4 November 2020 and updated in April 2022 following further infill and extension drilling - ASX Announcement 2 May 2022.

Indicated and Inferred Resources were estimated on the **San Antonio** deposit with a nominal 20m drill hole spacing and calculated to the -200mRL, an average of 250m below the ground surface. Details are provided in the ASX Announcement 15 January 2021.

Full details and JORC tables were included in the announcements and the Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which any Competent Person's findings are presented have not been materially modified from the original market announcements.

TOMINGLEY GOLD PROJECT SAR MINERAL RESOURCES (as at 30 June 2022)									
DEPOSIT	MEASURED		INDICATED		INFERRED		TOTAL		Total Gold
	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	(Koz)
Total Resources (cut off 0.4g/t Au Roswell and 0.5g/t Au San Antonio)									
Roswell			5,615	1.78	791	0.96	6,406	1.68	346
San Antonio			5,930	1.82	1,389	1.32	7,319	1.73	406
Sub Total	**0**	**0.0**	**11,545**	**1.80**	**2,180**	**1.19**	**13,725**	**1.70**	**752**
Underground Resources (cut off 1.6g/t Au)									
Roswell			1,897	2.67	4,244	2.56	6,141	2.59	512
Sub Total			**1,897**	**2.67**	**4,244**	**2.56**	**6,141**	**2.59**	**512**
TOTAL			**13,443**	**1.92**	**6,424**	**2.09**	**19,867**	**1.98**	**1,264**

Apparent arithmetic inconsistencies are due to rounding

Full Resource details are given in the ASX Announcements 4 November 2020, 15 January 2021 and 2 May 2022.

Roswell and San Antonio Open Pit Ore Reserves

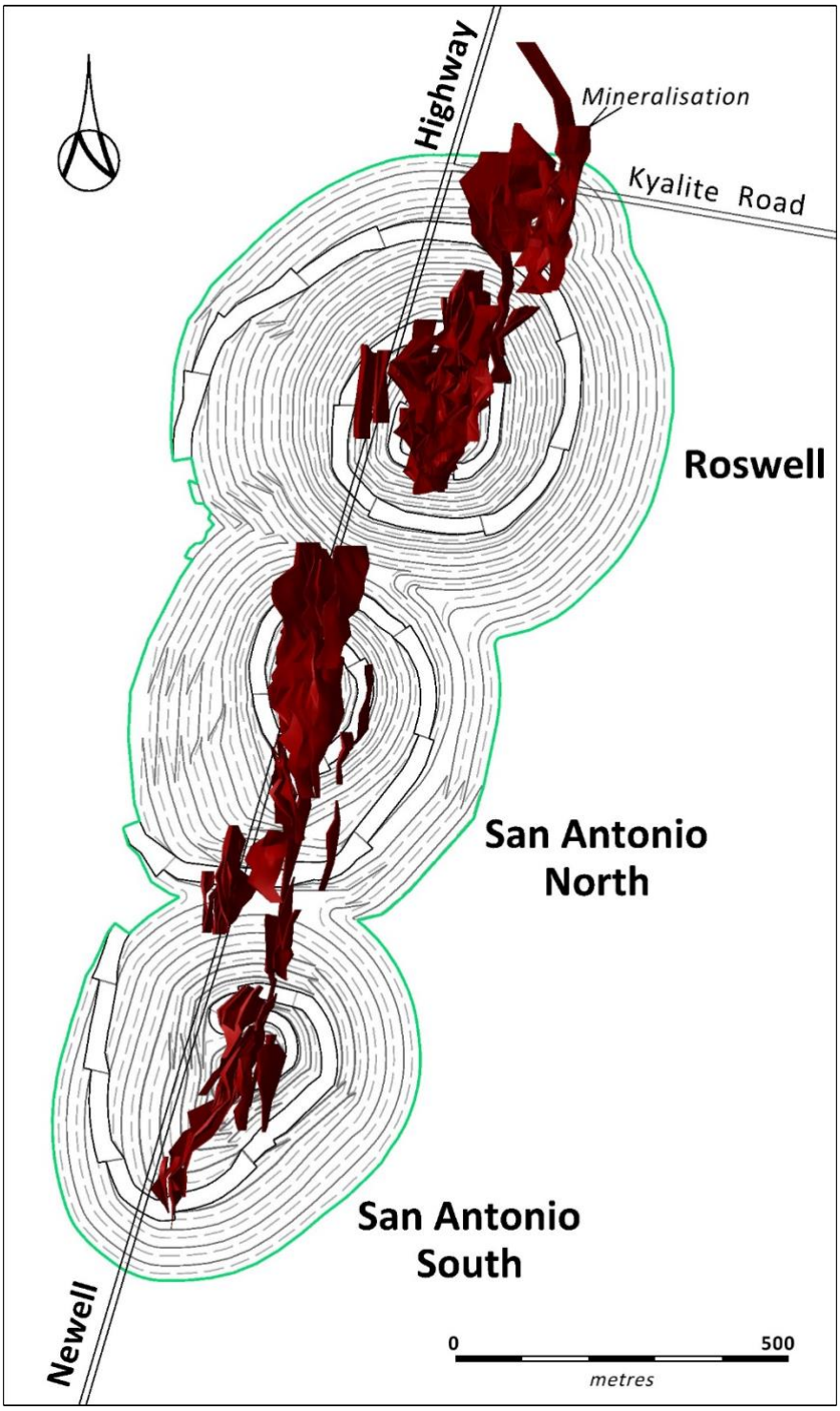
Based upon the resource models above, optimisation work using Whittle Software (WSP) and modifying factors developed on the existing Tomingley operations, an open pit reserve was estimated with the following observations:

- The project is sensitive to block model cell size, gold price and wall angle. The conservative case for wall angle as proposed by WSP has been adopted for design purposes.
- The project has limited sensitivity to resource category. The extent of the Indicated resource is such that the inferred category has limited effect on the optimisation and is generally below the range of the Revenue Factor shells.
- The project has limited sensitivity to mining cost increments within the range of this study. Reducing mining costs by 10% may be achieved by increasing the size of trucks for the oxide prestrip.
- Shell selection for design was based upon a gold price of A$2,250 per ounce, and revenue factor 1 shell. This was considered the most robust of the lower the gold price options.

Design was completed giving an overall conversion of 66% for undiscounted cash flow, 105% of recovered ounces and 113% of total mined compared to the selected shell. A three-stage open pit development was considered for scheduling purposes.

Scheduling has been completed using a maximum mill rate of 1.5Mtpa and mining rates suitable for operating up to 250 t class excavators. analysis including capital using the optimisation inputs and a gold price of A$2,250 per ounce has shown a positive NPV for both the base case and upgrade case of metallurgical recoveries.

A reserve has been calculated using appropriate modifying factors and can be reported according to JORC 12 requirements. The reserve has been calculated inclusive of the published resources and totals 416,000 ounces of contained gold.



Final Design Combined San Antonio Roswell

Roswell and San Antonio Underground Ore Reserves

Based upon the resource models below the proposed open pit extraction, the Roswell deposit was selected for immediate underground mining potential based upon the current underground mining of Wyoming One and the Caloma orebodies located at the TGO site, 3km to the north. An exploration decline is being driven from the Wyoming One underground workings to access the Roswell orebody. TGEP is planned to be operated from TGO. TGO is operated on a residential basis with personnel residing in Dubbo, Narromine and Parkes in the Central West of New South Wales.

The mining method proposed for mining the underground portion of the Roswell resource is Longhole Open Stoping (LHOS) with full paste fill. The choice of mining method is determined by value of the resource, orebody width and geotechnical factors.

Stoping configurations are predominantly single-lift stoping (25m vertical interval) with strike length of 20-25m. The stoping method involves establishing a slot using conventional long-hole drill and blast techniques and then the stopes mined in a retreat sequence along strike to the central access. The stopes are paste filled prior to the adjacent stope is mined. The installation of brow cables and the use of a concurrent strike-retreat blasting sequence, and use of paste fill will assist in controlling ground stability.

Ore production is scheduled to be 900 ktpa which would be trucked to surface using a fleet of four underground trucks (MT65). The truck fleet is matched with four Caterpillar R2900 loaders operating on a combination of tele-remote and manual control. Normal drilling fleet includes two development jumbos (DD420/422i) and two production drills (DL431/432).

The reported Ore Reserve is based on the Measured and Indicated Mineral Resources from the current site based TGO mine design and incorporates the existing site costs and modifying factors.

TOMINGLEY GOLD PROJECT SAR ORE RESERVES(as at 30 June 2022)							
DEPOSIT	PROVED		PROBABLE		TOTAL		Total Gold
	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	(Koz)
Open Pittable Reserves (cut off 0.40g/t Au)							
Roswell	0	0.0	3,900	1.7	3,900	1.7	213
San Antonio	0	0.0	4,100	1.6	4,100	1.6	214
Sub Total	**0**		**8,000**	**1.6**	**8,000**	**1.6**	**427**
Underground Reserves (cut off 1.6g/t Au)							
Roswell	0	0.0	1,456	2.6	1,456	2.6	119
San Antonio*	0	0.0	0	0.0	0	0.0	0
Sub Total	**0**	**0.0**	**1,456**	**2.6**	**1,456**	**2.6**	**119**
TOTAL	**0**	**0.0**	**9,456**	**1.8**	**9,456**	**1.8**	**547**

Apparent arithmetic inconsistencies are due to rounding.

* San Antonio U/G Reserves not determined at this time.

Full **Open Pit** details are given in Appendix 4 and full **Underground** details are in Appendix 5.

Peak Hill Gold Project

The Peak Hill Gold Project is located 15km south of Alkane's operating Tomingley Gold Operations (TGO). The Peak Hill Gold Mine (**PHGM**) was a fully operational open pit gold mine that is currently under care and maintenance with most site rehabilitation completed away from the existing open cuts. There are four pits; the main Proprietary-Parkers Pit and three satellite pits, Bobby Burns, Crown and Great Eastern.

The recent history of the Project was summarised in the 2021 Annual Resource and Reserve Statement ASX Release 7 September and JORC Tables documented in ASX Release 18 October 2018

Mineral Resources

PEAK HILL GOLD PROJECT MINERAL RESOURCES (as at 30 June 2021)						
Deposit	Resource Category	Cut-Off	Tonnes (Kt)	Gold Grade g/t	Gold Metal (Koz)	Copper Metal (%)
Proprietary U/G	Inferred	2g/t Au	1,022	3.29	108	0.15
TOTAL			**1,022**	**3.29**	**108**	**0.15**

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which any Competent Person's findings are presented have not been materially modified from the original market announcement.

Comparison of 2020 / 2021 Peak Hill Gold Project Mineral Resources

The Mineral Resource estimate was initially completed in October 2018.

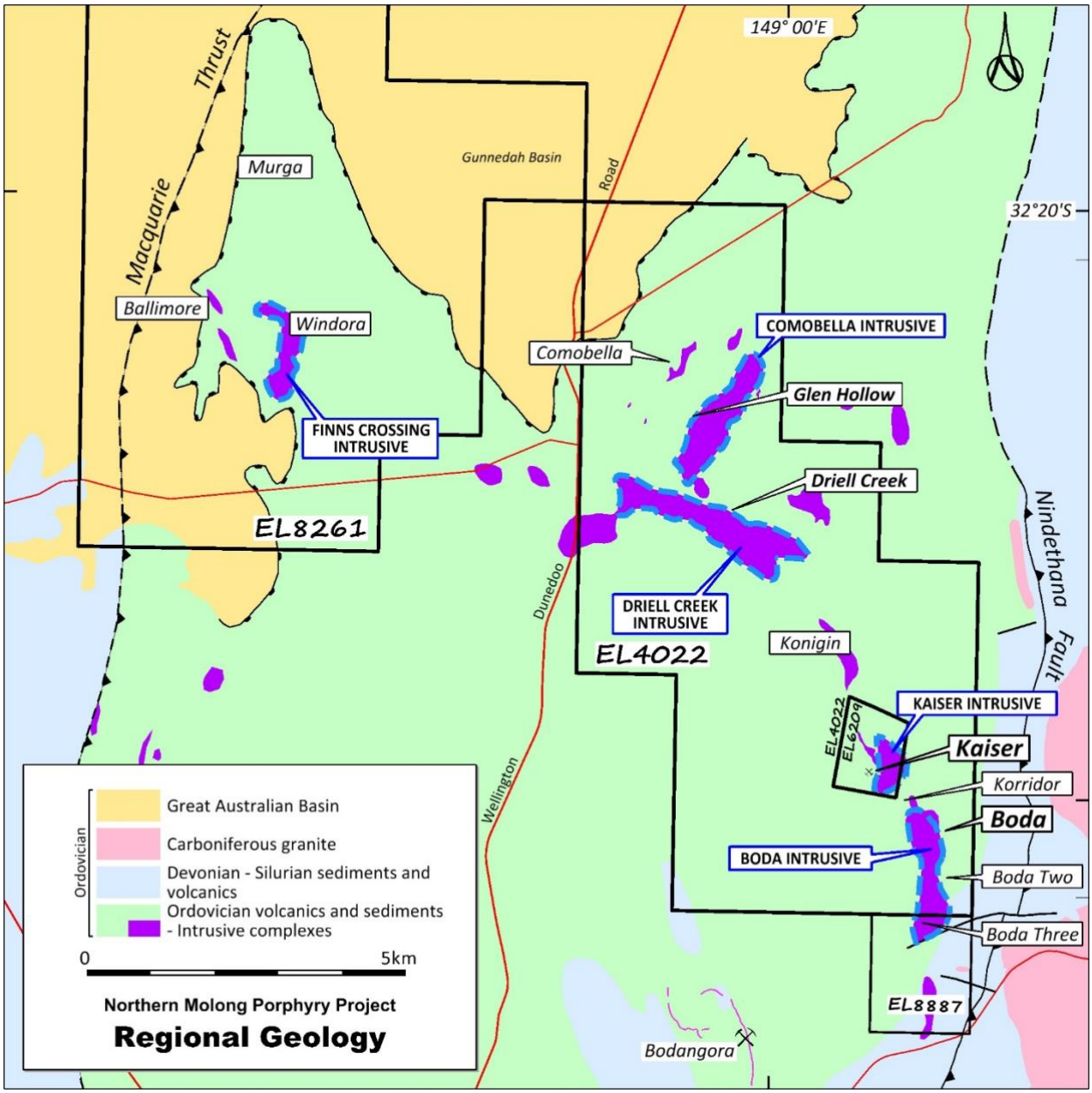
PEAK HILL COMPARATIVE MINERAL RESOURCES								
Deposit	2021				2022			
Proprietary U/G	Tonnes (Mt)	Gold Grade g/t	Gold Metal (Koz)	Copper Metal (%)	Tonnes (Mt)	Gold Grade g/t	Gold Metal (Koz)	Copper Metal (%)
Inferred Resource	1.02	3.29	108	0.15	1.02	3.29	108	0.15
TOTAL	**1.02**	**3.29**	**108**	**0.15**	**1.02**	**3.29**	**108**	**0.15**

Northern Molong Porphyry Project – Boda Mineral Resources

The Project is located in central west NSW at the northern end of the Molong Volcanic Belt of the Macquarie Arc and is considered highly prospective for large scale porphyry and epithermal gold-copper deposits.

Exploration in the NMPP has identified five discrete magnetic/intrusive complexes – Kaiser, Boda, Comobella, Driell Creek and Finns Crossing – within a 15km northwest trending corridor. The corridor is defined by intermediate intrusives, lavas and breccias, extensive alteration and widespread, low-grade, gold-copper mineralisation.

Since the discovery of Boda in late-2019, a significant campaign of RC and diamond core drilling commenced. The drilling was designed to test the dimensions and extent of the mineralisation at Boda for the purposes of an initial resource estimation.



The Boda Deposit is located within a NW-SE trending structural corridor on the north-western margin of a significant magnetic high with dimensions of approximately 2 km x 0.7 km. The mineralisation is hosted within a package of submarine basaltic to andesitic lavas with subordinate latite flows. The volcanic

sequence is intruded by monzogabbroic, and monzodiorite-monzonite units and related magmatic-hydrothermal breccias. The deposit is crosscut by numerous post-mineralisation dykes and sills of varying composition.

Intrusive- to magmatic-hydrothermal breccias appear to be the focus for the calc-potassic alteration and gold-copper mineralisation at Boda. The mineralisation is related to a series of NW-trending monzodiorite intrusions that manifest as a series of vertically extensive intrusive breccias forming a 500 x 300 m stock central to Boda. These intrusive breccias transition to hydrothermal breccias to which the highest Au-Cu grades at Boda are related. The majority of brecciation is in the form of a 'crackle breccia' that can either have a hydrothermal matrix usually comprising of calcite ± actinolite ± pyrite ± magnetite ± chalcopyrite or an igneous matrix.

The initial Inferred Mineral Resource estimation for the Boda deposit was confined to a surface area of 1,000m strike length and 500m width. The estimation uses nominal drill hole grid of 100m by 50m to depths averaging approximately 1,000m. It utilises assay results captured from 83 drill holes of a combined 52,390 metres of diamond core and 19,041 metres of RC drilling. The resource was calculated to an average -500mRL. A review of feasibility and existing operating data for similar deposits in Australia was considered in determining cut-off grades of 0.3g/t AuEq and 0.4g/t AuEq as reasonable for the prospect of eventual extraction with the use of bulk tonnage mining methods of open cut or underground respectively.

The monzonites, dolerites, surface and base of oxidation were modelled in 3D and formed the basis of wireframing the mineralisation in the estimation. All wireframes were built by Alkane geologists. This informed the estimates and along with grade guided the interpretation of the ore envelope wireframes at a nominal 0.2g/t AuEq lower cut-off and the high-grade breccia was informed using a 1.0g/t AuEq lower cut-off Where the intercept gold value was below the nominal cut-off and the mineralisation continuity was supported by veining and alteration, the intercept was included within the domain due to the commodity and the style of deposit.

Grade estimation was completed using Ordinary Kriging (OK) with dynamic anisotropy to optimise search ellipse orientation within the lodes, using a hard boundary interpolation on the high-grade breccia domain, the gold-rich phyllic domain, the monzonite domain and into the broad low-grade envelope domains. All wireframing and estimation was completed with Datamine Studio RM software.

Mineral Resources

NORTHERN MOLONG PORPHYRY PROJECT MINERAL RESOURCES (as at 30 June 2022)									
DEPOSIT	MEASURED		INDICATED		INFERRED		TOTAL		Total Metal
	M Tonnes	Grade	Tonnage	Grade	M Tonnes	Grade	M Tonnes	Grade	Au Moz / Cu Mt
Resources (cut off 0.3g/t AuEq)									
BODA Au g/t					624	0.26	624	0.26	5.20
BODA Cu %					624	0.14	624	0.14	0.90
AuEq					**624**	**0.51**	**624**	**0.51**	**10.1 MozEq**
Resources (cut off 0.4g/t AuEq)									
BODA Au g/t					353	0.33	353	0.33	3.71
BODA Cu %					353	0.18	353	0.18	0.62
AuEq					**353**	**0.63**	**353**	**0.63**	**7.1 MozEq**

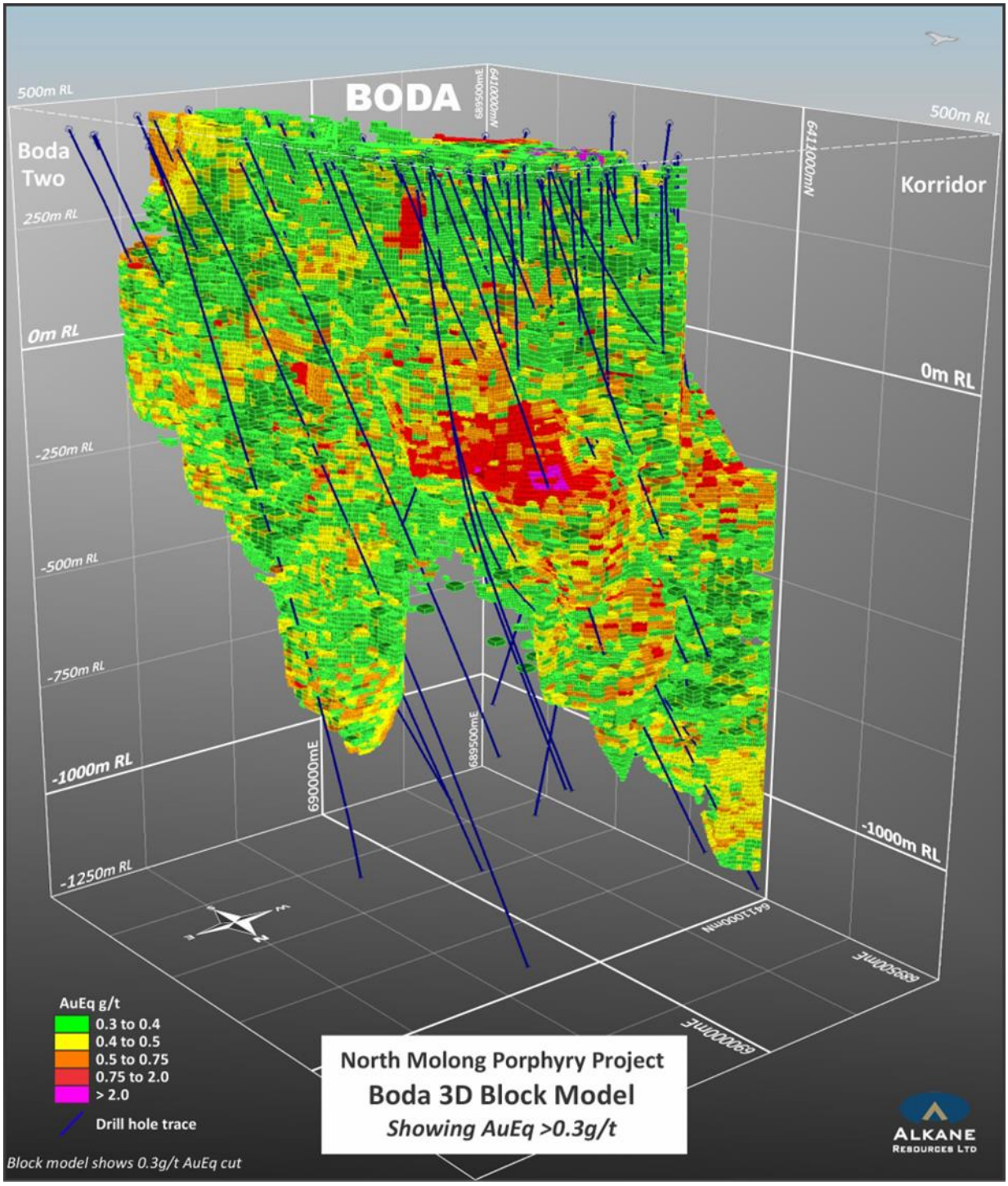
The equivalent calculation formula is AuEq(g/t) = Au(g/t) + Cu%/100*31.1035*copper price ($/t)/gold price($/oz).

Apparent arithmetic inconsistencies are due to rounding

Full Resource methodology description and JORC Table details are given in the ASX Announcements 30 May 2022.

Drilling is continuing on extensions to Boda deposit and testing other nearby targets, including Kaiser.

Boda resource block model at >0.3g/t AuEq



Competent Persons

*This **Mineral Resources and Ore Reserves Statement as a whole** has been approved by Mr D Ian Chalmers, FAusIMM, FAIG, (executive director of the Company) who has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Chalmers has provided his prior written consent to the inclusion in this report of the Mineral Resources and Ore Reserves Statement in the form and context in which it appears.*

*The information in this report that relates to the **TGO Mineral Resource** estimates is based on, and fairly represents, information which has been compiled by Mr Craig Pridmore, Geology Manager Tomingley Gold Operations, who is a Member of the Australasian Institute of Mining and Metallurgy and an employee of Alkane Resources Ltd. Mr Pridmore has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Pridmore consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.*

*The information in this report that relates to the **TGO Open Pit Ore Reserve** estimate is based on, and fairly represents, information which has been compiled by Mr John Millbank (Proactive Mining Solutions), an independent consultant, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Millbank has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Millbank consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.*

*The information in this report that relates to the **TGO Underground Ore Reserve** estimate is based on, and fairly represents, information which has been compiled by Mr Christopher Hiller (Hiller Enterprises Pty Ltd), an independent consultant, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Hiller has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Hiller consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.*

*The information in this report that relates to **Roswell and San Antonio Mineral Resource** estimate is based on information compiled by Mr David Meates MAIG, (Alkane Exploration Manager NSW) who has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Meates has provided his prior written consent to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

*The information in this report that relates to the **Roswell and San Antonio Open Pit Ore Reserve** estimate is based on, and fairly represents, information which has been compiled by Mr John Millbank (Proactive Mining Solutions), an independent consultant, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Millbank has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Millbank consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.*

*The information in this report that relates to the **Roswell Underground Ore Reserve** estimate is based on, and fairly represents, information which has been compiled by Mr Christopher Hiller (Hiller Enterprises Pty Ltd), an independent consultant, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Hiller has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Hiller consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.*

*The information in this report that relates to the **PHGP Mineral Resource** estimate is based on, and fairly represents, information which has been compiled by Mr Craig Pridmore, Geology Manager Tomingley Gold Operations, who is a Member of the Australasian Institute of Mining and Metallurgy and an employee of Alkane Resources Ltd. Mr Pridmore has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Pridmore has provided his prior written consent to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

*The information in this report that relates to the **Boda Mineral Resource** estimate is based on, and fairly represents, information which has been compiled by Mr David Meates MAIG, (Alkane Exploration Manager NSW) who has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Meates has provided his prior written consent to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

The information in this report that relates to previously reported exploration results and exploration targets is extracted from the Company's ASX announcements noted in the text of the announcement and are available to view on the Company's website. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcements and that the form and context in which the Competent Person's findings are presented have not been materially altered.

Disclaimer

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

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

This document has been authorised for release to the market by Nic Earner, Managing Director.

ABOUT ALKANE - www.alkane.com.au - ASX: ALK

Alkane Resources is poised to become Australia's next multi-mine gold producer.

The Company's current gold production is from the Tomingley Gold Operations in Central West New South Wales, where it has been operating since 2014 and is currently expediting a development pathway to extend the mine's life beyond 2030.

Alkane has an enviable exploration track record and controls several highly prospective gold and copper tenements. Its most advanced exploration projects are in the tenement area between Tomingley and Peak Hill, which have the potential to provide additional ore for Tomingley's operations.

Alkane's exploration success includes the landmark porphyry gold-copper mineralisation discovery at Boda in 2019. With drilling ongoing adjacent to the initial resource identified at Boda, Alkane is confident of further consolidating Central West New South Wales' reputation as a significant gold production region.

Alkane's gold interests extend throughout Australia, with strategic investments in other gold exploration and aspiring mining companies, including ~9.8% of Calidus Resources (ASX: CAI).

APPENDIX 1

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

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	The Wyoming One area has been evaluated using air core (AC), reverse circulation (RC) and diamond drilling (DD) techniques between May 2001 and June 2021 although not all of this drilling lies within the current resource outline. AC - 185 holes for 14593.8m – inclusive of 3 pre-collars totalling 294.2m RC - 149holes for 25356m – inclusive of 29 pre-collars totalling 4552.9m RC Grade Control – 1187 hole for 30331m DD - 502 holes totalling 95573.45m Face samples: 988 faces totalling ~5862m Sludge samples: 142 holes for 2439.2m AC samples were collected in large plastic bags at one metre intervals via a cyclone RC samples were collected at one metre intervals via a cyclone. DD sample intervals were defined by geologist during logging to honour geological boundaries. The resource model includes Grade Control holes drilled within the Wyoming 1 pit. These RC Grade control holes have limited impact on the Wyoming 1 Underground estimation but were essential to the creation of the entire geological model.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	AC and RC drilling completed to industry standards. Core was laid out in suitably labelled core trays. A core marker (core block) was placed at the end of each drilled run (nominally 3 or 6m) and labelled with the hole number, down hole depth, length of drill run. Core was aligned and measured by tape, comparing back to this down hole depth consistent with industry standards.
	• *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	AC drilling samples collected at 1m intervals via a cyclone into large plastic bags. RC Drilling – the entire RC sample was collected at 1m intervals and delivered into a large plastic bag via a cyclone. DD Drilling – sample intervals were defined by geologists during logging to honour geological boundaries and cut in half with a saw. All Underground diamond holes were full core sampled. Intervals were honoured to match geological boundaries. 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

Criteria	JORC Code explanation	Commentary
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. The 2016/2017 Diamond drilling was collared with PQ3 and were reduced to HQ3 when the ground became competent. The HQ3 core was oriented using the 'BallMark', 'EzyMark' or 'Ace' (Reflex Act) core orientation tool depending upon the contractor and time period of when the drill program was drilled. All Underground diamond holes have been drilled using NQ core diameter.
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 was used to ensure a representative sample was achieved for 1 metre samples. DD - core loss was identified by drillers and calculated by geologists when logging. Generally ≥95% was recovered and any loss was usually in portions of the oxide zone. Triple tube Large diameter, triple tube core (PQ3) was used through the oxide material to ensure the greatest recovery.
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	*RC drilling was completed using oversized shrouds to maintain sample return in oxide zone and all samples were split using riffle or cone splitters. Use of RC rigs with high air capacity assists in keeping samples dry.* Triple tube coring was used at all times to maximise core recovery with larger diameter (PQ3) core used in the oxide and saprolite zones.
	• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	There is no known relationship between sample recovery and grade.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	*AC & RC - each one metre interval was geologically logged for characteristics such as lithology, weathering, alteration (type, character and intensity), veining (type, character and intensity) and mineralisation (type, character and volume percentage).* *DD - all core was laid out in core trays and geologically logged for characteristics such as lithology, weathering, alteration (type, character and intensity), veining (type, character and intensity) and mineralisation (type, character and volume percentage). A brief geotechnical log was also undertaken collecting parameters such as core recovery, RQD, fracture count, and fracture type and orientation. With the surface and underground Diamond programs, specific zones of the core has full geotechnical analysis undertaken. This included Alpha, Beta measurements for all fractures and internal structures, fracture fill type etc*
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*	*All logging was qualitative with visual estimates of the various characteristics. Magnetic susceptibility data is quantitative.* *AC & RC - A representative sample of each one metre interval is retained in chip trays for future reference.*

Criteria	JORC Code explanation	Commentary
		DD - Core was photographed and all un sampled core is retained for reference purposes. Undeground Grade control diamond core unsampled material has been thrown away.
	• *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.*	Surface DD - zones of visual mineralisation and/or alteration were marked up by the geologist and cut in half using an Almonté (or equivalent) core cutting saw. Samples submitted for analysis were collected from the same side in all cases to prevent bias. Sampling intervals were generally based on geology, were predominantly over 1m intervals but do not exceed 1.2 metres in length. The minimum core sample length was 0.3m. All mineralised zones were sampled, plus ≥6m of visibly barren wall rock. Underground DD: - zones of visual mineralisation and/or alteration were marked up by the geologist, Sampling intervals were generally based on geology, were predominantly over 1m intervals but do not exceed 1.3 metres in length. The minimum core sample length was 0.3m. All mineralised zones were sampled, plus ≥6m of visibly barren wall rock. Laboratory Preparation – drill core was oven dried prior to crushing to <6mm using a jaw crusher, split to 3kg if required then pulverised in an LM5 (or equivalent) to ≥85% passing 75µm. Bulk rejects for all samples were discarded. A pulp packet (±100g) is stored for future reference
	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*	*AC/RC – samples were collected at 1m intervals via a cyclone into large plastic bags. Spear samples were collected from each 1m sample and composited to 3m for initial analysis. Individual 1m samples from all composites assaying ≥0.2g/t Au were riffle split and resubmitted for analysis.* *Rare damp or wet samples were recorded by the sampler.* Laboratory Preparation – the entire RC sample (3kg) was dried and pulverised in an LM5 (or equivalent) to ≥85% passing 75µm. Bulk rejects for all samples were discarded. A pulp packet (±100g) is stored for future reference.
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	Alkane (ALK) sampling techniques are of industry standard and considered adequate.
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	AC – field duplicate samples were not regularly submitted for reconnaissance AC drilling RC – field duplicate samples collected at every stage of sampling to control procedures. DD – external laboratory duplicates used.
	• *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*	RC - Duplicate samples were riffle split from bulk sample. Duplicates show generally excellent repeatability, indicating a negligible “nugget” effect.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Sample sizes are industry standard and considered appropriate.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	*For all 1m samples used in the resource estimate gold was determined using a 50g charge fused at approximately 1100°C with alkaline fluxes, including lead oxide. The resultant prill was dissolved in aqua regia and gold determined by flame AAS. For 3m composite samples gold was determined using a 30g charge (more rarely 50g charge).*

Criteria	JORC Code explanation	Commentary
		For other geochemical elements, samples were digested in aqua regia with each element concentration determined by ICP Atomic Emission Spectrometry or ICP Mass Spectrometry. These additional elements were generally only used for geological interpretation purposes, are not of economic significance and are not routinely reported.
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*	Not applicable to this report or deposit.
	• *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	*Commercially prepared Certified Reference Materials (CRM) and blanks were inserted at 1 in 50 samples. CRM's were not identifiable to the laboratory.* *Field duplicate samples were inserted at 1 in 50 samples (alternate to CRM's) for RC drilling programs.* *Laboratory QAQC sampling includes insertion of CRM samples, internal duplicates and screen tests. This data was reported for each sample submission.* *Failed standards result in re-assaying of portions of the affected sample batches.*
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	Drill data was compiled and collated, and reviewed by senior staff. External consultants do not routinely verify exploration data until resource estimation procedures are deemed necessary.
	• *The use of twinned holes.*	Twinned holes have not been used at Wyoming One as twinning provides verification only for extremely limited areas of a deposit.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	*All drill hole logging and sampling data was hard keyed into Excel spreadsheet for transfer and storage in the Datashed database with verification protocols in place.* All primary assay data was received from the laboratory as electronic data files which were imported into sampling database with verification procedures in place. QAQC analysis was undertaken for each laboratory report. Digital copies of Certificates of Analysis (COA) are stored in a central database with regular (daily) backup. Original survey data is stored on site. Data was also verified on import into mining related software.
	• *Discuss any adjustment to assay data.*	No assay data was adjusted.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	*Drill holes were laid out using hand held GPS (accuracy ± 2m) then surveyed accurately (± 0.1m) by licensed surveyors on completion.* Since mining commenced drill holes were set out and picked up using a RTK rover based GPS (± 0.1m) *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. Some of the more recent surface Diamond holes from the 2016/2017 program were surveyed by nth seeking gyro.
	• *Specification of the grid system used.*	All drill holes were originally laid out in AMG66 grid however since mining commenced in February 2014 have been transformed to MGA94 grid system to conform to reporting requirements for mine operations.

