# ASX and MEDIA RELEASE

**4 November 2020**

ALKANE RESOURCES LTD
ABN 35 000 689 216



## *Updated Roswell Resource Estimation Lifts Contained Ounces by 50% to 660,000oz*

- **The Global Mineral Resource (Indicated and Inferred) for the Roswell Deposit has been updated after an additional 29,000 metres of drilling, and now stands at:**

  **10.1 million tonnes grading 2.04g/t gold (660,000oz)**

- **Total contained ounces have increased 50% from the previously announced January 2020 Inferred Mineral Resource.**

- **The resource remains open for extensions at depth, with particular focus on the high-grade zones in southern Roswell, and to the west within the poorly constrained western monzodiorite.**

- **Drilling is continuing in the prospective corridor to the south of Roswell and an updated Mineral Resource for the San Antonio deposit is anticipated in December 2020.**

- **The resource definition drilling program at the Roswell and San Antonio prospects is ongoing as part of an extensive regional exploration program aimed at providing future additional ore feed, either at surface or underground, for Alkane's operating Tomingley Gold Operations (TGO). The Roswell Deposit is located 3km south of the TGO mine and processing facility.**

- **An underground exploration drive from Tomingley Gold Operations to the Roswell Deposit is under development. Land acquisitions have taken place and planning is underway to facilitate rapid mine development on approval.**

Alkane Resources Managing Director, Nic Earner, said:

"The Roswell Resource represents the most attractive zone of broad mineralisation identified so far in the Tomingley region. This deposit, together with San Antonio, and good reserve replacement at Tomingley underground, is showing a clear pathway to achieving a further 10+ year mine life for Tomingley.

Now that resource drilling is complete at Roswell, and nearing completion at San Antonio, consultation, permitting and licencing to facilitate mining is being expedited with the relevant stakeholders and NSW government departments."


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## Tomingley Gold Project

*Alkane Resources Ltd 100%*

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. The TGP contains Alkane's currently producing Tomingley Gold Operations (TGO), an open pit mine and underground operation with a 1Mtpa processing facility.

Over the past three years Alkane has conducted an extensive regional exploration program which led to the definition Resources at the Roswell and San Antonio prospects.

Alkane has continued consultation with its key stakeholders, including landholders and regulators. The Company has approval to develop an exploration drive from the Wyoming One deposit to Roswell, and has prepared preliminary plans for both open-cut and underground mines beneath Roswell and San Antonio. These plans are the basis of Alkane's current consultation activities as it seeks approval for both underground and open cut mining (refer ASX Announcement 19 August 2020).

Detailed mine plans for Roswell and San Antonio, to enable an economic assessment, will be prepared once the Indicated Resources have been compiled and released in Q4 2020.

### *Geology:*

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.

