ASX and MEDIA RELEASE

7 September 2021

ALKANE RESOURCES LTD
ABN 35 000 689 216

Resource and Reserve Statements FY21

- **Identified Mineral Resources and Ore Reserves for the Tomingley Gold Project have been updated as at 30 June 2021. 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.**
- **Regional, near-mine exploration and evaluation programs continued between Tomingley and Peak Hill defined additional resources at Roswell and San Antonio, as previously reported. Preliminary open pit and underground design was applied to these deposits enabling estimation of additional reserves.**
- **Mineral Resources and Ore Reserves for the Tomingley Gold Project have been re-estimated to account for additional resources, depletion, changes in gold price and operating costs:**
  - **Total Mineral Resources** **27.01 Mt grading 1.99g/t Au (1,727,000oz)**
  - **Total Ore Reserves** **11.82 Mt grading 1.86g/t Au (707,000oz)**
- **As previously advised (ASX Announcement 3 June 2021), these additional resources and reserves provide the foundation for the updated Life of Mine (LOM) plan:**
  - **An expanded Tomingley Gold Operation that extends the mine's life to at least 2031, once necessary approvals are achieved.**
  - **Production of approximately 745,000 ounces of gold (ozAu) for the period, with processing ramping to a 1.5 million tonne per annum feed rate that delivers a more than 100,000 ounce per year production rate.**
  - **Substantial upside potential to extend the Roswell underground and maintain production over the FY28 to FY31 period at or near FY25 to FY27 levels, and beyond.**

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Mineral Resource and Ore Reserve Estimates as at 30 June 2021

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**) as at 30 June 2021 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.

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:

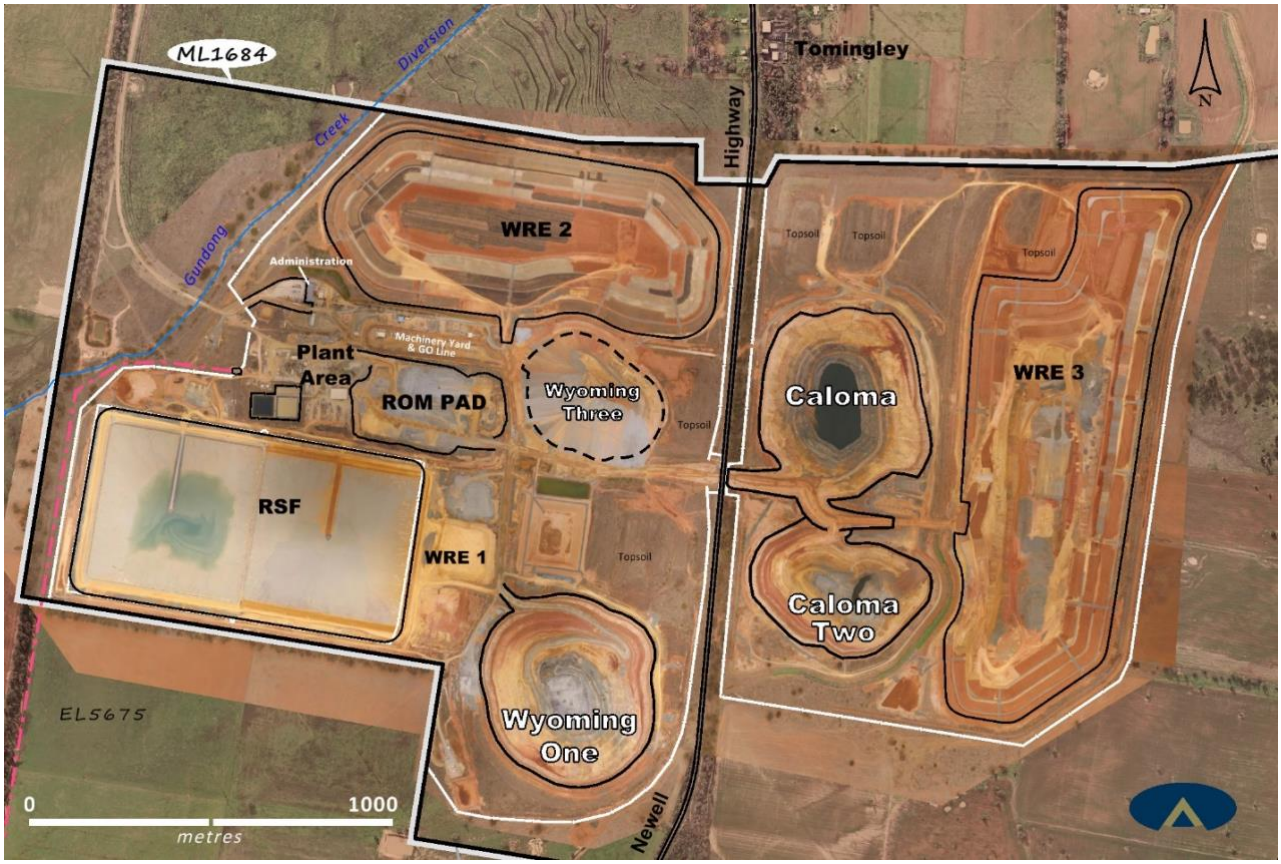
- oversight and approval of each annual statement by the Technical Director;
- establishment of internal procedures and controls to meet JORC Code 2012 compliance in all external reporting;
- independent review of new and materially changed estimates;
- annual reconciliation with internal planning to 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 ≥0.5g/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 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 2021 financial year and are set out in the tables below.



Mineral Resources

TOMINGLEY GOLD OPERATION MINERAL RESOURCES (as at 30 June 2021)									
DEPOSIT	MEASURED		INDICATED		INFERRED		TOTAL		Total Gold
	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	(Koz)
Open Pittable Resources (cut off 0.50g/t Au)									
Wyoming One	573	1.8	412	1.2	135	0.7	1,120	1.4	52
Wyoming Three	86	2.0	16	1.3	33	1.4	135	1.7	8
Caloma One	801	1.6	1,070	1.2	579	1.2	2,450	1.3	105
Caloma Two	57	2.3	875	1.9	30	1.8	962	1.9	58
Sub Total	**1,517**	**1.7**	**2,373**	**1.4**	**777**	**1.1**	**4,667**	**1.5**	**222**
Underground Resources (cut off 1.3g/t Au)									
Wyoming One	1102	3.0	1,050	2.7	86	2.0	2,238	2.8	201
Wyoming Three	46	2.2	24	2.0	20	1.9	90	2.1	6
Caloma One	157	2.6	234	2.1	374	2.1	765	2.2	54
Caloma Two	2	3.6	699	2.5	153	2.3	854	2.5	67
Sub Total	**1,307**	**2.9**	**2,007**	**2.6**	**633**	**2.1**	**3,947**	**2.6**	**328**
TOTAL	**2,824**	**2.3**	**4,380**	**1.7**	**1,410**	**1.8**	**8,614**	**2.0**	**550**

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 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 substantial increase in gold prices in 2020, the cut-off grade was revised, and the reported 2021 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 2021 financial year and are set out in the tables below.

Current mining activities comprise of underground mining of Wyoming One and access development to the Caloma orebodies.

Two mining methods are used to mine the underground resource including Longhole Open Stoping (LHOS) with cemented rockfill or rockfill, and 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 20-25m. 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 rockfill is filled into the stopes upon completion of mining. For the LHOS with rib pillars there is no placement of fill.

Ore production is scheduled at 840 ktpa which is trucked to surface using a fleet of four underground trucks. 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 and two production drills.

TOMINGLEY GOLD OPERATION ORE RESERVES(as at 30 June 2021)							
DEPOSIT	PROVED		PROBABLE		TOTAL		Total Gold
	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	(Koz)
Open Pittable Reserves (cut off 0.50g/t Au)							
Wyoming One	0	0.0	0	0.0	0	0.0	0
Wyoming Three	0	0.0	0	0.0	0	0.0	0
Caloma	398	1.7	78	1.2	476	1.6	25
Caloma Two	0	0.0	0	0.0	0	0.0	0
Stockpiles	72	1.2	0	0	72	1.2	3
Sub Total	**470**	**1.6**	**78**	**1.2**	**548**	**1.6**	**28**
Underground Reserves (cut off 1.3g/t Au)							
Wyoming One	780	2.1	410	2.1	1,190	2.1	81
Caloma One	3	1.5	113	1.5	116	1.5	5
Caloma Two			519	1.8	519	1.8	31
Sub Total	**783**	**2.1**	**1,042**	**1.9**	**1,825**	**2.0**	**117**
TOTAL	**1,253**	**1.8**	**1,120**	**1.9**	**2,373**	**1.9**	**144**

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 2020/ 2021 TGO Mineral Resources and Ore Reserves

TOMINGLEY GOLD OPERATION COMPARATIVE RESOURCES						
DEPOSIT	2020			2021		
	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)
Open Pit						
Wyoming One	1,159	1.5	57	1,120	1.4	52
Wyoming Three	135	1.7	8	135	1.7	8
Caloma One	2,719	1.3	115	2,450	1.3	105
Caloma Two	902	2.0	58	962	1.9	58
Sub Total	**4,915**	**1.5**	**238**	**4,667**	**1.5**	**222**
Underground						
Wyoming One	2481	2.9	228	2238	2.8	201
Wyoming Three	90	2.1	6	90	2.1	6
Caloma One	752	2	50	765	2.2	54
Caloma Two	1211	2.3	88	854	2.4	67
Sub Total	**4534**	**2.6**	**372**	**3947**	**2.6**	**328**
TOTAL	**9,449**	**2.0**	**610**	**8,614**	**2.0**	**550**

Apparent arithmetic inconsistencies are due to rounding

TOMINGELY GOLD OPERATION COMPARATIVE OPEN PIT RESERVES						
	2020			2021		
DEPOSIT	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)
Wyoming One	0	0.0	0			
Wyoming Three	0	0.0	0			
Caloma One	569	1.6	30	476	1.6	24
Caloma Two	0	0.0	0			
Stockpiles	207	0.8	6	72	1.2	3
Total	**776**	**1.4**	**36**	**548**	**1.6**	**27**
COMPARATIVE UNDERGROUND RESERVES						
	2020			2021		
SOURCE	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)	Tonnage (Kt)	Grade (g/t Au)	Gold (koz)
Proven	573	1.9	34	783	2.1	54
Probable	1,618	2.0	106	1,042	1.9	63
Total	**2,191**	**2.0**	**140**	**1,825**	**2.0**	**117**
TOTAL	**2,967**	**1.8**	**176**	**2,373**	**1.9**	**144**

Apparent arithmetic inconsistencies are due to rounding

The primary differences from 2020 to 2021 are:

- Caloma 1 cut-back placed into the reserves;
- Underground reserves depleted through mining at Wyoming One; and
- Addition of Caloma One and Caloma Two reserves.

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.

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 2021)									
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 0.50g/t Au)									
Roswell			7,871	2.07	2,188	1.93	10,059	2.04	660
San Antonio			5,930	1.82	1,389	1.32	7,319	1.73	406
TOTAL			**13,801**	**1.96**	**3,577**	**1.69**	**17,378**	**1.91**	**1,066**

Apparent arithmetic inconsistencies are due to rounding

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

Roswell and San Antonio Open Pit Ore Reserves

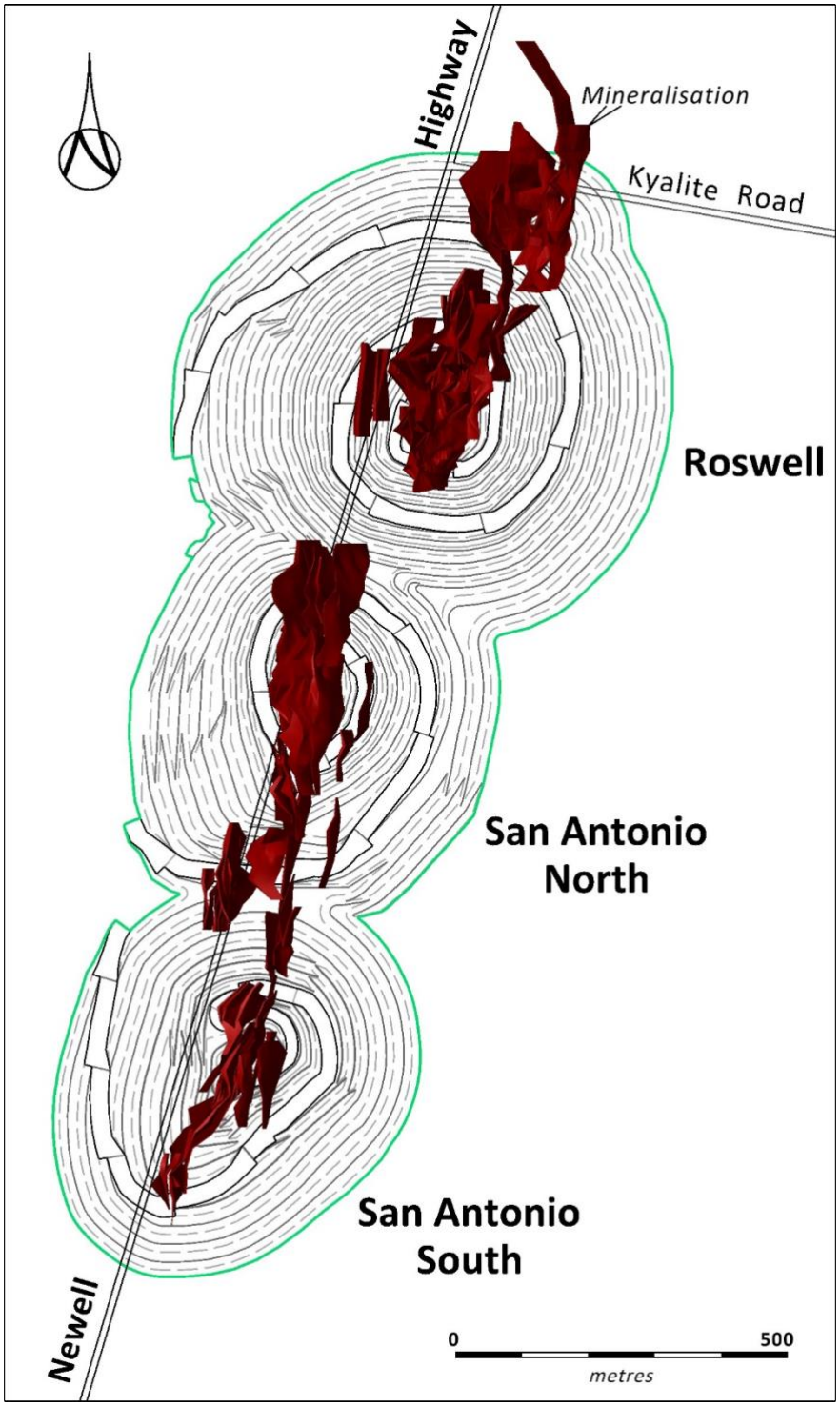
Based upon the resource models above, optimisation work using Whittle Software (WSP) and modifying factors developed on the existing Tomingley operations, an open pit reserve was estimated with the following observations:

- 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. Financial 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.