Criteria	JORC Code explanation	Commentary
	• *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 exploration drilling at Wyoming One within the open pit was completed along east-west lines spaced 25m apart. However once the east-west lode orientation was confirmed for the '376' zone (this zone is the high grade mineralisation on the eastern contact of the porphyry intrusive contact) this portion of the deposit was assessed by south drilled holes was completed along north-south sections spaced 25m apart. The Underground infill drilling during the 2016/2017 campaign was drilled to ensure the drill hole intercept spacing within each lode was covered to a nominal 30m pattern. The drilling direction of these holes was optimised best as practical to the orientation of the mineralisation and geology to remove/reduce any potential sample bias for the estimation. The drill hole spacing is similar to that used at other Tomingley deposits and has been established to be sufficient. Surface in-pit RC Grade control drilling was undertaken on a nominal 10m x 10m drill spacing on all ore lodes. All Underground Grade control diamond drilling, infilled all lodes beneath the Wyoming 1 Open pit on a nominal 15 x 20m spacing. Areas within the underground have been infilled using face sampling and sludge drilling techniques
	• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*	The drill hole spacing has been shown to be appropriate by the visible continuity of mineralisation and geology between drill holes.
	• *Whether sample compositing has been applied.*	Sample compositing was not applied until resource estimation stage. RC & AC – samples were composited to 3m with 1m resamples assayed if the composite returned a gold value of >0.2g/t gold. One metre samples override 3m composites in the database. DD – core was sampled to geology.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	Much care was given to attempt to intersect mineralisation at an optimal angle but in complex ore bodies this can be difficult. As noted above, drilling at Wyoming One was initially completed along both east-west and north-south lines, depending upon which portion of the deposit was being assessed.
	• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	It is not thought that drilling direction will bias assay data at Wyoming One however east-west drilling will not provide optimum intersection of the 101' lode in the north where the 101 lode folds around the porphyry contact. The 2016/2017 drilling campaign specifically targeted the High grade mineralisation associated with the previously known "376" structure (now referred to as the High Grade 101 porphyry lode). These holes were orientated to intersect this mineralisation at an optimal angle and to confirm the mineralisation thickness. Targeted Underground Grade control drilling, Sludge sampling, Face sampling and mapping the development of this area has significantly improved the lode geometry in this area of the 101 lode and converted a significant portion into a measured resource classification.

Criteria	JORC Code explanation	Commentary
Sample security	• *The measures taken to ensure sample security.*	All samples were bagged in tied numbered calico bags, grouped into larger tied polyweave bags and transported to the laboratory in Orange by Alkane personnel or courier. S ample submission sheets were delivered with the samples and also emailed to the laboratory. All sample submissions were documented via ALS tracking system and all assays were reported via email. Sample pulps were returned to site and were stored for an appropriate length of time (minimum 3 years). The Company has in place protocols to ensure data security.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	The Company does not routinely have external consultants verify exploration data until resource estimation procedures are deemed necessary. The Wyoming data was reviewed in 2010 and 2011 by Behre Dolbear (BDA) as part of the due diligence phase of the development of the project. BDA did not express any specific concerns with respect to the data other than to recommend the completion of some round robin assaying and completion of additional density determinations, both of which were undertaken for the Caloma Two and Wyoming 1 resource drilling.

Section 2 Reporting of Exploration Results

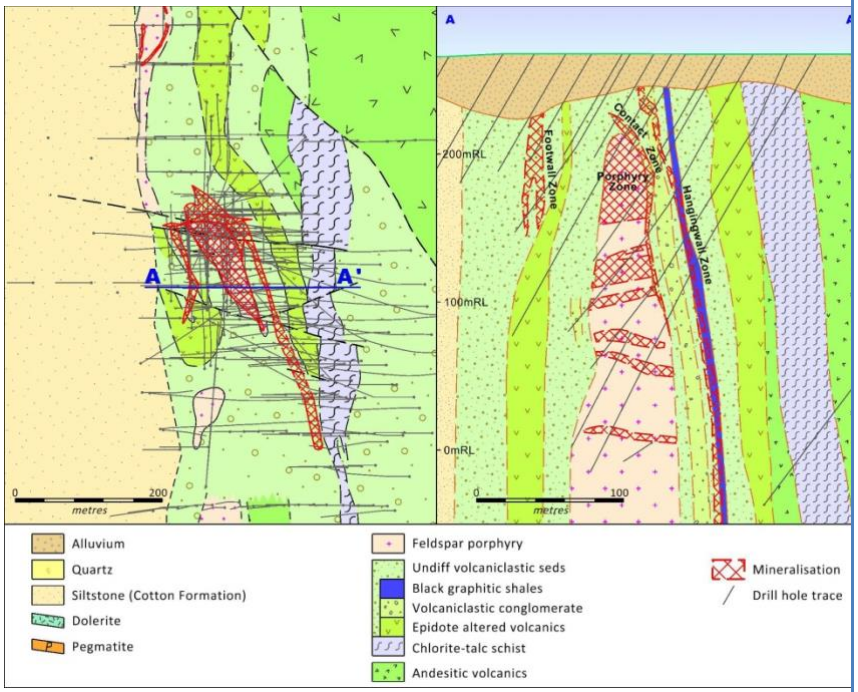
(Criteria listed in the preceding section also apply to this section.)

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 which have been domained based on the geology, style of mineralisation and continuity of high mineralisation that can be separated: *Porphyry* – mineralisation hosted by a quartz stockwork within the carapace of a sub-volcanic sill with dimensions roughly 60m x 150m. High grade mineralisation is developed along the eastern and northern contact of the sediment and porphyry. This High Grade

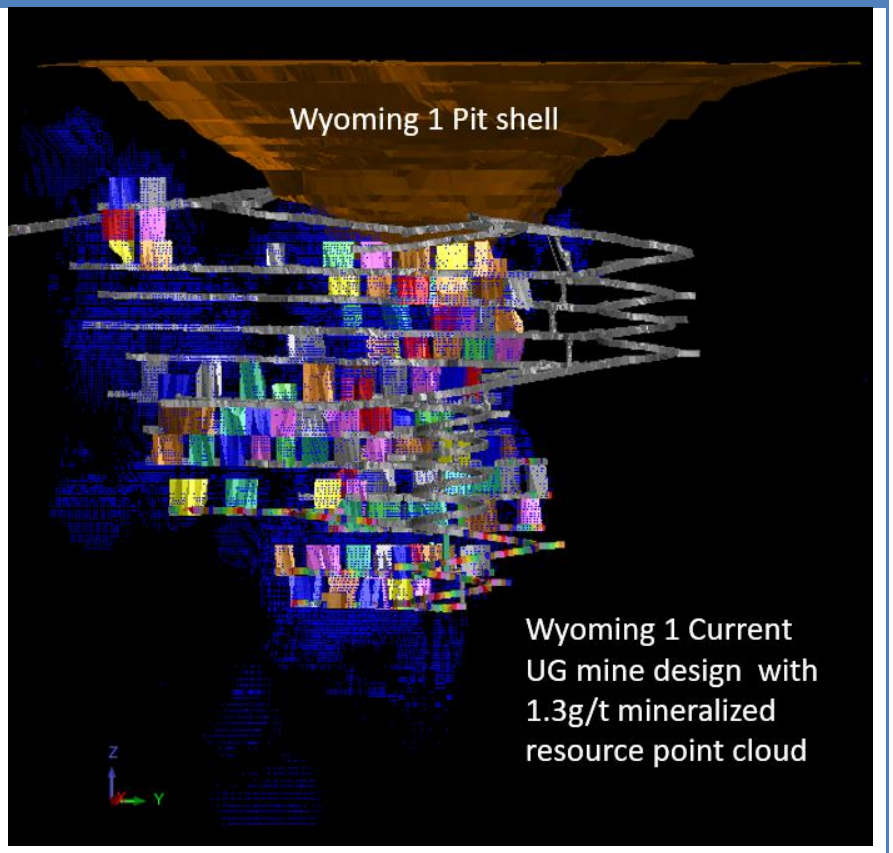
Criteria	JORC Code explanation	Commentary
		mineralisation on the contact has been domained separately for the estimation and is currently referred known as the "High Grade 101 porphyry lode" mentioned below. Within the main porphyry body there are several internal mineralised stacked lodes that dip 45° to the NE. These structures were evident from the close spaced open pit RC Grade control drilling. Underground Diamond drilling has confirmed these stacked lodes and the targeting and defining of more internal porphyry mineralised structures will be a focus as mining continues. *Hangingwall* – a linear zone of mineralisation situated approximately 30m to hanging wall of the 'porphyry' mineralisation and hosted within quartz veins within silicified fine grained sediments and a brecciated carbonaceous mudstone. This zone is lithologically constrained with these fine grained sediment package which folds around the northern end of the porphyry; *'High Grade 101 Porphyry Lode"'* –This zone was previously known as the '376" structure interpreted to be a bounding structure and primary fluid conduit. This High Grade zone of mineralisation is developed at the eastern and northern contact of the porphyry and incorporates some of the contact metasediments which were impacted by the mineralisation. *Footwall* – a low grade zone located in a similar stratigraphic position to the hangingwall zone but footwall to the porphyry
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *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.

Criteria	JORC Code explanation	Commentary
	• *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.

Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	*Cross sections and a plan showing geology with drill collars were included with previously reported exploration results. A typical plan and cross section are included below.* 

Criteria	JORC Code explanation	Commentary
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Data relating to all exploration drill holes has been reported in previous documentation of exploration results.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	No additional or new drilling results are being reported at this time.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	The Wyoming 1 underground commenced in January 2019. Extensive underground Grade control Diamond drilling has occurred since the start up and within the reporting period. This drilling will continue to infill the known mineralisation and also look towards along strike and down dip extensions of the ore lodes.
	• *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 UG deposit are well constrained by drilling however the high grade porphyry internal structures remain open at depth.

Criteria	JORC Code explanation	Commentary
		

Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	Logging data was entered into Excel via drop down menus. All raw data was loaded directly to the Access database from the assay, logging and survey derived files. (Datashed is the Companies Drill hole Database platform.
	• *Data validation procedures used.*	There are validation checks to avoid duplications of data. The data were further validated for consistency when loaded into Datashed and desurveyed. An extensive check on the consistency and adequacy of down-hole survey database continued throughout the projects inception.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* *(If no site visits have been undertaken indicate why this is the case.)*	No site visit was undertaken by an external consultant since the release of the previous 2014 Underground release. Since the last release the geological/structural model of the Wyoming 1 deposit has been updated based on the mapping of the geology exposed within the development of the underground. All geostatistical analysis for the resource estimation was undertaken by Cube Consultancy who are based in Perth. The quoted resources were compiled by Mr Craig Pridmore, Geology Manager, Tomingley Gold Operations Pty Ltd, who has worked at TGO site since March 2015.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	The geological model was built on structural data from core lithological logging, in pit Grade control logging,pit mapping, and underground mapping. The domain wireframes were built by the Alkane geologists most familiar with the deposit.
	• *Nature of the data used and of any assumptions made.*	Structural measurements from oriented drill core were used to assist in the geological interpretation along with lithological, alteration and mineralisation logging of RC chips and drill core. Mapped lithological contacts have been surveyed and digitised to complete the current model.
	• *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,in pit and underground mapping was used to develop a geological model. Alteration and mineralisation estimates along with grade guided the interpretation of the ore envelope wireframes at a nominal 0.5g/t Au lower cut-off. Gold mineralisation at Wyoming One has a close spatial relationship to feldspar porphyry which intrudes into andesitic volcaniclastic rocks and metasedimentary pelitic rock sequences. Mineralisation is associated with extensive alteration and quartz veining of the porphyry and volcanic rocks. In pit mapping has generally verified the geological interpretation on a macroscopic scale.
	• *The factors affecting continuity both of grade and geology.*	Mineralisation is directly associated with alteration and quartz veining.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	The mineralisation occurs in several zones within a NNW-striking corridor 300m long and 220m wide. Mineralisation extends from about 25m below the surface for more than 400m vertical depth.
	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation*	18 mineralisation wireframes (domains) were interpreted by the Alkane geologists most familiar with the deposit to constrain the estimation. This includes an enclosing background

Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	*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.*	domain which was modelled to capture minor mineralization outside the main domains. Four surfaces were also used to separate material types - topography, alluvium, saprolite and base of oxidation surfaces. The material type classification was used to allocate density values. The drill hole data were flagged by the domain wireframes in priority order, to prevent double use the data in the intersecting zones. The samples were composited to 1m, the most common sample length and flagged by the topography, alluvium, saprolite and base of oxidation surfaces. Top-cuts were selected for each domain based on histograms, probability plots and cutting statistic plots. The top-cuts ranged from 7g/t gold to 40.0 g/t gold. In November 2019 Cube consultancy reviewed the drill data in Wyoming 1. The composite gold grades were first transformed to Standard Gaussian space in order to elucidate the underlying spatial structure. A Gaussian Variogram was then produced before back-transformed to real space for use in in Wyoming 1 DOK process. Reasonably robust variogram models were obtained for all estimation domains. Each domain used in the estimation had its own variogram model. The Underground Resource model incorporates the entire Wyoming 1 project and includes the estimation for the open pit. The Estimation technique used was Ordinary Kriging. A check estimate was made using the Inverse Distance Squared method. The minimum samples, maximum samples and search parameters used in the ID2 check estimate are were the same as the Kriged estimation values. Surpac was used for estimation. The orientation of the search ellipse for each domain was controlled by a Dynamic Anisotropy model that provided a unique dip and dip-azimuth for each block. Grade control drilling data is incorporated with exploration data and a new block model generated using the same parameters as the resource model for that sector of the ore body subject to the grade control drilling. .
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	The estimates were compared to those of previous published resource estimate made by Alkane. The variance between the models is based on modifications to the geological domains and mineralised domains which have been updated. These modifications were based on the in-pit geological mapping, underground mapping and greater definition through a significant underground grade control program and additional surface diamond holes.
	• *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 unrotated (5mE x 5mN x 5mRL) because of the narrow steeply dipping nature of the mineralized zones. Sub-blocking of 2.5mE x 2.5mN x 2.5mRl was also used were estimated. These block sizes were employed in the open pit based on the practical mining considerations and the fact he variogram nugget effects are low. These block sizes were used in the underground resource estimate below the open pit. The maximum search radius used was m with a search radius ratio of 3:1

Criteria	JORC Code explanation	Commentary
	• *Any assumptions behind modelling of selective mining units.*	No assumptions were made.
	• *Any assumptions about correlation between variables.*	No assumptions made0
	• *Description of how the geological interpretation was used to control the resource estimates.*	Only data from the same domain were used to make estimates. No soft boundaries were used between domains
	• *Discussion of basis for using or not using grade cutting or capping.*	The top-cut analysis was undertaken by using a combination of histograms, log-probability plots of composite gold grade and cutting statistic plots (plots of cut-off grade against Coefficient of Variation (CV) and total metal). Using the statistical information above the top cuts were picked using the following criteria 1) By visual inspection of the log-probability plots of composite gold grade, with a view towards identifying the point at the upper tail where the robustness of the distribution breaks down and where the plot goes off trend. 2) By visual 3D inspection of the spatial location of the grade outliers and the spatial relationship to neighbouring values. While the principal estimate was made using top-cuts, a check estimate was made without top-cutting.
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	The estimates were verified using several different techniques and checked for local variability by comparing the estimated block grades with the average of the top-cut composites in each block.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	The tonnages were estimated on a dry tonnage basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	The cut-off grade (0.50 g/t Gold) for open pit able resources is relevant for the current mining operation for similar material in the adjacent deposits.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	Mining of ore from the Wyoming One ore body commenced in 2016 and to date reconciliations, save for poorly defined inferred mineralisation in the background domain, have been as expected. The Wyoming One deposit open pit has been completed and the underground resource is currently being mined by underground mining methods. No dilution factors in the resource model were applied to the Block model estimation.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	The metallurgy of the Tomingley deposits is well studied. The upper portion of the Wyoming 1 deposit has been completed. A total of 2.1M tonnes have been mined up to June 2022, with 3.0M tonnes of Wyoming 1 having been processed. During this time no metallurgical issues have arisen, with recoveries ranging between 85-92%.
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. Mining of ore from the Wyoming One open pit

Criteria	JORC Code explanation	Commentary
	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.	commenced in January 2016 and was completed in January 2019. Underground mining commenced in January 2019.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	Specific gravity measurements were completed by commercial laboratories on DD core samples of the different material types (alluvium, saprolite, totally oxidized and fresh). Oxidation was far more important than variations in lithology or alteration. The specific gravity measurements were applied on a dry basis. In December 2015 a large in-house density analysis campaign occurred on all the deposits with over 3,182 additional measurements taken. Using wet/dry density methods. All diamond hole drilled in the 2016/2017 campaign had SG measurements undertaken using the wet/dry method (SG = Mass of object/ (Mass of object) – (Mass of object in water). All measurements in the fresh material were constrained to each geological domain. The average Specific gravity reading was applied to each domain and used in the estimation.
	• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.*	SG measurements completed on all material types – see above.
	• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	No assumptions made – SG determined and individual values applied to each material type based on wire-framed domain.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*	The resources were classified using drill density, geological confidence and mineralisation continuity. The actual break-points for the different resource classes were chosen by inspection of the model in relation to the drilling density and geological continuity. Any blocks outside the main mineralized/geological domains were classified as Inferred.
	• *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).*	Wyoming One Underground resource model which includes Grade control RC was estimated using high proportion of predominantly Diamond drill hole data.
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The classification reflects the Competent Persons view of the deposit and its supporting data
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	No external reviews undertaken
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*	The Wyoming One deposit consists of 18 mineralisation zones; Reasonable robust variogram models were obtained for all estimation domains (undertaken by Cube consultancy). The variograms show clear evidence of a relatively low nugget effect (between 14% and 25%), with exception of the footwall lode which does not impact on the underground. This coupled with a rapid deterioration in continuity over a distance of several meters, as indicated by the first spherical structure ranges and sills. These features are evident when the composite gold values are visually inspected, with gold values generally being similar within a distance of 2m to 3m but then changing rapidly at greater distances. As a consequence,

Criteria	JORC Code explanation	Commentary
		the second spherical structure does not exercise great influence over an OK estimate, generally having low sill values, with the exception of the hanging wall lode which is more continuous that the rest. No statistical or geostatistical method (non-linear or simulation) apart from ID2 estimation checks were used to quantify the relative accuracy of the estimate within confidence limits. Accuracy of the estimate is strongly dependent on: accuracy of the interpretation and geological domaining; accuracy of the drill hole data (location and values); orientation of local anisotropy; and Estimation parameters which are reflected in the global resource classification.
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*	The quoted underground resources are global, being based on drill hole data at exploration spacing. To ensure the resources have 'reasonable prospects of eventual economic extraction' the resources have been restricted by an indicative optimistic pit shell estimated at a gold price of $2000 per ounce and a gold cut off for eventual extraction by underground mining methods assessed at ≥1.3g/t gold.
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	Mining of ore from the Wyoming One ore body commenced in 2016 and to date reconciliations have shown that the original resource model was performing well within expectations, Save for poorly defined inferred mineralisation in the background domain. Reconciled Tonnes, grade and total ounces mined are all within ~10% of the original resource model prediction with and overall increase in ounces. Over the period of mining the Block Estimation model has been modified and improved, with the Open pit and Underground run simultaneously and captured within the same Block model The estimation method has been changed from ID2 (original resource model estimate) to Ordinary Kriging. Close spaced Grade control drilling has been ongoing since the start of the open pit. This additional data collected with the mapping justified a change in modelling parameters and estimation techniques from ID2 to Ordinary Kriging. This change in estimation method has been used for the underground resource model which is an extension of the current open pit grade control block model. Comparisons between the Underground reconciled mined tonnes and grade and the Grade control model (same as the Underground Resource model) have shown that the reconciled mined tonnes are +13%, grade 16%% with an overall increase of+30% ounces. This indicates the model being implemented does have a reasonable level of accuracy with respect to grade estimation. The increase in grade has come from the high grade 101 porphyry lode where significant localised visible gold was noted during the mining process.

APPENDIX 1 (continued)

JORC Code, 2012 Edition – Table 1 report – Caloma One
Section 1 Sampling Techniques and Data
(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	The Caloma area has been evaluated using air core (AC), reverse circulation (RC) and diamond drilling (DD) techniques between August 2004 and June2022 although not all of this drilling lies within the current resource outline. In addition RC grade control drilling is undertaken on a campaign basis to assist in ore mark-up in the pit. o AC - 342 holes for 19,955.4m o RC - 335 holes for 37337.5 m – inclusive of 12 pre-collars totalling 453m o RC Grade Control – 2892 holes for 78217 metres o DDH - 111 holes totalling 18161.9m o Face samples 45 faces totalling 340m o BH – 232 holes for 1382.6m 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 and riffle or cone splitter. DD sample intervals were defined by geologist during logging to honour geological boundaries. Underground diamond drilling targeting areas between the Caloma 1 and Caloma 2 UG resource were whole core sampled with sample intervals defined by the geologist.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	AC and RC drilling completed to industry standards. Core was laid out in suitably labelled core trays. A core marker (core block) was placed at the end of each drilled run (nominally 3 or 6m) and labelled with the hole number, down hole depth, length of drill run. Core was aligned and measured by tape, comparing back to this down hole depth consistent with industry standards.
	• *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	AC drilling samples collected at 1m intervals via a cyclone into large plastic bags. RC Drilling – prior to November 2007, the entire RC sample was collected at 1m intervals and delivered into a large plastic bag via a cyclone. For resource definition drilling since Nov 2007 and all grade control drilling, approximately 12.5% (2-4kg) of total sample was delivered via cone or riffle splitter into a calico bag (for shipment to laboratory if required) with the remaining sample delivered into a large plastic bag and retained for future use if required. DD Drilling – sample intervals were defined by geologists during logging to honour geological boundaries and cut in half with a saw. Only the Underground infill diamond GC holes were whole core sampled. 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

Criteria	JORC Code explanation	Commentary
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. Underground Diamond core was drilled as NQ.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	AC and RC - sample recovery was visually estimated and was generally very good (>90%) aided by the use of oversized shrouds through oxide material. Samples were even in size. Samples were rarely damp or wet. Sample quality was assessed by the sampler by visual approximation of sample recovery and if the sample was dry, damp or wet. Riffle and cone splitters were used to ensure a representative sample was achieved for 1 metre samples. DD - core loss was identified by drillers and calculated by geologists when logging. Generally ≥95% was recovered and any loss was usually in portions of the oxide zone. Triple tube Large diameter, triple tube core (PQ3) was used through the oxide material to ensure the greatest recovery.
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	RC drilling was completed using oversized shrouds to maintain sample return in oxide zone and all samples were split using riffle or cone splitters. Use of RC rigs with high air capacity assists in keeping samples dry. Triple tube coring was used at all times to maximise core recovery with larger diameter (PQ3) core used in the oxide and saprolite zones.
	• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	There is no known relationship between sample recovery and grade.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	AC & RC - each one metre interval was geologically logged for characteristics such as lithology, weathering, alteration (type, character and intensity), veining (type, character and intensity) and mineralisation (type, character and volume percentage). DD - all core was laid out in core trays and geologically logged for characteristics such as lithology, weathering, alteration (type, character and intensity), veining (type, character and intensity) and mineralisation (type, character and volume percentage). A brief geotechnical log was also undertaken collecting parameters such as core recovery, RQD, fracture count, and fracture type and orientation.
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*	All logging was qualitative with visual estimates of the various characteristics. Magnetic susceptibility data is quantitative. Magnetic susceptibility data is not collected for grade control drilling. AC & RC - A representative sample of each one metre interval is retained in chip trays for future reference. DD - Core was photographed and all unsampled core is retained for reference purposes.
	• *The total length and percentage of the relevant intersections logged.*	All DD core and AC/RC chip samples have been geologically and geotechnically logged by qualified geologists.
	• *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

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation		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 1.3 metres in length. All mineralised zones were sampled, plus ≥2m of visibly barren wall rock. Laboratory Preparation – drill core was oven dried prior to crushing to <6mm using a jaw crusher, split to 3kg if required then pulverised in an LM5 (or equivalent) to ≥85% passing 75µm. Bulk rejects for all samples were discarded. A pulp packet (±100g) is stored for future reference
	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*	AC/RC – for drilling completed prior to Nov 2007 spear samples were collected from each 1m sample and composited to 3m for initial analysis. Individual 1m samples from all composites assaying ≥0.2g/t Au were riffle split and resubmitted for analysis. For resource definition drilling completed since Nov 2007, for intervals with visual mineralisation and/or alteration the calico sample bag (1m samples) were numbered and submitted to the laboratory for analysis. Intervals without visual mineralisation and/or alteration were spear sampled and composited over three metres. For composited intervals returning grades >0.2g/t Au the calico bags were retrieved for assay of the individual 1 m intervals. Rare damp or wet samples were recorded by the sampler. All grade control drill holes are sampled at 1m intervals with all samples forwarded to the laboratory for analysis. Laboratory Preparation – the entire RC sample (3kg) was dried and pulverised in an LM5 (or equivalent) to ≥85% passing 75µm. Bulk rejects for all samples were discarded. A pulp packet (±100g) is stored for future reference.
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	Alkane (ALK) sampling techniques are of industry standard and considered adequate.
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	RC and grade control – field duplicate samples collected at every stage of sampling to control procedures. DD – external laboratory duplicates used.
	• *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*	RC - Duplicate samples were riffle split from the riffle/conical split calico from the drill rig. Duplicates show generally excellent repeatability, indicating a negligible "nugget" effect. For grade control drilling duplicate samples are split at the drilling rig.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Sample sizes are industry standard and considered appropriate.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	For all 1m samples used in the resource estimate gold was determined using a 50g charge fused at approximately 1100°C with alkaline fluxes, including lead oxide. The resultant prill was dissolved in aqua regia and gold determined by flame AAS. For 3m composite samples gold was determined using a 30g charge (more rarely 50g charge). For other geochemical elements, samples were digested in aqua regia with each element concentration determined by ICP Atomic Emission Spectrometry or ICP Mass Spectrometry. These additional elements were generally only used for geological interpretation purposes, are not of economic significance and are not routinely reported.
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*	Not applicable to this report or deposit.

Criteria	JORC Code explanation	Commentary
	• *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	Commercially prepared Certified Reference Materials (CRM) and blanks were inserted at 1 in 50 samples. CRM's were not identifiable to the laboratory. Field duplicate samples were inserted at 1 in 50 samples (alternate to CRM's). Laboratory QAQC sampling includes insertion of CRM samples, internal duplicates and screen tests. This data was reported for each sample submission. Failed standards result in re-assaying of portions of the affected sample batches. Screen fire assay checks (75µm mesh) were undertaken on 110 drill core samples. Screen fire assay data overrides all other methods.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	Drill data was compiled and collated, and reviewed by senior staff. External consultants do not routinely verify exploration data until resource estimation procedures are deemed necessary.
	• *The use of twinned holes.*	Twinned holes have not been used at Caloma Two as twinning provides verification only for extremely limited areas of a deposit.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	All resource definition drill hole logging and sampling data was hard keyed into Excel spreadsheet for transfer and storage in an access database with verification protocols in place. All grade control drilling data at Tomingley is stored in a "Datashed" Microsoft SQL database. All primary assay data was received from the laboratory as electronic data files which were imported into sampling database with verification procedures in place. QAQC analysis was undertaken for each laboratory report. Digital copies of Certificates of Analysis (COA) are stored in a central database with regular (daily) backup. Original survey data is stored on site. Data was also verified on import into mining related software.
	• *Discuss any adjustment to assay data.*	No assay data was adjusted. Screen fire assays take precedence over all other assay techniques.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Drill holes were laid out using hand held GPS (accuracy ± 2m) then surveyed accurately (± 0.1m) by licensed surveyors on completion. Since mining commenced drill holes were set out and picked up using a RTK rover based GPS (± 0.1m) RC & AC drill holes were surveyed using a single shot electronic camera at a nominal 30m downhole intervals. Grade control drill holes complete since March 2015 which are greater than 24m in depth are surveyed down hole. DD holes were surveyed at nominal 30m down hole during drilling to maintain drilling direction and then at 6m intervals on retrieval of rod string using a multi shot electronic camera.
	• *Specification of the grid system used.*	All drill holes were originally laid out in AMG66 grid however since mining commenced in February 2014 have been transformed to MGA94 grid system to conform with reporting requirements for mine operations. Grade control drill holes laid out in MGA.
	• *Quality and adequacy of topographic control.*	The area is very flat. A site based digital terrain model was developed from accurate (± 0.1m) survey control by licenced surveyors.
	• *Data spacing 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

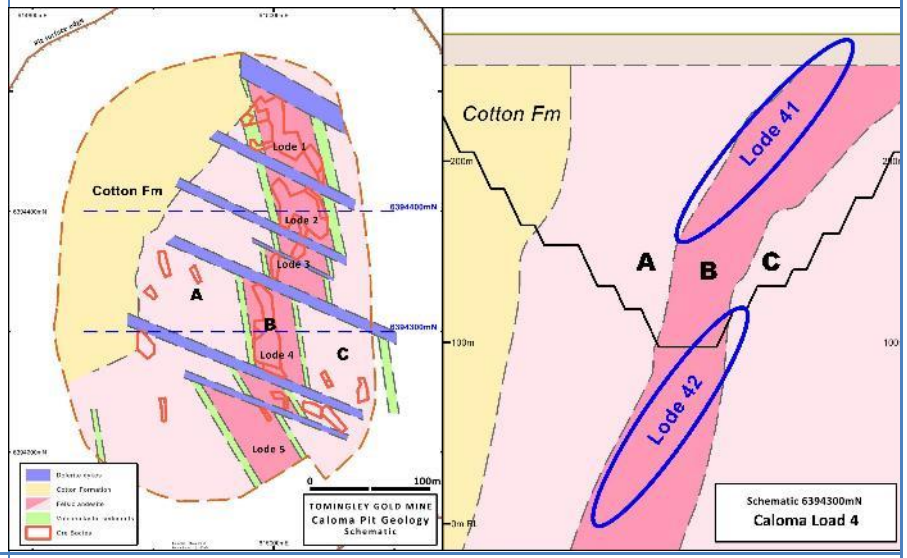
Criteria	JORC Code explanation	Commentary
Data spacing and distribution		thought peripheral to the main ore body and to the north. Grade control drilling is completed on a pattern ensuring a minimum of 10m x 10m pattern when combined with resource definition drill holes. The drill hole spacing is similar to that used at other Tomingley deposits and has been established to be sufficient.
	• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*	A Simulation Study for optimal drill spacing has been undertaken. There is a case to reduce the spacing from 10x10 to 10x8. With the minimal mine life and visual continuity of mineralisation between drill holes and when on the ground the 10x10 drill spacing has been deemed appropriate,
	• *Whether sample compositing has been applied.*	Sample compositing was not applied until resource estimation stage. RC & AC -exploration and resource definition drilling samples with no visible mineralisation or alteration were composited to 3m with 1m resamples assayed if the composite returned a gold value of >0.2g/t gold. One metre samples override 3m composites in the database. All grade control sample assayed at 1m intervals DD – core was sampled to geology.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	Much care was given to attempt to intersect mineralisation at an optimal angle but in complex ore bodies this can be difficult. A number of drilling directions were used in the early drilling phases in an attempt to optimise the intersection angle. The chosen drilling direction (east at inclination of -60°) appears optimal based on reconciliation from the early mining periods.
	• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	It is not thought that drilling direction will bias assay data at Caloma 1
Sample security	• *The measures taken to ensure sample security.*	All samples were bagged in tied numbered calico bags, grouped into larger tied polyweave bags and transported to the laboratory in Orange by Alkane personnel or courier. S ample submission sheets were delivered with the samples and also emailed to the laboratory. All sample submissions were documented via ALS tracking system and all assays were reported via email. Sample pulps were returned to site and were stored for an appropriate length of time (minimum 3 years). The Company has in place protocols to ensure data security.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	The Company does not routinely have external consultants verify exploration data until resource estimation procedures are deemed necessary. The Caloma data was reviewed in 2010, 2011 and 2014 by Behre Dolbear (BDA) as part of the due diligence phase of the development of the project and bank financing. BDA did not express any specific concerns with respect to the data other than to recommend the completion of some round robin assaying and completion of additional density determinations, both of which were undertaken for the Caloma Two resource drilling. A density campaign on all deposits using drill core was undertaken in December 2015. A total of 3,182 density measurements were taken The aim of the review was to assess variability from fresh rock density values applied in previous Resource and Grade Control models. Data measurement was restricted to materials below the fresh rock transition. Average density values recorded for fresh rock materials within each of the deposits were generally between

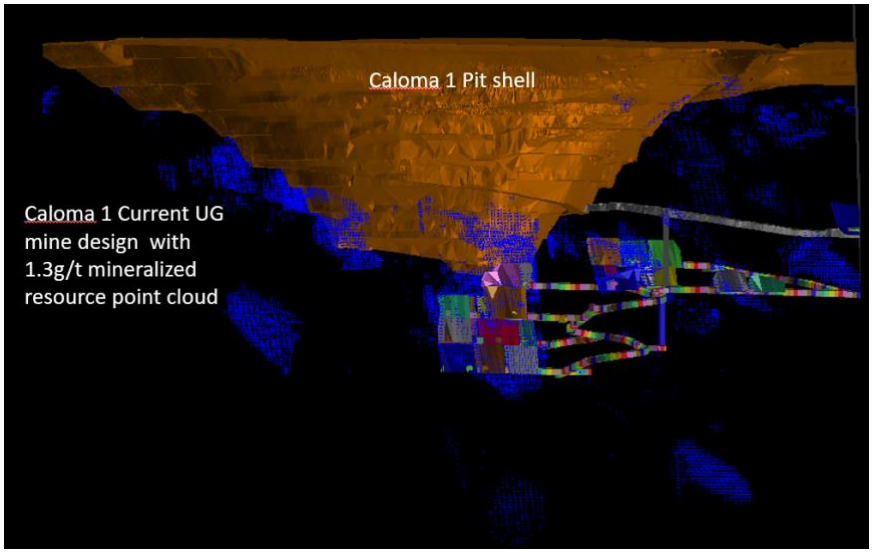
Criteria	JORC Code explanation	Commentary
		1 - 2% higher than the current assigned value. These new density values have been assigned to the latest Caloma 1resource model.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	The Caloma Deposit lies within ML 1684 which is held in the name of Tomingley Gold Operations Pty Ltd, a wholly owned subsidiary of Alkane Resources Ltd.
	• *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	ML1684 expires on 11 February 2034.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	All reported drilling has been completed by ALK.
Geology	• *Deposit type, geological setting and style of mineralisation.*	Geological nature of the Tomingley Deposits is well documented elsewhere. Mineralisation is associated with quartz veining and alteration focused within sub-volcanic basaltic-andesite sills and adjacent volcaniclastic sediments. The deposits appear to have formed as the result of a rheological contrast between the porphyritic sub-volcanic sills and the surrounding volcaniclastic sediments, with the sills showing brittle fracture and the sediments ductile deformation, and have many similarities to well documented orogenic - lode-style gold deposits. Mineralisation at Caloma is developed within a series of stacked 'quartz lodes' which dip shallowly to the west and hosted dominantly within the sub-volcanic sills. The lodes are cross cut by a number of barren post mineralisation dolerite dykes.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *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;

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

Criteria	JORC Code explanation	Commentary
exploration data	*results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	
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 surface drilling has been completed to compliment an assessment of mining resources below the open pit by underground methods and also Underground diamond infill drilling following up on the mineralisation intersected by the surface 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.*	

Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	Logging data was entered into Excel via drop down menus. All raw data was loaded directly to the Access database from the assay, logging and survey derived files.
	• *Data validation procedures used.*	There are validation checks to avoid duplications of data. The data were further validated for consistency when loaded into Surpac and desurveyed. An extensive check on the consistency and adequacy of down-hole survey data for exploration and resource definition drill holes was carried out in 2009.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* *(If no site visits have been undertaken indicate why this is the case.)*	The Caloma 1 Resource Model was developed by Mr Craig Pridmore who has been working at the site since March 2015. The quoted resources have been compiled by Mr Craig Pridmore, Geology Manager, Tomingley Gold Operations Pty Ltd.