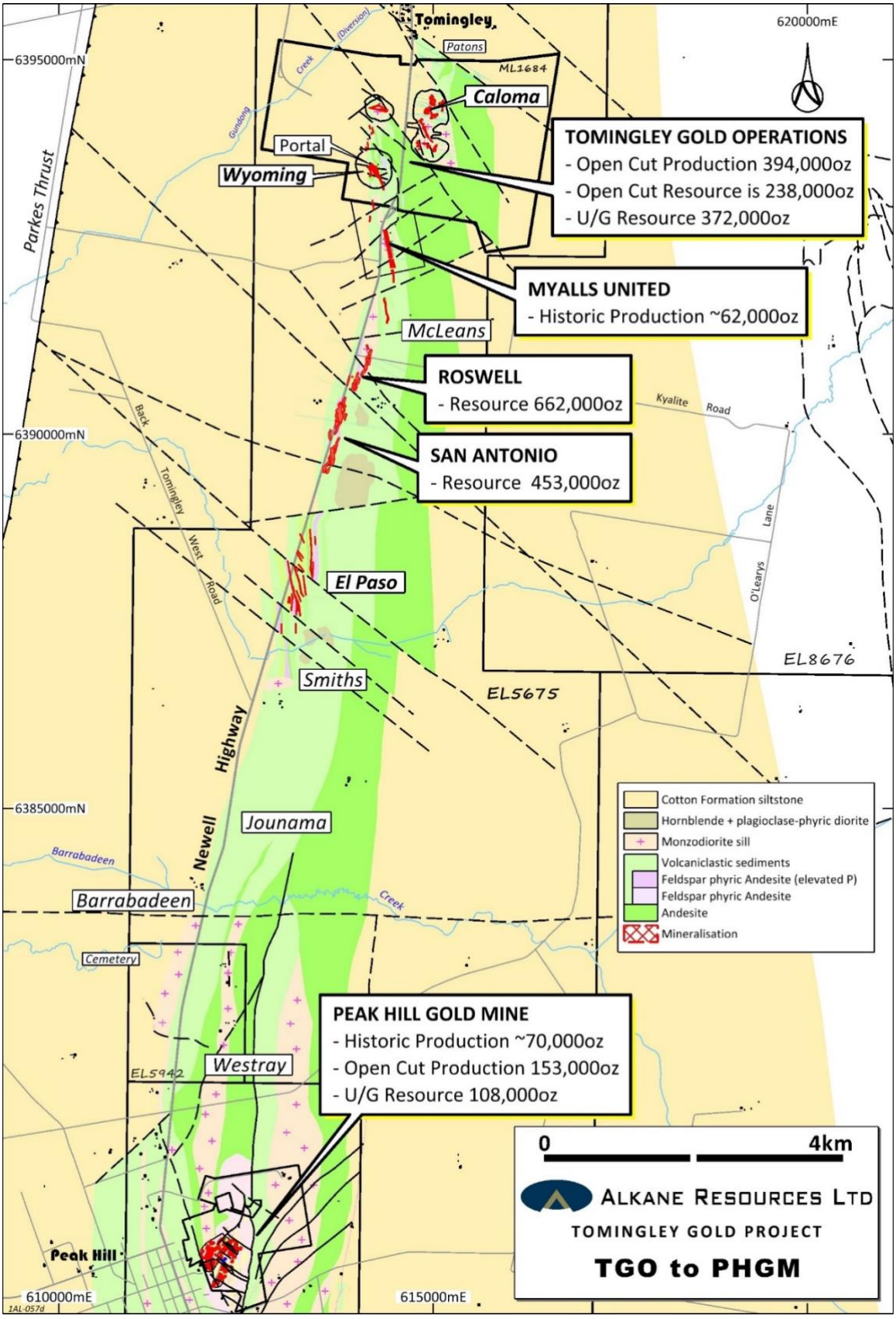
The Roswell deposit is hosted in the Mingelo Volcanic Formation, a strongly deformed and hydrothermally altered Ordovician aged belt of volcanics that are predominantly andesitic volcaniclastic breccias, lesser sandstone/siltstone units, lavas and black mudstones. The volcanics are overlain by the younger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

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

Mineralisation is characterised as similar to the Tomingley gold mineralisation, as quartz-carbonate-pyrite-arsenopyrite veins hosted in phyllic altered volcanics. These sheeted quartz veins are orientated as steep east dipping, striking approximately 10$^o$ 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.



**Mineral Resource**

A Mineral Resource estimation has been calculated on the Roswell deposit with a nominal 20 metre drill hole spacing to depths ranging from 0mRL to -200mRL and averaging about 350m below ground surface:

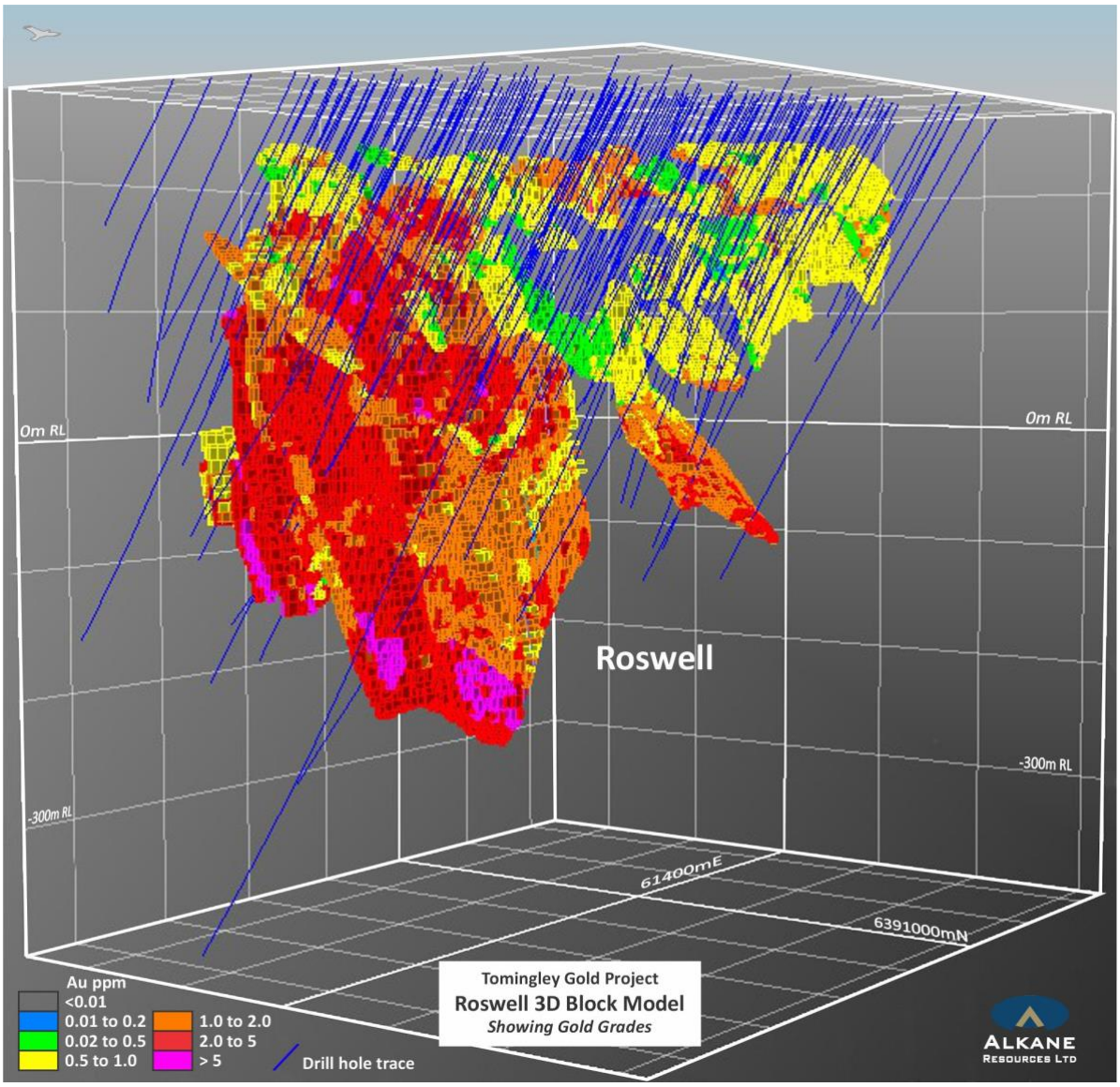
**Table 1 Mineral Resource**

| Project | Resource Category | Cut-Off | Tonnes (Mt) | Gold Grade g/t | Gold Metal (Koz) |
|---|---|---|---|---|---|
| **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** |

**Full details are provided in the appended JORC Table 1 and text summary below**

The Mineral Resource will be subject to further infill and extensional drilling with a view to both define the continuity of the mineralisation to the north and high-grade zones at depth.

A 3D model of the Roswell mineralisation is displayed below.



**Exploration Upside at Roswell**

The Mineral Resource estimation delineated a high-grade, large tonnage zone of mineralisation proximal to the Rosewood Fault in the southern section of Roswell. There is considerable upside to further test the depth extensions of this significant ore zone. Other exploration targets are at the poorly constrained northern zone where mineralisation is open to the west and at depth, where grade and tonnage appears low, but may improve at depth and with better geological understanding. A second monzodiorite (third brittle volcanic host rock at Roswell) was recently identified by deeper drilling west of the main andesite, and hosts significant mineralisation (RWRC179D - 9m grading 1.93g/t Au from 374m including 3m grading 4.80g/t Au from 379m, and 3m grading 2.52g/t Au from 412m) – ASX Announcement 16 July 2020.

**ROSWELL MINERAL RESOURCE – Supporting information**

The Mineral Resource Statement for the Roswell Mineral Resource Estimate (MRE) is reported according to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the 'JORC Code') 2012 edition.

In the opinion of Alkane, the resource estimation reported is a reasonable representation of the global gold mineral resource within the Roswell deposit, based on reverse circulation and diamond drilling sampling data available as of October 2020, and is detailed below:

***Drilling Techniques***

The Roswell deposit has been evaluated using all of Alkane's reverse circulation (RC) and diamond drilling (DD) holes within the prospect area. No previous companies' exploration drilling in the region (shallow air-core and RAB holes) was used in the assessment.