The mining method proposed for mining the underground portion of the Roswell resource is primary and secondary Longhole Open Stoping (LHOS) with paste filled primary stopes and no fill in secondary stopes.

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 primary stopes mined in a checker board pattern retreated along strike to the central access. The primary stopes are paste-filled and then the secondary stopes are accessed by mining through the paste-filled primary stopes. The secondary stopes are then mined, being left unfilled. 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 840 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 would include two development jumbos and two production drills.

Primary ventilation for Roswell is planned to be supplied by four 110kw, 1.4m diameter, single stage fans wall mounted underground. These fans will support mining down to the current extent of the Roswell ore deposit. Electrical infrastructure servicing TGO can deliver 10MW and the site currently uses 6.5MW; this falls within the current 7.5MW peak allowance. Underground mining at TGO currently uses 2.0MW, this power can be redirected to Roswell as TGO underground ramps down and underground production from Roswell commences. The power will be reticulated from TGO to Roswell using overhead power lines.

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 2021)							
DEPOSIT	PROVED		PROBABLE		TOTAL		Total Gold
	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	(Koz)
Open Pittable Reserves (cut off 0.50g/t Au)							
Roswell	0	0.0	3,679	1.7	3,679	1.7	202
San Antonio	0	0.0	4,188	1.6	4,188	1.6	218
Sub Total	**0**		**7,867**	**1.7**	**7,867**	**1.7**	**420**
Underground Reserves (cut off 1.3g/t Au)							
Roswell	0	0.0	1,575	2.8	1,575	2.8	142
San Antonio*	0	0.0	0	0.0	0	0.0	
Sub Total	**0**	**0.0**	**1,575**	**2.8**	**1,575**	**2.8**	**142**
TOTAL	**0**	**0.0**	**9,442**	**1.9**	**9,442**	**1.9**	**563**

Apparent arithmetic inconsistencies are due to rounding.

* San Antonio 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.

A review of the existing database in 2018 defined a resource beneath the Proprietary (220mRL – -45mRL) at a 2.0g/t gold lower cu-off. The Proprietary underground deposit is approximately 250m long and 30m wide and the resource estimate was depleted for the known historical underground workings. Details of the project and underground Mineral Resource estimation were given in the ASX Announcement of 18 October 2018.

During the last year further metallurgical testing was completed using the diamond drill core from the 2018 drilling program at Proprietary. Results were very positive indicating that gold recoveries of 90-95% were achievable using a modified Albion process. A conceptual mine development plan is being investigated.

Mineral Resources

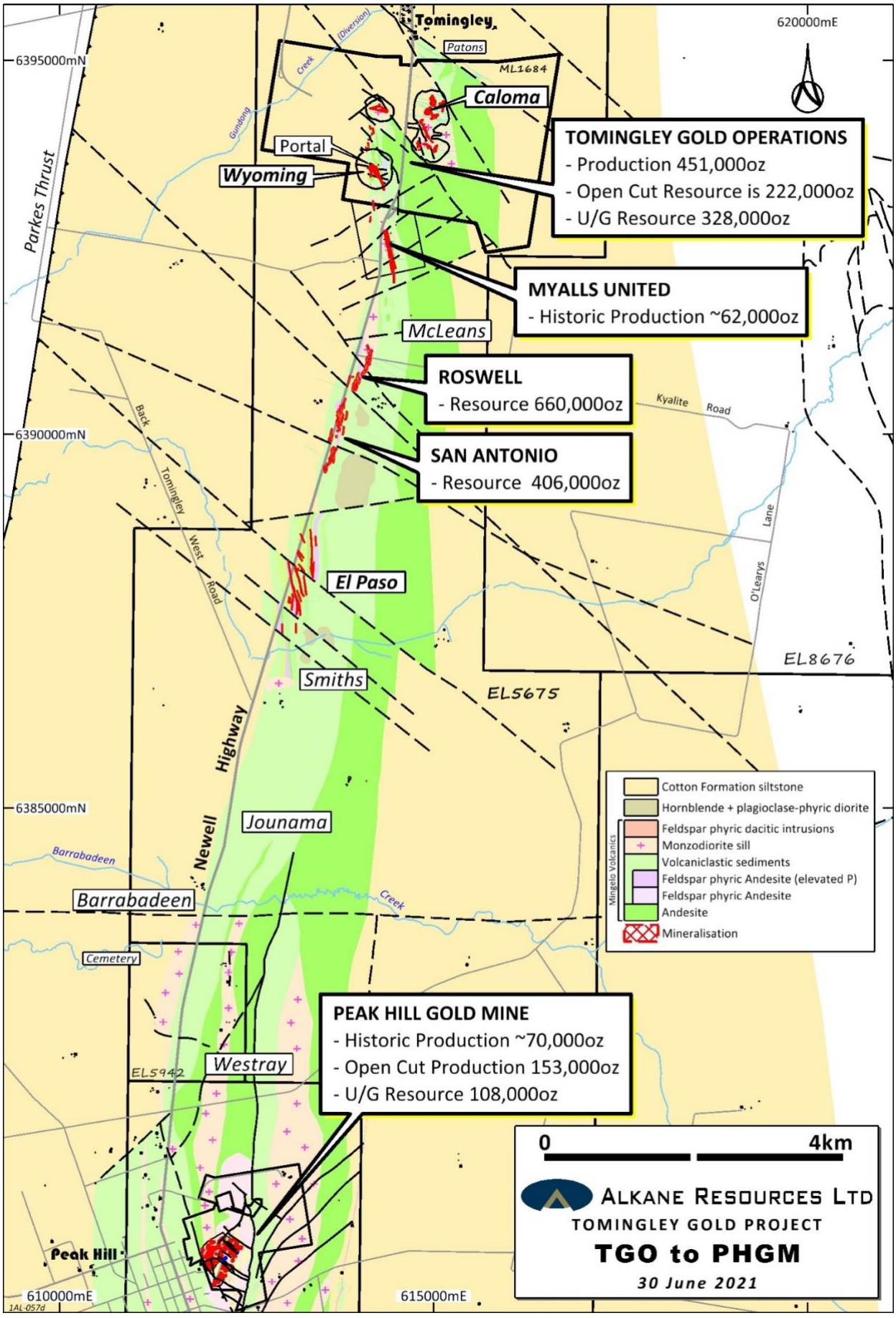
PEAK HILL GOLD PROJECT MINERAL RESOURCES (as at 30 June 2021)						
Deposit	Resource Category	Cut-Off	Tonnes (Kt)	Gold Grade g/t	Gold Metal (Koz)	Copper Metal (%)
Proprietary U/G	Inferred	2g/t Au	1,022	3.29	108	0.15
TOTAL			**1,022**	**3.29**	**108**	**0.15**

Full details and JORC tables were included in the ASX announcement 18 October 2018, 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.

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 (30 June 2021)								
Deposit	2020				2021			
Proprietary U/G	Tonnes (Kt)	Gold Grade g/t	Gold Metal (Koz)	Copper Metal (%)	Tonnes (Kt)	Gold Grade g/t	Gold Metal (Koz)	Copper Metal (%)
Inferred	1,022	3.29	108	0.15	1,022	3.29	108	0.15
TOTAL	**1,022**	**3.29**	**108**	**0.15**	**1,022**	**3.29**	**108**	**0.15**



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.*

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 and OTCEF: ALKEF

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 a major drill program ongoing 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 ~19.8% of Genesis Minerals (ASX: GMD) and ~9.7% 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 2020 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 – 1062 hole for 28366m DD - 39 holes totalling 83037.65m Face samples: 535 totalling ~3251 samples Sludge samples: 87 holes ~1283 samples 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.

Criteria	JORC Code explanation	Commentary
		Visible gold was occasionally observed in both core and AC/RC samples
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	Initial reconnaissance drilling was completed to fresh rock using 75mm or 100mm air core with follow-up and deeper drilling completed by RC (usually 126 - 140mm diameter). Detailed resource definition drilling was completed primarily by RC techniques using a 130mm or 140mm diameter face sampling hammer. DD holes were pre-collared using either RC techniques or un-oriented PQ3 (83mm diameter) core drilling. Pre-collars were completed to competent material, with holes cased off and completed to depth using HQ3 (61mm diameter) core. 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.
He 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*

Criteria	JORC Code explanation	Commentary
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*	*All logging was qualitative with visual estimates of the various characteristics. Magnetic susceptibility data is quantitative.* *AC & RC - A representative sample of each one metre interval is retained in chip trays for future reference.* DD - Core was photographed and all un sampled core is retained for reference purposes. Underground 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.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	*For all 1m samples used in the resource estimate gold was determined using a 50g charge fused at approximately 1100°C with alkaline fluxes, including lead oxide. The resultant prill was dissolved in aqua regia and gold determined by flame AAS. For 3m composite samples gold was determined using a 30g charge (more rarely 50g charge).* For other geochemical elements, samples were digested in aqua regia with each element concentration determined by ICP Atomic Emission Spectrometry or ICP Mass Spectrometry. These additional elements were generally only used for geological interpretation purposes, are not of economic significance and are not routinely reported.
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*	Not applicable to this report or deposit.
	• *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	*Commercially prepared Certified Reference Materials (CRM) and blanks were inserted at 1 in 50 samples. CRM's were not identifiable to the laboratory.* *Field duplicate samples were inserted at 1 in 50 samples (alternate to CRM's) for RC drilling programs.* *Laboratory QAQC sampling includes insertion of CRM samples, internal duplicates and screen tests. This data was reported for each sample submission.* *Failed standards result in re-assaying of portions of the affected sample batches.*
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	Drill data was compiled and collated, and reviewed by senior staff. External consultants do not routinely verify exploration data until resource estimation procedures are deemed necessary.
	• *The use of twinned holes.*	Twinned holes have not been used at Wyoming One as twinning provides verification only for extremely limited areas of a deposit.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	*All drill hole logging and sampling data was hard keyed into Excel spreadsheet for transfer and storage in the Datashed database with verification protocols in place.* All primary assay data was received from the laboratory as electronic data files which were imported into sampling database with verification procedures in place. QAQC analysis was undertaken for each laboratory report. Digital copies of Certificates of Analysis (COA) are stored in a central database with regular (daily) backup. Original survey data is stored on site. Data was also verified on import into mining related software.
	• *Discuss any adjustment to assay data.*	No assay data was adjusted.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	*Drill holes were laid out using hand held GPS (accuracy ± 2m) then surveyed accurately (± 0.1m) by licensed surveyors on completion.* *RC & AC drill holes were surveyed using a single shot electronic camera at a nominal 30m down hole intervals.* DD holes were surveyed at nominal 30m down hole during drilling to maintain drilling direction and then at 6m intervals on retrieval of rod string using a multi shot electronic camera. Some of the more recent surface Diamond holes from the 2016/2017 program were surveyed by nth seeking gyro.