Criteria	JORC Code explanation	Commentary
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	The initial geological model was built on structural data from core and lithological logging with extensive pit mapping formed the backbone of the Geological/Structural model currently being implemented. The domain wireframes were built by the Alkane geologists most familiar with the deposit. The geological model is continuously being modified and improved as mining progresses. The broad geological model remains much as interpreted however the sub-volcanic sills have been separated into three individual units and constraints on the ore outlines tighten in line with the additional data available.
	• *Nature of the data used and of any assumptions made.*	Structural measurements from oriented drill core were used to assist in the geological interpretation for the resource model along with lithological, alteration and mineralisation logging of RC chips and drill core. Mapping within the open pit has greatly assisted with the refinement of the interpretation of the geology.
	• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*	The Caloma deposit was been drilled at a close-spacing in several different drilling campaigns, reducing the likelihood that the geological interpretation will change significantly. Drill holes were predominantly inclined to the east with some holes inclined to the north or west (early drilling). Reconciliation with grade control drilling and mining confirms this broad interpretation.
	• *The use of geology in guiding and controlling Mineral Resource estimation.*	Geological (lithological) logging was used to develop a geological model. Alteration and mineralisation estimates along with grade guided the interpretation of the ore envelope wireframes at a nominal 0.25g/t Au lower cut-off. The Caloma deposit consists of a series of moderate to shallow west-dipping mineralised structures within the steep west dipping feldspar porphyritic host which is bounded by several thin volcaniclastic sediment lenses. These structures trend north-south over a strike length of 500 metres and range in width from a few metres to in excess of 20 metres. The mineralised structures have been displaced and offset by numerous east-west barren post-mineralisation dolerite dykes. Mineralisation is associated with extensive alteration and quartz veining of the porphyry and volcanic rocks.
	• *The factors affecting continuity both of grade and geology.*	Mineralisation is directly associated with silica, sericite, arsenopyrite, pyrite alteration and quartz veining.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	The mineralisation occurs in several west-dipping zones within a north-striking corridor 460m long and 420m wide. Mineralisation extends from about 5m below the surface for more than 350m vertical depth.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	The resource model has used all the exploration drill data (RC/ DD) and the grade control RC drilling. Grade control drill design was undertaken on a nominal 10m x 10m spacing. The resource model has incorporated sub-domaining of the main geological units and mineralised lodes. This sub-domaining has been incorporated into the resource model based on elements identified through in-pit mapping and increased drill density through the grade control drilling. There are nine Geological domains, these are comprised of the cotton formation, the cross cutting barren dolerites, and the three sub-volcanic sill domains (Feldspar Porphyry's) which are separated by thin volcaniclastic sediments. There are 8 mineralised domains which define the main high grade ore lenses of the deposit and two enclosing background domains to capture minor mineralisation outside the main domains.

Criteria	JORC Code explanation	Commentary
		Four surfaces were also used to separate material types - topography, alluvium, saprolite and base of oxidation surfaces. The material type classification was used to allocate density values. The drill hole data were flagged by the domain wireframes in priority order, to prevent double use of the data in any intersecting zones. The samples were composited to 1m, the most common sample length and flagged by the topography, alluvium, saprolite and base of oxidation surfaces. Top-cuts were selected for each domain based on histograms, probability plots and cutting statistic plots. The top-cuts ranged from 10g/t gold to 30.0 g/t gold for the mineralised zones. After top-cutting, the maximum coefficient of variation for the mineralised domains ranged from 1.11 to 4.81 indicating that the estimation would not be difficult. The principal estimation was made using Ordinary Kriging with Inverse Distance Squared checks made. The number of drill hole composites have significantly increased since the original exploration resource model release allowing for reliable variography to be undertaken in the main ore lodes. These variogram models have been incorporated in the resource block model. The orientation of the search ellipse for each domain was controlled by dynamic anisotropy, which uses the bounding mineralised surfaces of the lodes and discrete wireframes for the unconstrained mineralisation. This method provided a unique dip and dip-direction for each block. The principal estimation using Surpac software was ordinary kriging with ID2 checks using the same dynamic anisotropy. A parent block size of 5m x 2.5m x 2.5m with 1.25m sub-blocking was used in the block model. All blocks constrained within the dolerite wireframe domain were classified as waste with a grade of 0 g/t assigned to the blocks.
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	Mining has been ongoing from the Caloma open pit since January 2014. In June 2015, a new geological/structural model was generated based on detailed inpit mapping, relogging of Diamond core holes and logging of Grade control holes. The estimation method was changed from ID2 to Ordinary Kriging and the reconciliation process was reviewed and modified. The geological model has been updated routinely since mining commenced. Since the change Caloma pit Grade control Model has reconciled very well with the new estimation process. With +1% tonnes, +3% grade for +4% increase in ounces.
	• *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 for the resource model is 5m x 2.5m x 2.5m, with sub-blocking of 2.5m x 1.25m x 1.25m. The primary search on each domain is variable based on the variograms with a range from 30m to 60m with a Major/Semi ratio of 1 and a Major/Minor ratio of 5.
	• *Any assumptions behind modelling of selective mining units.*	Block size of 5mN x 2.5mE x 2.5m has been used for the following reasons: 1. A rule of thumb is that the block dimensions for OK should not be less than a third to half of the informing data spacing. This increased length in the northing direction would mean that only the easting dimension does not strictly meet this criterion. This should translate to

Criteria	JORC Code explanation	Commentary
		an improvement in estimation accuracy and precision, and therefore also the accuracy of ore allocation. 2. A 5mN x 2.5mE x 2.5mRL block equates to about 80t of fresh rock, which would essentially be a single haul truck load. 3. The continuity of mineralisation in the north-south orientation has a longer range no matter what the dip of the high grade lodes and so there will be only a minor impact on grade resolution for ore block definition.
	• *Any assumptions about correlation between variables.*	No assumptions made
	• *Description of how the geological interpretation was used to control the resource estimates.*	Hard boundaries on all domains within the resource model were used.
	• *Discussion of basis for using or not using grade cutting or capping.*	The top cuts were selected using a combination of histograms, probability plots and cutting statistic plots (plots of cut-off grade against Coefficient of Variation (CV) and total metal).
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	Estimates were made using Ordinary Kriging with Inverse Distance checks. The model was compared to previous grade control models and the resource model. A variety of checks were used to identify variability between models and also the estimated block grades. Each step of the process has validation steps to ensure estimation validity. Some of the checks incorporated comparison of composites to actual raw drill hole data, 2.5m level comparison checks using various grade cuts. Visual checks of the block estimation against composite and raw drill hole data both on plan and section.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	The tonnages were estimated on a dry tonnage basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	The cut-off grade (0.50 g/t Gold) for open pittable resources is relevant for the current mining operation of this deposit.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	The main part of the Caloma deposit is being mined by open pit methods. No dilution has been applied to the resource model. The resources are depleted for production.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	The Caloma 1 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*	Project approval for the TGP was granted in July 2012 for mining from three open pits (Wyoming One, Wyoming Three and Caloma 1) 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 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.	
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	Specific gravity measurements for the original resource model were completed by commercial laboratories on drill core samples of the different material types (alluvium, saprolite, totally oxidised and fresh). Oxidation was far more important than variations in lithology or alteration. The specific gravity measurements were applied on a dry basis. In December 2015 a large in-house density analysis campaign occurred on all the deposits with over 3,182 additional samples taken. The results were combined the original exploration density data and used in the current resource estimate.
	• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.*	SG measurements completed on all material types – see above.
	• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	No assumptions made – SG determined and individual values applied to each material type based on wire framed surfaces
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*	*Resource Model* The resources were classified based on drilling density, geological confidence and grade continuity. The actual break-points for the different resource classes were chosen by inspection of the model in relation to the drilling density. As a general rule all areas with a 10m x 10m drill spacing was classified as measured. Zones with a nominal drill spacing of 20m x 25m has been classified as indicated, material that has been drilled to a 30m x 40m spacing is in the inferred category. The classifications are based on the confidence of ounce conversion. Measured would have a 90% conversion probability, indicated would have a 75% confidence level and inferred a 50% confidence in ounce conversion if mined.
	• *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).*	Caloma 1 was estimated using high proportion of Reverse Circulation (RC) drill hole data. The RC drilling was conducted using industry-standard methods and was not affected by high water flows, so there is no reason not to accept the RC results. Statistical studies showed that the RC drilling was of similar grade to the diamond drilling. Reconciliation has shown that the current estimation methods and modelling parameters are performing adequately with the reconciled ounces within 4% of the block model over the LOM
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The classification reflects the Competent Persons view of the deposit and its supporting data
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	No external audits have been carried out on the resource estimation. Cube Consultants have been used to review and update the estimation parameters for the Caloma 1 pit. The scope of work was: 1. Undertake exploratory data analysis on the 1m gold composites provided by Alkane. This included making top cut recommendations as well as an assessment of the suitability of the current estimation methodology. 2. Undertake a spatial structural analysis, for representative high and low grade domains, resulting in the modelling of gold grade variograms for use in the DOK estimation runs.

Criteria	JORC Code explanation	Commentary
		3. Undertake search neighbourhood analyses to assist with the choice of DOK search parameters. This included a consideration of tightly sampled grade control areas (10mN x 10mE) drilling to more widely sampled areas covered only by resource holes. 4. Deliver an opinion on the suitability of the current 10mN x 10mE grade control drill pattern. 5. Update the estimation parameter file for use in the DOK routine. 6. Produce a technical summary note explaining the process followed by Cube and briefly discussing the new estimation parameters.
	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*	No statistical or geostatistical method (non-linear or simulation) was used to quantify the relative accuracy of the grade control estimate within confidence limits. Accuracy of the estimate is strongly dependent on: ○ 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 variogram model used and the parameters used that follow the resource model relatively closely.
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*	The resources are global, being based on drill hole data at exploration spacing. To ensure the resources have 'reasonable prospects of eventual economic extraction' the resources have been restricted by an indicative optimistic pit shell estimated at a gold price of $2000 per ounce with the potential open pittable component assessed at ≥0.5g/t gold cut off and material outside of the indicative pit with potential for eventual extraction by underground mining methods assessed at ≥1.3g/t gold.
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	Reconciliation of the Caloma pit has shown the current geological model and estimation process is performing very well, with minor improvements being made to the model as more information is gathered. The reconciled tonnes versus the Model are +1%, +3% grade for -+4% increase in ounces. Based on the reconciled results and mining practices being implemented the resource model is deemed to have a high level of accuracy.

APPENDIX 1 (continued)

JORC Code, 2012 Edition – Table 1 report – Caloma Two
Section 1 Sampling Techniques and Data
(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	The Caloma Two area has been evaluated using air core (AC), reverse circulation (RC) and diamond drilling (DD) techniques between May 2007 (early reconnaissance) and March 2012. Not all of this drilling lies within the current resource outline, there is some overlap in drilling with the southern end of Caloma (although there is no overlap in resources) and none of the air core drilling samples were used in the resource calculation. o AC - 48 holes for 3424m o RC - 196 holes for 28404m (inclusive of 2 pre-collar totalling 72m) o RC Grade Control – 443 hole for 15361m o DD - holes totalling 43919.78m o FS – 190 faces for 1106.4m o Sludge samples 1 hole for 10m RC samples were collected at one metre intervals via a cyclone and riffle or cone splitter. DD sample intervals were defined by geologist during logging to honour geological boundaries. During the 2015 4 Geotech diamond holes were drilled into the Caloma Two deposit. These are included in the total DD holes drilled. A significant surface DD and Underground Grade control diamond program, infilling the known Caloma 2 underground resource occurred during the 2020/2021 year. All these holes have been incorporated and used in the resource model.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	RC drilling completed to industry standards. Core was laid out in suitably labelled core trays. A core marker (core block) was placed at the end of each drilled run (nominally 3 or 6m) and labelled with the hole number, down hole depth, length of drill run. Core was aligned and measured by tape, comparing back to this down hole depth consistent with industry standards.
	• *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	RC Drilling - approximately 10% (3-4kg) of total sample was delivered via cone or riffle splitter into a calico bag (for shipment to laboratory if required) with the remaining sample delivered into a large plastic bag and retained for future use if required. DD Drilling – sample intervals defined were by geologists during logging to honour geological boundaries and cut in half with a saw. All samples sent to laboratory were crushed and/or pulverised to produce a ~100g pulp for assay process. All RC and core samples were fire assayed using a 50g charge. Visible gold was occasionally observed in both core and RC samples

Criteria	JORC Code explanation	Commentary
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	The resource is based on 196 RC drill holes totalling 28,404 metres and 301 diamond core drill (DD) holes totalling 43919 metres. The in-pit grade control RC drilling was also used in the resource estimation. 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. The 21/22 surface and Underground diamond drill program was undertaken drilling NQ core. Drilling data used in the establishment of resource wireframes and the resource calculation is comprised of: ○ 55% RC – 639 holes totalling 53,743.85m (inclusive of 2 pre-collar totalling 72m) ○ 45% DD – 301 holes totalling 437919m
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	RC sample recovery was visually estimated and was generally very good (>90%) aided by the use of oversized shrouds through oxide material. Samples were even in size. Samples were rarely damp or wet. Sample quality was assessed by the sampler by visual approximation of sample recovery and if the sample was dry, damp or wet. Riffle and cone splitters were used to ensure a representative sample was achieved for 1 metre samples. DD - core loss was identified by drillers and calculated by geologists when logging. Generally ≥95% was recovered and any loss was usually in portions of the oxide zone. Triple tube Large diameter, triple tube core (PQ3) was used through the oxide material to ensure the greatest recovery.
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	RC drilling was completed using oversized shrouds to maintain sample return in oxide zone and all samples were split using riffle or cone splitters. Use of RC rigs with high air capacity assists in keeping samples dry. Triple tube coring was used at all times to maximise core recovery with larger diameter (PQ3) core used in the oxide and saprolite zones.
	• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	There is no known relationship between sample recovery and grade.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	RC - each one metre interval was geologically logged for characteristics such as lithology, weathering, alteration (type, character and intensity), veining (type, character and intensity) and mineralisation (type, character and volume percentage). DD - all core was laid out in core trays and geologically logged for characteristics such as lithology, weathering, alteration (type, character and intensity), veining (type, character and intensity) and mineralisation (type, character and volume percentage). A brief geotechnical log was also undertaken collecting parameters such as core recovery, RQD, fracture count, and fracture type and orientation.
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*	All logging was qualitative with visual estimates of the various characteristics. Magnetic susceptibility data is quantitative. RC - A representative sample of each one metre interval is retained in chip trays for future reference.

Criteria	JORC Code explanation	Commentary
		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 1.3 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 1 m intervals. Rare damp or wet samples were recorded by the sampler. Laboratory Preparation – the entire RC sample (3kg) was dried and pulverised in an LM5 (or equivalent) to ≥85% passing 75µm. Bulk rejects for all samples were discarded. A pulp packet (±100g) is stored for future reference.
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	Alkane (ALK) sampling techniques are of industry standard and considered adequate.
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	RC – field duplicate samples collected at every stage of sampling to control procedures. DD – external laboratory duplicates used.
	• *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*	RC - Duplicate samples were riffle split from the riffle/conical split calico from the drill rig. Duplicates show generally excellent repeatability, indicating a negligible “nugget” effect.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Sample sizes are industry standard and considered appropriate.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	Gold was determined using a 50g charge fused at approximately 1100°C with alkaline fluxes, including lead oxide. The resultant prill was dissolved in aqua regia and gold determined by flame AAS. For other geochemical elements, samples were digested in aqua regia with each element concentration determined by ICP Atomic Emission Spectrometry or ICP Mass Spectrometry. These additional elements were generally only used for geological interpretation purposes, are not of economic significance and are not routinely reported.
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*	Not applicable to this report or deposit.

Criteria	JORC Code explanation	Commentary
	• *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	Commercially prepared Certified Reference Materials (CRM) and blanks were inserted at 1 in 50 samples. CRM's were not identifiable to the laboratory. Field duplicate samples were inserted at 1 in 50 samples (alternate to CRM's). Laboratory QAQC sampling includes insertion of CRM samples, internal duplicates and screen tests. This data was reported for each sample submission. Failed standards result in re-assaying of portions of the affected sample batches. Screen fire assay checks (75µm mesh) were undertaken on 110 drill core samples. Screen fire assay data overrides all other methods.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	Drill data was compiled and collated, and reviewed by senior staff. External consultants do not routinely verify exploration data until resource estimation procedures are deemed necessary.
	• *The use of twinned holes.*	Twinned holes have not been used at Caloma Two as twinning provides verification only for extremely limited areas of a deposit.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	All drill hole logging and sampling data was hard keyed into Excel spreadsheet for transfer and storage in an access database with verification protocols in place. All primary assay data was received from the laboratory as electronic data files which were imported into sampling database with verification procedures in place. QAQC analysis was undertaken for each laboratory report. Digital copies of Certificates of Analysis (COA) are stored in a central database with regular (daily) backup. Original survey data is stored on site. Data was also verified on import into mining related software.
	• *Discuss any adjustment to assay data.*	No assay data was adjusted. Screen fire assays take precedence over all other assay techniques.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Drill holes were laid out using hand held GPS (accuracy ± 2m) then surveyed accurately (± 0.1m) by licensed surveyors on completion. RC drill holes were surveyed using a single shot electronic camera at a nominal 30m down hole intervals. DD holes were surveyed at nominal 30m down hole during drilling to maintain drilling direction and then at 6m intervals on retrieval of rod string using a multi shot electronic camera.
	• *Specification of the grid system used.*	All drill holes were originally laid out in AMG66 grid however since mining commenced in February 2014 have been transformed to MGA94 grid system to conform with reporting requirements for mine operations.
	• *Quality and adequacy of topographic control.*	The area is very flat. A site based digital terrain model was developed from accurate (± 0.1m) survey control by licenced surveyors.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	Exploration 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. Underground grade control infill drilling and the 20/21 surface infill drilling was completed on a nominal 15x20m spacing. The drill hole spacing is similar to that used at other Tomingley

Criteria	JORC Code explanation	Commentary
		deposits and has been established to be sufficient. Some areas have been reduced to 15 x 15 due to the structural complexity of certain areas.
	• *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. In some areas the drill spacing has been reduced.
	• *Whether sample compositing has been applied.*	Sample compositing was not applied until resource estimation stage. RC samples with no visible mineralisation or alteration were composited to 3m with 1m resamples assayed if the composite returned a gold value of >0.2g/t gold. One metre samples override 3m composites in the database. DD – core was sampled to geology.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	Much care was given to attempt to intersect mineralisation at an optimal angle but in complex ore bodies this can be difficult. The chosen drilling direction (south at inclination of -60°) is consistent with structural measurements obtained from oriented drill core.
	• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	It is not thought that drilling direction will bias assay data at Caloma Two.
Sample security	• *The measures taken to ensure sample security.*	All samples were bagged in tied numbered calico bags, grouped into larger tied polyweave bags and transported to the laboratory in Orange by Alkane personnel or courier. S ample submission sheets were delivered with the samples and also emailed to the laboratory. All sample submissions were documented via ALS tracking system and all assays were reported via email. Sample pulps were returned to site and were stored for an appropriate length of time (minimum 3 years). The Company has in place protocols to ensure data security.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	The Company does not routinely have external consultants verify exploration data until resource estimation procedures are deemed necessary. The Caloma Two data has not been audited nor reviewed by external parties however the data for other deposits within the TGP was reviewed in 2010 and 2011 by Behre Dolbear (BDA). BDA did not express any specific concerns with respect to the data other than to recommend the completion of some round robin assaying and completion of additional density determinations, both of which were undertaken for the Caloma Two resource drilling.

Section 2 Reporting of Exploration Results

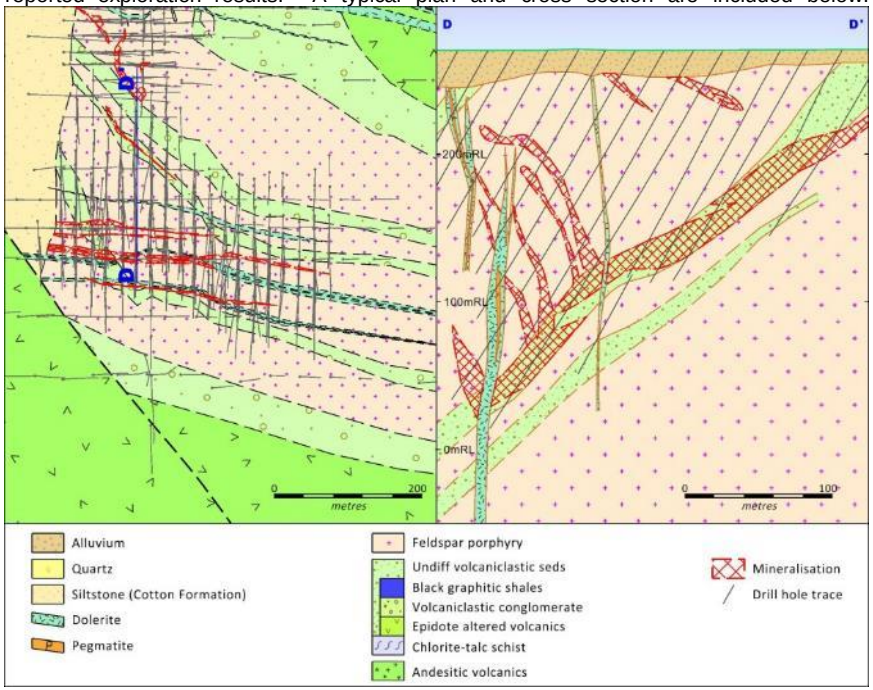
(Criteria listed in the preceding section also apply to this section.)

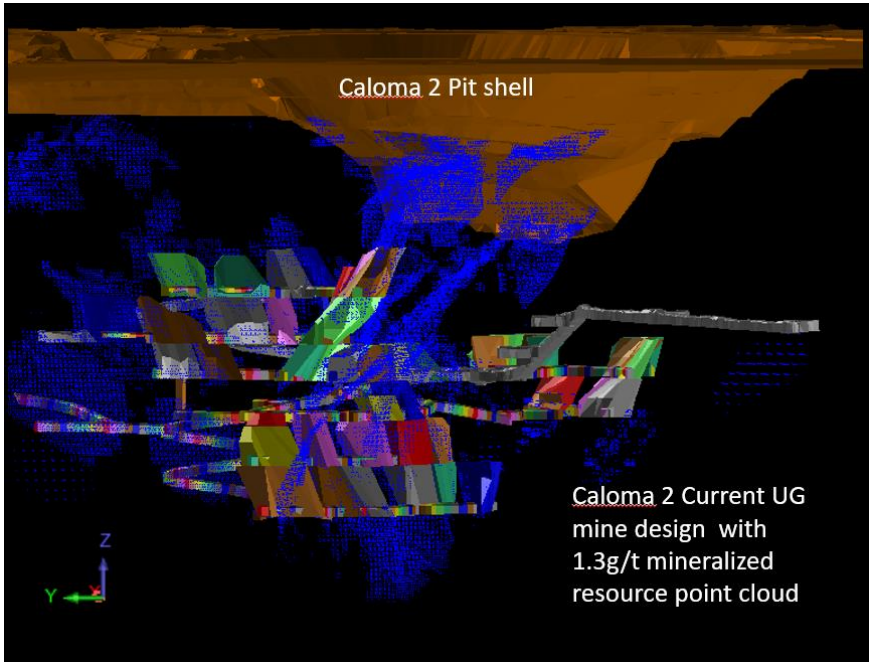
Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	The Caloma Two Deposit lies within ML 1684 which is held in the name of Tomingley Gold Operations Pty Ltd, a wholly owned subsidiary of Alkane Resources Ltd.
	• *The security of the tenure held at the time of reporting along with any known*	ML1684 expires on 11 February 2034.

Criteria	JORC Code explanation	Commentary
	impediments to obtaining a licence to operate in the area.	
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:* ○ *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.

Criteria	JORC Code explanation	Commentary

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. 
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Data relating to all drill holes has been reported in previous documentation of exploration results.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	No additional or new drilling results are being reported at this time.

Criteria	JORC Code explanation	Commentary
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	No further work is planned in the short term however drilling to test the continuation of mineralised structures at depth for an underground resource definition will be contemplated.
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	A pit design has been established and material has been included in the mining schedule. 

Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	Logging data is entered into Excel via drop down menus. All raw data is loaded directly to the Access database from the assay, logging and survey derived files.
	• *Data validation procedures used.*	There are validation checks to avoid duplications of data. The data are further validated for consistency when loaded into Datamine and desurveyed.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* *(If no site visits have been undertaken indicate why this is the case.)*	The quoted resources were compiled by Mr Craig Pridmore, Geology Manager Tomingley Gold Operations Pty Ltd, who has worked at TGO site since March 2015.
	• *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.

Criteria	JORC Code explanation	Commentary
Geological 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.*	A steep dipping interpretation was initially proposed however this was inconsistent with structural measurements obtained from oriented drill core.
	• *The use of geology in guiding and controlling Mineral Resource estimation.*	Geological (lithological) logging was used to develop a geological model. Alteration and mineralisation estimates along with grade guided the interpretation of the ore envelope wireframes at a nominal 0.25g/t Au lower cut-off. The majority of mineralisation is hosted by a quartz veined and altered feldspar ± augite porphyritic andesite of probable sub-volcanic origin. Dolerite dykes post-date mineralisation and all mineralised lodes are terminated at the dolerite contacts.
	• *The factors affecting continuity both of grade and geology.*	Mineralisation is directly associated with alteration and quartz veining.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	Strike length ~ 360m Width ~ 100m Depth ~ 20m from below surface to ~ 250m below surface from deepest drilling intercept.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	23 mineralisation wireframes (domains) and 5 dolerite wireframes were interpreted and used as constraints for the resource modelling. Four surfaces were also used to separate material types - topography, alluvium, saprolite and base of oxidation surfaces. The drill hole data were flagged by dolerite and mineralised domain wireframes in priority order, to prevent double use the data in the intersecting zones. The samples immediately outside the mineralised zones were re-flagged, if they contained more than 0.25 g/t gold, in order to prevent any overestimation that could be caused by use of assay boundaries. This re-flagging is also useful for the RC samples that are not broken at barren dyke boundaries. The samples were composited to 1m, the most common sample length and flagged by the topography, alluvium, saprolite and base of oxidation surfaces. The top-cut declustered data had Coefficient of Variation (CV's) of less than 1.7 for the mineralised zones, allowing use of Ordinary Kriging for estimation. Average variogram models were fitted for the mineralised zones and dolerite dykes. Estimates were by Ordinary Kriging methods. Datamine Studio 3 V22 was used. The resources are limited by an indicative pit design to ensure they have reasonable prospects for eventual economic extraction.
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	There are no previous estimates or any production data to provide any validation.
	• *The assumptions made regarding recovery of by-products.*	No assumptions made - Estimates were made for gold, arsenic and copper; only gold is of economic significance.
	• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*	No deleterious elements identified for estimation

Criteria	JORC Code explanation	Commentary
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*	The primary block size was small (5m x 2.5m x 5m) because of the narrow dipping nature of the mineralisation zones. The average drill hole spacing is 10x10m in the open pit and is a nominal 15x20 in the underground Block size is 5 x 2.5 x5 with sub-blocking down to 1.25x1.25x1.25.
	• *Any assumptions behind modelling of selective mining units.*	No assumptions were made.
	• *Any assumptions about correlation between variables.*	No assumptions were made
	• *Description of how the geological interpretation was used to control the resource estimates.*	Only data form the same domain were used to make estimates.
	• *Discussion of basis for using or not using grade cutting or capping.*	The drill hole data were declustered using the polygonal method for statistical analysis and determination of top-cuts. The top cuts were selected using a combination of histograms, probability plots and cutting statistic plots (plots of cut-off grade against Coefficient of Variation (CV) and total metal).
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	Estimates were made by Ordinary Kriging, with check estimates by Inverse Distance Squared (ID2) and Nearest Neighbour methods. The estimates were verified using several different techniques and checked for local and global variability. The checks included comparison with estimates made by different estimation methods, and against the declustered composites.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	The tonnages were estimated on a dry tonnage basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	The cut-off grade (0.50 g/t Gold) for open pittable resources is being used for the other Tomingley deposits. This takes into account current mining costs and metallurgical recovery for similar material.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	Mining of ore from the Caloma 2 ore body commenced in 2017 and to date reconciliations, save for poorly defined inferred mineralisation in the background domain, have been grade positive. The main part of the Caloma 2 deposit is currently being mined by open pit methods.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	Metallurgical test work on Caloma Two material has not been undertaken to date however, the metallurgy of the other Tomingley deposits is well studied. It is likely that Caloma Two will have similar metallurgical characteristics. The Caloma 2 deposit is currently being mined and processed. The two main ore rock types being mined are of Andesitic composition and of Sedmentray composition. The Ore ohosted within the Andesite shows no significant differences in metallurgical recoveries from those estimated in the feasibility study. The initial processing of the sedimentary hosted ore has shown lower recoveries. Metallurgical testwork is being undertaken on the sedimentary ore to assess the potential issue.