Drilling at the Roswell deposit has been completed in six phased programs since January 2018 for a total of 198 RC and diamond core holes for 55,425.9 metres. Drillit Consulting Pty Ltd completed reconnaissance air-core drilling and the initial RC and diamond core drilling. Mitchells Services Ltd were used for the initial phase of resource definition RC drilling and 2 diamond core holes. Ophir Drilling Pty Ltd were used for the remainder of the diamond core drilling. Finally Strike Drilling Pty Ltd were contracted to complete the infill resource RC drilling. Drilling statistics are summarised in Table 2.

**Table 2 Summary Drilling Statistics**

| ***Roswell Drilling Statistics (air-core drill holes excluded)*** | | | | | |
|---|---|---|---|---|---|
| **Hole Type** | **Air Core (diamond pre-collars)** | **Reverse Circulation (diamond pre-collars)** | **Reverse Circulation** | **HQ3 Diamond** | **Total** |
| **No. Holes** | 2 | 31 | 165 | 33 | **198 (not including pre-collars)** |
| **Metres** | 179.95 | 5,978.31 | 40,569.9 | 8,697.72 | **55,425.9** |

Initial shallow reconnaissance drilling to fresh rock is completed using 90mm (3.5") air core. Gold and arsenic anomalism was followed up with deeper drilling completed by RC (usually 144mm or 5¾") and RC pre-collared HQ3 diamond core drilling. Resource definition drilling has been completed on east-west

sections. Drill sections are spaced 20m apart with drill holes at 20m intervals along these sections. Air-core drilling was not included in the resource estimation.

***Sampling and Sub-Sampling Techniques***

Sampling on all drilling techniques was conducted from the base of alluvium (the transported overburden contains no economic gold grades) to the bottom of hole. Sampling via the different drilling techniques used is described as follows:

RC Drilling:
Samples from the RC drilling were collected at 1 metre intervals via a cyclone into large plastic bags. Spear samples were collected from each 1 metre sample and composited to 3 metre for initial analysis unless the geologist on site determined visually strong mineralisation, then 1 metre samples were collected via a splitter below the cyclone and sent for analysis.

All composites assaying ≥0.2g/t Au together with their upper and lower bounding composite samples were re-split as 1 metre samples collected at the time of drilling into a calico bag via a splitter below the cyclone.

Diamond Core Drilling
Half core samples were collected from all geologically logged and potential mineralised zones from the diamond core drill holes. The core was sampled for assay in a range of 0.3 metre to 1.3 metre intervals as determined by the geologist based on lithological contacts, alteration zones and mineralisation zones. Geotechnical and bulk density measurements were collected as well as lithology logging and structural data. The remainder of the core was transferred to racking and stored at the decommissioned Peak Hill Gold Mine.

***Sample Analysis Method***

All samples were submitted to ALS Chemex Laboratory in Orange. Samples were oven dried prior to crushing to <6mm using a jaw crusher (in the case of diamond core), 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.

For all 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.

In addition to gold assay, RC samples were assayed for As, Cu, P, Sc and Ti by aqua regia digest AAS finish (ALS method code ME-ICP41). Diamond core analyses in addition to gold, were assayed for a full multi-element suite using a multi-acid complete digest, with an AES and MS finish.

Commercially prepared Certified Reference Materials (CRM) and blanks were inserted at approximately 1 in 40 samples. CRM's were not identifiable to the laboratory. Standards were deemed to be within tolerance if the result was within 3 standard deviations and 10% of the expected value. When a standard fell outside this tolerance, the standard along with a selection of samples from the batch were resubmitted. These "failed" samples are not included in the resource estimation. Overall, the CRM pass rate over 99.9%.

Field duplicate samples were inserted at 1 in 40 samples (alternate to CRM's). Field duplicate samples were collected by riffle splitting the RC sample. The correlation coefficient for gold is relatively high at 0.88 showing good repeatability for a gold deposit. A high correlation coefficient of 0.97 for arsenic indicates that the lower correlation coefficient in gold is due to a low nugget effect rather than improper sampling procedures.

Laboratory QAQC sampling includes insertion of CRM samples, internal duplicates and screen tests. This data was reported for each sample submission. Umpire laboratory check samples were forwarded to SGS Laboratory in West Wyalong for Au analyses over the course of the resource drilling campaign as a 1.4% proportion of total assays. In general, the results were repeatable between the laboratories with no statistically significant bias detected.