Criteria	JORC Code explanation	Commentary
	• *Specification of the grid system used.*	All drill holes were originally laid out in AMG66 grid however since mining commenced in February 2014 have been transformed to MGA94 grid system to conform to reporting requirements for mine operations.
	• *Quality and adequacy of topographic control.*	The area is very flat. A site based digital terrain model was developed from accurate (± 0.1m) survey control by licenced surveyors.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	The majority of drilling at Wyoming One within the open pit was completed along east-west lines spaced 25m apart. However once the east-west lode orientation was confirmed for the '376' zone (this zone is the high grade mineralisation on the eastern contact of the porphyry 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 has was undertaken on a nominal 15m x 20m drill spacing on all ore lodes.
	• *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 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.
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

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

Section 2 Reporting of Exploration Results

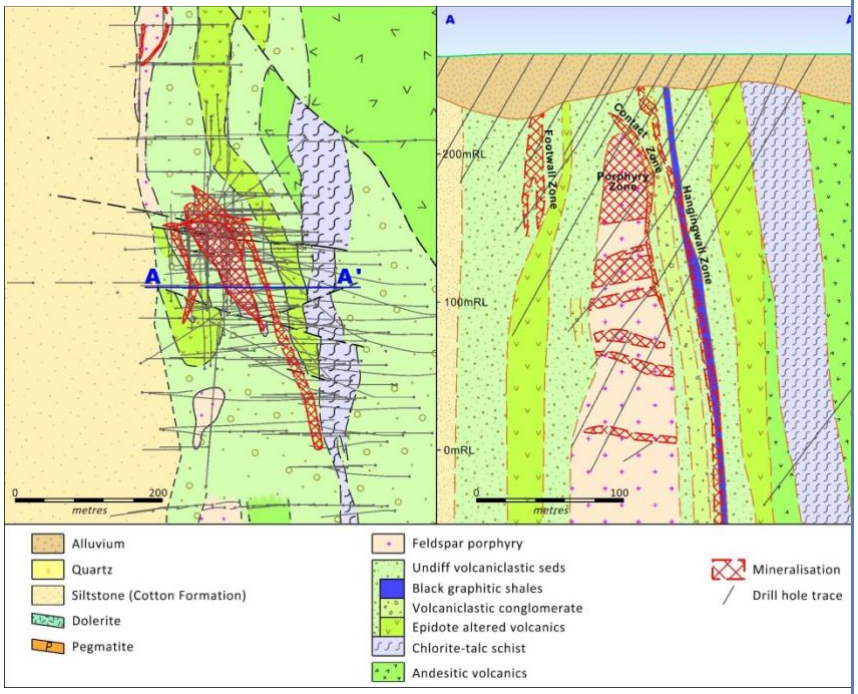
(Criteria listed in the preceding section also apply to this section.)

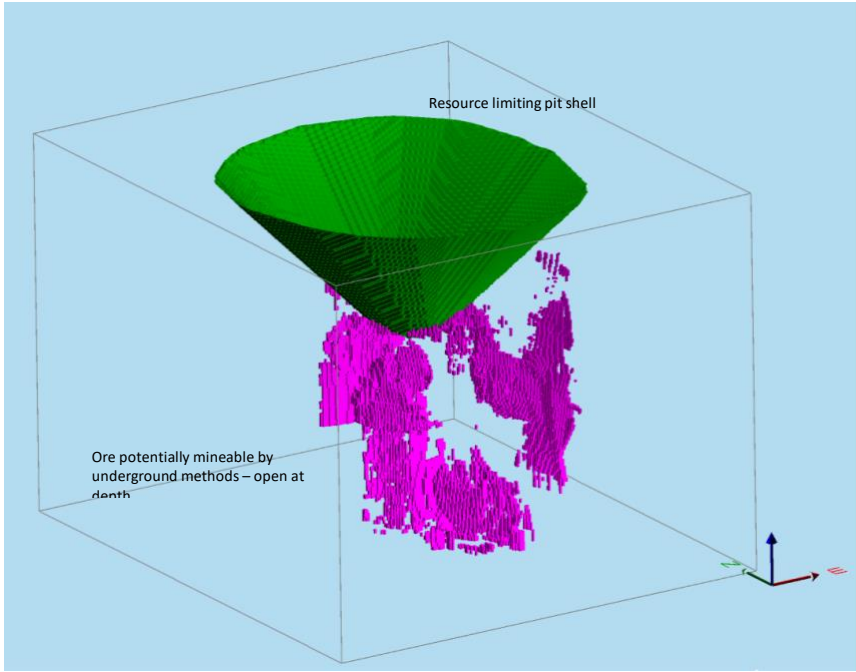
Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness 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 mineralisation on the contact has been domained separately for the estimation and is currently referred known as the “High Grade porphyry lode” mentioned below. Within the main porphyry body there are several internal mineralised stacked lodes that dip 45° to the

Criteria	JORC Code explanation	Commentary
		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 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.
	• *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.

Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	*Cross sections and a plan showing geology with drill collars were included with previously reported exploration results. A typical plan and cross section are included below.* 
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Data relating to all exploration drill holes has been reported in previous documentation of exploration results.

Criteria	JORC Code explanation	Commentary
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	No additional or new drilling results are being reported at this time.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	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 deposit are well constrained by drilling however the high grade structures remain open at depth. 

Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	Logging data was entered into Excel via drop down menus. All raw data was loaded directly to the Access database from the assay, logging and survey derived files. (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 datahas 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.

Criteria	JORC Code explanation	Commentary
	• *The factors affecting continuity both of grade and geology.*	Mineralisation is directly associated with alteration and quartz veining.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	The mineralisation occurs in several zones within a NNW-striking corridor 300m long and 220m wide. Mineralisation extends from about 25m below the surface for more than 400m vertical depth.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	13 mineralisation wireframes (domains) were interpreted by the Alkane geologists most familiar with the deposit to constrain the estimation. This includes an enclosing background domain which was modelled to capture minor mineralization outside the main domains. Four surfaces were also used to separate material types - topography, alluvium, saprolite and base of oxidation surfaces. The material type classification was used to allocate density values. The drill hole data were flagged by the domain wireframes in priority order, to prevent double use the data in the intersecting zones. The samples were composited to 1m, the most common sample length and flagged by the topography, alluvium, saprolite and base of oxidation surfaces. Top-cuts were selected for each domain based on histograms, probability plots and cutting statistic plots. The top-cuts ranged from 7g/t gold to 40.0 g/t gold. 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

Criteria	JORC Code explanation	Commentary
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*	The primary block size was unrotated (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
	• *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*	The metallurgy of the Tomingley deposits is well studied. The upper portion of the Wyoming 1 deposit has been completed. A total of 1.5K tonnes have been mined up to June 2020,

Criteria	JORC Code explanation	Commentary
	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.	with 2.5M tonnes of Wyoming 1 having been processed. During this time no metallurgical issues have arisen, with recoveries ranging between 88-92%.
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 environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	Project approval for the TGP was granted in July 2012 for mining from three open pits (Wyoming One, Wyoming Three and Caloma) and underground from Wyoming One deposit. Mining from the Wyoming Three and Caloma open pits commenced in December 2013 with processing of ore in February 2014. Mining of ore from the Wyoming One open pit commenced in January 2016 and 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

Criteria	JORC Code explanation	Commentary
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*	The Wyoming One deposit consists of 8 mineralisation zones; 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, 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 optimised 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 Open pit reconciled mined tonnes and grade, the Grade control model (same as the Underground Resource model) have shown that the reconciled mined tonnes are +17%, grade -1% with an overall increase of+15% ounces. This indicates the model being implemented does have a reasonable high level of accuracy with respect to grade estimation.

Appendix 2

Section 4 Estimation and Reporting of Ore Reserves

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

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Resees	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.*	The Mineral Resource estimate that this reserve is based upon has been complied by Mr Craig Pridmore, 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.

TOMINGLEY GOLD OPERATION MINERAL RESOURCES (as at 30 June 2021)

DEPOSIT	MEASURED		INDICATED		INFERRED		TOTAL		Total Gold
	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	(Koz)
Open Pittable Resources (cut off 0.50g/t Au)									
Wyoming One	573	1.8	412	1.2	135	0.7	1,120	1.4	52
Wyoming Three	86	2.0	16	1.3	33	1.4	135	1.7	8
Caloma One	801	1.6	1,070	1.2	579	1.2	2,450	1.3	105
Caloma Two	57	2.3	875	1.9	30	1.8	962	1.9	58
Sub Total	**1,517**	**1.7**	**2,373**	**1.4**	**777**	**1.1**	**4,667**	**1.5**	**222**
Underground Resources (cut off 1.3g/t Au)									
Wyoming One	1102	3.0	1,050	2.7	86	2.0	2,238	2.8	201
Wyoming Three	46	2.2	24	2.0	20	1.9	90	2.1	6
Caloma One	157	2.6	234	2.1	374	2.1	765	2.2	54
Caloma Two	2	3.6	699	2.5	153	2.3	854	2.5	67
Sub Total	**1,307**	**2.9**	**2,007**	**2.6**	**633**	**2.1**	**3,947**	**2.6**	**328**
TOTAL	**2,824**	**2.3**	**4,380**	**1.7**	**1,410**	**1.8**	**8,614**	**2.0**	**550**

	• *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	The Mineral Resources reported are inclusive of the Ore Reserves.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* *(If no site visits have been undertaken indicate why this is the case.)*	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.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* *(The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.)*	The Tomingley Gold Mine is an operational open pit mine and CIP processing plant. The mine is based on the extraction and treatment of ore from underground operations and remnant stockpiles from open cut mining operations. Previous open pits – Caloma, Caloma 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. • 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% 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. 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
	• *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.

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 2021)

John Millbank
– July 2021

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 June2021 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.
- Life of Mine cost and revenue models for the operation.

The ore reserve for July 2021 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	398	1.7	22	78	1.2	3	476	1.6	25
Total	**398**	**1.7**	**22**	**78**	**1.2**	**3**	**476**	**1.6**	**25**

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

Key differences between 2020 and 2021 are due to

- Continued depletion through mining of Caloma to the end of Financial Year 2021.
- Cost modelling resulting in the reduction of cut off grade to 0.4 g/t from the previous 0.5g/t.

John Millbank
Principal Mining Engineer MAusIMM #108087

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TABLES

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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

Disclaimer

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 2021 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 site visit to the TGO was completed between the 20th and 24th May 2019 and the Caloma site was inspected for the purposes of future reserves reports in this area.

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 current Life of Mine cost models. These are based on a

- Life of Mine Processing Cost – $24.90 per dry tonne inclusive of geology, safety and environment costs. This reflects average Life of Mine costs for the project to date and is representative of current costs.
- Average Processing recovery - of 90%.
- Gold price net royalty of $61.73 per gram ($1920 per ounce)

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 0.28 g/t.

Comparison has been made with costs from the 2021 end of June Monthly operations report, using the budget gold price. Using actual costs, the processing cut off grade is marginally higher than planned, at 0.31 g/t actuals versus 0.28 g/t planned.

Table 1 – Cut-off grade calculations

Cut Off Grade Calculations		FY 2021actuals	Budget 2021
Mining Cost per BCM	$/bcm		$ 7.78
Average Density During period.	SG		2.76
Mining Cost per mined tonne	$/t		$ 2.82
Geology Cost Increment	$/t		$ 1.52
Processing cost per dry ore tonne processed	$/t	$ 20.90	$ 19.19
Administration cost per dry ore tonne processed	$/t	$ 5.01	$ 2.46
Safety and Environment Cost per processed tonne	$/t	$ 2.49	$ 0.52
Process recovery	%	91.47	90
Gold Price	$/oz	$ 2,000.00	$ 2,000.00
Royalty	%	4	4
Gold Price	$/gm	$ 61.73	$ 61.73
Ore cut off grade	g/t	0.31	0.28
Incremental Cut off grade	g/t	0.50	0.43

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.

Processing cut off for this report has been selected as a conservative 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 2 – 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 at TGO. The reconciliations have been completed by using the as mined survey surfaces to determine the ore volumes mined from the resource models and comparing against the as mined calculations that are reconciled against the mill production.

The following is a summary of the variance for the project to date, for resource model versus reconciled mined ore, expressed as a percentage. Reconciled mined ore uses mill feed to adjust mined tonnes and stockpile values, with mill feed being the fixed known value.

Reconciliation is completed against the au_sched grade interpolation methodology in the block model, and compared against milled tonnes. The reconciliation is considered as life of mine up until mining was completed in 2018.

Table 3 – Caloma Reconciliation

	Predicted Tonnes	Grade (g/t)	Contained Ounces	Proportion Mined
Model versus Milled	99%	97%	96%	100%

The resource model slightly under calls milled material, predicting 99% of milled tonnes, 97% of grade and 96% of contained ounces.

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

2.4.2 *Dilution and Ore Loss Calculations*

Table 2 shows the reduction in mining inventory for each of the two grade calculation methods. Using a 0.4 g/t cut off grade, and measured and indicated resource categories, Table 4 shows the variation in mining inventory.

Table 4 –Mining Inventory Variation

Resource Category	AuKrig			AuSched		
	0.4 g/t cutoff			0.4 g/t cutoff		
	Tonnes	AuKrig	Oz	Tonnes	AuSched	Oz
Measured	485,516	1.74	27,161	398,561	1.78	22,809
Indicated	156,717	1.20	6,046	78,272	1.29	3,246
Total	642,233	1.61	33,207	476,833	1.70	26,055
Variation				74%	106%	78%

This shows that the au_sched grade interpolation methodology already reduces the ore tonnes by 26%, meaning no further factors for ore loss should be applied Reconciliation with milled grade indicates that the au_sched grade interpolation under calls milled grade by approximately 4%. There is a consequent reduction in contained ounces of 22%.