Criteria	JORC Code explanation	Commentary
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	Project approval for the TGP was granted in July 2012 for mining from three open pits (Wyoming One, Wyoming Three and Caloma) and underground from Wyoming One deposit. Mining from the Wyoming Three and Caloma open pits commenced in December 2013 with processing of ore in February 2014. Development approval for the Caloma Two open pit was granted in July 2016.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	Specific gravity measurements were completed by commercial laboratories on DD core samples. At least 5 samples if possible were selected for each of the 8 categories; weathered porphyry, weathered mineralised porphyry, fresh porphyry, fresh mineralised porphyry, weathered sediment, weathered mineralised sediment, fresh sediment, and fresh mineralised sediment. The specific gravity measurements were applied on a dry basis. In December 2015 a large in-house density analysis campaign occurred on all the deposits with over 3,182 additional measurements taken.
	• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.*	SG measurements completed on all material types – see above.
	• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	No assumptions made – SG determined and individual values applied to each material type based on wire-framed surfaces
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*	The resources were classified using drill density, geological confidence and mineralisation continuity. The actual break-points for the different resource classes were chosen by inspection of the model in relation to the drilling density and geological continuity. Any blocks outside the main mineralized/geological domains were classified as Inferred or deemed unclassified
	• *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).*	The use of RC drilling limits the amount of geological information that can be logged, and boundaries of mineralisation zones cannot be precisely located.
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The classification reflects the Competent Persons view of the deposit and its supporting data
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	As this is the first mineral resource estimation for this deposit, there have not been any audits or reviews.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*	The Caloma Two deposit consists of 17 narrow mineralisation zones; consequently there are relatively few drill hole data in each zone. This has limited the accuracy of any fitted variogram model and forced the use of average variogram models. The use of an approximate variogram model does not greatly affect the accuracy of 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.

Criteria	JORC Code explanation	Commentary
		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 quoted resources are global, being based on close spaced grade control drill hole data to exploration spacing. The resources have been depleted based on mining to end of June 2018. To ensure the resources have 'reasonable prospects of eventual economic extraction', the open pittable 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.The Underground Resource is restricted to material below the current final pit design,below the highest Stope level currently designed, with potential for eventual extraction by underground mining methods assessed at ≥1.3g/t gold.
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	Mining of ore from the Caloma 2 ore body commenced in 2017 and to date reconciliations have shown that the original resource model was performing within expectations, Save for poorly defined inferred mineralisation in the background domain. Reconciled Tonnes, against the original exploration resource model with in line with each other. The reconciled grade was 32% higher than predicted with an overall total ounces mined increase of 32%. Over the period of mining the Block Estimation model has been modified and improved, with the Open pit and Underground run simultaneously and captured within the same Block model The original exploration estimation method was remained as ID2 (original resource model estimate). Close spaced Grade control drilling has been ongoing since the start of the open pit. This additional data collected with the mapping has justified a review change in modelling parameters and estimation techniques from ID2 to Ordinary Kriging. This change in estimation method has will be used for the underground resource model which is an extension of the current open pit grade control block mode going forward. Comparisons between the open cut reconciled mined tonnes and grade of the Grade control model have shown that the reconciled mined tonnes are +6%, grade +8% with an overall increase of +14% ounces. This indicates the model being implemented does have a reasonable high level of accuracy although is slightly conservative.

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.)

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td rowspan="2">Mineral Resource estimate for conversion to Ore Resees</td><td>• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</td><td>The Mineral Resource estimate that this reserve is based upon has been complied by Mr Craig Pridmore, Geology Manager for Alkane Resources Ltd. Mr Pridmore is employed at the Tomingley Gold Operation. The mineral resource estimates have been completed using block models developed by Mr Craig Pridmore for Caloma, using data supplied by Alkane Resources Ltd (Alkane).

The models produced incorporated all mineralisation in the Caloma deposit 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 2021.

The following table comprises the Mineral Resources for the Tomingley Gold Project which were compiled by Mr Craig Pridmore, Geology Manager for Alkane.

<table>
<tr><th colspan="11">TOMINGLEY GOLD OPERATION MINERAL RESOURCES (as at 30 June 2022)</th></tr>
<tr><th rowspan="2">DEPOSIT</th><th colspan="2">MEASURED</th><th colspan="2">INDICATED</th><th colspan="2">INFERRED</th><th colspan="2">TOTAL</th><th rowspan="2">Total Gold</th></tr>
<tr><th>Tonnage (Kt)</th><th>Grade (g/t Au)</th><th>Tonnage (Kt)</th><th>Grade (g/t Au)</th><th>Tonnage (Kt)</th><th>Grade (g/t Au)</th><th>Tonnage (Kt)</th><th>Grade (g/t Au)</th><th>(Koz)</th></tr>
<tr><td colspan="11">Open Pittable Resources (cut off 0.40g/t Au)</td></tr>
<tr><td>Caloma One</td><td>106</td><td>2.0</td><td>16</td><td>1.8</td><td>0</td><td>0.0</td><td>122</td><td>2.0</td><td>8</td></tr>
<tr><td>Sub Total</td><td>106</td><td>2.0</td><td>16</td><td>1.8</td><td>0</td><td>0.0</td><td>122</td><td>2.0</td><td>8</td></tr>
<tr><td colspan="11">Underground Resources (cut off 1.3g/t Au)</td></tr>
<tr><td>Wyoming One</td><td>1050</td><td>2.8</td><td>916</td><td>2.5</td><td>232</td><td>1.8</td><td>2,198</td><td>2.6</td><td>181</td></tr>
<tr><td>Wyoming Three</td><td>46</td><td>2.2</td><td>24</td><td>2.0</td><td>20</td><td>1.9</td><td>90</td><td>2.1</td><td>6</td></tr>
<tr><td>Caloma One</td><td>162</td><td>2.5</td><td>501</td><td>2.1</td><td>507</td><td>2.0</td><td>1,170</td><td>2.1</td><td>79</td></tr>
<tr><td>Caloma Two</td><td>167</td><td>2.6</td><td>1098</td><td>2.2</td><td>181</td><td>1.8</td><td>1,446</td><td>2.2</td><td>103</td></tr>
<tr><td>Sub Total</td><td>1,425</td><td>2.7</td><td>2,539</td><td>2.3</td><td>940</td><td>1.9</td><td>4,904</td><td>2.3</td><td>369</td></tr>
<tr><td>TOTAL</td><td>1,531</td><td>2.7</td><td>2,555</td><td>3.6</td><td>940</td><td>3.4</td><td>5,026</td><td>2.3</td><td>377</td></tr>
</table>
</td></tr>
<tr><td>• Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</td><td>The Mineral Resources reported are inclusive of the Ore Reserves.</td></tr>
<tr><td>Site visits</td><td>• 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.)</td><td>The Competent Person for the Ore Reserves, Mr. John Millbank is an independent consultant engaged by Tomingley Gold Operations Pty Ltd (TGO), a whole owned subsidiary of Alkane. Mr Millbank has contributed to the mine planning processes at TGO since commencement of operations in 2013, and has been closely involved with site operations since this time.

A site visit for the Ore Reserves calculations was completed on the 7th June 2021.</td></tr>
<tr><td>Study status</td><td>• The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</td><td>The Tomingley Gold Mine is an operational open pit mine and CIP processing plant. The mine is based on the extraction and treatment of ore from underground operations and remnant stockpiles from open cut mining operations. Previous open pits – Caloma, Caloma</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	(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.)	Two, Wyoming One and Wyoming Three had been completed to economic limits by June 2019. This reserve statement is based upon a cutback to Caloma pit using current economics. The TGO processing plant utilises two stage crushing, single stage grinding and a gravity/CIL gold recovery circuit. The plant has a designated throughput of 1.25mtpa of oxide ore and 1.0mtpa of fresh (sulphide) ore. The plant has been operational since February 2014. • The Tomingley Gold Mine was subject to a Definitive Feasibility Study including the estimation of an initial Mineral Resource and Ore Reserve for the Wyoming One, Wyoming Three and Caloma open pits (2009, 2009 and 2012 respectively). Caloma 2 has been subsequently optimized and designed using Whittle and Surpac software by Proactive Mining Solutions and in-house personnel. The current Ore Reserve has been calculated by the Competent Person using the designed pit and associated depletion as at the end of 30 June 2021. • The Site has been operational since January 2014 and has achieved the design objectives set out in the DFS. • This Reserves Statement is based upon well understood costs and physicals from what is now a mature operation. Cost modelling has been completed to a budget level. • Mining and Processing modifying factors are well understood considering the longevity of the operation. • The end of June 2021 mine survey information has been used to differentiate material mined from in-situ material. • Due to the longevity of the operation, the nature of the study, and prior reconciliation of performance, no modifying factors have been applied that will transition the measured resource to a probable reserve. All Measured resource has been translated to a proved reserve classification.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• A lower block cut-off grade of 0.4g/t Au has been applied to the 'diluted' resource block model in calculating this Ore Reserve. The lower cut has been selected with consideration to mine ability, and incremental cash operating margins (i.e. processing costs). • The lower cut-off has been calculated based upon, - a $2000 per ounce gold price excluding royalties, - using process recoveries based on actual achieved for the historical mining of Caloma. - estimated processing and administration costs for the life of mine plan, based upon achieved costs for the 2020 to 2021 financial year. • The cut-off grade has been verified by using costs and metallurgical recoveries from the previous mining and processing operations and expected Gold Price. The calculated lower block cut off of 0.4g/t is conservative when historic costs and processing recoveries are applied.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).*	Open cut truck excavator mining, with some free dig material in the upper oxide zones and drill and blast in the lower oxide and fresh materials.
	• *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.*	• Equipment size and methods selected typical of moderate scale open pit gold mining. 120 tonne class excavators, 90 tonne mechanical drive haul trucks.

Criteria	JORC Code explanation	Commentary
		• Dual lane in pit ramps at 24 m wide and 1:8.5 gradient for the majority of the pits. Single lane ramps at 15m wide have been designed to access the final stages of the mine. These have shown to be successful for the mine so far. • Mining is on five metre high benches and is mined in two, two and a half metre high flitches, to reduce mining dilution. These flitch heights are typical for gold mining and match the size of mining equipment selected.
	• *The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc), grade control and pre-production drilling.*	In Pit ore boundaries are defined by Reverse Circulation Grade control drilling on 10 metre by 10 metre, to 10 metre by 5 metre patterns depending on the size and quality of the mineralisation being grade controlled. Geotechnical parameters as advised by specialised geotechnical consultants for Caloma. Site visits are conducted regularly by the consultants, and parameters reviewed. Any modifications to wall design are addressed in design. The same consultants have been used at TGO since production commenced and are well familiar with the ground conditions.
	• *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).*	Pit Optimisation parameters have been confirmed to an appropriate level of accuracy through subsequent mining operations, along with reconciliation of actual performance to date. Parameters have been applied directly to designs, and these designs have then been subjected to financial analysis, to confirm profitability. Mine optimisation has excluded the inferred portion of the resource.
	• *The mining dilution factors used.*	The resource model has been based on a model that includes all grade control information for the project to date. Grade interpolation has been completed using ordinary kriging. A second grade interpolation has been generated using mineable boundaries, and applying average grades within those boundaries. Material that has lower grade and where the average grade for the mineable block falls below cut off is set to waste. This effectively removes the interstitial low grade from ore zones and eliminates the reliance on selective mining sized blocks within the resource model. Resource definition drilling is backed by reconciliation of the project to date. Reconciliation of grade control drilling versus mill production to date in Caloma shows the grade control drilling underestimates by approximately 4% on ounces fed. No dilution factor has been applied additional to the work completed within the block model.
	• *The mining recovery factors used.*	Assumed 100% recovery of the models, due to acceptable reconciliation to date and work that has been completed on the model to create a mineable ore zone within the model.
	• *Any minimum mining widths used.*	Pit Design has been limited to a minimum working width of 20 metres.
	• *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.*	Inferred resources contained in the mineralised ore wireframes are included in the current mine schedule for Caloma. The proportion of inferred in pit resource is less than 2% of ore tonnes and is not considered significant. Reconciliations to date for Caloma show the original resource model is over reporting tonnes by 15% and under reporting grade by 11% for a total over report of ounces by 7% against Mill feed. This is based on 100% of the original pit ore being mined thus far, and includes the inferred in pit mining resource. Reconciliation excluding the inferred resource over performs the model estimates, with 9% under reporting of tonnes, 17% over reporting of grade, and overall under reporting of 10% for contained ounces. When the au_sched grade item is applied, which has been modified to mining blocks, the overall model reporting error is 1%

Criteria	JORC Code explanation	Commentary
		under on tonnes, 3% over on grade and 4% under on ounces. Reconciliation to date of the cutback for which this reserve statement applies has shown an increase of 8% of overall ounces on ore mined versus ore planned. Consequently no further reconciliation factors have been applied to the au_sched item..
	• *The infrastructure requirements of the selected mining methods.*	• All required infrastructure is currently in place, including surface works for Caloma. There is adequate tailings storage available with the current facilities in place.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.*	Ore from the Tomingley Project will be treated at the Tomingley Gold Plant which is described above.
	• *Whether the metallurgical process is well-tested technology or novel in nature.*	The technology is well tested and has been successfully operated for six years.
	• *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.*	The DFS plan uses 96% metallurgical recovery for oxide and 91% for fresh for an overall recovery of 93%. Each pit, had specific metallurgical test work undertaken for the DFS which is made up of leach and gravity recovery. The metallurgical test work is representative of all material types and areas of the ore bodies. The range of recoveries used are within the parameters of the individual pit recoveries. Processing of ores from each pit to completion including those from Caloma , have shown process recoveries to fall within the DFS limits.
	• *Any assumptions or allowances made for deleterious elements.*	No deleterious elements extracted.
	• *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the ore body as a whole.*	Process recovery for the 2016/2017 financial year averaged 91.47%. A blend of 24% oxide and 76% fresh material was processed for the year. This results in process recovery being 1% less than the LOM Plan. Process recovery for the 2020/2021 financial year, with ore being primarily from underground mining sources, was over 89%.
	• *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 Caloma pit. • Waste will be sent to either the existing Wyoming Three or Caloma Two pit voids as backfill. • There is sufficient volume in the RSF design to allow for all the material in the current LOM..
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• Infrastructure has already been constructed for open pit mining and processing. Works to site included access road, a water pipeline, a 66 KV power line, site drainage, topsoil stockpiling, waste dump construction, Residue Storage Dams, Process Water Dams, associated offices, workshops, fuel and laydown areas. Sufficient site infrastructure has been constructed to process ore at 1.25 MTPA. • All surface drainage works for Caloma have been carried out. • The site relies upon local employment drawing employees from Tomingley, Peak Hill, Dubbo and Parkes Region.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.*	No allowance was made for capital costs in this reserve analysis although pre-stripping of waste for Caloma may be capitalised. The economic analysis is based on total cash costs.

Criteria	JORC Code explanation	Commentary
		Projected All In Sustaining Costs have been calculated from the LOM Plan and are less than the predicted realised gold price, leaving margin.

	• *The methodology used to estimate operating costs.*	• Operating costs – Mining and Process
		  ○ Current wage rates.
		  ○ Projected fuel price for 2021
		  ○ 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 and a portion of head office costs are not included. These costs are distributed to existing underground operations.

	• *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 stockpiles beside the existing plant within estimated mining costs. Gold transportation costs to the Mint are included in the refining component of the milling charges assumed in the study.
	• *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.*	Processing operating costs outlined above.
	• *The allowances made for royalties' payable, both Government and private.*	Royalties payable at rate of 4% ex-mine value to the NSW State Government have been considered. There are no other royalties' due.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.*	• Assume 100% ore mining recovery of the regularised Model. • Selling costs and Royalties included in costs to give a net revenue per ounce. • No deleterious metals present that incur smelter penalties. • A base gold price of AUD$ 2000 /Oz excluding royalties in this ore reserve assessment. • Exchange rates, royalties and transport charges dealt with above.
	• *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	No assumptions made. The gold dore is to be sold at spot price.
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 at the spot value for gold.
	• *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

Criteria	JORC Code explanation	Commentary
	• *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. • 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. Pit designs where then back calculated for undiscounted return using the whittle input costs to ensure profitability within limits.
	• *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	Sensitivity analysis was included in the Whittle optimization and simple cash flow analysis were completed for gold prices ranging from $1800 - $2200
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• The TGO site is located on flat farm land with the Newell Highway separating Caloma and the Wyoming (pits and processing) side of operations. Surrounding the site is the village of Tomingley (600 m to the north) and local operating farms. • All key stakeholder agreements are in place, including a Voluntary Planning Agreement (VPA) with the Narromine Shire Council. The Company has close working relationships with the local communities.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* ○ *Any identified material naturally occurring risks.*	A risk analysis was undertaken as part of the Feasibility Study and Environmental Assessment and no naturally occurring risks were identified.
	○ *The status of material legal agreements and marketing arrangements.*	Majority of production is sold into the spot gold market.
	○ *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	The operation is situated on a granted Mining Lease which expires in 2034. All statutory and government approvals have been obtained along with the required development approvals for Caloma.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.*	The classification of the Tomingley Gold Operations, Caloma open cut deposit (July 2021) has been carried out in accordance with the recommendations of the JORC code 2012.
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*	Yes. The Caloma deposits are robust at current gold prices and this has been proven over past eight years of operations.
	• *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	No probable reserves have been derived from Measured Resources – all measured resources converted to Proved Reserves.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	The Ore Reserves estimates have been completed by Competent Persons external to Alkane Resources and Tomingley Gold Operations. No further review has been conducted.

Criteria	JORC Code explanation	Commentary
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 Mr Craig Pridmore who is satisfied with the resource categories quoted. Within the reserve estimation process the effects of included dilution have been accounted for to produce an anticipated selective mining unit grade. The effects of this dilution are more pronounced in narrow zones of mineralisation, leading to overall grade reduction and loss of some narrow zones to waste through a drop below cut-off grade.
	○ *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*	The material included in the LOM schedule is only material that has been estimated inside of designated ore zones. The estimated material outside of the ore zones has not been included.
	○ *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.*	The assumption that the high grade (plus 1 g/t) and the low grade (0.4-1.0 g/t) could be wholly separated has not been proved, although low grade material is being recovered. This has resulted in more high-grade material and less low-grade material than as predicted in the resource models. A revised technique using grade control drilling and modelling a separate attribute called au_sched has shown some improvement for this. The estimation technique used essentially smooths the grade and allows for low grade within the high grade mineable ore blocks.
	○ *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	Reconciliation to date of the au_sched attribute shows an underestimate of 4% on ounces recovered from milling operations.

Caloma Open Pit Ore Reserve (July 2022)

John Millbank

– July 2022

EXECUTIVE SUMMARY

This report has been compiled at the request of Mr Simon Parsons, General Manager at Tomingley Gold Operations (TGO) to determine the ore reserve for the Caloma Open Pit.

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The ore reserves have been completed to JORC 2012 reporting standards and are based on the latest information provided by TGO site personnel. This includes,

- EOM June2022 survey surface which delineates completion of previous open pit mining activity.
- Mining to date reconciliations.
- Pit designs based upon review by geotechnical consultants.
- Life of Mine cost and revenue models for the operation.

The ore reserve for July 2022 at Caloma Open Pit can be shown as follows.

Deposit	Proved			Probable			Total		
	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)
Caloma Open Pit	106	2.0	7	16	1.8	1	122	2.0	8
Total	**106**	**2.0**	**7**	**16**	**1.8**	**1**	**122**	**2.0**	**8**

As a year on year basis

Caloma Open Pit Total Reserves			
Year	Tonnage (kt)	Grade (g/t Au)	Gold (kOz)
2013	1,200	2.2	87
2014	1,928	2.2	136
2015	1,319	1.8	80
2016	838	1.6	43
2017	58	2.2	4
2020	569	1.6	30
2021	476	1.6	25
2022	122	2.0	8

Key differences between 2020 and 2021 are due to

- Continued depletion through mining of Caloma to the end of Financial Year 2022.

John Millbank
Principal Mining Engineer MAusIMM #108087

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ABBREVIATIONS

AISC	All In Sustaining Costs
Au	Gold
AusIMM	Australasian Institute of Mining and Metallurgy
Dia	diameter
g/t	grammes per tonne
JORC	Joint Ore Reserves Committee
kOz	thousand ounces
m	Metres
Mt	Million Tonnes
Mtpa	Million Tonnes per Annum
Oz	Ounce
ROM	Run Of Mine Ore Stockpile
SMU	Selective Mining Unit
TGO	Tomingley Gold Operation
$	Australian Dollars

1 Introduction

The Tomingley Gold Operation is a nominal 1.2 Mtpa gold mine located approximately 50km south of Dubbo adjacent to the town of Tomingley in the central west of New South Wales. It is operated by Tomingley Gold Operations Pty Ltd, a wholly owned subsidiary of Alkane Resources Limited (Alkane)

Proactive Mining Solutions was requested by Mr Simon Parsons of TGO to complete the 2022 Ore Reserve Statement for Caloma Open Pit in compliance with The JORC Code 2012 Edition. This report is a summary of the work completed for the reserve statement, and a resource for site personnel to reference.

2 Components of and associated discussion for the Statement

2.1 Competent Person

Mr John Millbank is a mining engineer with over 30 years' experience in mine planning and operational roles, both as an employee and consultant to the minerals industry. Mr Millbank has over 13 years' experience relevant to the style of mineralisation and type of deposit in this report, and specifically to open cut gold mining in the Asia Pacific region. Mr Millbank is a current member of the AusIMM (#108087) and meets the requirements of the JORC code 2012 as a Competent Person.

At the time of writing, Mr Millbank, or any of the entities he directly controls, has no equity holdings in Alkane Resources or its subsidiaries.

A copy of The Competent Person Report Signoff is attached as Appendix 1 of this report.

Mr Millbank has been involved with mine planning for the Caloma open pit since 2013. A site visit to the TGO operations and exploration areas was completed on the 7th June 2021. The Caloma site was inspected for the purposes of future reserves reports in this area.

A copy of Mr Millbank's resume is attached as Appendix 2.

2.2 Cut-off grade calculations

Cut-off grade calculations were completed to check against past values used. Calculations were completed based on the following parameters taken directly from the TGO June 2022 Monthly Report.

- End of June Processing Cost – $31.32 per dry tonne inclusive of geology, admin, safety and environment costs.
- Average Processing recovery - of 90%. This has been verified as an appropriate conservative average for processing of Caloma open pit ores for the life of the operation.
- Gold price net royalty of $61.73 per gram ($1920 per ounce), or $2000 per ounce before royalty.

Cut-off grade calculation for ore / waste was determined using (process cost)/(Au price per gram x process recovery/100)

Cut-off grade calculated was 0.33 g/t.

Until June 2021, The TGO site has traditionally used a 0.5g/t processing cut off for the entirety of open cut operations, despite a rising gold price and improved cost performance. Subsequent to this, a 0.4g/t processing cut has been applied. This has shown to be cash flow positive across the year 2022. Consequently, the processing cut off for this report has been continued at 0.4g/t Au and is being used for site mine planning and budgeting purposes.

2.3 Resource Model

Resource model for use in the calculations were provided by Mr Craig Pridmore, Geology Manager of TGO.

The model used for Caloma (Caloma_200717.mdl) is a subblock model 5m x 2.5m x 2.5m (x,y,z) parent cell size in Surpac format. The model incorporates all resource and grade control drilling since project commencement. During mining operations the model was continuously updated with drilling information and grade values were reinterpreted after each drilling campaign. This gave a process of continuous improvement when compared against mine reconciliations.

Two specific grade items are used for the interpolation process. The first, au_krig, is calculated using ordinary kriging. This gives grade results for each block, and relies upon the mining method to be able to adequately separate high grade ore from low grade and waste to achieve the modelled grades.

The second grade item, au_sched, has mining ore boundaries applied to the au_krig field. The average au_krig grade of the combined blocks within the boundary is then applied to each of the blocks within this boundary. This effectively simulates the grade control ore blocking process and delivers grade interpolations that can be achieved with the mining method. Table 2 below shows comparisons of mining inventory delivered from the block model using combinations of grade interpolation methods and cut off grades.

Table 1 – Mining Inventory by grade item

Resource Category	AuKrig						AuSched					
	0.3 g/t cut off			0.4 g/t cutoff			0.3 g/t cutoff			0.4 g/t cutoff		
	Tonnes	AuKrig	Oz	Tonnes	AuKrig	Oz	Tonnes	AuSched	Oz	Tonnes	AuSched	Oz
Measured	545,832	1.59	27,903	485,516	1.74	27,161	399,434	1.78	22,859	398,561	1.78	22,809
Indicated	206,463	0.99	6,572	156,717	1.20	6,046	78,272	1.29	3,246	78,272	1.29	3,246
Inferred	10,243	1.09	359	8,556	1.24	341	5,093	1.38	226	5,093	1.38	226
Total	762,538	1.42	34,833	650,789	1.60	33,548	482,799	1.70	26,331	481,926	1.70	26,281

By creating the au_sched methodology, some ore blocks within the mining inventory are sent to waste, and some waste blocks are incorporated into the ore zone. This has resulted in less tonnes at a lower grade but is considered fully recoverable.

This model, and variations of it, were successfully used for short- and long-term planning for the last two years of mining operations at Caloma before commencement of the current pit wall cutback.

2.4 Modifying Factors

2.4.1 *Reconciliation*

Reconciliations have been completed on an ongoing basis by Mr Craig Pridmore, Geology Manager, and Mr Daniel Short, Open Cut Mining Manager at TGO. Caloma has a long history of positive reconciliation and has been shown in previous reserve reports.

The current mining area has been reconciled using as mined ore compared with planned budget production. Reconciliation is completed against the au_sched grade interpolation methodology in the block model and has been completed from October 2020 until June 30 2022.

Table 2 – Caloma Reconciliation

	Predicted Tonnes	Grade (g/t)	Contained Ounces
Budget ore tonnes	296,680	1.42	13,592
As Mined Ore Tonnes	642,496	1.25	25,873
Difference (%)	217%	88%	190%

The resource model slightly under calls mined grade, with the 12% grade reduction potentially indicating as mined dilution, however the additional tonnes mined more than compensates for this.

Based on these results, no modifying factor for reconciliation has been used in the reserve estimates.

2.4.2 *Dilution and Ore Loss Calculations*

Gold grades have been calculated using both the Au_krig and Au_sched attributes. Au_krig uses the traditional kriging approach for interpolation within the resource model. Au_sched uses the modified approach to simulate grade control ore blockouts. Comparison of the two methods (Table 3) for the to be mined portion of the resource produces a reduction of 17% for contained ounces using the Au_sched attribute.

Table 3 –Mining Inventory Variation

Resource Category	AuKrig			AuSched		
	0.4 g/t cutoff			0.4 g/t cutoff		
	Tonnes	AuKrig	Oz	Tonnes	AuSched	Oz
Measured	119,408	2.13	8,177	106,313	2.09	7,144
Indicated	23,729	2.12	1,617	16,035	1.82	938
Total	143,137	2.13	9,795	122,348	2.05	8,082
Variation				85%	97%	83%

Table 3 shows that the au_sched grade interpolation methodology reduces the ore tonnes by 15%, meaning no further factors for ore loss should be applied.

Considering the positive reconciliation provided thus far, it is considered the dilution factors that are inherently built into the models are adequate allowance and no further modification is needed.

2.5 Pit Design

2.5.1 *Designs Used*

The pit design used for the extension to Caloma pit is cl1_ecb_v11.dtm.

The geotechnical parameters for this pit design have been reviewed by Lianne McKenzie of WSP Australia. Ms McKenzie has been providing geotechnical advice for Caloma pit since commencement of operations. The Geotech parameters are specified in the letter to TGO PS111842-GEO-LTR-004 RevA.pdf. The parameters reflect the existing as constructed pit wall.

Figure 1 – Caloma Pit Design

2.6 Financial Viability

Financial Analysis of the Caloma pit has been completed using the following methodologies.

- Whittle pit optimisations were completed during March 2017 as a basis for the design shape. These were completed using actual costs at the time, a gold price of $1600 per ounce before royalty, and as constructed pit slopes. Optimisations were completed for both the Au_krig and Au_sched grade attributes and returned positive cash flows.

- Mining costs have been updated for current equipment hire rates, and conservative historical production rates have been used to determine overall mining costs for an owner mining model using dry hire equipment, as per previous operations.

- Processing, administration and HSE costs as per FYE2022 actuals, were applied to the life of mine and budget cost models. Gold price of $2000 per ounce net royalty has been applied. The Caloma pit extension is cash flow positive based on these criteria.

- AISC for 2018 was published to the ASX as $1002 per ounce in the Annual Report to 30 June 2018. This was for the last year that open cut mining occurred at TGO.

- AISC for end of FY 2022 was $940 per ounce produced as reported in the ASX Media release “Quarterly Activities Report to 30 June 2022” on 19 July 2022.

Consequently, there is no reason to suggest that the Caloma pit is not financially viable, with the current input parameters.

2.7 Depletion Surfaces

Mining Depletion was done by using a top limiting constraint on the reserve calculations. These top limits were a combination of natural surface topography and the end of mining surface completed by TGO site surveyors. Surfaces created for the end of June 2022 were used for the depletion.

2.8 Partial Block Percentages

A field called *partpc* was added to the block models used for reserve estimation. This field was used to determine the proportion of a block that is inside the limiting surface. This was used for both the top and bottom limiting surfaces in all reserve calculations.

2.9 Clarification Table 1

Under the JORC 2012 Code a clarification table is required for all published reserves. A completed Table 1 is attached as Appendix 4 to this document.

Of note from the clarification table additional to other discussion in this report

- No further modifying factors were used in the calculation of the reserves.
- The reserve is inclusive of all resources.
- No Inferred material is used within mine planning calculations for the reserve.
- Indications to date are that the Reserve should be conservative in both tonnes and grade. Considering historical reconciliations, it is likely that the pits will recover more tonnes and possibly grade than what is contained in the Proved and Probable Reserve.

3 2022 Ore Reserve Table.

3.1 Mining Inventory

The mining inventory for Caloma ending June 30, 2022, can be summarised as in Table 4. This is based on the resource reporting categories and includes inferred material. This table only applies to the Caloma deposit, and as such does not include underground or stockpile inventories.

Mining Inventory totals 122 kt at 2.1 g/t for 8,000 contained ounces of gold. This has been calculated using a 0.4g/t cut off.

Table 4 – Mining Inventory Table

Deposit	Measured			Indicated			Inferred			Total		
	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)
Caloma Open Pit	106	2.0	7	16	1.8	1	-	-	-	122	2.0	8
Total	**106**	**2.0**	**7**	**16**	**1.8**	**1**	**-**	-	**-**	**122**	**2.0**	**8**

3.2 Mining Ore Reserve

Mining Ore Reserve totals 122 kt at 2.0 g/t for 8,000 contained ounces of gold, using a 0.4g/t cut off and is shown in Table 5.

Table 5 – 2022 Caloma Open Pit Ore Reserve

Deposit	Proved			Probable			Total		
	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)
Caloma Open Pit	106	2.0	7	16	1.8	1	122	2.0	8
Total	**106**	**2.0**	**7**	**16**	**1.8**	**1**	**122**	**2.0**	**8**

3.3 Year on Year Ore Reserve

Year on Year the Total reserves are as shown in Table 6. The years 2018 and 2019 had no reserves reported due to open pit mining of existing reserves being completed.

Table 6 – Year on Year Ore reserve report

Caloma Open Pit Total Reserves			
Year	Tonnage (kt)	Grade (g/t Au)	Gold (kOz)
2013	1,200	2.2	87
2014	1,928	2.2	136
2015	1,319	1.8	80
2016	838	1.6	43
2017	58	2.2	4
2020	569	1.6	30
2021	476	1.6	25
2022	122	2.0	8

3.3.1 *Key Differences 2021 to 2022.*

Key differences between 2021 and 2022 are as follows

- Depletion through mining of Caloma to the end of Financial Year 2022.

Appendix 1

Competent Person's Consent Form

Competent Person's Consent Form

Pursuant to the requirements of ASX Listing Rules 5.6, 5.22 and 5.24 and
Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

Report name

Caloma Open Pit Ore Reserve (July 2022)

(*Insert name or heading of Report to be publicly released*) ('Report')

ALKANE RESOURCES LTD

(*Insert name of company releasing the Report)*

Tomingley Gold Operations, Caloma Open Cut Deposit.