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_v8.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.

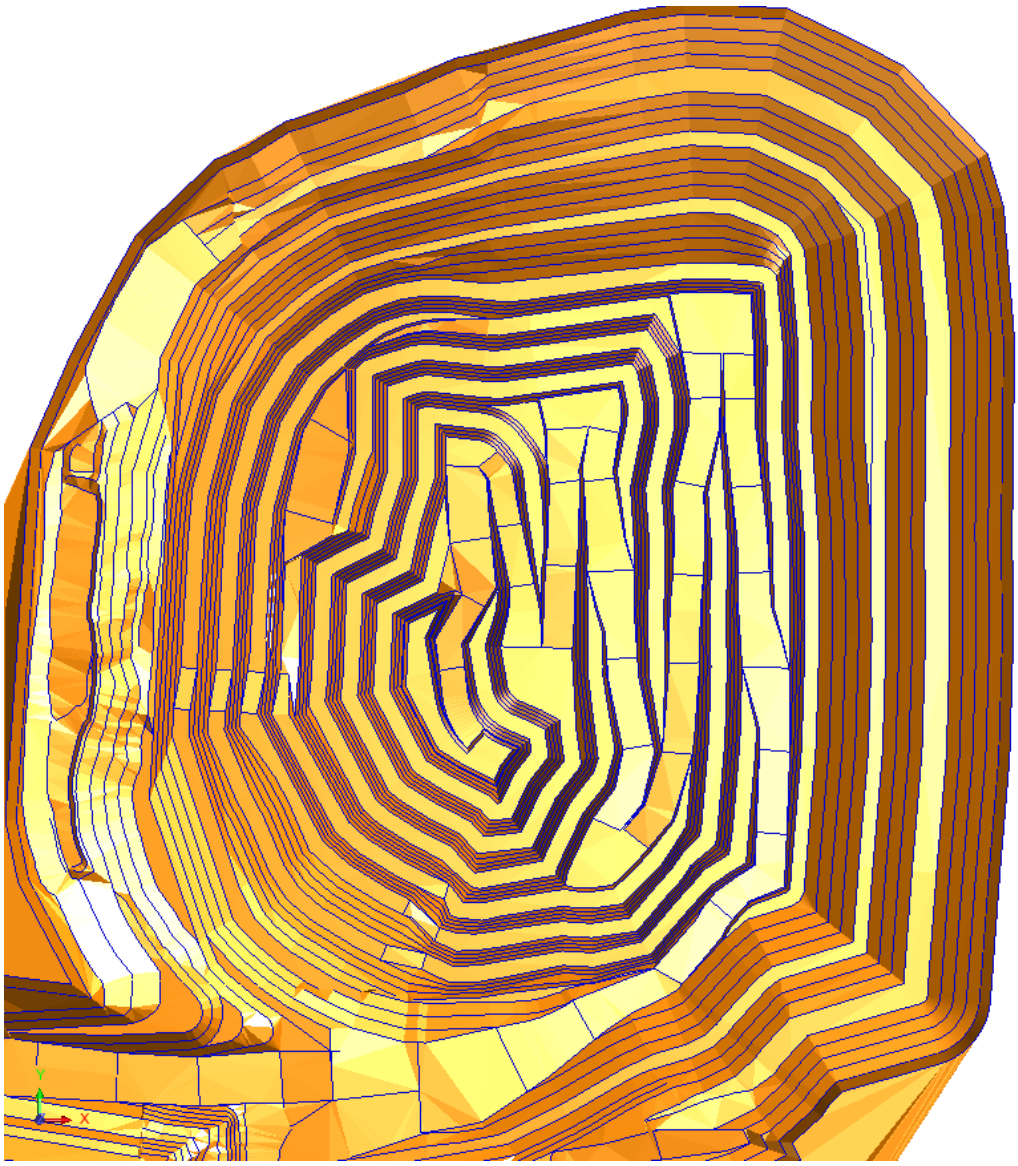

Figure 1 – Caloma Pit Design

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 FYE2020 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 2021 was $1320 per ounce produced as reported in the ASX Media release “Quarterly Activities Report to 30 June 2021” on 22 July 2021.

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 2021 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.
- Grade control drilling data was used where possible and has been included in the resource model for Caloma.
- Indications to date are that the Reserve should be conservative in both tonnes and grade. It is likely that the pits will recover more tonnes and possibly grade than what is contained in the Proved and Probable Reserve.

3 2021 Ore Reserve Table.

3.1 Mining Inventory

The mining inventory for Caloma ending June 30, 2021, can be summarised as in Table 5. 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 576 kt at 1.6 g/t for 30,000 contained ounces of gold. This has been calculated using a 0.5g/t cut off. The effect of rounding on these physicals in Table 5 has generally resulted in variations down compared to values shown in Table 2.

Table 5 – 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	398	1.8	23	78	1.3	3	5	1.4	0.2	481	1.7	27
Total	**398**	**1.8**	**23**	**78**	**1.3**	**3**	**5**	**1.4**	**0.2**	**481**	**1.7**	**27**

3.2 Mining Ore Reserve

Mining Ore Reserve totals 476 kt at 1.6 g/t for 25,000 contained ounces of gold, using a 0.4g/t cut off.

Table 6 – 2020 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	398	1.7	22	78	1.2	3	476	1.6	25
Total	**398**	**1.7**	**22**	**78**	**1.2**	**3**	**476**	**1.6**	**25**

3.3 Year on Year Ore Reserve

Year on Year the Total reserves can be shown as follows. The years 2018 and 2019 had no reserves reported due to open pit mining of existing reserves being completed.

Table 7 – 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

3.3.1 *Key Differences 2020 to 2021.*

Key differences between 2020 and 2021 are as follows

- Depletion through mining of Caloma to the end of Financial Year 2021.
- Cost modelling resulting in the reduction of processing cut off grade to 0.4 g/t from the previous 0.5g/t.

APPENDIX 3

ALKANE RESOURCES LTD SHORT FORM ORE RESERVE REPORT

Tomingley Gold Operations Underground

TENEMENT:	*ML1684*
OWNER:	Alkane Resources Ltd 100%
OPERATOR:	Alkane Resources Ltd (ABN 35 000 689 216) 89 Burswood Road, BURSWOOD, WA 6100
COMMODITIES:	Gold
COMPILED BY:	Christopher Hiller
REPORT BY:	Christopher Hiller
REPORTING DATE:	30 June 2021

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 licenses.

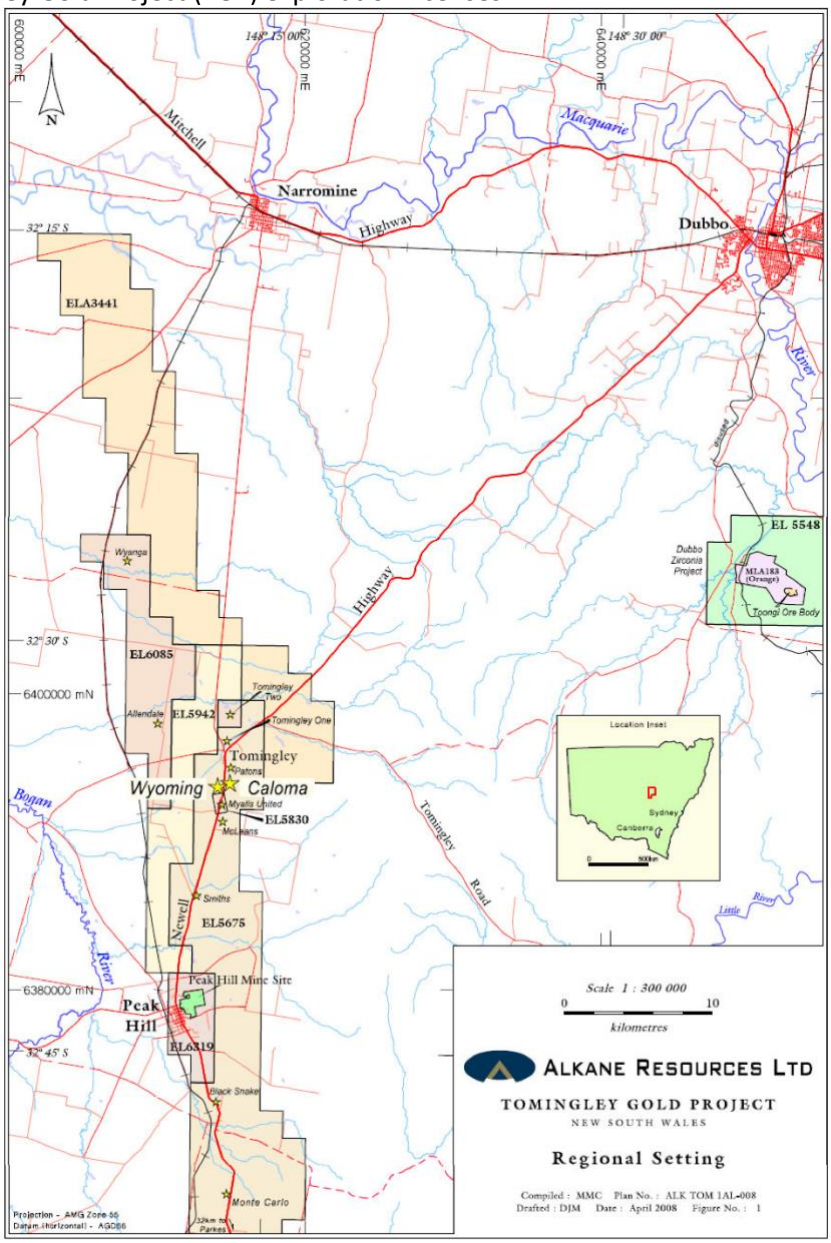

Figure 1: Regional Setting of the TGP

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 and access development to the Caloma orebodies. A proposed cut back of the Caloma One pit is scheduled to commence during the up-coming year. 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 20-25m. 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.

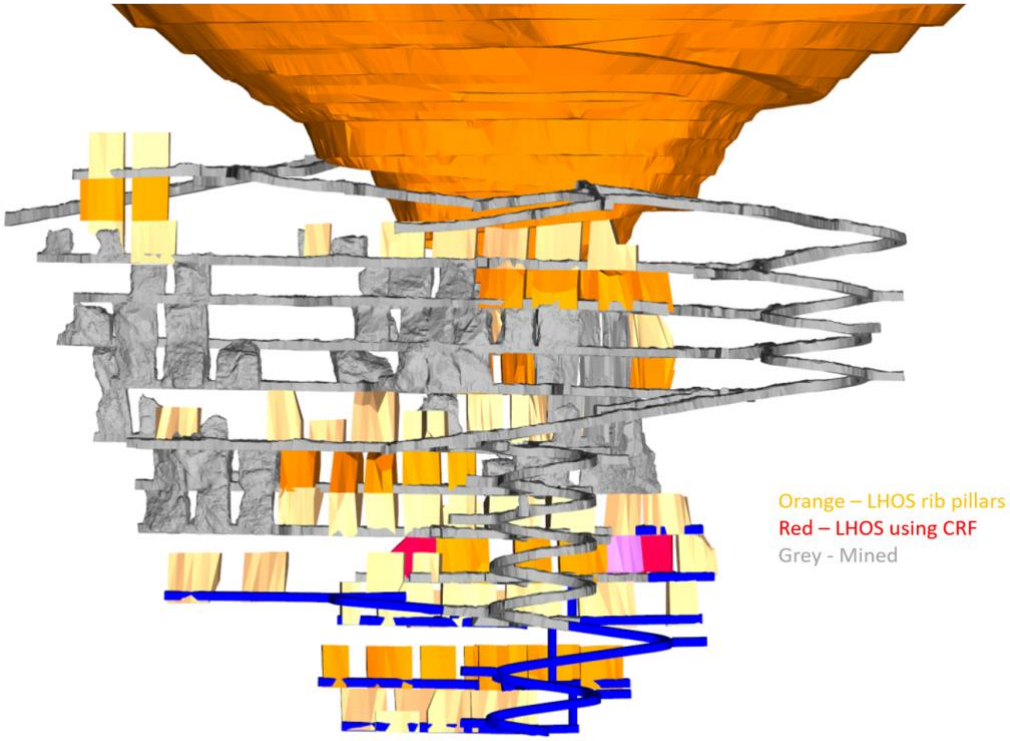

Figure 2: Isometric View of Wyoming One Pit and Stope Shapes

Ore production is scheduled at 800 ktpa which is trucked to surface using a fleet of four underground trucks (AD55). 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) and two production drills (DL431).

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.

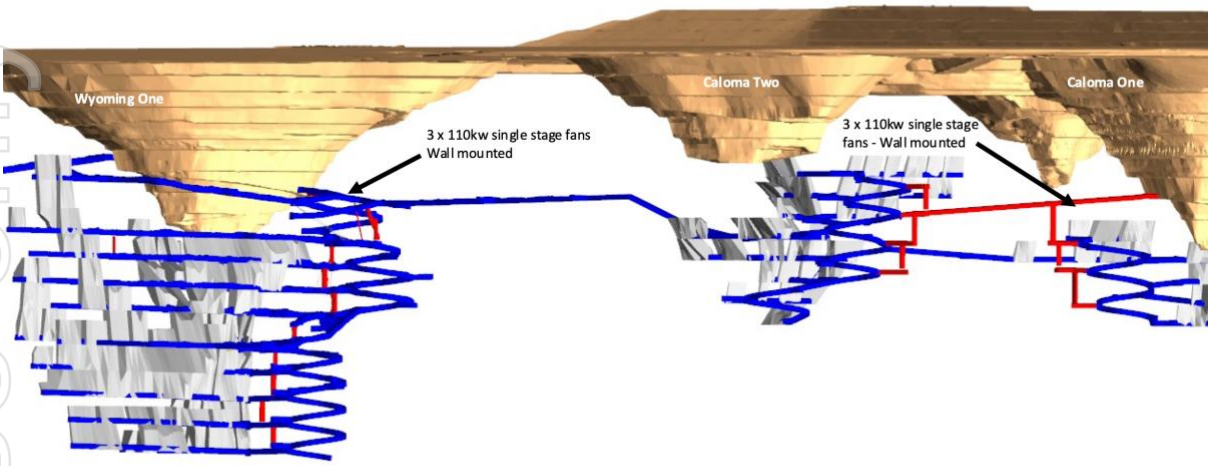

Figure 3: Primary Ventilation for Wyoming One, Caloma One and Caloma Two

Electrical infrastructure servicing TGO can deliver 10MW. The site currently uses 6.5MW; this falls within the current 7.5MW peak allowance. Underground mining currently uses 2.0MW, 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.

Stage seven tailings dam lift is nearing completion with construction of stage eight to commence in September 2021, an additional lift is approved (stage nine). Stage nine allows for storage at the current processing rate until July 2023. A second tailing dam has been approved for stage 1 and 2. These stages allow storage of a further 3.0Mt and construction is scheduled to commence in 2022.

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.

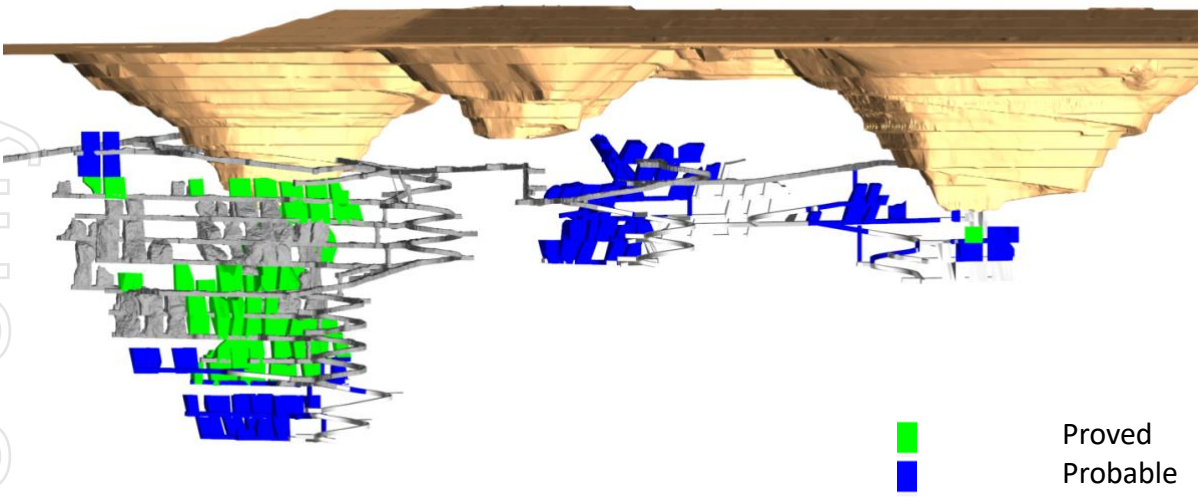

Figure 4: Isometric view of TGO Life-of-Mine design by Ore Reserve classification

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	**780**	**2.13**	**53**
Probable		**410**	**2.07**	**27**
Subtotal		**1,190**	**2.11**	**80**
Caloma One				
Proved	1.3g/t Au	**3**	**1.50**	**0**
Probable		**113**	**1.47**	**5**
Subtotal		**116**	**1.47**	**5**
Caloma Two				
Proved	1.3g/t Au	-	-	-
Probable		**519**	**1.84**	**31**
Subtotal		**519**	**1.84**	**31**
Total				
Proved	1.3g/t Au	**783**	**2.13**	**54**
Probable		**1,042**	**1.89**	**63**
Total		**1,825**	**1.99**	**117**

Table 1: Tomingley Gold Operation Ore Reserve Summary – 30 June 2020

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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_03072021.mdl, caloma_01072021.mdl and caloma2_03072021.mdl.
Site visits	• The Competent Person is Christopher Hiller a full-time employee of Hiller Enterprises Pty Ltd. Christopher has been onsite 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 has commenced to access Caloma One and Two. 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. • 17,000m 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_03072021.mdl, caloma_01072021.mdl and caloma2_03072021.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 due to commence construction in 2022.
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 Operating Plan (MOP) requires renewal prior to September 2021. The review has been completed, with submission pending. • 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 1.25Mtpa.
	
	• 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 most of its gold at spot prices however also has contracts to sell 24,000 ounces at an average gold price of $2,307 per ounce. • The Underground mine would contribute only a small portion of the overall volume of output and is unlikely to have any impact on the market.
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 rowspan="2">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>• 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>
</table>

Criteria	JORC Code explanation	Commentary
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* *(If no site visits have been undertaken indicate why this is the case.)*	The 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 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*	Open cut truck excavator mining, with some free dig material in the upper oxide zones and drill and

Criteria	JORC Code explanation	Commentary
assumptions	*factors by optimisation or by preliminary or detailed design).*	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. 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

Criteria	JORC Code explanation	Commentary
		pit physicals from inferred resources.
	• *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.

Criteria	JORC Code explanation	Commentary
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. • 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.

Criteria	JORC Code explanation	Commentary
		• 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 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.

Criteria	JORC Code explanation	Commentary
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.* ○ *The status of material legal agreements and marketing arrangements.* ○ *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.*	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. Produced gold doré is currently sold into the spot gold market. 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 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 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. No statistical quantification of confidence limits has been generated. Estimates are global by deposit. 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
	○ *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* ○ *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	

APPENDIX 4

Tomingley Gold Extension Project: San Antonio Roswell Prefeasibility Design. (JORC report)

- August 2021

EXECUTIVE SUMMARY

Studies have been completed to prefeasibility level on the recently published resource for the San Antonio and Roswell deposits.

Optimisation and sensitivity analysis has been completed using Whittle software. This has highlighted some key aspects to this project.

- The project is sensitive to block model cell size, gold price and wall angle.
- 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.

Shell selection for design was based upon a gold price before royalty of $2250 per ounce, and revenue factor 1 shell. At a gold price of $2000 per ounce, Roswell did not return results for some of the input cases.

Design has been completed and physicals generated for a staged pit design approach. Three stages have been included 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. Financial analysis including capital using the optimisation inputs and a gold price of $2250 per ounce has shown a positive NPV for both the base case and upgrade case 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.

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)
San Antonio Open Pit	-	-	-	4.1	1.6	215	4.1	1.6	215
Roswell Open Pit	-	-	-	3.6	1.7	201	3.6	1.7	201
Total	**-**	**-**	**-**	**7.7**	**1.6**	**416**	**7.7**	**1.6**	**416**

The completed reserve table should be considered as a robust and conservative estimate due to

- Conservative model block size parameters,
- Gold price that is currently above the estimated price of $2250 per ounce.
- Inferred material not being used within the mine planning that comprises these estimates.
- Confidence in cost estimates based on prior operations and
- Solid history of positive reconciliations from prior operations at TGO.

John Millbank
Principal Mining Engineer
MAusIMM #108087

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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 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.

Alkane has published a resource for the San Antonio and Roswell (SAR) areas in its report to the ASX on the 16th of February 2021, titled "Updated San Antonio Resource Estimation Shows Contained Ounces for Tomingley Extension of ~1.1Moz". Figure 1 has been taken directly from this report and shows the proximity of the Roswell and San Antonio projects to the existing Caloma Pits.

Alkane commissioned a prefeasibility design study to be completed for the SAR project. Scope for this work included

- Pit optimisation using cost and physical modifying factors for the project based on existing and previous operations at TGO.
- Complete sensitivity analysis for the individual resources based on changes to the inputs.
- Pit Shell selection for design purposes from the sensitivity analysis.
- Complete pit designs, preliminary schedules and financial analysis.
- Complete a report that meets the requirements of the JORC Code 2012 to report reserves for the two projects, as appropriate.

This report is for the purposes of release to the ASX, as part of the announcement of the maiden reserves statement for SAR.

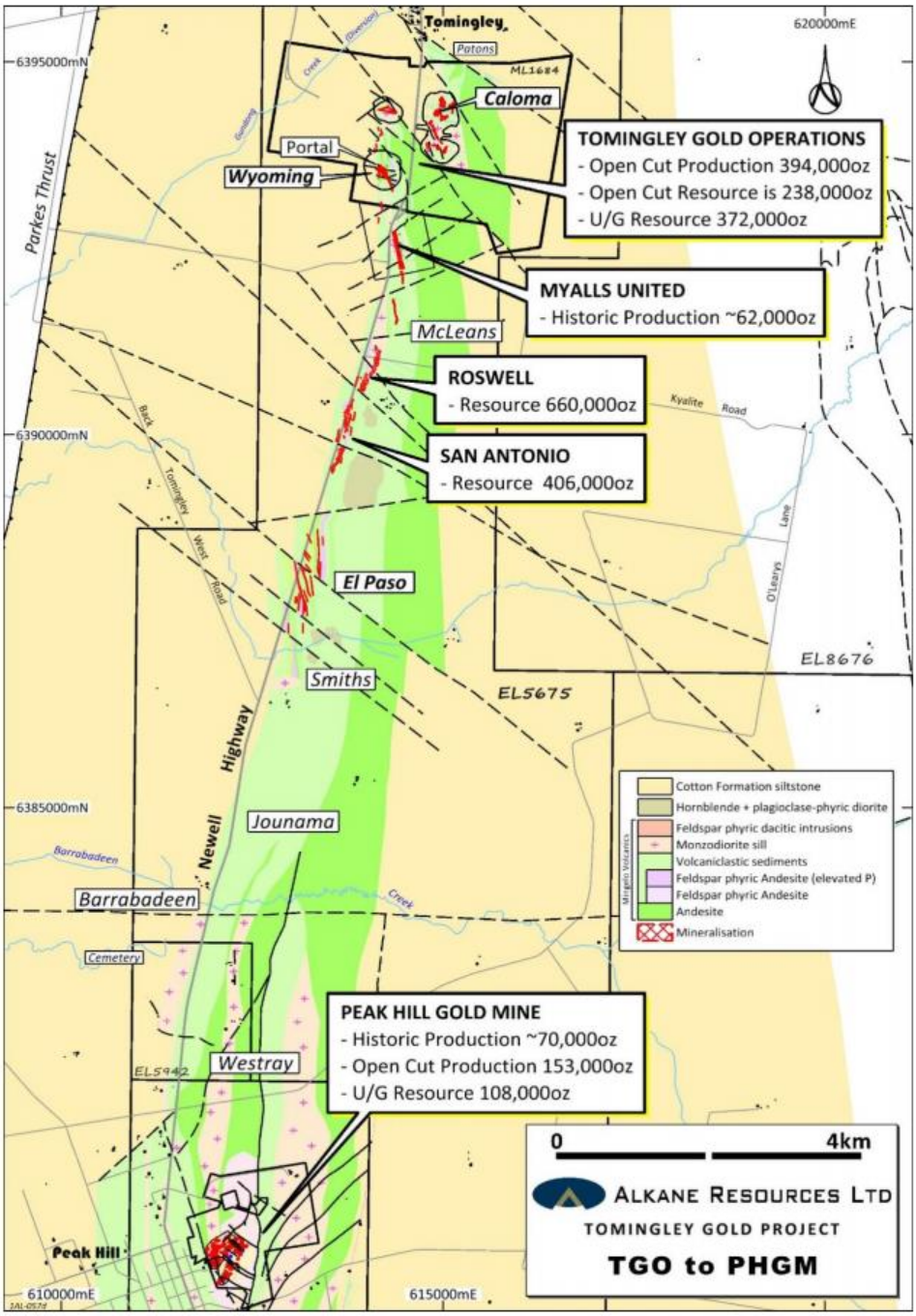

Figure 1 – Resource Location Plan.

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 February 2021, and as shown below in Table 1.