(Insert name of the deposit to which the Report refers)

If there is insufficient space, complete the following sheet and sign it in the same manner as this original sheet.

August 2022

(Date of Report)

Statement

I/~~We~~,

John Edward Millbank

(*Insert full name(s)*)

confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having five year's experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member or Fellow of *The Australasian Institute of Mining and Metallurgy* or the *Australian Institute of Geoscientists* or a 'Recognised Professional Organisation' (RPO) included in a list promulgated by ASX from time to time.
- I have reviewed the Report to which this Consent Statement applies.

~~I am a full time employee of~~

(Insert company name)

Or

I/~~We~~ am a consultant working for

Proactive Mining Solutions Pty Ltd

(Insert company name)

and have been engaged by

Alkane Resources

(Insert company name)

to prepare the documentation for

Tomingley Gold Operations, Caloma open cut deposit.

(Insert deposit name)

on which the Report is based, for the period ended

August 2022

(Insert date of Resource/Reserve statement)

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to ~~Exploration Targets, Exploration Results, Mineral Resources and/or~~ Ore Reserves *(select as appropriate).* Additional deposits covered by the Report for which the Competent Person signing this form

is accepting responsibility:

NIL

Additional Reports related to the deposit for which the Competent Person signing this form is accepting responsibility:

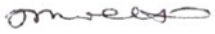
NIL

Consent

I consent to the release of the Report and this Consent Statement by the directors of:

ALKANE RESOURCES LTD

(Insert reporting company name)

Signature of Competent Person:	Date: 18th August 2022
AusIMM	108087
Professional Membership: *(insert organisation name)*	Membership Number:
 Signature of Witness:	Jacqueline Millbank (Buderim Q) Print Witness Name and Residence: (eg town/suburb)

80 Nyes Crescent
Buderim
Queensland 4556

Appendix 2 - Professional Resume - John Millbank

Certificates Held:

- Bachelor of Engineering in Mining Engineering (1991)
- Masters of Business Administration (2005)
- WA Unrestricted Quarry Managers Certificate of Competency #414
- Current QLD Drivers License (Heavy Rigid)

Current Employment And Duties:

Currently offering contract services with my own company, Proactive Mining Solutions Pty Ltd.

Recent Clients have included

- Gascoyne Resources Ltd (Under Administration)
- Nordic Gold Oy, Laiva Gold Mine, Finland.
- Resolute Mining - Carpentaria Gold.
- Alkane Resources
- Kirkland Lake Gold
- Ramelius Resources.
- CST Mining
- Arrium Mining
- Crosslands Resources
- Oz Minerals
- BHPB WAIO.

Recent Projects have included

- Technical Service project implementation of greenfield and brownfields sites. Life of Mine Planning, financial modelling and budgeting, pit optimisation, design review and analysis.
- Alt Mining Manager and Quarry Manager for operations during voluntary administration.
- Manager Laiva Gold Mine contract termination and mine closure.
- Ore reserves reporting to JORC 12 for open pit gold projects.
- Short term planning and scheduling system implementation and review.
- Production planning and Quarry Manager Roles in Western Australia.
- Training and mentoring of junior technical staff, to allow the site to become self-sufficient with some off site technical support.
- Pit optimisation and design using Whittle and Surpac software for Gold, Iron Ore, and Copper projects in New South Wales, Western Australia, South Australia, Queensland and the Northern Territory.
- Strategic planning for open pit gold operations. Sensitivity analysis work for rising cost and rising gold price environments.
- Mining due diligence assessment of gold and iron ore projects.
- Contract Preparation and tender evaluation for open pit gold and bulk commodity products.
- Drill and blast system implementation GPS controlled rigs.

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GEMCO - Groote Eylandt Mining Company - BHP Billiton
Contract Production Engineer
March 2008 to April 2009.

- Pit and cut design.
- Production reporting.
- Fleet optimisation and recommendations.
- Maintenance and operation of high precision dozer control system.
- Short term planning and scheduling.
- End of month production checks.
- Training and mentoring of junior and incumbent mining engineers specifically software and mining methods.

Newcrest Cadia Hill (June 2008)
-Peer review of haulage fleet requirements for Cadia East Feasibility study.

Previous Employment And Duties:

Mt Gibson Iron - (Tallering Peak Hematite Operation)
Technical Services Manager
April 2006 to February 2008

- Statutory roles of Alternate Registered Manager, and Alternate Quarry Manager.
- Alternate for the Mining Manager on FIFO roster.
- Incident Investigations using ICAM methodology
- Staged Pit and Dump design.
- Management of Junior Mining Engineers.
- Implementation of site mine planning system.
- Evaluation of planning software requirements.
- Short term, budget and whole of life mine scheduling.
- Fleet selection and optimisation.
- Statutory approval documents and clearing permits.

Energy Resources Australia (Rio Tinto Group)
(Ranger Uranium Mine)
Contract Mining Engineer
March 2004 to April 2006

- Pit and Dump design.
- Short term, budget and whole of life mine scheduling.
- Implementation of real time fleet management system.
- In house project management.
- Mining equipment requirements and evaluation.

Sipa Exploration NL - (Paraburdoo Gold Project)
Mining Superintendent / Quarry Manager
August 2000 to October 2003

- Registered Quarry Manager
- Alternate Registered Manager (FIFO coverage)

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- Direct accountability for health and safety of mining department personnel and contractors.
- Management of all aspects of the mining department including the mining contractor.
- Contract tender preparation and negotiation.
- Annual budget preparation.
- Period production and financial reporting.
- Feasibility studies of satellite ore resources.
- Development and mining of satellite reserves.
- Annual environmental reporting.
- Liaison with statutory bodies.

Gold Ridge Mining Ltd. (Delta Gold) (Gold Ridge Solomon Islands)
Senior Mining Engineer / Alternate Mining Manager
June 1999 to June 2000

- Alternate for the Manager Mine
- Supervising Heavy Vehicle Workshop staff.
- Long and short term mine planning.
- Budget planning.
- Monthly reporting and financial evaluation.
- Coordination of daily mining activities.
- Supervision of mining consultants.
- Mining equipment requirements and evaluation.
- Mine training coordination.
- Implementation of mining procedures.
- Incident investigation and review.
- Acting manager during shutdown of operations due to civil unrest.

Normandy – NFM Ltd - (The Granites Gold Mine)
Senior Mining Engineer -Production
February 1999 to June 1999
- Direct accountability for the Open Cut Survey Team
- Direct accountability for the Open Cut Production Engineers
- Contract negotiation and supervision.
- Deputising for the Open Pit Superintendent.
- Contract Superintendent, Tailings Dam Construction.

Open Cut Mining Engineer
November 1997 to February 1999
- Coordinating daily mining activities.
- Coordination of the contractors
- Site and contractor safety inspections.
- Accident and Incident investigation.
- Induction of Open Cut Mining personnel.
- Short term mine planning and scheduling.

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- Pit design, using Surpac software.
- Resource optimisation using Whittle software.

Herald Operations Pty Ltd - (Coolgardie Gold Operations)
July 1997 to November 1997
Contract Mining Engineer
- Pit design using Surpac Software
- Resource optimisation using Whittle Software.
- Financial analysis of pit designs.
- Deputising for the Registered Quarry Manager.

Hamersley Iron Pty Ltd - (Marandoo Operations)
April 1994 to June 1997
Mine Planning Engineer
- Short term to strategic mine planning and scheduling.
- Pit, road and dump designs using Vulcan software.
- Design and implementation of selective mining techniques.
- Creation use and reconciliation of ore body models.
- Product grade regression calculations
- Annual planning and implementation of such plans.
- Registered Quarry Manager.
- Acting for the Superintendent – Mine Planning.

Worsley Alumina Pty Ltd - (Boddington Gold Mine)
March 1992 to April 1994
Mine Planning Engineer
- Short and Medium term mine planning using Vulcan
- Monthly and Six Monthly production forecasts.
- Preparation of Monthly reports.
- Supervision of and liaison with the mining contractor.
- Design of rehabilitation slopes and final landforms.

Professional Membership: Member of the AusIMM, Membership Number 108087
Competent Person for reporting of Gold Ore Reserves under JORC 2012

Academic Record: 1991 Completed Bachelor of Engineering in Mining Engineering at University of South Australia.
2005 Completed the Master of Business Administration

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Queensland 4556

Appendix 3

Mine Reconciliation Tables

Resource Reconciliation

Table A3.1 – Caloma One Oxide Fresh Reconciliation for Life of Mine.

Months		Exploration Ore Resource									Grade Control			Mine Claimed (not reconciled?)			Mill Feed			Geology mined Reconciled		
		MEASURED		INDICATED		INFERRED		TOTAL			MEASURED											
		Tonnes	Grade	Tonnes	Grade	Tonnes	Grade	Tonnes	Grade	Oz	Tonnes	Grade	Oz	Tonnes	Grade	Oz	Dry	Grade	Oz	Tonnes	Grade	Oz
Cal Jan14	oxide					322.00	0.85	322	0.85	9												
	fresh							0		0												
	TOTAL	0.00		0.00		322.00	0.85	322	0.85	9												
	REPORT									9												
Cal Feb-14	oxide	994.00	0.76			81.00	0.62	1075	0.75	26												
	fresh							0		0												
	TOTAL	994.00	0.76	0.00		81.00	0.62	1075	0.746	26												
	REPORT									26												
Cal Mar-14	oxide	10,229.00	1.77	404.00	1.09	6,054.00	1.28	16687	1.57	845	39,950	2	2,569	37,078	2.00	2,384	4,905	2.08	328			
	fresh							0		0												
	TOTAL	10,229.00	1.77	404.00	1.09	6,054.00	1.28	16687	1.57	845	39,950	2	2,569	37,078	2.00	2,384	4,905	2.08	328			
	REPORT							**22,151**	**1.98**	**1,410**	**39,950**	**2**	**2,569**	**37,078**	**2.00**	**2,384**	**4,905**	**2.08**	**328**			
Cal Apr-14	oxide	66,375.00	2.10	4,392.00	1.94	43,232.00	1.35	113,999	1.81	6,644	153,716	1.65	8,154	143,138	1.65	7,609	22,786	2.09	1,531			
	fresh	86.00	0.69					86	0.69	2							7,008	1.05	237			
	TOTAL	66,461.00	2.10	4,392.00	1.94	43,232.00	1.35	114,085	1.81	6,646	153,716	1.65	8,154	143,438	1.65	7,609	29,794	1.84	1,763			
	REPORT							**123,076**	**1.44**	**5,698**	**153,716**	**1.65**	**8,154**	**143,438**	**1.65**	**7,609**	**29,794**	**1.84**	**1,763**			
Cal May-14	oxide	59,214.00	1.64	2,772.00	1.67	20,441.00	1.19	82,427	1.53	4,059				78,709	1.6	4,049	68,404	1.91	4,201			
	fresh					86.00	0.69	86	0.69	2	85,411	1.6	4,394				4,366	1.04	146			
	TOTAL	59,214.00	1.64	2,772.00	1.67	20,527.00	1.19	82,513	1.53	4,061	85,411	1.6	4,394	78,709	1.60	4,049	72,770	1.85	4,328			
	REPORT							**82,972**	**1.54**	**4,108**	**85,411**	**1.6**	**4,394**	**78,709**	**1.60**	**4,049**	**72,770**	**1.85**	**4,328**			
Cal Jun-14	oxide	55,038.00	1.80	2,545.00	1.49	24,462.00	1.11	82,045	1.58	4,173	53,561	1.95	3,358	60,383	1.78	3,456	49,604	2.01	3,206			
	fresh					173.00	0.70	173	0.70	4												
	TOTAL	55,038.00	1.80	2,545.00	1.49	24,635.00	1.11	82,218	1.58	4,177	53,561	1.95	3,358	60,383	1.78	3,456	49,604	2.01	3,206			
	REPORT							**66,465**	**1.8**	**3,846**	**53,561**	**1.95**	**3,358**	**60,383**	**1.78**	**3,456**	**49,604**	**2.01**	**3,206**			
Cal Jul-14	oxide	53,670.00	2.33	2,640.00	1.42	23,748.00	1.08	80,058	1.93	4,967	81,090	1.89	4,927	78,566	1.87	4,715	67,647	2.41	5,242			
	fresh	652.00	2.68	43.00	4.17	1,476.00	0.87	2,171	1.48	103							4,119	1.67	221			
	TOTAL	54,322.00	2.33	2,683.00	1.47	25,224.00	1.07	82,229	1.92	5,070	81,090	1.89	4,927	78,566	1.87	4,724	71,766	2.28	5,261			
	REPORT							**82,254**	**1.92**	**5,078**	**81,090**	**1.89**	**4,927**	**78,566**	**1.87**	**4,724**	**71,766**	**2.28**	**5,261**			
Cal Aug-14	oxide	60,688.00	2.28	1,921.00	1.37	23,658.00	1.05	86,267	1.93	5,340				78,712	1.90	4,807	72,169	2.29	5,313			
	fresh	4,169.00	3.16	130.00	1.75	1,868.00	1.04	6,167	2.49	493	83,673	2	5,380	1,898	2.34	143	2,232	2.34	168			
	TOTAL	64,857.00	2.34	2,051.00	1.40	25,526.00	1.05	**92,434**	**1.96**	**5,833**	83,673	2	5,380	80,610	1.91	4,950	74,401	2.28	5,454			
	REPORT							**92,286**	**1.97**	**5,845**	**83,673**	**2**	**5,380**	**80,610**	**1.91**	**4,950**	**74,401**	**2.28**	**5,454**			
Cal Sep-14	oxide	36,957.00	2.43	1,574.00	2.16	23,097.00	1.16	61,628	1.95	3,865	80,722	1.95	5,061	87,694	1.88	5,299	95,841	2.34	7,210			
	fresh					43.00	0.72	43	0.72	1												
	TOTAL	36,957.00	2.43	1,574.00	2.16	23,140.00	1.16	**61,671**	**1.95**	**3,866**	80,722	1.95	5,061	87,694	1.88	5,301	95,841	2.34	7,210			
	REPORT							**62,380**	**1.94**	**3,891**	**80,722**	**1.95**	**5,061**	**87,694**	**1.88**	**5,301**	**95,841**	**2.34**	**7,210**			
Cal Oct-14	oxide	42,165.00	2.19	1,473.00	1.68	24,298.00	1.08	67,936	1.78	3,894				82,651	1.77	4,704	98,092	2.37	7,474			
	fresh	11,422.00	4.58	130.00	3.89	3,561.00	1.63	15,113	3.88	1,886	103,566	1.49	4,961	18,515	2.05	1,219	12,124	2.65	1,033			
	TOTAL	53,587.00	2.70	1,603.00	1.86	27,859.00	1.15	**83,049**	**2.16**	**5,780**	103,566	1.49	4,961	101,166	1.82	5,920	110,216	2.4	8,504			
	REPORT							**82,714**	**2.17**	**5,771**	**103,566**	**1.49**	**4,961**	**101,166**	**1.82**	**5,920**	**110,216**	**2.4**	**8,504**			

Cal Nov-14	oxide	45,814.00	2.20	1,771.00	1.77	19,631.00	1.02	67,216	1.84	3,983				131,318	1.48	6,267	77,341	1.6	**3,979**			
	fresh	8,991.00	3.22	130.00	2.00	6,950.00	1.12	16,071	2.30	1,190	133,612	1.42	6,100	31,459	2.12	2,148	12,590	2.21	**895**			
	TOTAL	54,805.00	2.37	1,901.00	1.79	26,581.00	1.05	**83,287**	**1.93**	**5,173**	133,612	1.42	6,100	162,777	1.61	8,426	89,931	1.69	4,886			
	REPORT							**83,067**	**1.94**	**5,181**	**133,612**	**1.42**	**6,100**	**162,777**	**1.61**	**8,426**	**89,931**	**1.69**	**4,886**			
Cal Dec-14	oxide	41,557.00	2.31	1,679.00	1.47	16,395.00	1.05	59,631	1.94	3,712				76,367	1.66	4,008	62,168	1.90	3,798			
	fresh	12,379.00	2.25	1,650.00	1.80	13,595.00	1.09	27,624	1.65	1,466	99,540	1.56	4,992	30,260	1.33	1,298	24,176	2.05	1,593			
	TOTAL	53,936.00	2.29	3,329.00	1.63	29,990.00	1.07	**87,255**	**1.85**	**5,178**	99,540	1.56	4,992	106,627	1.55	5,314	86,344	1.93	5,358			
	REPORT							**86,423**	**1.85**	**5,140**	**99,540**	**1.56**	**4,992**	**106,627**	**1.55**	**5,314**	**86,344**	**1.93**	**5,358**			
Cal Jan-15	oxide	8,877	2.21	800	1.20	7,989	1.24	17,666	1.73	980				14,247	1.67	766	53,445	1.61	2,773			
	fresh	3,518	2.30			5,908	1.04	9,426	1.51	458	24,658	1.33	1,054	7,233	1.41	328	7,586	1.56	381			
	TOTAL	12395	2.24	800	1.20	13897	1.15	27,092	1.65	1,438	24,658	1.33	1,054	21,480	1.58	1,091	61,032	1.61	3,159			
	REPORT							**27,792**	**1.62**	**1,448**	**24,658**	**1.33**	**1,054**	**21,480**	**1.58**	**1,091**	**61,032**	**1.61**	**3,159**			
Cal Feb-15	oxide	34,220	2.17	1,941	1.29	13,716	0.96	49,877	1.80	2,892				54,063	1.71	2,973	45,424	1.71	2,502			
	fresh	5,733	2.27	1,216	1.73	5,733	2.27	12,682	2.22	904	98,346	1.38	4,363	15,486	1.02	506	9,339	1.42	425			
	TOTAL	39,953	2.19	3,157	1.46	19,449	1.34	62,559	1.89	3,796	98,346	1.38	4,363	69,549	1.56	3,488	54,763	1.66	2,923			
	REPORT							**61,118**	**1.76**	**3,458**	**98,346**	**1.38**	**4,363**	**69,549**	**1.56**	**3,488**	**54,763**	**1.66**	**2,923**			
Cal Mar-15	oxide	34,802	2.15	889	1.76	12,141	1.00	47,832	1.85	2,848				41,255	1.54	2,042	46,336	1.39	2,073			
	fresh	4,691	1.95	434	1.61	12,075	0.96	17,200	1.25	689	104,601	1.26	4237	15,348	1.55	764	4,643	1.75	261			
	TOTAL	39,493	2.13	1,323	1.71	24,216	0.98	65,032	1.69	3538	104,601	1.26	4237	56,604	1.54	2803	50,979	1.42	2,327			
	REPORT							**65,905**	**1.74**	**3687**	**104,601**	**1.26**	**4237**	**56,604**	**1.54**	**2803**	**50,979**	**1.42**	**2,327**			
Cal Apr-15	oxide	23,358	1.78	1,703	1.22	5,458	0.92	30,519	1.59	1565				9,370	1.6	481	10,399	1.41	471			
	fresh	21,630	1.86	3,474	1.49	12,809	0.97	37,913	1.53	1859	76383	1.47	3,610	20,895	1.86	1251	20,354	1.53	1,000			
	TOTAL	44,988	1.82	5,177	1.40	18,267	0.96	68,432	1.56	3,424	76383	1.47	3,610	30,265	1.78	1,732	30,753	1.49	1,473			
	REPORT							**66,755**	**1.56**	**3,348**	**76383**	**1.47**	**3,610**	**30,265**	**1.78**	**1,732**	**30,753**	**1.49**	**1,473**			
Cal May-15	oxide	17,811	2.11	8,023	1.12			25,834	1.81	1,499				12,235	1.7	670	29,127	1.76	1,653			
	fresh	45,565	1.84	4,691	1.52	22,586	1.05	72,842	1.57	3,687	110,269	1.51	5353	54,482	1.52	2,665	40,122	2.19	2,826			
	TOTAL	63,376	1.92	12,714	1.27	22,586	1.05	98,676	1.63	5186	110,269	1.51	5353	66,717	1.55	3335	69,249	2.01	4,479			
	REPORT							**98,510**	**1.64**	**5194**	**110,269**	**1.51**	**5353**	**121,199**	**1.55**	**3335**	**69,249**	**2.01**	**4,479**			
Cal June-15	oxide	15,747	1.85	111	0.88	3,026	1.06	18,884	1.72	1043				42,817	1.53	2,107	30,172	2.05	1,984			
	fresh	80,748	2.49	6,428	1.59	40,700	1.27	127,876	2.05	8443	155,576	1.67	8353	110,671	1.30	4,613	52,468	2.02	3,405			
	TOTAL	96,495	2.38	6,539	1.58	43,726	1.25	146,760	2.01	9486	155,576	1.67	8353	153,489	1.36	6711	82,640	2.03	5,389			
	REPORT							**144,594**	**2.01**	**9344**	**155,576**	**1.67**	**8353**	**153,489**	**1.36**	**6711**	**82,640**	**2.03**	**5,389**			
Cal July-15	oxide	9,070	1.41	42	1.55	148	0.87	9,260	1.40	416				7,111	1.04	238	2,906	2.13	199			
	fresh	79,796	3.49	5,344	1.24	40,569	1.36	125,709	2.71	10940	143,874	1.82	8419	122,176	1.67	6,568	61,531	2.67	5,282	128,207	2.07	8,532
	TOTAL	88,866	3.28	5,386	1.25	40,717	1.35	134,969	2.62	11,356	143,874	1.82	8419	129,288	1.64	6817	64,438	2.65	5,490	128,207	2.07	8,532
	REPORT							**134,968**	**2.6**	**11282**	**143,874**	**1.82**	**8419**	**129,288**	**1.64**	**6817**	**64,438**	**2.65**	**5,490**	**128,207**	**2.07**	**8,532**
Cal Aug-15	oxide	10,269	1.85	78	0.62	1,789	0.92	12,136	1.71	665							14,627	1.64	771	11,584	2.16	806
	fresh	75,884	2.40	7,340	1.40	28,668	0.97	111,892	1.97	7084	131,247	1.75	7,384				51,860	3.74	6,240	98,812	2.57	8,156
	TOTAL	86,153	2.33	7,418	1.39	30,457	0.97	124,028	1.94	7,749	131,247	1.75	7,384	125,286	1.80	7,237	66,487	3.28	7,011	110,396	2.52	8,962
	REPORT							**122,050**	**1.95**	**7,668**	**131,247**	**1.75**	**7,384**	**125,286**	**1.80**	**7,237**	**66,487**	**3.28**	**7,011**	**110,396**	**2.52**	**8,962**
Cal Sep 15	oxide	2,792	2.03			342	0.87	3,134	1.90	191							22,240	1.61	1,149	11,022	2.21	783
	fresh	41,744	2.40	2,302	1.52	17,069	1.37	61,115	2.08	4,082	80,313	1.79	4622				60,131	2.11	4,073	71,121	1.73	3,952
	TOTAL	44,536	2.38	2,302	1.52	17,411	1.36	64,249	2.07	4273	80,313	1.79	4622	75,939	1.75	4276	82,372	1.97	5,222	82,143	1.79	4,735
	REPORT							**64,249**	**2.07**	**4276**	**80,313**	**1.79**	**4622**	**75,939**	**1.75**	**4276**	**82,372**	**1.97**	**5,222**	**82,143**	**1.79**	**4,735**
Cal Oct 15	oxide	1,491	1.15	74	0.74	224	0.60	1,789	1.07	61										2,036	0.80	52
	fresh	39,527	2.32	5,560	3.09	16,420	1.24	61,507	2.10	4149	62,644	1.80	3,625				55,409	2.34	4,171	69,578	1.93	5,310
	TOTAL	41,018	2.27	5,634	3.06	16,644	1.23	63,296	2.07	4,210	62,644	1.80	3,625	70,287	1.86	4,212	55,409	2.34	4,171	71,607	1.89	4,363
	REPORT							**63,296**	**2.07**	**4,206**	**62,644**	**1.80**	**3,625**	**70,287**	**1.86**	**4,212**	**55,409**	**2.34**	**4,171**	**71,607**	**1.89**	**4,363**

Cal Nov 15	oxide	1970	1.89			471	0.81	2,441	1.68	132												
	fresh	55380	2.10	3430	1.35	20589	0.90	79,399	1.76	4,482	91,951	1.77	5233				53,661	2.07	3,563	70,448	1.80	4,073
	TOTAL	57350	2.09	3430	1.35	21060	0.90	81,840	1.75	4,614	91,951	1.77	5233	72,038	1.75	4047	53,661	2.07	3,563	70,448	1.80	4,073
	REPORT							**81,500**	**1.76**	**4601**	**91,951**	**1.77**	**5233**	**72,038**	**1.75**	**4047**	**53,661**	**2.07**	**3,563**	**70,448**	**1.80**	**4,073**
Cal Dec 15	oxide	40	0.66	41	0.50			81	0.58	2												
	fresh	28,148	3.03	2,650	2.63	19,243	0.98	50,041	2.22	3,574	46,418	2.00	2,985				27,661	1.87	1,662	53,645	1.80	3,104
	TOTAL	28,188	3.03	2,691	2.60	19,243	0.98	50,122	2.22	3,575	46,418	2.00	2,985	49,822	1.83	2,931	27,661	1.87	1,662	53,645	1.80	3,104
	REPORT							**50,165**	**2.22**	**3,581**	**46,418**	**2.00**	**2,985**	**49,822**	**1.83**	**2,931**	**27,661**	**1.87**	**1,662**	**53,645**	**1.80**	**3,104**
Cal Jan 16	oxide							0		0												
	fresh	20,198	2.36	3,214	5.53	12,988	1.43	36,400	2.31	2,701	40,559	1.58	2,060	18,633	1.60	959	62,150	2.29	4,576			
	TOTAL	20,198	2.36	3,214	5.53	12,988	1.43	36,400	2.31	2,701	40,559	1.58	2,060	18,633	1.60	959	62,150	2.29	4,576	**7,752**	**3.76**	**937**
	REPORT							**36,401**	**2.31**	**2,703**	**40,559**	**1.58**	**2,060**	**18,633**	**1.60**	**959**	**62,150**	**2.29**	**4,576**	**7,752**	**3.76**	**937**
Cal Feb-16	oxide	164	1.94					164	1.94	10												
	fresh	53,515	2.54	6,255	1.51	24,673	1.12	84,443	2.05	5562	70,087	1.84	4153	78,747	1.68	4,253	84,649	1.86	5,066	72,664	1.84	4,310
	TOTAL	53,679	2.54	6,255	1.51	24,673	1.12	84,607	2.05	5,573	70,087	1.84	4,153	78,747	1.68	4,253	84,649	1.86	5,066	72,664	1.84	4,310
	REPORT							**83,573**	**2.05**	**5,510**	**70,087**	**1.84**	**4,153**	**78,747**	**1.68**	**4,253**	**84,649**	**1.86**	**5,066**	**72,664**	**1.84**	**4,310**
Cal Mar 16	oxide							0		0												
	fresh	65,460	2.71	4,344	1.85	24,325	1.07	94,129	2.25	6,799	79,926	2.05	5,268	75,939	1.75	4,276	71,315	2.34	5,363	88,013	1.99	5,618
	TOTAL	65,460	2.71	4,344	1.85	24,325	1.07	94,129	2.25	6799	79,926	2.05	5268	75,939	1.75	4276	71,315	1.97	5,222	88,013	1.99	5,618
	REPORT							**89,655**	**2.2**	**6335**	**79,926**	**2.05**	**5268**	**75,939**	**1.75**	**4276**	**71,315**	**2.34**	**5,363**	**88,013**	**1.99**	**5,618**
Cal Apr 16	oxide																					
	fresh	58,988	2.24	6,820	1.75	35,228	1.12	101,036	1.82	5900	70,887	1.99	4535	69,566	1.74	3891	60,685	2.06	4,029	78,942	1.70	4,315
	TOTAL	58,988	2.24	6,820	1.75	35,228	1.12	101,036	1.82	5,900	70,887	1.99	4,535	69,566	1.74	3,891	60,685	2.06	4,029	78,942	1.70	4,315
	REPORT							**101,079**	**1.81**	**5,878**	**70,887**	**1.99**	**4,535**	**69,566**	**1.74**	**3,891**	**60,685**	**2.06**	**4,029**	**78,942**	**1.70**	**4,315**
Cal May 16	oxide																					
	fresh	56903	2.49	6125	2.25	29147	1.38	92,175	2.12	6,292	54,372	2.13	3,723	54,308	1.89	3,298	67,193	1.92	4,140	67,908	2.07	4,527
	TOTAL	56903	2.49	6125	2.25	29147	1.38	92,175	2.12	6,292	54,372	2.13	3723	54,308	1.89	3298	67,193	1.92	4,140	67,908	2.07	4,527
	REPORT							**92,175**	**2.13**	**6299**	**54,372**	**2.13**	**3723**	**#REF!**	**#REF!**	**#REF!**	**67,193**	**1.92**	**4,140**	**67,908**	**2.07**	**4,527**
Cal Jun 16	oxide																					
	fresh	39,094	1.55	7,167	1.39	15,073	1.09	61,334	1.42	2,797	37,781	1.49	1810	37,842	1.28	1557	27,925	1.74	1,563	36,216	1.45	1,690
	TOTAL	39,094	1.55	7,167	1.39	15,073	1.09	61,334	1.42	2,797	37,781	1.49	1,810	37,842	1.28	1,557	27,925	1.74	1,563	36,216	1.45	1,690
	REPORT							**61,421**	**1.42**	**2,803**	**37,781**	**1.49**	**1,810**	**37,842**	**1.28**	**1,557**	**27,925**	**1.74**	**1,563**	**36,216**	**1.45**	**1,690**
Cal Jul 16	oxide																					
	fresh	43264	1.43	5821	1.72	21458	1.14	70,543	1.37	3,097	44,378	1.75	2,497	60,246	1.55	2,995	58,880	1.58	2,993	55,422	1.57	2,796
	TOTAL	43264	1.43	5821	1.72	21458	1.14	70,543	1.37	3,097	44,378	1.75	2497	60,246	1.55	2995	58,880	1.58	2,993	55,422	1.57	2,796
	REPORT							**70,500**	**1.37**	**3098**	**44,378**	**1.75**	**2497**	**60,246**	**1.55**	**2995**	**58,880**	**1.58**	**2,993**	**55,422**	**1.57**	**2,796**
Cal Aug 16	oxide																					
	fresh							68,467	1.64	3,618	61,721	1.51	2996	62,788	1.42	2867	73,194	1.32	3,109	62,743	1.21	2438
	TOTAL	0	#DIV/0!	0	0	#DIV/0!	0	68,467	1.64	3,618	61,721	1.51	2,996	62,788	1.42	2,867	73,194	1.32	3,109	62,743	1.21	2,438
	REPORT							**68,467**	**1.64**	**3,618**	**61,721**	**1.51**	**2,996**	**62,788**	**1.42**	**2,867**	**73,194**	**1.32**	**3,109**	**62,743**	**1.21**	**2,438**
Cal Sep-16	oxide																					
	fresh							35,751	1.86	2,138	34,401	2.02	2,234	23,063	1.84	1,363	24,916	2.04	1,638	19,976	1.98	1,270
	TOTAL							35,751	1.86	2,138	34,401	2.02	2,234	23,063	1.84	1363	24,916	2.04	1,638	19,976	1.98	1,270
	REPORT							**35,751**	**1.86**	**2138**	**34,401**	**2.02**	**2234**	**23,063**	**1.84**	**1363**	**24,916**	**2.04**	**1,638**	**19,976**	**1.98**	**1,270**