Project	Resource Category	Cut-Off	Tonnes (Mt)	Gold Grade g/t	Gold Metal (Koz)
San Antonio	Indicated	0.5g/t Au	5.93	1.82	347
	Inferred	0.5g/t Au	1.39	1.32	59
	Total	**0.5g/t Au**	**7.32**	**1.72**	**406**
Roswell	Indicated	0.5g/t Au	7.88	2.07	524
	Inferred	0.5g/t Au	2.19	1.93	136
	Total	**0.5g/t Au**	**10.1**	**2.04**	**660**
Total Resource Inventory	Indicated	0.5g/t Au	13.80	1.96	871
	Inferred	0.5g/t Au	3.58	1.69	195
	Total	**0.5g/t Au**	**17.4**	**1.90**	**1066**

Table 1 –Mineral Resources at San Antonio and Roswell

5 Mine OPtimisation

Mine optimisation was then conducted using Geovia Whittle software, along with Geovia Surpac software for 3d Modelling and design.

5.1 Optimisation Inputs

5.1.1 *Block Model*

Alkane have supplied two block models in .dm format, one for San Antonio and one for Roswell. Both models are .dm format sub celled models with a minimum cell size of 2.5m x 2.5 mx 2.5m (x,y,z), and both models have the same coordinate centres. The two models are called.

- Roswell - *Ros_est202011finalv3.dm*
- San Antonio – *SAN_RESBM_202102.dm*

These models were imported into Surpac and combined together to provide a single model for the entire San Antonio and Roswell resource. This combined model was named *sar_comb_202102.mdl.*

Using a 0.4g/t cut off the following Table 2 is a summary of the combined 2.5m cell size model and is representative of the two individual models.

Datamine Models - 0.4g/t Cut					
Deposit	Oxidation	ResCat	Tonnes	Au Grade	Cont Oz.
SanAntonio	Ox	Indicated	2,090,672	1.65	110,901
		Inferred	46,723	1.00	1,500
	Fresh	Indicated	4,442,726	1.74	249,094
		Inferred	1,171,623	1.34	50,427
	Subtotal	*All*	*7,751,744*	*1.65*	*411,922*
Roswell	Ox	Indicated	518,632	0.90	15,074
		Inferred	134,970	0.80	3,463
	Fresh	Indicated	7,607,016	2.10	512,623
		Inferred	2,154,969	1.93	133,926
	Subtotal	*All*	*10,415,587*	*1.99*	*665,085*
Combined	**Total**	**All**	**18,167,331**	**1.84**	**1,077,007**

Table 2 –Combined Resource Model for San Antonio and Roswell

This combined model was then reblocked to a minimum size of 5m x 5 m x 5m *(x,y,z)*. This was to reduce the number of cells in the model to reduce Whittle processing time, and to provide a SMU size relevant to the potential equipment for mining operations. The reblocked model will then provide an inherent dilution within the model that can be used for mine planning purposes.

Table 3 shows the results from the reblocking process. This has resulted in a global change of 116% on tonnes, 81% of grade, and a resulting 94% 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.

			Datamine Models - 0.4g/t Cut			5x5 Reblocked Model - 0.4 g/t Cut			Difference, .dm Vs Reblock		
Deposit	Oxidation	ResCat	Tonnes	Au Grade	Cont Oz.	Tonnes	Au Grade	Cont Oz.	Tonnes	Au Grade	Cont Oz.
SanAntonio	Ox	Indicated	2,090,672	1.65	110,901	2,016,243	1.42	92,096	96%	86%	83%
		Inferred	46,723	1.00	1,500	35,335	0.88	994	76%	88%	66%
	Fresh	Indicated	4,442,726	1.74	249,094	5,490,960	1.36	240,111	124%	78%	96%
		Inferred	1,171,623	1.34	50,427	1,455,283	0.99	46,124	124%	74%	91%
	Subtotal	*All*	*7,751,744*	*1.65*	*411,922*	*8,997,821*	*1.31*	*379,325*	*116%*	*79%*	*92%*
Roswell	Ox	Indicated	518,632	0.90	15,074	493,177	0.80	12,731	95%	89%	84%
		Inferred	134,970	0.80	3,463	104,276	0.64	2,143	77%	80%	62%
	Fresh	Indicated	7,607,016	2.10	512,623	9,017,938	1.71	496,860	119%	82%	97%
		Inferred	2,154,969	1.93	133,926	2,522,438	1.55	125,362	117%	80%	94%
	Subtotal	*All*	*10,415,587*	*1.99*	*665,085*	*12,137,829*	*1.63*	*637,096*	*117%*	*82%*	*96%*
Combined	**Total**	**All**	**18,167,331**	**1.84**	**1,077,007**	**21,135,650**	**1.50**	**1,016,421**	**116%**	**81%**	**94%**

Table 3 –Combined and Reblocked Resource Model for San Antonio and Roswell

5.1.2 *Gold Price*

Base case gold price has been used as $2000 per ounce less selling costs and royalties. This gives an effective gold price of $61.73 per gram. Gold prices up to $3500 per ounce were tested in sensitivity.

5.1.3 *Overall Slope angles*

These were derived from reports by WSP in both 2019 and 2021. In broad terms the wall angles reduced by up to 6 degrees for the slightly weathered to fresh rock horizons, and as much as 20 degrees for some of the Saprolite. The two different cases are modelled with the sensitivity analysis. Wall angles presented for the optimisations are inclusive of estimates for ramp width.

The March 21 report - PS117942-GEO-REP-005 RevB, is the most up to date and concise report, as well as the most conservative for geotechnical estimates. It is this report that is used for final evaluation in the optimisation results, and pit design.

5.1.4 *Mining Factors*

These were set to 1 considering the impact of inherent dilution within the reblocked model.

5.1.5 *Mining Cost.*

This was completed by site-based personnel using latest cost models for a dry hire equipment rental mining case. Rental costs have been based on current contracts for mining the Caloma pits, fleet utilisation from previous operations, and current labour hire rates. Equipment size is based upon previously operated machinery, 120t excavator class with 100t class trucks and appropriate support equipment. A component for overhaul has also been applied to allow for the additional haulage from San Antonio and Roswell to the ROM pad, and for backfilling of existing pit voids where possible.

Drill and blast costs have been based upon previous costs for operation at TGO and adjusted to bench levels where similar ground conditions are expected.

5.1.6 *Fixed Surface Infrastructure.*

Figure 2 highlights the proximity of the SAR resource to the Newell Highway and Kyalite Road. Other surface infrastructure includes private farmlands and associated houses and sheds. Capital costs associated with moving the highway and associated Kyalite Road, along with purchasing the adjacent farmlands are included external to this report. On the 3rd of June 2021 Alkane published a release to the ASX “Tomingley Mine Life Extended Beyond 2030”. A capital

cost estimate of approximately $87M is required for road realignment and process plant upgrades. Capital has been added back into cost modelling and has been excluded from the Whittle optimisations.

5.1.7 *Ore costs and recovery*

Processing costs have been based upon LOM actual costs for the project to date and are inclusive of maintenance. Additive to this is the General and Admin, HSE and Geology costs.

Metallurgical recovery is listed as 82% for fresh rock and 92% for oxide based on LOM averages to date. An upside recovery case has been generated based on the mill upgrade proposed by Alkane (3rd June 2021).

5.2 Optimisation Runs.

Optimisation runs were completed using Whittle software. A total of 30 different cases have been run for sensitivity analysis. Variations of the following input parameters were used to determine each case.

- Variations across deposit to test individual elements of the SAR resource.
- Variations on model block size to test effect of inbuilt dilution and SMU size.
- Variations on resource category to test the effect of including the inferred portion of the resource.
- Variations on gold price between $2000 and $3500 per ounce at increments of $250. (Before royalties).
- Variations on metallurgical recovery to test upside and base cases.
- Variations on wall angle based on the various geotechnical reports. The latest report from WSP in March 2021 was accepted as the final case.
- Variations to mining cost and ore cost to within 10%.

5.3 Optimisation Results.

Comparing results for each of the runs listed above showed the following.

- The project is sensitive to gold price. Variations to gold price has shown that Roswell and portions of San Antonio do not return positive cash flows at $2000 per ounce before royalty. Increasing this to $2250 per ounce and above produces positive cash flows. Percentage increments above $2250 per ounce increases cash flows proportionately above the increase in gold price.
- The project is somewhat sensitive to the dilutions applied via reblocking the model. Reducing these produced significantly higher cash flows and a higher conversion to ore tonnes. This reflects the importance of diligent grade control and mining practices during operations. The model has been reblocked to 5m high benches in the z direction. Reducing to 2.5m high benches will capture some of this value.
- The project is somewhat sensitive to wall angle and associated discounting effects. Continual improvement through geotechnical site visits and slope performance evaluation will protect this value during operations.
- Variations to met recovery show that the upside case will generate the required cash flow to substantiate capital expenditure.
- Variations to mining costs and ore costs result in direct savings or expenditure through the ranges tested and have minimal impact on the financial results.
- Less than 3% of material was added to the potential mill feed when inferred resource category material was included in the results,

5.4 Shell Selection for Design

Following on from results of the sensitivity analysis, the following inputs were selected as the basis for design. (Case 28)

- Measured and Indicated Resource only.

- Gold Price of $2250 per ounce.
- Updated slope geometry (reduced case)
- Upgrade Met recovery case.
- Reblocked Model.

Figure 2 shows the chart for cash flow versus shell size within the Case 28 runs. From this it was decided to use the revenue factor 1 Shell 21 for design purposes. With the flat curve above shell 16, the revenue factor 1 shell selection allows for changes to pit shape through design minimising economic impacts. Deferring the waste stripping and staging the pit will produce improved discounted cash flow than the worst case shown in Figure 3.

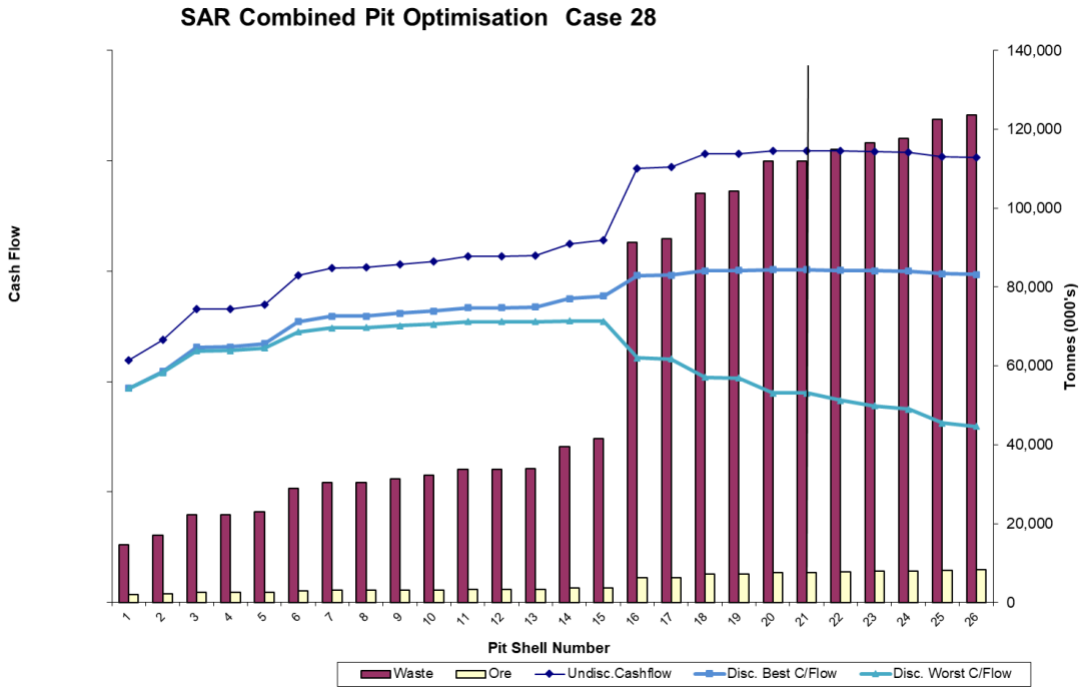

Figure 2 - Case 28 Results.

6 Staged Pit Design

6.1.1 *Parameters*

Pit design work has been completed using Surpac Software. Parameters for the design are as follows.

- 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 3 below shows the completed design (*sar_combined_210728.str)* clipped with the current topography and current surface roads overlain. Pit floor extends to RL 60 for San Antonio North, RL 100 for San Antonio South, and 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 4.

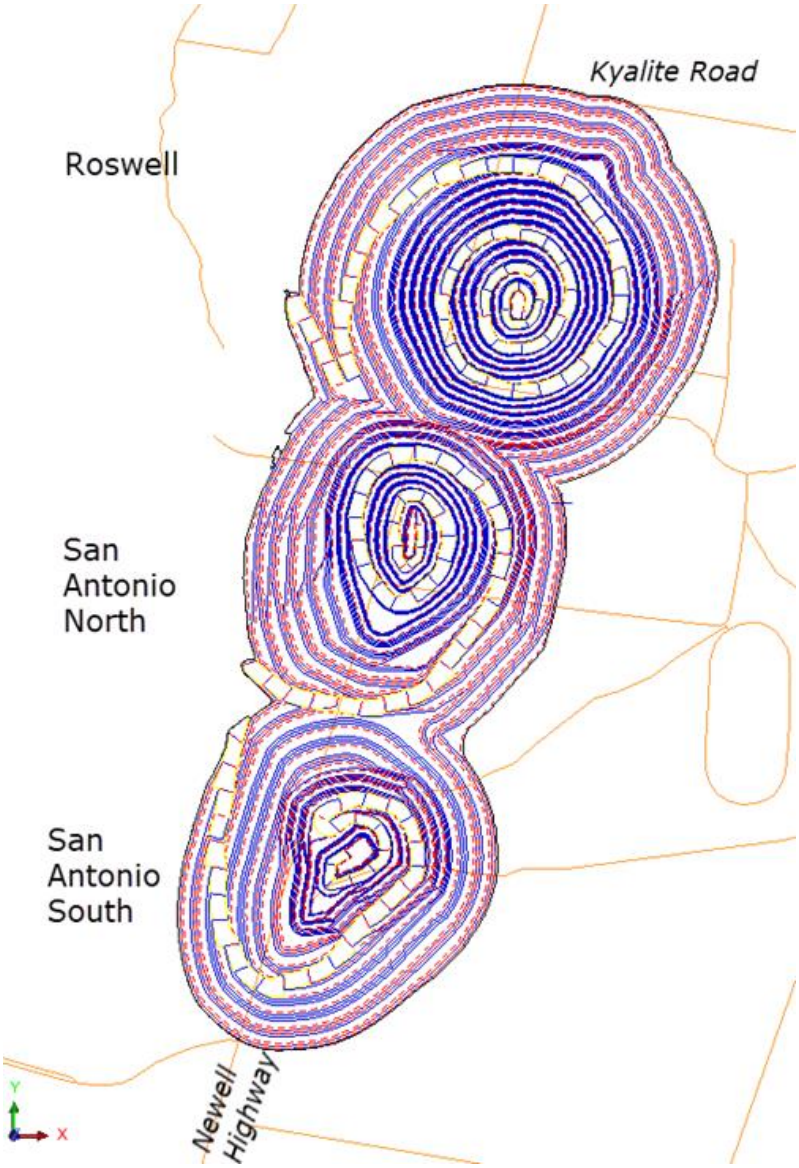

Figure 3 –Final Design Combined San Antonio Roswell.

Combined Pit 210728 (Au$2250) Combined 5x5x5 Model	Waste	LG Waste 0.3 -> 0.4	LG 0.4 -> 0.8	MG 0.8 -> 1.5	HG 1.5 -> 999.0	Total Ore >0.4	Total Mined	Strip Ratio
Mined Volumes (BCM)	59,794,583	311,139	1,009,017	964,246	1,281,828	3,255,091	63,360,813	
Mined Tonnes	126,339,606	748,462	2,452,487	2,354,130	3,224,768	8,031,385	135,119,453	15.8
Mined Grade		0.35	0.59	1.11	2.85	1.65		
Contained Ounces		8,414	46,221	84,344	294,975	425,541		
Mined Alluvial Rock Tonnes	56,402,044	5,510	14,871	6,684	5,014	26,569	56,434,123	2,123.1
Mined Alluvial Rock Grade		0.35	0.58	1.08	2.13	1.00		
Contained Ounces		63	279	231	343	852		
MinedSaprolite Rock Tonnes	36,108,453	256,988	767,885	687,103	675,812	2,130,800	38,496,241	17.1
Mined Saprolite Rock Grade		0.35	0.59	1.13	2.53	1.38		
Contained Ounces		2,889	14,525	24,861	54,939	94,325		
Mined Fresh Rock Tonnes	33,829,111	485,963	1,669,733	1,660,344	2,543,941	5,874,018	40,189,092	5.8
Mined Fresh Rock Grade		0.35	0.59	1.11	2.93	1.75		
Contained Ounces		5,462	31,417	59,253	239,694	330,364		
Measured Rock Tonnes		-	-	-	-	-		
Measured Rock Grade		-	-	-	-	0.00		M Only
Contained Ounces		-	-	-	-	-		
Indicated Rock Tonnes		694,632	2,347,983	2,313,687	3,207,093	7,868,763		
Indicated Rock Grade		0.35	0.59	1.11	2.85	1.66		MI Only
Contained Ounces		7,809	44,362	82,903	293,655	420,920		
Inferred Rock Tonnes		53,830	104,507	40,446	17,675	162,628		
Inferred Rock Grade		0.35	0.55	1.11	2.33	0.88		MII
Contained Ounces		605	1,860	1,443	1,321	4,624		

Table 4 –Physicals SAR Combined design

Table 4 shows that Inferred ore resources are included in the overall physicals. However total inferred ore tonnes greater than the 0.4 cut-off grade are only 2% of the total mined ore 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 treating all three spirals as individual pits, mining from north to south. Similar cash flow calculations were completed, and each individual stage also generates a positive cash flow at $2250 per ounce before royalty.

7 LOM Scheduling

7.1 Inputs

Life of Mine Scheduling has been completed using Minesched software. For the purposes of this report, the SAR project has been used as a sole source of mill feed as the basis of the schedule. However, the intention for a total life of mine plan is to supplement SAR open pit feed with underground sources at Caloma, Wyoming, and SAR. Other stockpiles from previous operations will also be included.

For the purposes of this report, the full life of mine plan has been stripped back to include only SAR open pit mining, with measured and indicated resource categories. Consequently the mill is not filled for parts of the schedule.

Inputs have been based on the methods and processes used for the Whittle Optimisation, pit designs used in Section 4, and the 5m x 5m x 5m *(xyz)* reblocked block model.

Excavator productivity has been assumed as follows and is based on assumptions from prior operations at TGO, including the use of 100t class trucks.

- 120 t class - Up to 350 kbcm per month for oxide and 250 kbcm per month in fresh rock
- 190 t class – Up to 400 kbcm per month for oxide and 300 kbcm for fresh rock.
- 260 t class – Up to 700 kbcm per month in oxide only.

Mining start date has been assumed for July 2024.

7.2 Results

Figure 4 shows contained gold ounces delivered to the mill.

Simple financial analysis was completed on the schedule outputs. Gold price of $2250 per ounce and a discount rate of 8% per annum was applied.

Capital expenses of $87M were applied based on the ASX release on the 3rd June 2021. These were applied evenly over 12 months preceding mining operations in the schedule.

Using both the upgrade case and base case mill recovery factors a positive cash flow was generated after discounting.

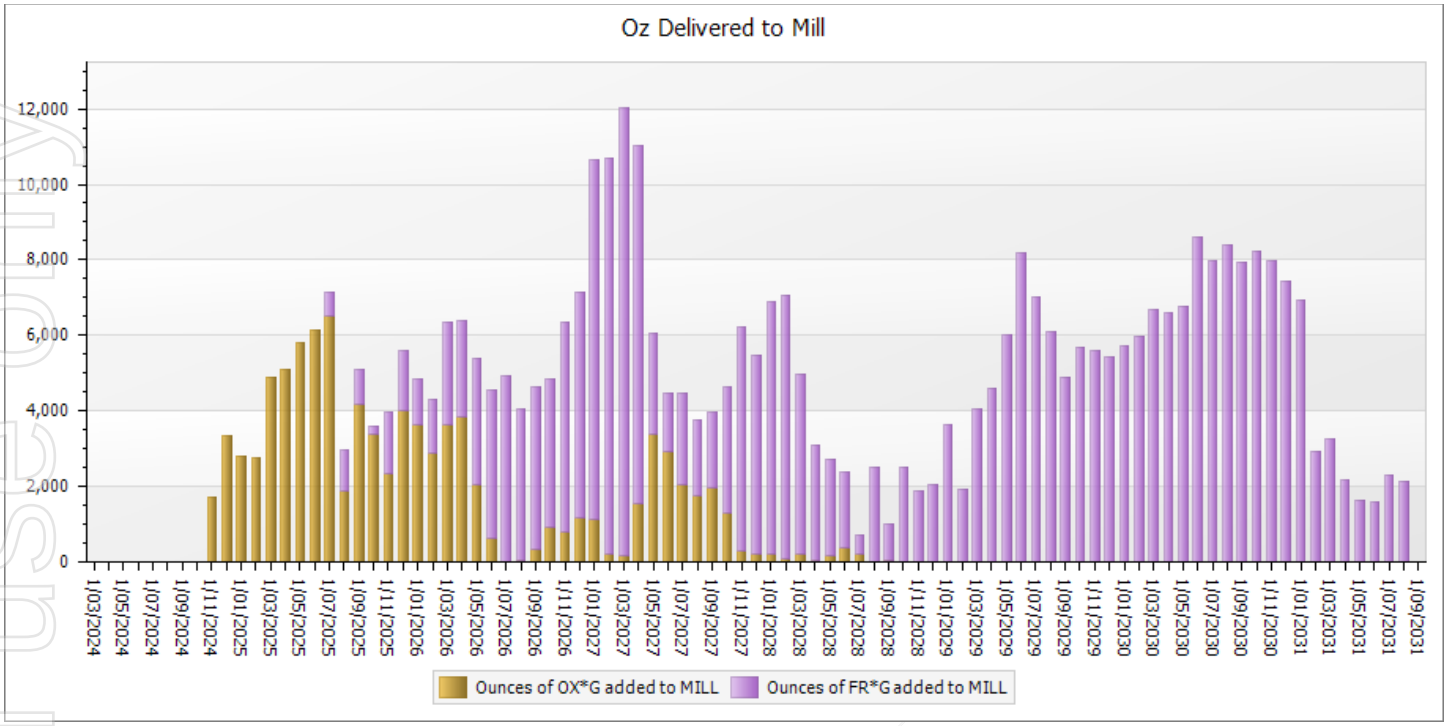

Figure 4 – Contained metal delivered to mill

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 was completed between the 20th and 24th May 2019 and 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 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 Tomingley Gold Expansion Project on which the Report is based, for the period ended 30th June 2021. 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 5 below can be used as a total mining inventory for the expansion project, 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)
San Antonio Open Pit	-	-	-	4,189	1.6	215	35	0.9	1.0	4,224	1.6	217
Roswell Open Pit	-	-	-	3,679	1.7	201	127	0.9	3.7	3,806	1.7	205
Total	-	-	-	**7,868**	**1.6**	**417**	**162**	**0.9**	**4.7**	**8,030**	**1.6**	**421**

Table 5 – Tomingley Gold Expansion Project Mining Inventory

8.4 Mining Reserve

Using the modifying factors as discussed in this report, the following Table 6 can be considered as a reserve for the San Antonio 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)
San Antonio Open Pit	-	-	-	4.1	1.6	215	4.1	1.6	215
Roswell Open Pit	-	-	-	3.6	1.7	201	3.6	1.7	201
Total	**-**	**-**	**-**	**7.7**	**1.6**	**416**	**7.7**	**1.6**	**416**

Table 6 – 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.

9 Conclusion

The completed reserve table should be considered as a robust and conservative estimate due to

- Conservative model block size parameters,
- Gold price that is currently above the estimated price.
- Inferred material not being used within the financial estimates.
- Confidence in cost estimates based on prior operations and
- Solid history of positive reconciliations for prior operations at TGO.

9.1 Recommendations for further works.

The following list is a list of works required to increase the confidence in subsequent levels of study for the San Antonio and Roswell open pit projects.

- Review of the overall mining schedule and equipment strategy to improve cost input confidence.
- From the work completed so far it is apparent that the project is robust for gold prices above $2250 per ounce. Work should be completed to secure gold sales above this price.
- The long lead time for implementation of this project will revolve around permits and completion of road works for the Newell Highway. It is the understanding that at the time of writing permitting applications have been submitted to the relevant local and state government authorities.

10 REFERENCES

Alkane Resources Ltd - *Tomingley Mine Life Extended Beyond 2030.* Announcement for the ASX 3 June 2021. https://investors.alkane.com.au/site/PDF/6fdfebf9-0c01-4558-a60a-4bddd7c67d71/TomingleyMineLifeExtendedBeyond2030

Alkane Resources Ltd - *Updated San Antonio Resource Estimation Shows Contained Ounces for Tomingley Extension of ~1.1Moz* Announcement for the ASX 16 February 2021. https://investors.alkane.com.au/site/PDF/ba3739ef-855a-4bbf-af48-52784c11bb6c/SanAntonioResourceEstPushesTomingleyExtover11mOz

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

APPENDIX 5

ALKANE RESOURCES LTD SHORT FORM ORE RESERVE REPORT

Roswell Underground

TENEMENT:	*EL5675*
OWNER:	Alkane Resources Ltd 100%
OPERATOR:	Alkane Resources Ltd (ABN 35 000 689 216) 89 Burswood Road, BURSWOOD, WA 6100
COMMODITIES:	Gold
COMPILED BY:	Christopher Hiller
REPORT BY:	Christopher Hiller
REPORTING DATE:	30 June 2021

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.