Cal Oct 16	oxide																				
	fresh							49,828	1.55	2485	45,750	1.42	2089	38,125	1.58	1,942	39,417	1.68	2,132	38,854	1.53	1,915
	TOTAL							49,828	1.55	2,485	45,750	1.42	2089	38,125	1.58	1,942	39,417	1.68	2,132	38,854	1.53	1,915
	REPORT							**49,828**	**1.55**	**2,485**	**45,750**	**1.42**	**2089**	**38,125**	**1.58**	**1,942**	**39,417**	**1.68**	**2,132**	**38,854**	**1.53**	**1,915**
Cal Nov 16	oxide																				
	fresh							51,107	1.56	2,564				36,619	1.78	2,091	29,483	1.72	1,631	42,905	1.68	2,311
	TOTAL							51,107	1.56	2564	39,077	1.96	2,462	36,619	1.78	2091	29,483	1.72	1,631	42,905	1.68	2,311
	REPORT							**51,107**	**1.56**	**2564**	**39,077**	**1.96**	**2462**	**36,619**	**1.78**	**2091**	**29,483**	**1.72**	**1,631**	**42,905**	**1.68**	**2,311**
Cal Dec16	oxide																				
	fresh							44,340	1.38	1967				19,892	1.72	1100	34,506	1.36	1,505	28,610	1.41	1,294
	TOTAL							44,340	1.38	1,967	42,885	1.63	2,247	19,892	1.72	1,100	34,506	1.36	1,505	28,610	1.41	1,294
	REPORT							**44,340**	**1.38**	**1,967**	**42,885**	**1.63**	**2,247**	**19,892**	**1.72**	**1,100**	**34,506**	**1.36**	**1,505**	**28,610**	**1.41**	**1,294**
Cal Jan 17	oxide																				
	fresh							83,587	1.31	3,525				59,461	1.71	3,268	43,812	2.02	2,847	69,774	1.72	3,869
	TOTAL							83,587	1.31	3,525	67,451	1.9	4,120	59,461	1.71	3268	43,812	2.02	2,847	69,774	1.72	3,869
	REPORT							**83,587**	**1.31**	**3525**	**67,451**	**1.9**	**4120**	**59,461**	**1.71**	**3268**	**43,812**	**2.02**	**2,847**	**69,774**	**1.72**	**3,869**
Cal Feb 17	oxide																				
	fresh							103,662	1.25	4,166				50,833	1.69	2770	62,415	2.25	4,523	42,947	2.17	2,990
	TOTAL							103,662	1.25	4,166	72,336	1.93	4,489	50,833	1.69	2,770	62,415	2.25	4,523	42,947	2.17	2,990
	REPORT							**103,662**	**1.25**	**4,166**	**72,336**	**1.93**	**4,489**	**50,833**	**1.69**	**2,770**	**62,415**	**2.25**	**4,523**	**42,947**	**2.17**	**2,990**
Cal March 17	oxide																				
	fresh							41,211	1.56	2,018	31,711	2.61	2,661	34,548	2.10	2,333	43,898	2.98	4,204	35,427	2.69	3,063
	TOTAL							41,211	1.56	2,018	31,711	2.61	2,661	34,548	2.10	2,333	43,898	2.98	4,204	35,427	2.69	3,063
	REPORT							**41,211**	**1.56**	**2,018**	**31,711**	**2.61**	**2,661**	**69,096**	**2.10**	**4,665**	**43,898**	**2.98**	**4,204**	**35,427**	**2.69**	**3,063**
Cal April 17	oxide																				
	fresh							51,085	1.40	299	31,514	3.07	3,111	36,516	2.71	3182	51,558	2.65	4,389	44,098	2.88	4,081
	TOTAL							51,085	1.40	299	31,514	3.07	3,111	36,516	2.71	3,182	51,558	2.65	4,389	44,098	2.88	4,081
	REPORT							**51,085**	**1.40**	**299**	**31,514**	**3.07**	**3,111**	**52,164**	**2.51**	**4,210**	**51,558**	**2.65**	**4,389**	**44,098**	**2.88**	**4,081**
Cal May 17	oxide																				
	fresh							67,556	1.54	3,351	44,449	2.66	3,801	67,683	2.06	4,483	47,820	3.05	4,689	88,060	2.26	6,408
	TOTAL							67,556	1.54	3,351	44,449	2.66	3,801	67,683	2.06	4,483	47,820	3.05	4,689	88,060	2.26	6,408
	REPORT							**67,556**	**1.54**	**3,351**	**44,449**	**2.66**	**3,801**	**67,683**	**2.06**	**4,483**	**47,820**	**3.05**	**4,689**	**88,060**	**2.26**	**6,408**
Cal June 17	oxide																				
	fresh							74,448	1.97	4,727	62,588	2.26	4,548	63,730	2.04	4,177	20,723	2.60	1,732	77,295	2.05	5,094
	TOTAL							74,448	1.97	4,727	62,588	2.26	4,548	63,730	2.04	4,177	20,723	2.60	1,732	77,295	2.05	5,094
	REPORT							**74,448**	**1.97**	**4,727**	**62,588**	**2.26**	**4,548**	**63,730**	**2.04**	**4,177**	**20,723**	**2.60**	**1,732**	**77,295**	**2.05**	**5,094**
Cal July 17	oxide																				
	fresh							80,479	2.39	6,192	57,254	2.21	4,068	74,638	2.09	5,018	64,092	2.80	5,766	88,763	2.39	6,820
	TOTAL							80,479	2.39	6,192	57,254	2.21	4,068	74,638	2.09	5,018	64,092	2.80	5,766	88,763	2.39	6,820
	REPORT							**80,479**	**2.39**	**6,192**	**57,254**	**2.21**	**4,068**	**74,638**	**2.09**	**5,018**	**64,092**	**2.80**	**5,766**	**88,763**	**2.39**	**6,820**
Cal August 17	oxide																				
	fresh							2,190	2.83	199	3,348	3.05	328	3,577	2.31	266	24,133	2.85	2,211	340	1.44	16
	TOTAL							2,190	2.83	199	3,348	3.05	328	3,577	2.31	266	24,133	2.85	2,211	340	1.44	16
	REPORT							**2,190**	**2.83**	**199**	**3,348**	**3.05**	**328**	**3,577**	**2.31**	**266**	**24,133**	**2.85**	**2,211**	**340**	**1.44**	**16**

Cal September 17	oxide																					
	fresh																21,938	1.98	1,395			
	TOTAL																21,938	1.98	1,395			
	REPORT																**21,938**	**1.98**	**1,395**			
Cal October 17	oxide																					
	fresh																26,604	1.40	1,197			
	TOTAL																26,604	1.40	1,197			
	REPORT																**26,604**	**1.40**	**1,197**			
Cal November 17	oxide																					
	fresh																26,788	1.78	1,533			
	TOTAL																26,788	1.78	1,533			
	REPORT																**26,788**	**1.78**	**1,533**			
LOM TOTAL	oxide							938,908	1.78	53,821				1,035,714	1.70	56,575	873,634	1.99	55,857			
	Fresh							2,128,907	1.84	125,897				1,395,178	1.73	77,591	1,579,475	2.16	109,815			
	TOTAL							3,067,815	1.82	179,717	3,033,596	1.77	172,338	2,824,567	1.73	156,901	2,453,110	2.10	165,259			
	REPORT							3,053,205	1.81	177,971	3,033,596	**1.72**	167,942	#REF!	**#REF!**	#REF!	2,453,110	**2.10**	165,400			
July15-June16	REPORT							980,532	2.07	65,142	910,059	1.84	53,817							867,941	1.98	55,167
July 16- June 17	REPORT							822,021	1.52	40,147	638,863	2.03	41,652							695,214	1.68	37,529
July15 -LOM								1,804,743	1.82	105,489	1,548,922	1.92	95,469							1,563,155	1.98	99,532

APPENDIX 3

Click here to enter list of tenements *Click here to enter list of resource modellers.* *Click here to enter original report author(s)* *Click here to enter original report date.*

ALKANE RESOURCES LTD SHORT FORM ORE RESERVE REPORT

Tomingley Underground Ore Reserves

TENEMENT:	*ML1684*
OWNER:	Alkane Resources Ltd 100% OPERATOR: (ABN 35 000 689 216) Level 4, 66 Kings Park Road, WEST PERTH, WA 6153
COMMODITIES:	Gold
COMPILED BY:	Christopher Hiller
REPORT BY:	Christopher Hiller
REPORTING DATE:	30 June 2022

Project Summary

The Tomingley Gold Operation (TGO) is located on the Newell Highway, two kilometres south of the town of Tomingley, Tomingley is 54kms south west of Dubbo and 67kms North of Parkes, Central New South Wales. TGO's mining operations are currently focussed on the Wyoming and Caloma deposits and this forms a small portion of the Tomingley Gold Project (TGP) exploration licences.

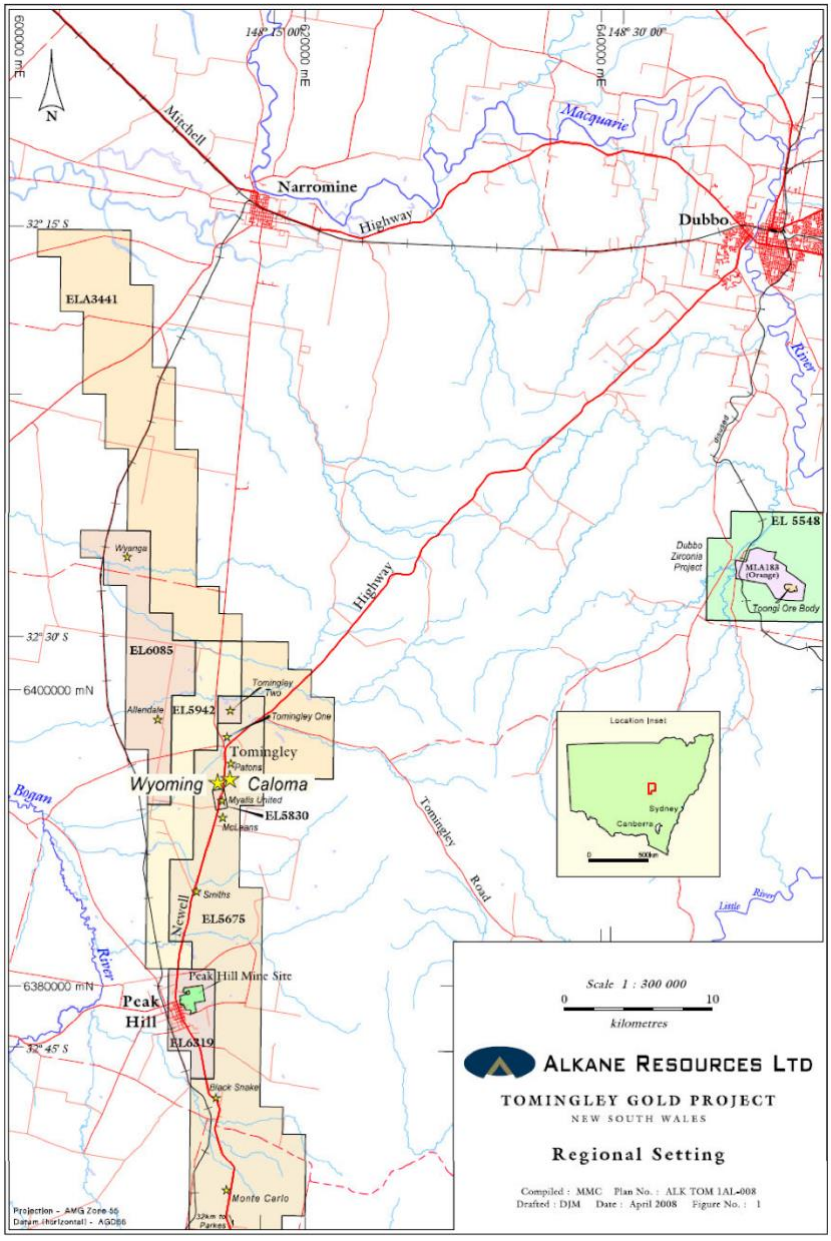

Figure 1: Regional Setting of the TGP

The gold mineralisation is hosted within volcaniclastic sediments, rare lavas and shallow intrusive porphyritic rocks. The volcanic units are of trachy-andesite to basaltic trachy-andesite composition. The volcaniclastic rocks, which contain very rare detrital quartz, are dominated by well bedded sandstones and siltstones with minor breccias, lithic conglomerates and black mudstones centred at the Wyoming One and Myalls United area, reducing in grainsize to dominantly peperitic graphitic mudstones north at Wyoming Three and the Caloma deposits. The volcanics appear to terminate further north at the historic Tomingley workings within the township. The volcaniclastic units are intruded by numerous coarse feldspar ± augite porphyritic bodies which commonly show peperitic contacts and are interpreted as shallowly emplaced sills. Wyoming Three, Caloma One and Caloma Two sills that host mineralisation are all correlative but are chemically distinct from Wyoming One and

Myalls United mineralised sills.

A narrow, marginally discordant, chlorite-talc schist has also been located by drilling just to the east of the sills at Wyoming One. This likely represents a mafic-ultramafic precursor, similar to olivine rich lavas (picrites) described in the Molong Belt.

Current mining activities comprise of underground mining of Wyoming One, Caloma One and Caloma Two orebodies. The cut back of the Caloma One pit is currently underway and will be completed in the next six months. TGO is operated on a residential basis with personnel residing in Dubbo, Narromine and Parkes in the Central West of New South Wales.

Two mining methods are used to mine the underground resource including, Longhole Open Stoping (LHOS) with loose or cemented rockfill and top-down LHOS with rib pillars and no fill. The choice of mining method is determined by value of the resource, orebody width and geotechnical factors.

Stoping configurations are predominantly single-lift stoping (25m vertical interval) with strike length of 20-30m. The stoping method (as illustrated in Figure 2) involves establishing a slot using conventional long-hole drill and blast techniques and then the stoping front is retreated along strike. The installation of brow cables and the use of a concurrent strike-retreat blasting sequence assist in controlling ground stability. Depending on the mining method used cemented rockfill or loose rockfilled is filled into the stopes upon completion of mining. For the LHOS with rib pillars there is no fill placement.

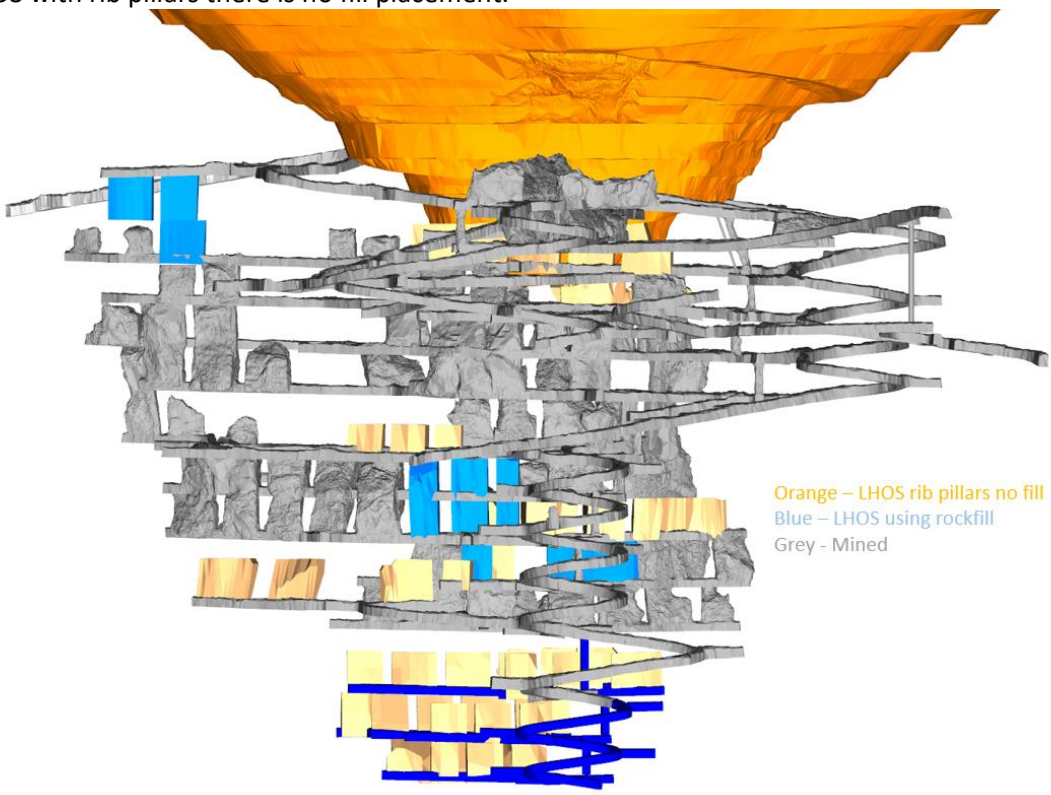

Figure 2: Isometric View of Wyoming One Pit and Stope Shapes

Ore production is scheduled at 900 ktpa which is trucked to surface using a fleet of four underground trucks (MT65). The truck fleet is matched with four Caterpillar R2900 loaders operating on a combination of tele-remote and manual control. Normal drilling fleet includes two development jumbos (DD420/422i) and two production drills (DL431/432).

Primary ventilation for Wyoming One is supplied by three 110kw, 1.4m diameter, single stage fans wall mounted underground. These fans will support mining down to the extent of Wyoming One ore deposit. Primary

ventilation for the Caloma orebodies is supplied using a similar configuration. The ventilation layout is illustrated in Figure 3.

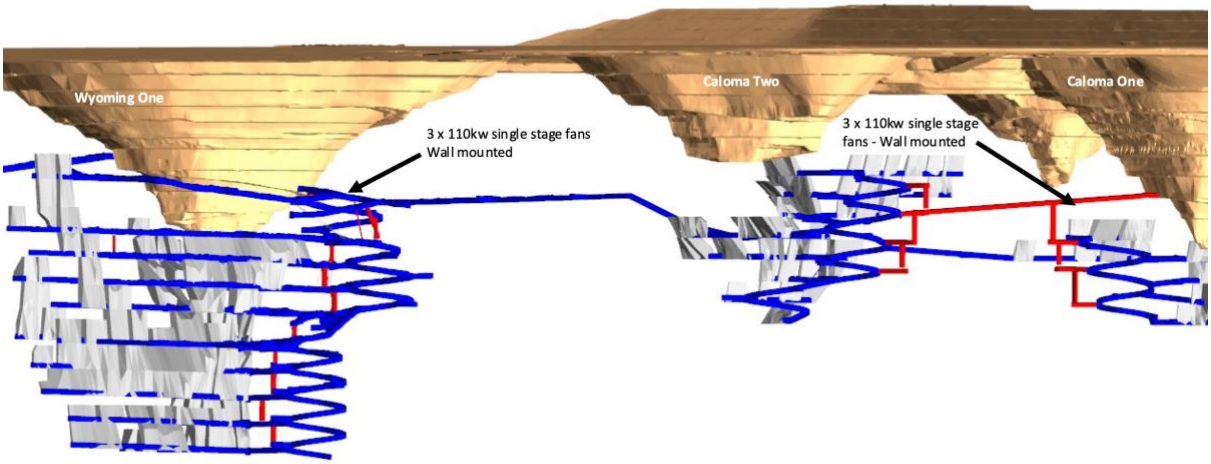

Figure 3: Primary Ventilation for Wyoming One, Caloma One and Caloma Two

Electrical infrastructure servicing TGO can deliver 10MW. The site currently uses 7.0MW; this falls within the current 10.0MW peak allowance. Underground mining currently uses 2.5MW, power is reticulated to Wyoming One, using a 1.3km high voltage cable from the mill. Power to the Caloma orebodies is provided by a further 600m extension of the high voltage cable along the access drive.

Tailings are begin deposited into stage eight (of RFS1), with stage nine currently under construction to be completed no later than March 2023. Stage nine allows for storage at the current processing rate until July 2023. A second tailing dam (RFS2) has been approved for stage one and two. Stage one allows storage of a further 3.0Mt with construction currently underway.

All TGO ore is trucked to the TGO processing plant which is located adjacent to the Wyoming Three pit. The plant consists of a crushing circuit, single-stage milling circuit and hybrid carbon-in-leach (CIL) circuit with one designated leach tank and numerous adsorption tanks. Gold is recovered from activated carbon into concentrated solution. Electrowinning and smelting are conducted in an adjacent secure gold room. The tailings from the process are thickened and pumped to a paddock-type tailings storage facility with multi-spigot distribution. Gold doré bars are transported to the Perth Mint for refining.

The reported Ore Reserve is based on the Measured and Indicated Mineral Resources from the current site based mine design. Figure 4 shows the Ore Reserve design, colour coded by Ore Reserve classification.

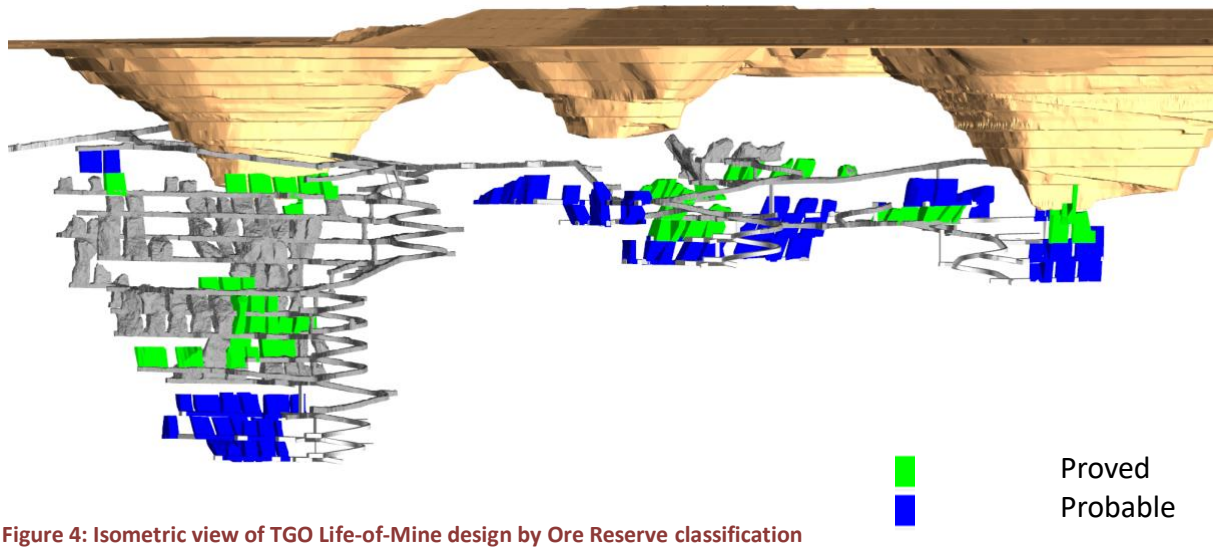

Figure 4: Isometric view of TGO Life-of-Mine design by Ore Reserve classification

The Ore Reserve estimate for TGO is shown in Table 1 below. The Ore Reserve is reported in accordance with the requirements of the 2012 Edition of the JORC Code, "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves".

Classification	Cut-off	Tonnes (kt)	Grade (g/t)	Ounces (koz)
Wyoming One				
Proved	1.3g/t Au	**366**	**2.09**	**25**
Probable		**304**	**2.17**	**21**
Subtotal		**670**	**2.13**	**46**
Caloma One				
Proved	1.3g/t Au	**68**	**1.75**	**4**
Probable		**315**	**1.56**	**16**
Subtotal		**383**	**1.59**	**20**
Caloma Two				
Proved	1.3g/t Au	**137**	**1.60**	**7**
Probable		**628**	**1.54**	**31**
Subtotal		**765**	**1.55**	**38**
Total				
Proved	1.3g/t Au	**570**	**1.93**	**36**
Probable		**1,248**	**1.70**	**68**
Total		**1,818**	**1.77**	**104**

Table 1: Tomingley Gold Operation Ore Reserve Summary – 30 June 2022

References

Thomson, C., 2022, 'Caloma Underground Geotechnical Review', Mine Geotech Pty Ltd

Pridmore, C., 2020, 'Wyoming 1 2020 Resource Estimate'

Hiller, C., 2019, 'Tomingley Underground AU2000/oz review', *Hiller Enterprises Pty Ltd*

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Faast, C., 2010, 'Tomingley Wyoming One Underground Feasibility Study', *Mining One Consultants.*

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Leak, M., 2015, 'Tomingley Gold Operations Options Study', *Alkane Resources Ltd, Internal Report.*

Lewis, R., 2010, 'Summary Report Wyoming One Underground Resources. Estimation of a Resource Optimized for Underground Exploitation', *Lewis Mineral Resource Consulting Pty Ltd*

JORC 2012 Table 1 Checklist of Assessment and Reporting Criteria

Section 4 Estimation and Reporting of Ore Reserves

Criteria	Comments
Mineral Resource estimate for conversion to Ore Reserves	• The underground Ore Reserve estimate is based on the Mineral Resource estimate carried out by Alkane Resources Ltd. Gold grade was estimated using ordinary kriging for Wyoming One, Caloma One and Caloma Two. • The Mineral Resources are reported exclusive of the Ore Reserve. • The Mineral Resource model used to estimate this Reserve is described as; wyoming1_gc_03072022.mdl, caloma_22072022.mdl and caloma2_16072022.mdl.
Site visits	• The Competent Person is Christopher Hiller a full-time employee of Hiller Enterprises Pty Ltd. Christopher has been providing mining engineering support, since February 2020. Christopher is a member of the Australasian Institute of Mining and Metallurgy.
Study status	• Wyoming One is an operating underground mine, having commenced capital development in December 2018 and stoping in February 2020. The life of mine design is updated and reviewed on a quarterly basis. • Capital development to access Caloma One and Two commenced in July 2020 and stoping in November 2021. The life of mine design is updated and reviewed on a quarterly basis. • The mine has been in full production since 2014 and is achieving design objectives. • Any further studies undertaken are to extend the mine or optimise the current operating practices.
Cut-off parameters	• Two cut-off grades have been calculated and applied based on current costs and modifying factors for the Life-of-Mine plan. A gold price of AU$2,000/oz was provided by Alkane Resources Ltd and was used in this calculation. ○ **Fully Costed** cut-off grade of 1.3 g/t and this includes all costs associated with the extraction and processing of ore material ○ **Incremental Development** cut-off grade of 0.5 g/t applies to all development ore material.
Mining factors or assumptions	• The TGO Ore Reserve has been estimated based on detailed mine development and stope designs. Modifying factors for dilution and mining recovery have been applied post-geological interrogation to generate the final diluted and recovered Ore Reserve. • The Life-of-Mine plan used for budgeting at the Tomingley Gold Operations utilises two mining methods ○ Top down long hole open stoping using rib pillars with no fill

	○ Bottom up long hole open stoping using cemented or loose rockfill. • Stope size, development placement and ground support strategies have been designed in line with recommendations from the current ground control management plan. • 14,400m of grade control drilling is planned within Wyoming One, Caloma One and Caloma Two orebodies. • The model used to estimate the Ore Reserve is consistent with that which forms the basis of the Mineral Resource estimate for the TGO deposits. The models are internally known as wyoming1_gc_03072022.mdl, caloma_22072022.mdl and caloma2_16072022.mdl. • Planned dilution has been accounted for in the creation of the Stope Shapes. Unplanned mining dilution of 15% for LHOS with pillars and LHOS using CRF or loose rockfill has been used. This factor has been applied in Deswik Scheduler. • A 95% mining recovery factor has been applied to both LHOS using rib pillars and LHOS using cemented or loose rockfill. • Waste development excavations are given a 10% overbreak. No further dilution factors or mining recovery factors have been applied to development ore. • A global minimum mining width of 3m is used. While the ore body width generally exceeds the minimum mining width, where the ore body is narrower stoping outlines are designed to honour the minimum width and include planned dilution. • All ore in the Ore Reserve estimate is classified as a Proved or Probable Ore Reserve. No Inferred Mineral Resources is included in the Ore Reserve. The Inferred Mineral Resources in the Life-of-Mine plan have been removed from the Ore Reserve estimate. • The infrastructure requirements of the stoping methods used are already in place and maintenance of this infrastructure has been included in the economic evaluation. • The capital and operating costs of this additional infrastructure to support underground mining have been included in the economic evaluation which demonstrates the economic viability of the Ore Reserve.
Metallurgical factors or assumptions	• All TGO ore is trucked to the TGO processing plant which is located adjacent to the Wyoming Three pit. The plant consists of a crushing circuit, single-stage milling circuit and hybrid carbon-in-leach (CIL) circuit with one designated leach tank and numerous adsorption tanks.

	Gold is recovered from activated carbon into concentrated solution. Electrowinning and smelting are conducted in an adjacent secure gold room. The tailings from the process are thickened and pumped to a paddock type tailings storage facility with multi-spigot distribution. • The technology associated with processing of TGO ore is currently in operation and is based on industry standard practices. • Mine production and cash flow estimates are based on a metallurgical recovery of 87%, which is consistent with current performance. • No deleterious elements extracted. • N/A – no minerals defined by a specification. • The current tailings storage facility is adequate for processing until July 2023, with a second tailings storage facility approved to store a further 3.0Mt with construction underway.
Environmental	• TGO is currently compliant with all environmental regulatory agreements under the Environmental Protection Act 1986. • TGO was subject to numerous environmental studies as part of the Environmental Assessment (EA) for the Tomingley Gold Project during the approvals phase and all required approvals were granted prior to the commencement of mining. The EA included documentation regarding the underground mine which is still relevant today. • The Mine Rehabilitation Management Plan (MRMP) has been submitted, awaiting approval. • The project approval requires renewal prior to December 2025. • All external reporting against the environmental licenses is recorded and reported in the Annual Environmental Report available on the Alkane Resources Ltd website.

Infrastructure	• Infrastructure has been constructed for underground mining and processing. Works on site include access road, a water pipeline, a 66 KV power line, site drainage, topsoil stockpiling, waste dump construction, Residue Storage Dams, Process Water Dams, associated offices, workshops, fuel, and laydown areas. Sufficient site infrastructure has been constructed to process ore at 1.1Mtpa.
	
	• The underground specific infrastructure in place includes
	  ○ Underground primary ventilation fans
	  ○ Secondary fans
	  ○ Portals
	  ○ Pump station
	  ○ Mobile equipment
	  ○ Compressors

	○ HV to portals ○ Substations ○ Rescue equipment • Labour is sourced from Tomingley, Narromine, Dubbo, and Parkes region and as such the operation requires no accommodation or messing facilities. • Central NSW has many active mining operations within a short distance of TGO and as such the ability to procure labour and infrastructure services for the operation does not pose any major challenges.
Costs	• All costs used in the estimation of Ore Reserves are based on the Ore Reserve plan. This plan excludes the Inferred Mineral Resources in the Life-of-Mine plan. • Mining capital estimates have been made using, wherever possible, budget pricing obtained from reputable suppliers. The few instances where costs could not be obtained from these sources, costs were obtained by benchmarking of similar sized Australian mines. • The operating cost estimates have been derived from the past years of operating costs. • No deleterious elements are modelled in the Mineral Resources Models nor has there been any concern with this during the period TGO has been producing gold dorè. • Gold price is expressed in Australian dollars and no exchange rate is required. A gold price of AU$2,000/oz has been used in all calculations. • Transport charges for dorè to the Perth Mint are included in the refining charges and based on historical charges incurred by TGO. • Site treatment charges are well known due to the current processing of fresh rock ore material from underground. Refining charges have been assumed to be AU$1.50/oz in accordance with historical charges incurred by TGO by the Perth Mint. • A 4% New South Wales state royalty of revenue less processing and selling costs has been allowed for in the financial evaluation.
Revenue factors	• A gold price of AU$2,000/oz has been used in all revenue calculations for the Ore Reserve.
Market assessment	• All gold doré produced at the TGO processing plant is transported to the Perth Mint for refining. • The gold market is driven by several factors and fluctuates dependant on physical supply and demand, political tensions, and global

	instability. In times of uncertainty gold is seen to be a stable and safe "currency" and this has maintained its value for a significant period. • TGO currently sells gold at spot price and via forward sale contracts. 36,800 ounces at an average gold price of $2,715 per ounce is currently under sale contracts between September 2022 to December 2023. • The Underground mine would contribute only a small portion of the overall volume of output and is unlikely to have any impact on the market.
Economic	• The underground operation at TGO is an operating asset. • The financial analysis used the costs as well as the revenue from gold sales, together with the mine schedule to calculate a net cashflow per month for the duration of the project. This cashflow is then discounted to derive at the projects Net Present value (NPV). This NPV excludes depreciation, amortisation, and taxes. • No inflation of costs has been undertaken as there has been no forward speculation on gold price. It is the net cashflow that drives NPV and this is assumed to remain consistent (i.e. gold price and inflation move in the same direction). • Life-of-Mine plans are updated on a quarterly basis. These plans reflect current and projected performances for the Ore Reserve. • Sensitivities have been undertaken for both the entire mining inventory and the reserve version of the financial model.
Social	• Alkane Resources Ltd's social licence to operate is underpinned by the excellent relationship that the Company has built, over many years, with the local community of Tomingley. • TGO has a set up a community consultation committee that meets quarterly to discuss the activities on the mine, interaction with the local community and any concerns from local residents, the committee includes: ○ Independent Chairperson, ○ TGO Environment and Community Manager, ○ TGO Operations Manager, ○ Narromine Shire Council Representative, ○ 3 x Community Representatives, ○ An Aboriginal Community Representative.
Other	• A company risk register is maintained to address and mitigate against all foreseeable risks that could impact the Ore Reserve.

	• Contracts are in place for all critical goods and services required to operate the mine. • The TGO underground operations are an operating asset in full production with all required government and statutory permits and approvals are in place.
Classification	• The Ore Reserve includes only Proved and Probable classifications. • The Ore Reserve is in line with expectations given the low capital cost associated with the project and due to the locality. The Competent Person is confident that it is an accurate estimation of the current TGO reserve. • The economically minable component of the Measured Mineral Resource has been classified as a Proved Ore Reserve. • The economically minable component of the Indicated Mineral Resource has been classified as a Probable Ore Reserve.
Audits or reviews	• The Ore Reserve has undergone internal reviews to ensure quality and consistency. No external reviews have been undertaken.
Discussion of relative accuracy/ confidence	• The Ore Reserve estimate has been prepared in accordance with the guidelines of the JORC Code (2012). The relative confidence of the estimates contained fall with the criteria of Proved and Probable Ore Reserves. • The Ore Reserve has been estimated in line with the Alkane Resources Ltd Ore Reserve process. • The main factors which could affect the confidence of the assessment include: ○ **Stope stability**, this has been assessed by a reputable geotechnical consultancy and remains relevant. ○ **Modifying factors**, these are in line with industry accepted norms ○ **Costs**, cost have been sourced from the past years of capital and operating costs. ○ **Revenue**, revenue assumptions used are in line with TGO expectations and gold price used below current spot prices.

APPENDIX 4

Section 4 Estimation and Reporting of Ore Reserves Roswell and San Antonio

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

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Mineral Resource estimate for conversion to Ore Reserves</td><td>• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</td><td>The Mineral Resource estimate that this reserve is based upon has been compiled by Mr David Meates, Exploration Manager NSW for Alkane Resources Ltd. The mineral resource estimates have been completed using block models developed by Mr Meates for San Antonio and Roswell, using data supplied by Alkane Resources Ltd (Alkane).

The models produced incorporated all mineralisation in the San Antonio and Roswell deposit that has been generated to February 2021.

The following table comprises the Mineral Resources used within this study, and has been taken from the ASX media release dated 16 February 2021, Updated San Antonio Resource Estimation Shows Contained Ounces for Tomingley Extension of ~1.1Moz

This release is publicly available on the Alkane controlled web site.

https://investors.alkane.com.au/site/PDF/ba3739ef-855a-4bbf-af48-52784c11bb6c/SanAntonioResourceEstPushesTomingleyExtover11mOz

<table>
<tr><th>Project</th><th>Resource Category</th><th>Cut-Off</th><th>Tonnes (Mt)</th><th>Gold Grade g/t</th><th>Gold Metal (Koz)</th></tr>
<tr><td rowspan="3">San Antonio</td><td>Indicated</td><td>0.5g/t Au</td><td>5.93</td><td>1.82</td><td>347</td></tr>
<tr><td>Inferred</td><td>0.5g/t Au</td><td>1.39</td><td>1.32</td><td>59</td></tr>
<tr><td>Total</td><td>0.5g/t Au</td><td>7.32</td><td>1.72</td><td>406</td></tr>
<tr><td rowspan="3">Roswell</td><td>Indicated</td><td>0.5g/t Au</td><td>7.88</td><td>2.07</td><td>524</td></tr>
<tr><td>Inferred</td><td>0.5g/t Au</td><td>2.19</td><td>1.93</td><td>136</td></tr>
<tr><td>Total</td><td>0.5g/t Au</td><td>10.1</td><td>2.04</td><td>660</td></tr>
<tr><td rowspan="3">Total Resource Inventory</td><td>Indicated</td><td>0.5g/t Au</td><td>13.80</td><td>1.96</td><td>871</td></tr>
<tr><td>Inferred</td><td>0.5g/t Au</td><td>3.58</td><td>1.69</td><td>195</td></tr>
<tr><td>Total</td><td>0.5g/t Au</td><td>17.4</td><td>1.90</td><td>1066</td></tr>
</table>
</td></tr>
<tr><td></td><td>• Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</td><td>The Mineral Resources reported are inclusive of the Ore Reserves.</td></tr>
<tr><td>Site visits</td><td>• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</td><td>The Competent Person for the Ore Reserves, Mr. John Millbank is an independent consultant engaged by Alkane Resources. Mr Millbank has contributed to the mine planning processes at</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	(If no site visits have been undertaken indicate why this is the case.)	Tomingley Gold Operations since commencement of operations in 2013 and has been closely involved with site operations since this time. A site visit to the San Antonio and Roswell Sites for the Ore Reserves calculations was completed on the 7th June 2021.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* *(The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.)*	The Reserves contained in this report have been prepared to a prefeasibility level. The Tomingley Gold Mine is an operational open pit and underground mine and CIP processing plant. The mine is currently based on the extraction and treatment of ore from underground and open pit operations and remnant stockpiles from previous open cut mining operations. Previous open pits – Caloma, Caloma Two, Wyoming One and Wyoming Three had been completed to economic limits by June 2019. Caloma is currently undergoing a further cutback to the open pit. The TGO processing plant utilises two stage crushing, single stage grinding and a gravity/CIL gold recovery circuit. The plant has a designated throughput of 1.25mtpa of oxide ore and 1.0mtpa of fresh (sulphide) ore. The plant has been operational since February 2014. • The Tomingley Gold Mine was subject to a Definitive Feasibility Study including the estimation of an initial Mineral Resource and Ore Reserve for the Wyoming One, Wyoming Three and Caloma open pits (2009, 2009 and 2012 respectively). Caloma 2 was successfully incorporated into the life of mine plan by Proactive Mining Solutions and in-house personnel, after the initial Feasibility Study. • This Reserves Statement is based upon well understood costs and physicals from previous operations at this mature operation. • Cost modelling for mining operations has been completed to a prefeasibility level. Contract prices for equipment hire have been applied to previous cost models and these require further definition work. Established operating costs have been used for processing and oncosts. • Mining and Processing modifying factors are well understood considering the longevity of the operation and previous open pit mining results. Processing reconciliations are well understood. • Capital costs have been completed using engineering estimates. Further work is required to bring these to Feasibility level.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• A lower block cut-off grade of 0.4g/t Au has been applied to the 'diluted' resource block model in calculating this Ore Reserve. The lower cut has been selected with consideration to mine ability, and incremental cash operating margins (i.e. processing costs). • The lower cut-off has been calculated based upon, - a $2250 per ounce gold price excluding royalties, - using process recoveries based on actual achieved for the historical mining of TGO, and proposed for the completion of San Antonio and Roswell. - estimated processing and administration costs for the life of mine plan, based upon achieved costs for the 2020 to 2021 financial year. • The cut-off grade has been verified by using costs and metallurgical recoveries from the previous mining and processing operations and expected Gold Price. The calculated lower block cut off at 0.4g/t is conservative when historic costs and processing recoveries are applied.
Mining factors or	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).*	Open cut truck excavator mining, with some free dig material in the upper oxide zones and drill and blast in the lower oxide and fresh materials.

Criteria	JORC Code explanation	Commentary
assumptions	• *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.*	• Equipment size and methods selected typical of moderate scale open pit gold mining. 190 tonne and 120 tonne class excavators for mining of the ore zone and 250 t class excavators are to be used for waste prestrip. • 100 tonne class mechanical drive haul trucks. • Dual lane in pit ramps at 24 m wide and 1:8.5 gradient for the majority of the pits. Single lane ramps at 15m wide have been designed to access the final stages of the mine. These have shown to be successful for previous operations at TGO. • Mining is on five metre high benches and is mined in two, two and a half metre high flitches, to reduce mining dilution. These flitch heights are typical for gold mining and match the size of mining equipment selected.
	• *The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc), grade control and pre-production drilling.*	In Pit ore boundaries will be 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 have been advised by specialised geotechnical consultants. The same consultants have been used at TGO since production commenced and are well familiar with the ground conditions. Site visits are conducted regularly by the consultants, and parameters reviewed. Any modifications to wall design are addressed in design.
	• *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).*	Mine Optimisation was completed using Whittle software. Resource model used was reblocked to 5mx5mx5m (x,y,z) minimum cell size. Gold price used was $2250 per ounce before royalty and selling costs. Mining, Processing and Administration costs were based on previous operations and current contract rates applied. Capital costs were excluded and added back in during financial analysis of the proposed mining schedule. Mine optimisation has excluded the inferred portion of the resource. Sensitivity analysis on costs, modifying factors and gold price has been completed. Application of conservative values for modifying factors has been conducted to ensure the project is robust for gold prices above those used in this study.
	• *The mining dilution factors used.*	The resource models supplied were based on a minimum cell size of 2.5m x 2.5mx2.5m (x,y,z). This was subsequently reblocked to 5mx5mx5m (x,y,z) to provide a SMU size suitable for the mining equipment to be selected. Reblocking to this cell size produces an inherent dilution and ore loss. Using the 0.4g/t cut off grade, this is calculated as 116% of initial tonnes, 81% of initial grade and resulting in 94% of contained metal. This is considered within limits of the study and as such no further dilution factor has been applied additional to the work completed within the block model.
	• *The mining recovery factors used.*	Assumed 100% recovery of the models based on the reblocked block size. Previous reconciliations at TGO indicate that this is within limits.
	• *Any minimum mining widths used.*	Pit Design has been limited to a minimum working width of 20 metres.
	• *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.*	Inferred resource category material has been excluded from the base case mine planning, at optimisation, design and scheduling level. Sensitivity analysis has shown less than 3 percent of contained metal could be included within the pit physicals from inferred resources.

Criteria	JORC Code explanation	Commentary
	• *The infrastructure requirements of the selected mining methods.*	• Infrastructure directly related to the processing methods is already in place from prior operations. Required near mine infrastructure includes offices, crib rooms, workshop and magazine. Additional works include upgrades for the Processing Plant, road works to change the alignment of the Newell Highway and Kyalite Road, and relocation of existing power, communications and water lines. Costs for these have been estimated and included in financial analysis of the mining schedule.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.*	Ore from the Tomingley Project will be treated at the Tomingley Gold Plant which is described above.
	• *Whether the metallurgical process is well-tested technology or novel in nature.*	The technology is well tested and has been successfully operated for eight years.
	• *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.*	Test work has been completed on samples recovered from drilling that were considered representative of the San Antonio and Roswell Resource. This test work indicated metallurgical recovery of up to 93% for oxide and 92% for fresh is possible. The original DFS plan for TGO used 96% metallurgical recovery for oxide and 91% for fresh for an overall recovery of 93%.. Processing of ores from each pit to completion during prior operations at TGO, have shown actual process recoveries to fall within the original DFS limits.
	• *Any assumptions or allowances made for deleterious elements.*	No deleterious elements extracted.
	• *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the ore body as a whole.*	Process recovery for the 2016/2017 financial year averaged 91.47%. A blend of 24% oxide and 76% fresh material was processed for the year from open pit mining sources. Process recovery for the 2020/2021 financial year, with ore being primarily from underground mining sources, was over 89%. With the intended plant upgrade works, the process recoveries used in this plan are within expectations of the actuals recovered through the plant. Conservative process recoveries of 82% for fresh rock were applied during sensitivity analysis and the project maintained positive cash flow at the tested gold price.
	• *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.*	• The new Project Approval will require State Significant Development consent because the Capital Investment Value is greater than $30 million. A single consent to incorporate all extension activities is being sought. The current Tomingley consent will be surrendered on activation of the new consent. The Minister for Planning and Public Spaces or the Independent Planning Commission is the determining authority. Once Project Approval is obtained there are several further approvals that are required. The further approvals of significance include: • Mining Lease – MEG; • Environment Protection Licence (new or amended) – EPA; • Roads approvals – Transport for NSW (WAD) and Council; • Water approvals – NRAR / DPIE Water; and • Stewardship agreement – BCD. • Waste will be sent to either the existing Wyoming Three or Caloma Two pit voids as backfill. Pit Sequencing will also allow for backfilling of voids in San Antonio as mining progresses. • Approval for the RSF 2 has been granted. Lifts to the existing facility will be sought as required.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power,*	• Infrastructure has already been constructed for open pit mining and processing. Works to site

Criteria	JORC Code explanation	Commentary
	water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	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. • Additional surface drainage works, offices, crib rooms, a workshop and magazine will be required. Other required works include upgrades for the Processing Plant, road works to change the alignment of the Newell Highway and Kyalite Road, and relocation of existing power, communications and water lines. • 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.*	Capital costs have been estimated from a combination of engineering quotes, known prices, existing Tomingley costs and estimates based on recent projects executed within the industry. The economic analysis for pit optimisation is based on total cash costs excluding capital. Capital costs are then added back into financial analysis during mine scheduling.
	• *The methodology used to estimate operating costs.*	• Operating costs – Mining and Process ○ Current wage rates. ○ Projected fuel price for 2021 ○ 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. ○ Allocated truck hours based on relative performance from prior mining operations and associated pit levels. ○ Assumed amount for overhaul to ROM and backfill locations based on these inputs. ○ Contract Prices for Processing Consumables ○ Current contract prices for power and estimated usage ○ Current onsite administration cost and a portion of head office costs.
	• *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 stockpiles beside the existing plant within estimated mining costs. Gold transportation costs to the Mint are included in the refining component of the processing costs assumed in the study.
	• *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.*	Processing operating costs outlined above.
	• *The allowances made for royalties' payable, both Government and private.*	Royalties payable at rate of 4% ex-mine value to the NSW State Government have been considered. There are no other royalties' due.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.*	• Assume 100% ore mining recovery of the regularised Model. • Selling costs and Royalties included in costs to give a net revenue per ounce. • No deleterious metals present that incur smelter penalties. • A base gold price of AUD$ 2250 /Oz excluding royalties in this ore reserve assessment. • Exchange rates, royalties and transport charges dealt with above.

Criteria	JORC Code explanation	Commentary
	• *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	No assumptions made. The gold doré is to be sold at spot price.
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 gold doré is sent to the Perth Mint at commercial rates for refining. The Tomingley Gold Operations Pty Ltd sell the gold into the open market at the spot value for gold.
	• *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. • The preliminary analysis carried out did not estimate the NPV but rather simple cash flow based on a variety of possible gold prices. • For all deposits, the optimal pit shell was chosen as that with the highest discounted cash flow from the Whittle pit Optimisation. The pits were designed from the chosen shell. Pit designs where then back calculated for undiscounted return using the whittle input costs to ensure profitability within limits. • Scheduling of mine physicals was then completed. Capital costs were allocated evenly over the 12 months preceding mine production. Cash flow was determined using the whittle inputs and associated mining costs per period. A discount rate was applied and NPV calculated from the simple cash flows.
	• *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	Sensitivity analysis was included in the Whittle optimisations. Tested inputs included pit wall angle, metallurgical recovery, gold price, block model cell size (dilution and ore loss) and operating costs. Variations of up to 10 % were completed for these inputs where practicable and positive cash flows were returned for all cases with gold price at or higher than $2250 per ounce before royalty. Simple cash flow analysis has been completed for gold prices ranging from $2000 - $3500 per ounce in increments of $250 using Whittle optimisation shells. Roswell did not return a positive cash flow for the gold price at $2000 /oz before royalty.
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. • Transactions are complete for all properties directly affected by mining operations at Roswell, San Antonio and El Paso, by the extended tailings facility at RSF2, and by the moving of the Newell Highway.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:*	

Criteria	JORC Code explanation	Commentary
	○ *Any identified material naturally occurring risks.*	A risk analysis was undertaken as part of the original Feasibility Study and Environmental Assessment for the TGO project and no naturally occurring risks were identified.
	○ *The status of material legal agreements and marketing arrangements.*	Produced gold doré is currently sold into the spot gold market.
	○ *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	The current TGO operation is situated on a granted Mining Lease which expires in 2034. The new Project Approval will require State Significant Development consent because the Capital Investment Value is greater than $30 million. A single consent to incorporate all extension activities is being sought. The current Tomingley consent will be surrendered on activation of the new consent. The Minister for Planning and Public Spaces or the Independent Planning Commission is the determining authority. Once Project Approval is obtained there are several further approvals that are required. The further approvals of significance include: • Mining Lease – MEG; • Environment Protection Licence (new or amended) – EPA; • Roads approvals – Transport for NSW (WAD) and Council; • Water approvals – NRAR / DPIE Water; and • Stewardship agreement – BCD. Alkane is currently at the "EIS Preparation" stage.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.*	The classification of the Tomingley Gold Extension Project, San Antonio and Roswell Open Pit deposit (August 2021) has been carried out in accordance with the recommendations of the JORC code 2012.
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*	Yes. The San Antonio and Roswell deposits are robust at listed gold price and above.
	• *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	No Measured Mineral Resources are included in the resource report, and as such are not converted to Reserves.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	The Ore Reserves estimates have been completed by Competent Persons external to Alkane Resources and Tomingley Gold Operations. No further review has been conducted.
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 Mr David Meates who is satisfied with the resource categories quoted. Within the reserve estimation process the effects of included dilution have been accounted for to produce an anticipated selective mining unit grade. The effects of this dilution are more pronounced in narrow zones of mineralisation, leading to overall grade reduction and loss of some narrow zones to waste through a drop below cut-off grade.
	○ *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*	No statistical quantification of confidence limits has been generated. Estimates are global by deposit.
	○ *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.*	Through Whittle optimisation, the ore reserve is most sensitive to unfavourable changes in mining dilution and ore loss, as well as gold price.

Criteria	JORC Code explanation	Commentary
	○ *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.*	

APPENDIX 4 - Continued

Tomingley Gold Extension Project: Roswell 2022 Reserves Update

- August 2022

EXECUTIVE SUMMARY

During August 2021 Alkane Resources published a reserve completed to Prefeasibility level for the Roswell and San Antonio Resources. Since then, additional drilling has occurred at the Roswell resource. The results of this drilling were published in May 2022 with an update to the resource model and JORC 12 resource report.

The revised May 2022 resource for Roswell is Shown in the following table. This resource is suitable for open pit mining and limited by elevation -100RL, approximately 370 m below surface level.

Project	Resource Category	Cut-Off	Tonnes (Mt)	Gold Grade g/t	Gold Metal (Koz)
Roswell (OP)	Indicated	0.4g/t Au	8.04	1.90	492
	Inferred	0.4g/t Au	2.41	1.25	97
	Total	0.4g/t Au	10.4	1.75	589

Open-pittable resource estimated to -100mRL

A block model has been completed for this resource using a 2.5mx2.5mx2.5m (x,y,z) cell size. As per the work completed in August 2021, this model has been reblocked to provide a level of inherent dilution to the resource by providing an SMU size cell. The resultant model shows an inherent dilution of 118% for tonnes above 0.4 g/t, and 18% reduction on grade with 97% contained metal. This is comparable with the results from August 2021.

Roswell Reblocked Model					Comparison				
Resource Category	Lower Cut - Off	Tonnes ('000s)	Au Grade	Contained Ounces ('000s)	Resource Category	Lower Cut - Off	Tonnes ('000s)	Au Grade	Contained Ounces ('000s)
Indicated	0.4 g/t	9,558	1.57	482	Indicated	0.4 g/t	119%	82%	98%
Inferred	0.4 g/t	2,808	0.99	89	Inferred	0.4 g/t	116%	79%	92%
Total	0.4 g/t	12,366	1.44	572	Total	0.4 g/t	118%	82%	97%

Using the work from August 2021 as the basis, physicals and a simple cash flow have been calculated for the Roswell project, using the latest modelling work. The pit design *des_ros_210728.str* was used as the basis for this. Physicals generated an extra 246kt of material above 0.4 g/t at the same grade and same mining volume than previous work. Simple cash flow calculations showed that this additional material is cash flow positive.

No other work on costs or other modifying factors has been completed for this reserve. This

is simply an update for the new resource model and confirmation that the increase in mineralised material is cash flow positive using the prior costs.

A reserve has been calculated using appropriate modifying factors and can be reported according to JORC 12 requirements. The reserve has been calculated inclusive of the published resources and totals 214,000 ounces of contained gold, an increase of 13,000 ounces (6%) over the August 2021 reserve.

Deposit	Proved			Probable			Total		
	Tonnage (Mt)	Grade (g/t Au)	Gold (koz)	Tonnage (Mt)	Grade (g/t Au)	Gold (koz)	Tonnage (Mt)	Grade (g/t Au)	Gold (koz)
Roswell Open Pit	-	-	-	3.9	1.7	214	3.9	1.7	214

Roswell Open Pit Total Reserves			
Year	Tonnage (Mt)	Grade (g/t Au)	Gold (kOz)
2021	3.6	1.7	201
2022	3.9	1.7	214

John Millbank
Principal Mining Engineer
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ABBREVIATIONS

ASX	Australian Stock Exchange
BCM	bank cubic metres
Dia	diameter
HG	High Grade Ore
IRA	Inter Ramp Angle
kt	thousand tonnes
LCM	loose cubic metres
LG	Low Grade Ore
LOM	Life of Mine
m	metres
M	Measured resource category
MI	Measured and Indicated resource categories.
MII	Measured, Indicated and Inferred resource categories.
MG	Medium Grade Ore
Mt	Million Tonnes
Mtpa	Million Tonnes per Annum
OEM	Original Equipment Manufacturer
ROM	Run of Mine Ore
SAR	San Antonio Roswell
TGO	Tomingley Gold Operation
TGEP	Tomingley Gold Extension Project
WRD	Waste Rock Dump

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4 Introduction

The Tomingley Gold Operation is a nominal 1.2 Mtpa gold mine located approximately 50km south of Dubbo adjacent to the town of Tomingley in the central west of New South Wales. It is a wholly owned subsidiary of Alkane Resources Pty Ltd (Alkane)

Since the commencement of operations in 2014, exploration success has resulted in resource definition for the San Antonio and Roswell deposits located approximately 4km south of the existing Caloma deposits.

On the 7th September 2021 Alkane released the document "Reserve and Resource Statements FY21" This document contained the initial reserve information for the Roswell and San Antonio projects and was based upon the document supplied by PMS during August 2021 titled "Tomingley Gold Extension Project: San Antonio Roswell Prefeasibility Design. (JORC report)". The resource models used for these two reports were completed in February 2021.

Since then, additional drilling has occurred at the Roswell deposit. At the completion of this drilling program, an updated resource was announced on the 2nd May 2022 titled, "Roswell Resource Contained Ounces Up 37% to 904,000oz".

The resultant revised model forms the basis for this update to the Roswell reserve statements. All other work remains the same and as such the physicals change is a direct reflection of the change in the model for Roswell. The report "Tomingley Gold Extension Project: San Antonio Roswell Prefeasibility Design. (JORC report)" is a summary document pertaining to all other work associated with determining the reserves for this project under the JORC 12 reporting process. The work in that report has not changed and as such this report only documents the effects of the change in resource model.

Table 1 is the resource as it is estimated and forms the basis for the work contained in this report. All reported physicals within this report are to be considered within the resource published by Alkane in May 2022, and as shown below in Table 1.

Table 1 Mineral Resource Estimate – April 2022

Project	Resource Category	Cut-Off	Tonnes (Mt)	Gold Grade g/t	Gold Metal (Koz)
Roswell (OP)	Indicated	0.4g/t Au	8.04	1.90	492
	Inferred	0.4g/t Au	2.41	1.25	97
	Total	0.4g/t Au	10.4	1.75	589

Open-pittable resource estimated to -100mRL

Table 1 –Mineral Resources at Roswell

5 Block Model

Alkane have supplied a revised block model in .dm format with a minimum cell size of 2.5m x 2.5 mx 2.5m (x,y,z), called *Ros_est202204reblk.dm.*

This model was then reblocked to a minimum size of 5m x 5 m x 5m *(x,y,z),* and the limiting elevation of -160RL was applied. This was to provide a SMU size relevant to the potential equipment for mining operations and be consistent with previous work. The reblocked model will then provide an inherent dilution within the model that can be used for mine planning purposes.

Table 2 shows the results from the reblocking process. This has resulted in a global change of 118% on tonnes, 82% of grade, and a resulting 97% of contained metal. This is considered appropriate for this level of study and will provide an inherent amount of ore loss and dilution within the block model, without the requirement to use further modifying factors.

The previous report showed reblocking for the Roswell model increased tonnes by 116%, reduced grade by 81% for 96% contained metal, and as such the results for this revised model are within limits.

Roswell Reblocked Model					Comparison				
Resource Category	Lower Cut - Off	Tonnes ('000s)	Au Grade	Contained Ounces ('000s)	Resource Category	Lower Cut - Off	Tonnes ('000s)	Au Grade	Contained Ounces ('000s)
Indicated	0.4 g/t	9,558	1.57	482	Indicated	0.4 g/t	119%	82%	98%
Inferred	0.4 g/t	2,808	0.99	89	Inferred	0.4 g/t	116%	79%	92%
Total	0.4 g/t	12,366	1.44	572	Total	0.4 g/t	118%	82%	97%

Table 2 –Reblocked Resource Model for Roswell

6 Pit Design

Pit design work has been completed using Surpac Software. Parameters for the design were discussed by PMS (2021). The design has not changed since that report.

- Wall geometry as per the March 21 (conservative case) WSP report.
- Ramp gradient 1:8.5 inside edge of the ramp. This is based on previous operating experience at TGO.
- Ramp width of 24 metres for double lane, 18m for single lane. Ramp exits to be on the west side of the pits to allow for construction of Waste rock facilities adjacent.
- Minimum mining width of 25 metres at pit floor.

Figure 1 below shows the completed design for Roswell only. (*des_ros_210728.str)* clipped with the current topography and current surface roads overlain. Pit floor extends to RL -10 for Roswell.

Physicals for this design have been calculated using the 5mx5mx5m reblocked model, and a break even cut-off grade of 0.4 g/t has been applied. This was calculated using the all-in ore costs from the Whittle inputs, a gold price of $2250 before royalties and the mill upgrade case gold recovery. Physicals are shown in Table 3.

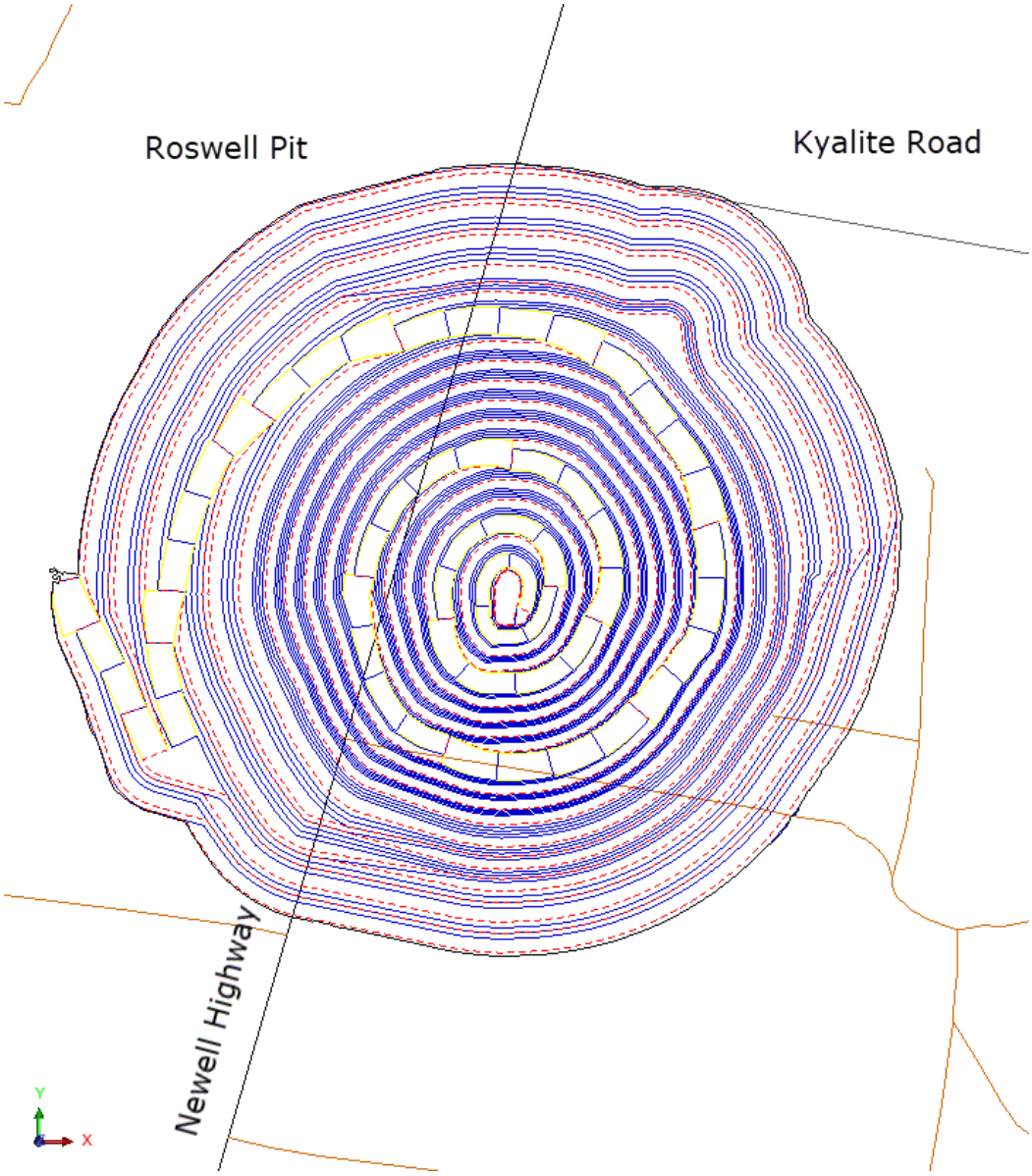

Figure 1 –Final Design Roswell Pit Only.

Roswell Pit 210728	LG 0.4 -> 0.8	MG 0.8 -> 1.5	HG 1.5 -> 999.0	Total Ore
ros_est2022045x5x5.mdl				>0.4
Mined Volumes (BCM)	482,804	388,027	606,877	1,477,708
Mined Tonnes	1,267,024	1,039,271	1,657,657	3,963,952
Mined Grade	0.57	1.11	2.97	1.71
Contained Ounces	23,360	37,104	158,050	218,513
Mined Alluvial Rock Tonnes	259	-	-	259
Mined Alluvial Rock Grade	0.41	-	-	0.41
Contained Ounces	3	-	-	3
MinedSaprolite Rock Tonnes	220,358	91,944	24,063	336,365
Mined Saprolite Rock Grade	0.58	1.06	2.13	0.82
Contained Ounces	4,136	3,130	1,652	8,917
Mined Fresh Rock Tonnes	955,987	932,320	1,582,101	3,470,408
Mined Fresh Rock Grade	0.58	1.12	2.87	1.77
Contained Ounces	17,724	33,508	145,770	197,002
Measured Rock Tonnes	-	-	-	-
Measured Rock Grade	-	-	-	0.00
Contained Ounces	-	-	-	-
Indicated Rock Tonnes	1,240,363	1,029,799	1,655,595	3,925,757
Indicated Rock Grade	0.57	1.11	2.97	1.72
Contained Ounces	22,904	36,764	157,902	217,569
Inferred Rock Tonnes	26,661	9,473	2,062	38,196
Inferred Rock Grade	0.53	1.12	2.24	0.77
Contained Ounces	456	340	148	944

Table 3 –Physicals Roswell design

Table 3 shows that Inferred resources are included in the overall physicals. Inferred resource tonnes greater than the 0.4 cut-off grade are only 1% of the total mined resource tonnes.

Using simplified cash flow techniques, the design generates a positive undiscounted cash flow, exclusive of the inferred component.

Individual stages have been designed for scheduling purposes. Similar cash flow calculations were completed, and each individual stage also generates a positive cash flow at $2250 per ounce before royalty.

7 Modifying factors

No additional work to other modifying factors was completed for the preparation of this report. The financial work was completed and current in the report PMS (2021) and is considered current for that time.

Since then, additional ongoing work around capital requirements, mining fleet options and processing rates is being completed to bring the project to feasibility level. This work is ongoing through financial year ending 2023 and will be reported on accordingly.

8 Reserve statement

8.1 Competent Person

Mr John Millbank is a mining engineer with over 20 years' experience in mine planning and operational roles, both as an employee and consultant to the minerals industry. Mr Millbank has over 12 years' experience specific to open cut gold mining in the Asia Pacific region. Mr Millbank is a current member of the AusIMM (#108087) and meets the requirements of the JORC code 2012 as a Competent Person.

At the time of writing, Mr Millbank, or any of the entities he directly controls, has no equity holdings in Alkane Resources or its subsidiaries.

A copy of The Competent Person Report Consent is attached as Appendix 2 of this report.

A site visit to the TGO and Roswell area was completed on the 7th June 2021. At this time the project area and drill samples were inspected.

A copy of Mr Millbank's resume is attached as Appendix 4.

8.2 Competent Persons Statement

I, Mr. John Millbank, confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).

- I am a Competent Person as defined by the JORC Code 2012 Edition, having five years' experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of The Australasian Institute of Mining and Metallurgy.
- I have reviewed the Report to which this Consent Statement applies.

I am a full-time employee of Proactive Mining Solutions Pty Ltd and have been engaged by Alkane Resources to prepare the documentation for the Roswell resource on which the Report is based, for the period ended 30th June 2022. I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest. I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears.

8.3 Mining Inventory

Using the modifying factors discussed in this report, Table 4 below can be used as a mining inventory for Roswell only, using the resource model classifications.

Deposit	Measured			Indicated			Inferred			Total		
	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)
Roswell Open Pit	-	-	-	3,925	1.7	215	38	0.8	1.0	3,963	1.7	216

Table 4 – Roswell Mining Inventory

8.4 Mining Reserve

Using the revised resource model and modifying factors as discussed in this report, the following Table 5 can be considered as a reserve for the Roswell project.

Deposit	Proved			Probable			Total		
	Tonnage (Mt)	Grade (g/t Au)	Gold (koz)	Tonnage (Mt)	Grade (g/t Au)	Gold (koz)	Tonnage (Mt)	Grade (g/t Au)	Gold (koz)
Roswell Open Pit	-	-	-	3.9	1.7	214	3.9	1.7	214

Table 5 – Tomingley Gold Expansion Project Mining Reserve

An accompanying consent statement for this document applicable to the JORC 2012 code for the publication of these reserves is attached as Appendix 1.