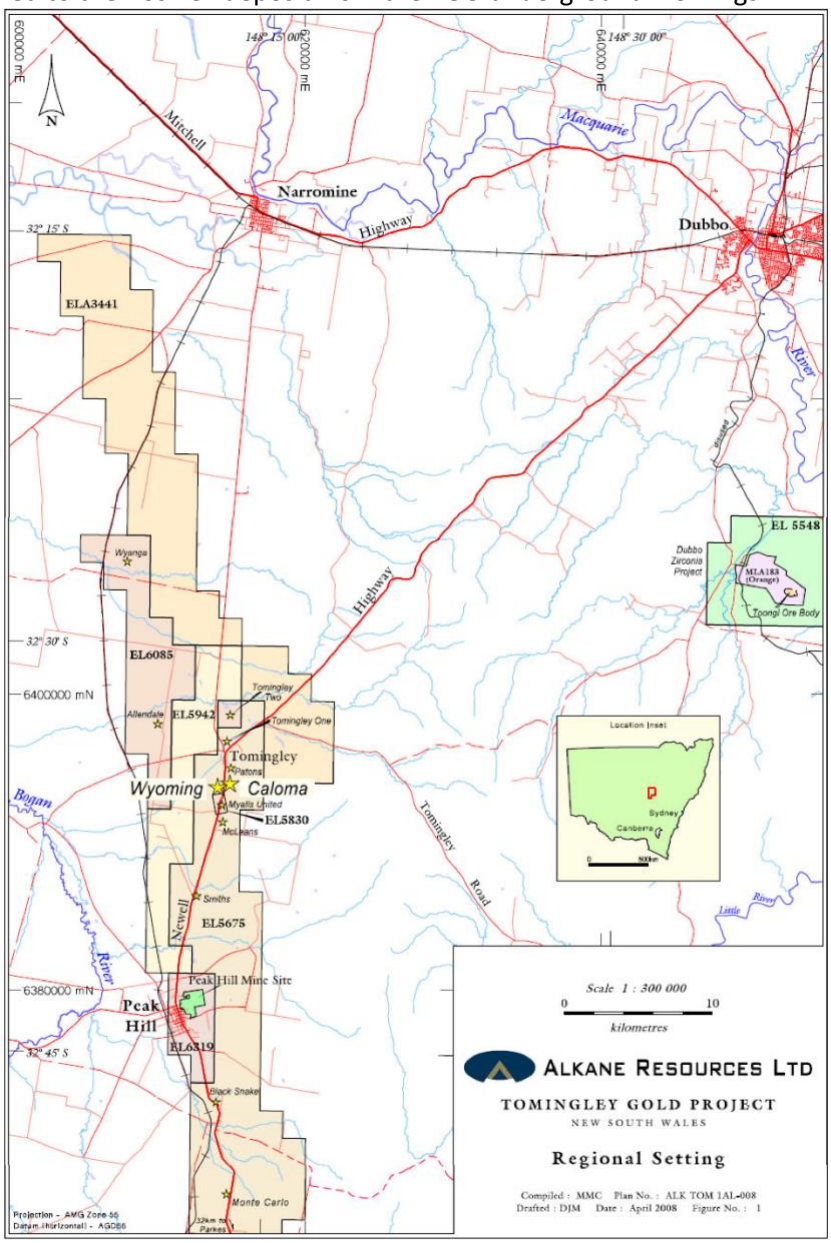

Figure 5: Regional Setting of the TGEP

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-carbonatepyrite-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 primary and secondary Longhole Open Stoping (LHOS) with paste filled primary stopes and no fill in secondary stopes. 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 primary stopes mined in a checker board pattern retreated along strike to the central access. The primary stopes are pastefilled and then the secondary stopes are accessed by mining through the pastefilled primary stopes. The secondary stopes are then mined, being left unfilled. 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.

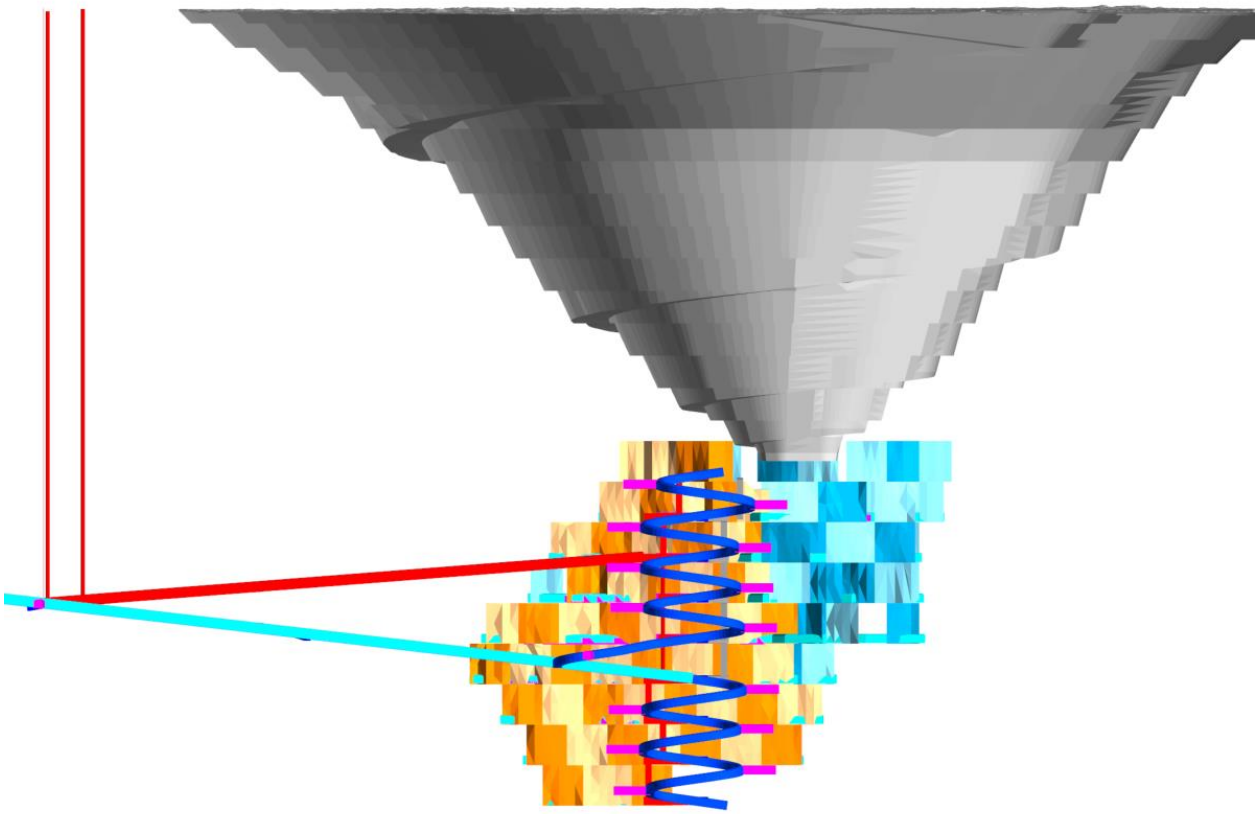

Figure 6: Isometric View of Proposed Roswell Pit and Underground Mine

Ore production is scheduled to be 840 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 would include two development jumbos and two production drills.

Primary ventilation for Roswell is planned to be supplied by four 110kw, 1.4m diameter, single stage 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.

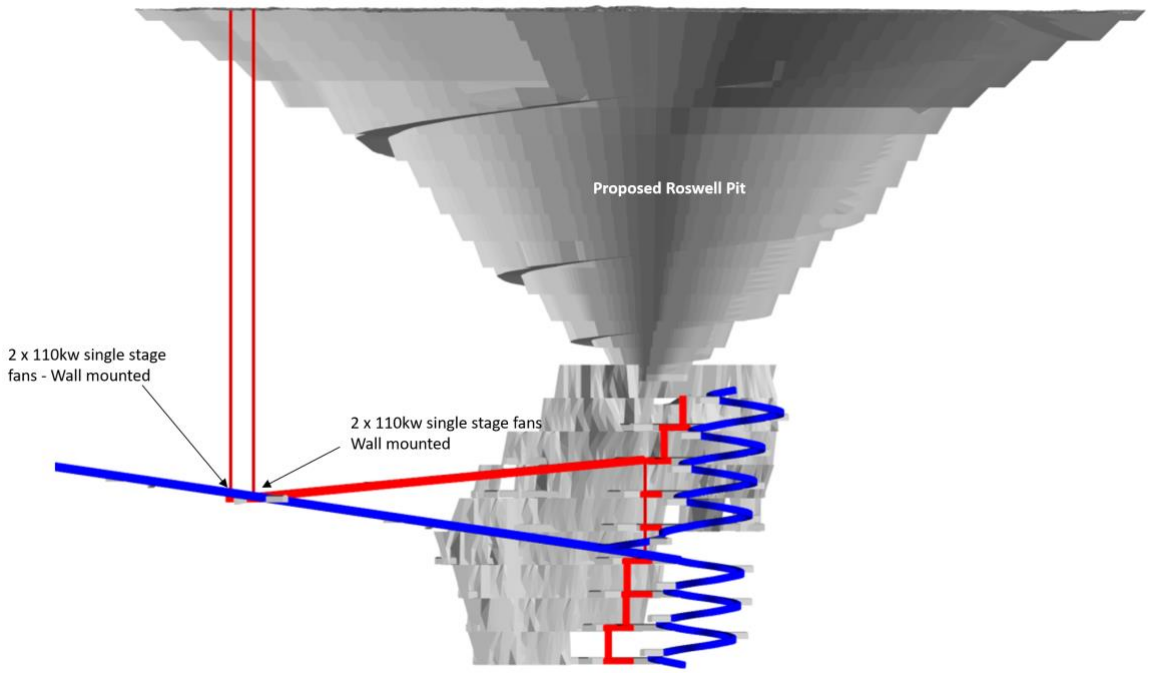

Figure 7: Primary Ventilation for Roswell (TGEP)

Electrical infrastructure servicing TGO can deliver 10MW. The TGO site currently uses 6.5MW; this falls within the current 7.5MW peak allowance. Underground mining at TGO currently uses 2.0MW, 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.

Stage seven tailings dam lift is nearing completion with construction of stage eight to commence in September 2021, an additional lift is approved (stage nine). Stage nine allows for storage at the current processing rate until July 2023. A second tailing dam has been approved for stage 1 and 2. These stages allow storage of a further 3.0Mt and construction is scheduled to commence in 2022.

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.

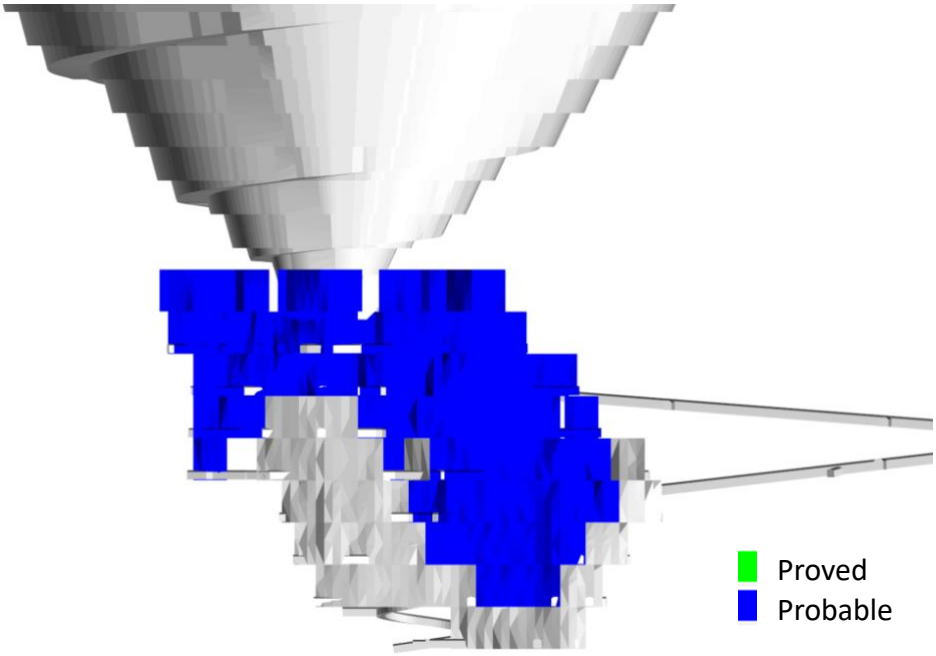

Figure 8: Isometric view of Roswell (TGEP) Life-of-Mine design by Ore Reserve classification

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		**1,575**	**2.81**	**142**
Subtotal		**1,575**	**2.81**	**142**
Total				
Proved	1.6g/t Au			
Probable		**1,575**	**2.81**	**142**
Total		**1,575**	**2.81**	**142**

Table 2: Roswell Underground Ore Reserve Summary – 30 June 2020

References

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_est202011finalv6_reg.mdl.
Site visits	• The Competent Person is Christopher Hiller a full-time employee of Hiller Enterprises Pty Ltd. Christopher has been onsite 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 test work and geotechnical holes for capital infrastructure completed recently. • Development of a 2.7km long exploration decline has commenced, with 250m 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 primary and secondary long hole open stoping with pastefill. • Stope size, development placement and ground support strategies have been designed in line with preliminary geotechnical recommendations.

	• 33,600m 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_est202011finalv6_reg.mdl. • 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 due to commence construction in 2022.
Environmental	• The TGEP environmental impact and associated studies are currently being prepared in line with all environmental regulatory agreements under the Environmental Protection Act 1986. • These studies are expected to be completed in submitted in 2021 and approval 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. • 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 most of its gold at spot prices however also has contracts to sell 24,000 ounces at an average gold price of $2,307 per ounce. • The Underground mine would contribute only a small portion of the overall volume of output and is unlikely to have any impact on the market.
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.