An accompanying Table 1 Section 4 document applicable to the JORC 2012 code for the publication of these reserves is attached as Appendix 2.

8.5 Year on Year Ore Reserve

Year on Year the Total reserves are as shown in Table 6. For completeness San Antonio has also been included in this table.

Roswell Open Pit Total Reserves				San Antonio Open Pit Total Reserves			
Year	Tonnage (Mt)	Grade (g/t Au)	Gold (kOz)	Year	Tonnage (Mt)	Grade (g/t Au)	Gold (kOz)
2021	3.6	1.7	201	2021	4.1	1.6	215
2022	3.9	1.7	214	2022	4.1	1.6	215

Table 6 – Year on Year Ore reserve report

8.5.1 *Key Differences 2021 to 2022.*

Key differences between 2021 and 2022 are due to changes in the resource model through updated drilling during the financial year. No further changes to costs or modifying factors have been completed.

9 REFERENCES

Alkane Resources Ltd - Roswell Resource Contained Ounces Up 37% to 904,000oz. ASX release 2nd May 2022. https://investors.alkane.com.au/site/PDF/4b78886d-f06b-4632-9a5a-70edc5197f6a/RoswellMineralResourceup37

Alkane Resources Ltd - *Resource and Reserve Statements FY21* ASX release 7th September 2021 https://investors.alkane.com.au/site/PDF/d0ac333d-a651-4227-884a-f05377c59a00/AnnualReservesandResourcesStatement

WSP – *Tomingley Gold Extension Project – San Antonio and Roswell Geotechnical Report* . Unpublished. March 2021,

WSP - *Tomingley Gold Extension Project: review of pit slope design*. Unpublished letter to Alkane Resource 27 April 2021.

Joint Ore Reserves Committee,. *The JORC Code 2021 Edition.* http://www.jorc.org/docs/JORC_code_2012.pdf

Proactive Mining Solutions (PMS), August 2021. Tomingley Gold Extension Project: San Antonio Roswell Prefeasibility Design. (JORC report). Unpublished report to Alkane Resources August 2021

10 Appendix 1 – Competent Persons Consent Form.

Competent Person's Consent Form

Pursuant to the requirements of ASX Listing Rules 5.6, 5.22 and 5.24 and
Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

Report name

Tomingley Gold Extension Project: Roswell 2022 Reserves Update (August 2022)

(*Insert name or heading of Report to be publicly released*) ('Report')

ALKANE RESOURCES LTD

(*Insert name of company releasing the Report)*

Tomingley Gold Operations, Roswell Deposit.

(Insert name of the deposit to which the Report refers)

If there is insufficient space, complete the following sheet and sign it in the same manner as this original sheet.

August 2022

(Date of Report)

Statement

I~~/We~~,

John Edward Millbank

(*Insert full name(s)*)

confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having five year's experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member or Fellow of *The Australasian Institute of Mining and Metallurgy* or the *Australian Institute of Geoscientists* or a 'Recognised Professional Organisation' (RPO) included in a list promulgated by ASX from time to time.
- I have reviewed the Report to which this Consent Statement applies.

~~I am a full time employee of~~

(Insert company name)

Or

I/~~We~~ am a consultant working for

Proactive Mining Solutions Pty Ltd

(Insert company name)

and have been engaged by

Alkane Resources

(Insert company name)

to prepare the documentation for

Tomingley Gold Extension Project: Roswell 2022 Reserves Update (August 2022)

on which the Report is based, for the period ended

August 2022

(Insert date of Resource/Reserve statement)

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to ~~Exploration Targets, Exploration Results, Mineral Resources and/or~~

Ore Reserves *(select as appropriate).* Additional deposits covered by the Report for which the Competent Person signing this form is accepting responsibility:

NIL

Additional Reports related to the deposit for which the Competent Person signing this form is accepting responsibility:

NIL

Consent

I consent to the release of the Report and this Consent Statement by the directors of:

ALKANE RESOURCES LTD

(Insert reporting company name)

19th August 2022

Signature of Competent Person: | Date:

AusIMM | 108087

Professional Membership:
(insert organisation name) | Membership Number:

Jacqueline Millbank (Buderim Q)

Signature of Witness: | Print Witness Name and Residence:
(eg town/suburb)

APPENDIX 5

ALKANE RESOURCES LTD SHORT FORM ORE RESERVE REPORT

Roswell Underground Ore Reserves

TENEMENT:	*EL5675*
OWNER:	Alkane Resources Ltd 100%
OPERATOR:	Alkane Resources Ltd (ABN 35 000 689 216) Level 4, 66 Kings Park Road, WEST PERTH, WA 6153
COMMODITIES:	Gold
COMILED BY:	Christopher Hiller
REPORT BY:	Christopher Hiller
REPORTING DATE:	30 June 2022

Project Summary

The Tomingley Gold Extension Project (TGEP) is defined as the San Antonio and Roswell deposits 2.5kms south of the existing Tomingley Gold Operation (TGO). TGO is located on the Newell Highway, two kilometres south of the town of Tomingley, Tomingley is 54kms south west of Dubbo and 67kms North of Parkes, Central New South Wales. TGEP is currently at feasibility stage with an exploration decline being mined to the Roswell deposit from the TGO underground workings.

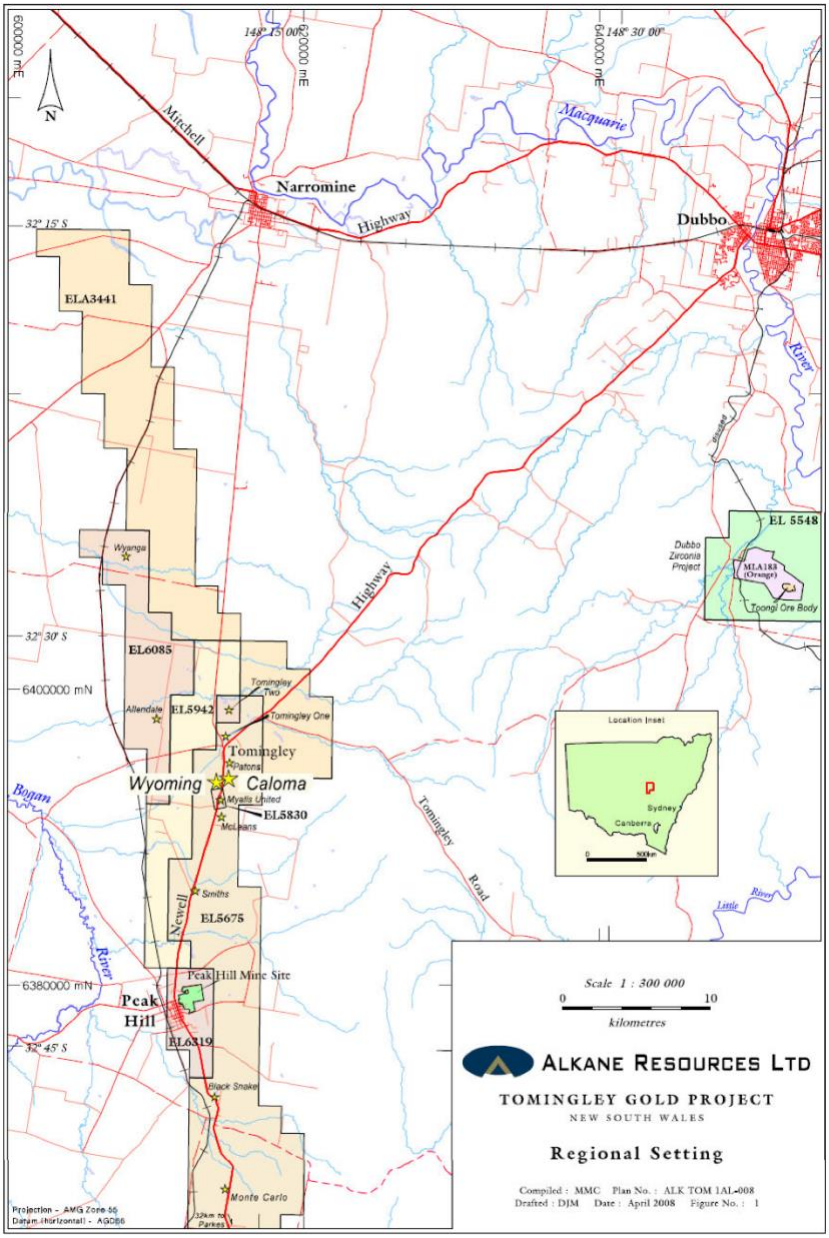

Figure 5: Regional Setting of the TGEP

The Tomingley gold deposits are interpreted as orogenic gold systems positioned within a major

structural zone. This style of deposit is well documented globally with the more significant examples in Australia being the Archean greenstone belts of the Yilgarn Craton in WA and the Paleozoic slate belts in Victoria.

The Roswell deposit is hosted in the Mingelo Volcanic Formation, a strongly deformed and hydrothermally altered Ordovician aged belt of volcanics that are predominantly andesitic volcaniclastic breccias, lesser sandstone/siltstone units, lavas and black mudstones. The volcanics are overlain by the younger Cotton Formation siltstones.

The resource drilling program has defined a fault bounded section of volcanic stratigraphy that has been rotated 15 degrees east from striking approximately north-south. The mineralisation at Roswell is primarily hosted by two 'brittle' volcanic units (monzodiorite and andesite) as per the structural setting observed at the Tomingley gold deposits. These volcanics host structural zones generated by a competency contrast between the 'brittle' volcanics and 'ductile' volcaniclastic sediments.

Mineralisation is characterised as similar to the Tomingley gold mineralisation, as quartz-carbonate pyrite-arsenopyrite veins hosted in phyllic altered volcanics. These sheeted quartz veins are orientated as steep east dipping, striking approximately 10 degrees east of north, and are typically constrained within the volcanic units. The mineralisation has been defined by drilling over a strike length of approximately 600 metres and remains open to the north and at depth. The higher grading mineralisation occurs in the southern section, proximal to and truncated to the south by a regional NW trending structure named the Rosewood Fault. The San Antonio deposit is a continuation of the mineralised zone to the south of the fault. The Rosewood Fault is of a similar orientation to the structure that dextrally displaces the Caloma deposits from the Wyoming deposits, positioned in the centre of the Tomingley 'gold camp'.

The mineralisation at the Roswell Deposit is displaced by three significant, approximately 4 metres thick dolerite dykes dipping steeply to the NNE, striking WNW. The dolerites postdate the gold mineralisation. Weathering of the mineralised bedrock has developed a saprolitic clay profile extending approximately 35 metres from the base of alluvium to fresh rock. The mineralised bedrock lies beneath a Cainozoic alluvium overburden between 30-55 metres thick

Current mining activities comprise of underground mining of Wyoming One and the Caloma orebodies. An exploration decline is being driven from the Wyoming One underground workings to access the Roswell orebody. TGEP is planned to be operated from TGO. TGO is operated on a residential basis with personnel residing in Dubbo, Narromine and Parkes in the Central West of New South Wales.

The mining method proposed for mining the underground portion of the Roswell resource is Longhole Open Stoping (LHOS) with full paste fill. The choice of mining method is determined by value of the resource, orebody width and geotechnical factors.

Stoping configurations are predominantly single-lift stoping (25m vertical interval) with strike length of 20-25m. The stoping method (as illustrated in Figure 2) involves establishing a slot using conventional long-hole drill and blast techniques and then the stopes mined in a retreat sequence along strike to the central access. The stopes are paste filled prior to the adjacent stope is mined. The installation of brow cables and the use of a concurrent strike-retreat blasting sequence, and use of paste fill will assist in controlling ground stability.

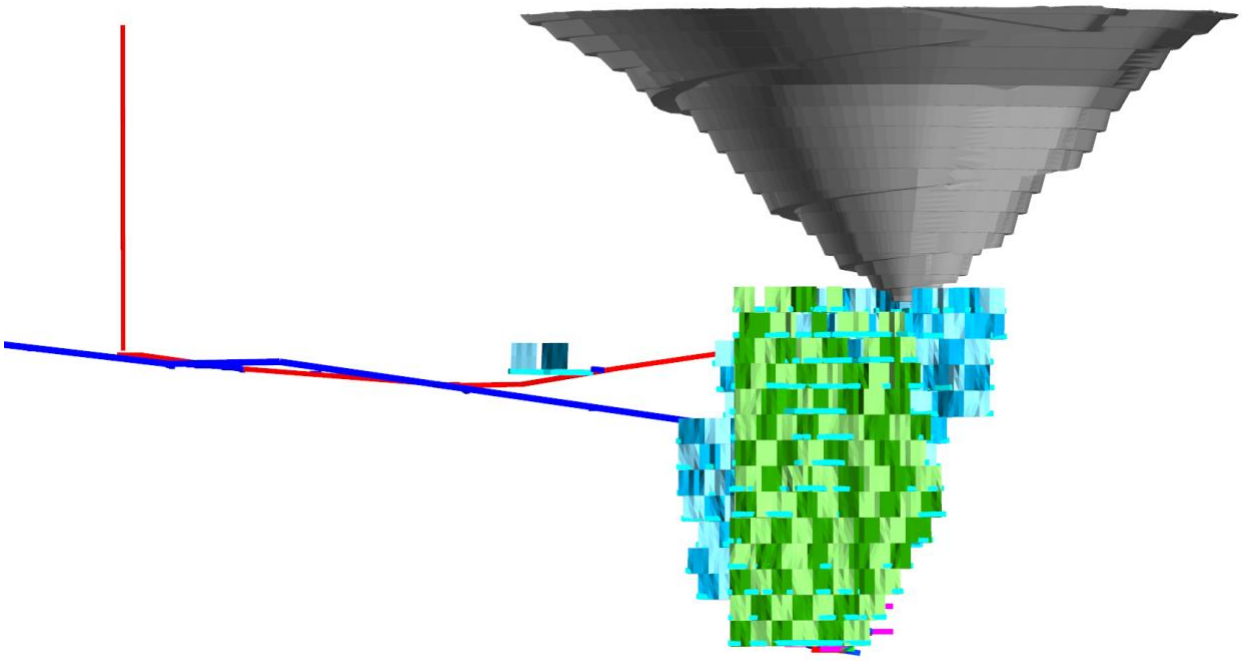

Figure 6: Isometric View of Proposed Roswell Pit and Underground Mine

Ore production is scheduled to be 900 ktpa which would be trucked to surface using a fleet of four underground trucks (MT65). The truck fleet is matched with four Caterpillar R2900 loaders operating on a combination of tele-remote and manual control. Normal drilling fleet includes two development jumbos (DD420/422i) and two production drills (DL431/432).

Primary ventilation for Roswell is planned to be supplied by three 500kw, 2.0m diameter, fans wall mounted underground. These fans will support mining down to the current extent of the Roswell ore deposit. The ventilation layout is illustrated in Figure 3.

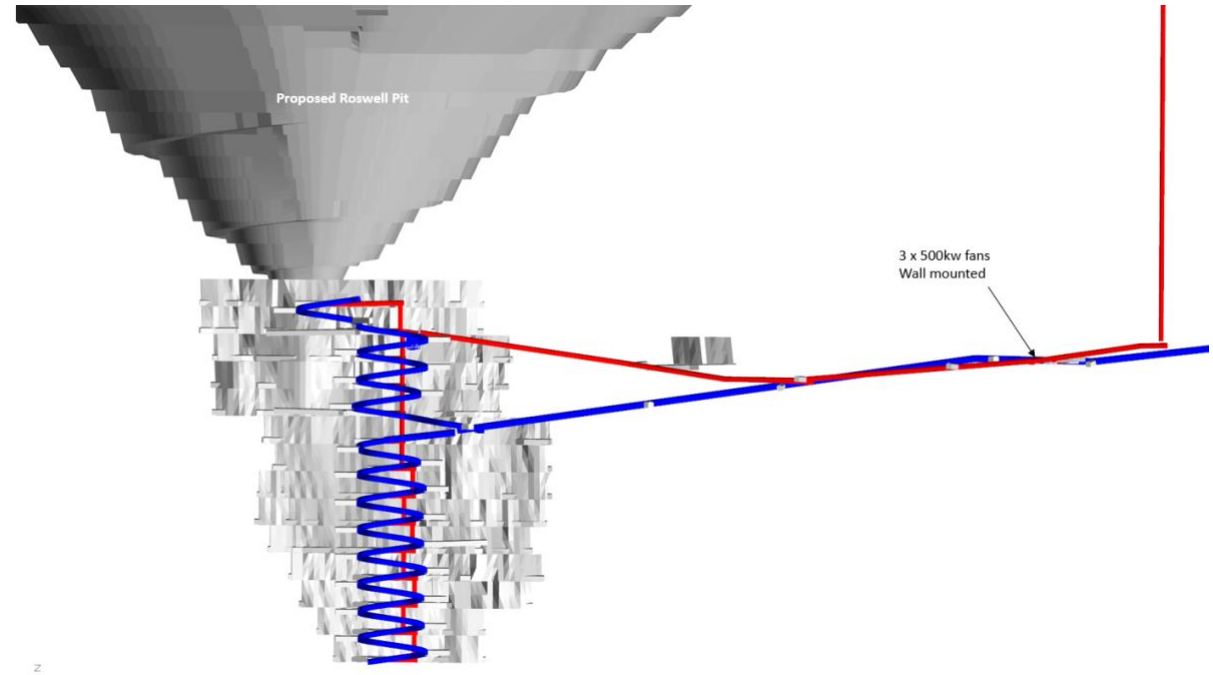

Figure 7: Primary Ventilation for Roswell (TGEP)

Electrical infrastructure servicing TGO can deliver 10MW. The TGO site currently uses 7.0MW; this falls within the current 10.0MW peak allowance. Underground mining at TGO currently uses 2.5MW, this power will be redirected to Roswell (TGEP) as TGO underground ramps down and underground production from Roswell commences. The power will be reticulated from TGO to Roswell (TGEP) using overhead power lines.

Tailings are begin deposited into stage eight (of RFS1), with stage nine currently under construction to be completed no later than March 2023. Stage nine allows for storage at the current processing rate until July 2023. A second tailing dam (RFS2) has been approved for stage one and two. Stage one allows storage of a further 3.0Mt with construction currently underway.

All Roswell (TGEP) ore is trucked to the TGO processing plant which is located adjacent to the Wyoming Three pit. The plant consists of a crushing circuit, single-stage milling circuit and hybrid carbon-in-leach (CIL) circuit with one designated leach tank and numerous adsorption tanks. Gold is recovered from activated carbon into concentrated solution. Electrowinning and smelting are conducted in an adjacent secure gold room. The tailings from the process are thickened and pumped to a paddock-type tailings storage facility with multi-spigot distribution. Gold doré bars are transported to the Perth Mint for refining.

The reported Ore Reserve is based on the Measured and Indicated Mineral Resources from the current site based mine design. Figure 4 shows the Ore Reserve design, colour coded by Ore Reserve classification.

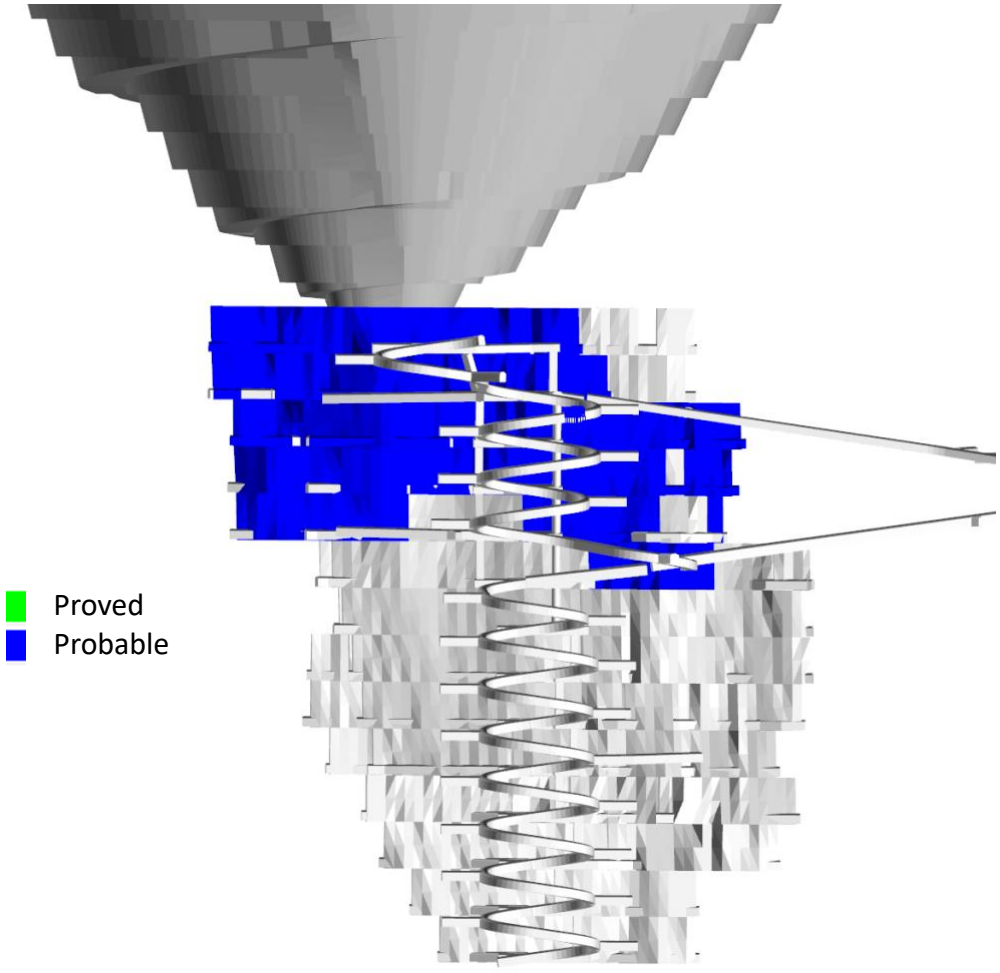

Figure 8: Isometric view of Roswell (TGEP) Life-of-Mine design by Ore Reserve classification

The Ore Reserve estimate for TGO is shown in Table 1 below. The Ore Reserve is reported in accordance with the requirements of the 2012 Edition of the JORC Code, "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves".

Classification	Cut-off	Tonnes (kt)	Grade (g/t)	Ounces (koz)
Roswell				
Proved	1.6g/t Au			
Probable		**1,456**	**2.55**	**119**
Subtotal		**1,456**	**2.55**	**119**
Total				
Proved	1.6g/t Au			
Probable		**1,456**	**2.55**	**119**
Total		**1,456**	**2.55**	**119**

Table 2: Roswell Underground Ore Reserve Summary – 30 June 2022

References

Jones, E., 2021, 'San Antonio-Roswell Geotechnical Review', Mine Geotech Pty Ltd

Pearce, R., McGrath, S., 2021, 'Tomingley Gold Extension Project Paste Backfill Pre-Feasibility Study', MineFill Services Pty Ltd.

Revell, M., McGrath, S., 2022, 'Tomingley Roswell Orebody Project Paste Feasibility Study', MineFill Services Pty Ltd.

Burrows, L. Cherry, A., 2020, 'Roswell Resource Estimation'

Meates, D., 2020, 'Updated Roswell Resource Estimation Lifts Contained Ounces by 50% to 660,000oz - 4 November 2020', *Alkane Resources Ltd, ASX Release.*

JORC 2012 Table 1 Checklist of Assessment and Reporting Criteria

Section 4 Estimation and Reporting of Ore Reserves

Criteria	Comments
Mineral Resource estimate for conversion to Ore Reserves	• The underground Ore Reserve estimate is based on the Mineral Resource estimate carried out by Alkane Resources Ltd. Gold grade was estimated using ordinary kriging for Roswell. • The Mineral Resources are reported exclusive of the Ore Reserve. • The Mineral Resource model used to estimate this Reserve is described as; ros_est202204rescla2.dm.
Site visits	• The Competent Person is Christopher Hiller a full-time employee of Hiller Enterprises Pty Ltd. Christopher has been providing mining engineering support, since February 2020. Christopher is a member of the Australasian Institute of Mining and Metallurgy.
Study status	• Roswell underground is at a feasibility level of study, with pastefill feasibility and geotechnical review completed. • Development of a 2.7km long exploration decline has commenced, with 1,600m completed. The life of mine design is updated and reviewed on a quarterly basis. • TGO/TGEP has been in full production since 2014 and is achieving design objectives. • Any further studies undertaken are to extend the mine or optimise the current operating practices.
Cut-off parameters	• Two cut-off grades have been calculated and applied based on current costs and modifying factors for the Life-of-Mine plan. A gold price of AU$2,000/oz was provided by Alkane Resources Ltd and was used in this calculation. ○ **Fully Costed** cut-off grade of 1.6 g/t and this includes all costs associated with the extraction and processing of ore material ○ **Incremental Development** cut-off grade of 0.5 g/t applies to all development ore material.
Mining factors or assumptions	• The Roswell (TGEP) Ore Reserve has been estimated based on detailed mine development and stope designs. Modifying factors for dilution and mining recovery have been applied post-geological interrogation to generate the final diluted and recovered Ore Reserve. • The Life-of-Mine plan used for budgeting at Roswell Underground utilises long hole open stoping with pastefill.

	• Stope size, development placement and ground support strategies have been designed in line with preliminary geotechnical recommendations. • 115,200m of grade control drilling is planned within Roswell. • The model used to estimate the Ore Reserve is consistent with that which forms the basis of the Mineral Resource estimate for the Roswell deposit. The model is internally known as ros_est202204rescla2.dm. • Planned dilution has been accounted for in the creation of the Stope Shapes. Unplanned mining dilution of 15% has been used for all stope shapes. This factor has been applied in Deswik Scheduler. • A 95% mining recovery factor has been applied for stoping. • Waste development excavations are given a 10% overbreak. No further dilution factors or mining recovery factors have been applied to development ore. • A global minimum mining width of 3m is used. While the ore body width generally exceeds the minimum mining width, where the ore body is narrower stoping outlines are designed to honour the minimum width and include planned dilution. • All ore in the Ore Reserve estimate is classified as a Proved or Probable Ore Reserve. No Inferred Mineral Resources is included in the Ore Reserve. The Inferred Mineral Resources in the Life-of-Mine plan have been removed from the Ore Reserve estimate. • The infrastructure and infrastructure maintenance requirements for the underground mining of Roswell have been included in the economic evaluation, which demonstrates the economic viability of the Ore Reserve.
Metallurgical factors or assumptions	• All Roswell (TGEP) ore is trucked to the TGO processing plant which is located adjacent to the Wyoming Three pit. The plant consists of a crushing circuit, single-stage milling circuit and hybrid carbon-in-leach (CIL) circuit with one designated leach tank and numerous adsorption tanks. Gold is recovered from activated carbon into concentrated solution. Electrowinning and smelting are conducted in an adjacent secure gold room. The tailings from the process are thickened and pumped to a paddock type tailings storage facility with multi-spigot distribution. • The technology associated with processing of TGO/TGEP ore is currently in operation and is based on industry standard practices. • Mine production and cash flow estimates are based on a metallurgical recovery of 87%, which is consistent with current performance.

	• No deleterious elements extracted. • N/A – no minerals defined by a specification. • The current tailings storage facility is adequate for processing until July 2023, with a second tailings storage facility approved to store a further 3.0Mt with construction underway.
Environmental	• The TGEP environmental impact and associated studies have been submitted for approval in line with all environmental regulatory agreements under the Environmental Protection Act 1986. • Approval is expected to be received in the second half of 2022. • Mining of an underground exploration drive from Wyoming One to Roswell, ventilation rise and metallurgical bulk sample have been approved and are currently being under taken. • All external reporting against the environmental licenses is recorded and reported in the Annual Environmental Report available on the Alkane Resources Ltd website.

Infrastructure	• Infrastructure has been constructed for the commencement of the underground exploration decline and processing. Works on site include access road, a water pipeline, a 66 KV power line, site drainage, topsoil stockpiling, waste dump construction, Residue Storage Dams, Process Water Dams, associated offices, workshops, fuel, and laydown areas. Sufficient site infrastructure has been constructed to process ore at 1.25Mtpa.
	
	• The underground specific infrastructure in place includes
	  ○ Secondary fans
	  ○ Portals
	  ○ Pump station
	  ○ Mobile equipment
	  ○ Compressors
	  ○ HV to portals
	  ○ Substations
	  ○ Rescue equipment
	
	• Labour is sourced from Tomingley, Narromine, Dubbo, and Parkes region and as such the operation requires no accommodation or messing facilities.
	
	• Central NSW has many active mining operations within a short distance of TGEP and as such the ability to procure labour and infrastructure services for the operation does not pose any major challenges.

Costs	• All costs used in the estimation of Ore Reserves are based on the Ore Reserve plan. This plan excludes the Inferred Mineral Resources in the Life-of-Mine plan. • Mining capital estimates have been made using, wherever possible, budget pricing obtained from reputable suppliers. The few instances where costs could not be obtained from these sources, costs were obtained by benchmarking of similar sized Australian mines. • The operating cost estimates have been derived from the past years of operating costs at TGO. • No deleterious elements are modelled in the Mineral Resources Models nor has there been any concern with this during the period TGO/TGEP has been producing gold dorè. • Gold price is expressed in Australian dollars and no exchange rate is required. A gold price of AU$2,000/oz has been used in all calculations. • Transport charges for dorè to the Perth Mint are included in the refining charges and based on historical charges incurred by TGO. • Site treatment charges are well known due to the current processing of fresh rock ore material from underground. Refining charges have been assumed to be AU$1.50/oz in accordance with historical charges incurred by TGO by the Perth Mint. • A 4% New South Wales state royalty of revenue less processing and selling costs has been allowed for in the financial evaluation.
Revenue factors	• A gold price of AU$2,000/oz has been used in all revenue calculations for the Ore Reserve.
Market assessment	• All gold doré produced at the TGO processing plant is transported to the Perth Mint for refining. • The gold market is driven by several factors and fluctuates dependant on physical supply and demand, political tensions, and global instability. In times of uncertainty gold is seen to be a stable and safe “currency” and this has maintained its value for a significant period. • TGO currently sells gold at spot price and via forward sale contracts. 36,800 ounces at an average gold price of $2,715 per ounce is currently under sale contracts between September 2022 to December 2023. • The Underground mine would contribute only a small portion of the overall volume of output and is unlikely to have any impact on the market.
Economic	• The underground operation at TGO is an operating asset.

	• The financial analysis used the costs as well as the revenue from gold sales, together with the mine schedule to calculate a net cashflow per month for the duration of the project. This cashflow is then discounted to derive at the projects Net Present value (NPV). This NPV excludes depreciation, amortisation, and taxes. • No inflation of costs has been undertaken as there has been no forward speculation on gold price. It is the net cashflow that drives NPV and this is assumed to remain consistent (i.e. gold price and inflation move in the same direction). • Life-of-Mine plans are updated on a quarterly basis. These plans reflect current and projected performances for the Ore Reserve. • Sensitivities have been undertaken for both the entire mining inventory and the reserve version of the financial model.
Social	• Alkane Resources Ltd's social licence to operate is underpinned by the excellent relationship that the Company has built, over many years, with the local community of Tomingley. • TGO/TGEP has a set up a community consultation committee that meets quarterly to discuss the activities on the mine, interaction with the local community and any concerns from local residents, the committee includes: ○ Independent Chairperson, ○ TGO Environment and Community Manager, ○ TGO Operations Manager, ○ Narromine Shire Council Representative, ○ 3 x Community Representatives, ○ An Aboriginal Community Representative.
Other	• A company risk register is maintained to address and mitigate against all foreseeable risks that could impact the Ore Reserve. • Contracts are in place for all critical goods and services required to operate the mine. • The TGEP underground operations are in the exploration stage with required government and statutory permits and approvals in place to allow mining of an exploration decline, ventilation rise and bulk sample.
Classification	• The Ore Reserve includes only Proved and Probable classifications. • The Ore Reserve is in line with expectations given the low capital cost associated with the project and due to the locality. The Competent Person is confident that it is an accurate estimation of the current TGO reserve.

	• The economically minable component of the Measured Mineral Resource has been classified as a Proved Ore Reserve. • The economically minable component of the Indicated Mineral Resource has been classified as a Probable Ore Reserve.
Audits or reviews	• The Ore Reserve has undergone internal reviews to ensure quality and consistency. No external reviews have been undertaken.
Discussion of relative accuracy/ confidence	• The Ore Reserve estimate has been prepared in accordance with the guidelines of the JORC Code (2012). The relative confidence of the estimates contained fall with the criteria of Proved and Probable Ore Reserves. • The Ore Reserve has been estimated in line with the Alkane Resources Ltd Ore Reserve process. • The main factors which could affect the confidence of the assessment include: ○ **Stope stability**, this has been assessed by a reputable geotechnical consultancy and remains relevant. ○ **Modifying factors**, these are in line with industry accepted norms ○ **Costs**, cost have been sourced from the past years of capital and operating costs at TGO. ○ **Revenue**, revenue assumptions used are in line with TGO expectations and gold price used below current spot prices.