In the competent persons opinion, the laboratory has performed satisfactorily over the resource drilling campaign and any noted discrepancies are acceptable for the resource classification applied.

***Geology and Geological Interpretation***

The geology, structural setting, alteration and mineralisation is very similar to the deposits at the Tomingley Gold Operations. The total resource inventory of the four deposits at Tomingley totalled 14.29 million tonnes grading 2.0g/t gold at a 0.5 g/t cutoff for 921,000 ounces of gold before commencement of mining.

The Tomingley, San Antonio and Roswell deposits are positioned within a gold-arsenic structural zone termed the Tomingley Gold Corridor that is approximately 500 m wide and located immediately east of the Cotton Formation contact. The Tomingley Gold Corridor begins approximately 5 km north of Tomingley, is approximately 30 km in length, and strikes south through Peak Hill. The individual prospects and deposits within the corridor all have their own structural nuances however mineralisation is dominantly hosted within brittle sub-volcanic sills or lavas or along their immediate contacts with volcaniclastic meta-sediments.

The alteration appears multiphase with repeated cracking, crushing, veining and sealing, leading to heterogeneous, patchy alteration and discontinuous narrow veinlets. It is characterised by a bleaching white mica (muscovite)-carbonate (ankerite)-albite-silica ± chlorite as pervasive replacement of the host rock around strong quartz-carbonate (ankerite)-pyrite-arsenopyrite ± albite veining.

Multiple phases and recrystallisation of pyrite and arsenopyrite occur early in the paragenesis. Late fractures in earlier pyrite and arsenopyrite have served as nucleation sites for the precipitation of gold which occurs within or disseminated near the selvages of the quartz-ankerite vein assemblage.

The Roswell Deposit is positioned north of a regional northwest trending structure termed the Rosewood Fault. This fault, originally identified in the aeromagnetics, appears dextral and is of a similar orientation to the structure that dextrally displaces the Caloma deposits from the Wyoming deposits at Tomingley, positioned in the centre of the mined deposits. These important cross-cutting structures may cause transpression after an intense period of compression during an orogeny, resulting in suitable volcanic host rocks to act as structural buttresses in which hydrothermal fluids pond and precipitate gold.

The drilling at Roswell has defined a fault bounded section of volcanic stratigraphy covered by 30 m to 55 m of alluvial clays and sands. The faulted sub-vertical volcanic stratigraphy is rotated from striking north to striking north-northeast. The mineralisation appears to be hosted by two different volcanic units - monzodiorite and andesite - within a coarse grained volcaniclastic package generating structural zones by a competency contrast between the ‘brittle’ volcanics and ‘ductile’ volcaniclastics.

The stratigraphy at Roswell comprises immature volcaniclastic sandstones and conglomerates with lesser siltstones/mudstones. More evolved, fine grained plagioclase phyric multi-phased andesite lavas, are slightly magnetic, and hosts a significant proportion of the gold mineralisation. In thin section, the andesite lavas have abundant tiny apatite needles within the plagioclase, accounting for the slightly elevated phosphorous concentration in comparison to the other volcaniclastics and lavas within the stratigraphic package.

Intruding into this volcanic package east of the andesite lavas, is a monzodiorite that appears to have the same petrographic qualities as the sub-volcanic sills that host the majority of the mineralisation at the Tomingley deposits, with the exception that it has a holocrystalline texture suggesting it is likely a deeper intrusive. A second, smaller and porphyritic, monzodiorite intrusive was identified west of the andesite lavas at depth by the recent deeper drilling.

The mineralisation at Roswell is characterised as typical quartz-carbonate-pyrite-arsenopyrite veins hosted in phyllic altered volcanics. The mineralised zones range from 2 m to 30 m wide and as stacked tension veins, sometimes becoming more of a stockwork within the andesite host.

The mineralisation, as observed at Tomingley, is displaced by a swarm of post mineralisation dolerite dykes. The dolerite dykes have a similar orientation of dipping steeply to the north-northeast.

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

***Estimation Methodology***

Grade estimation was completed using Ordinary Kriging (OK) with dynamic anisotropy to optimise search ellipse orientation within the lodes. All wireframing and estimation was completed with Datamine Studio RM software.

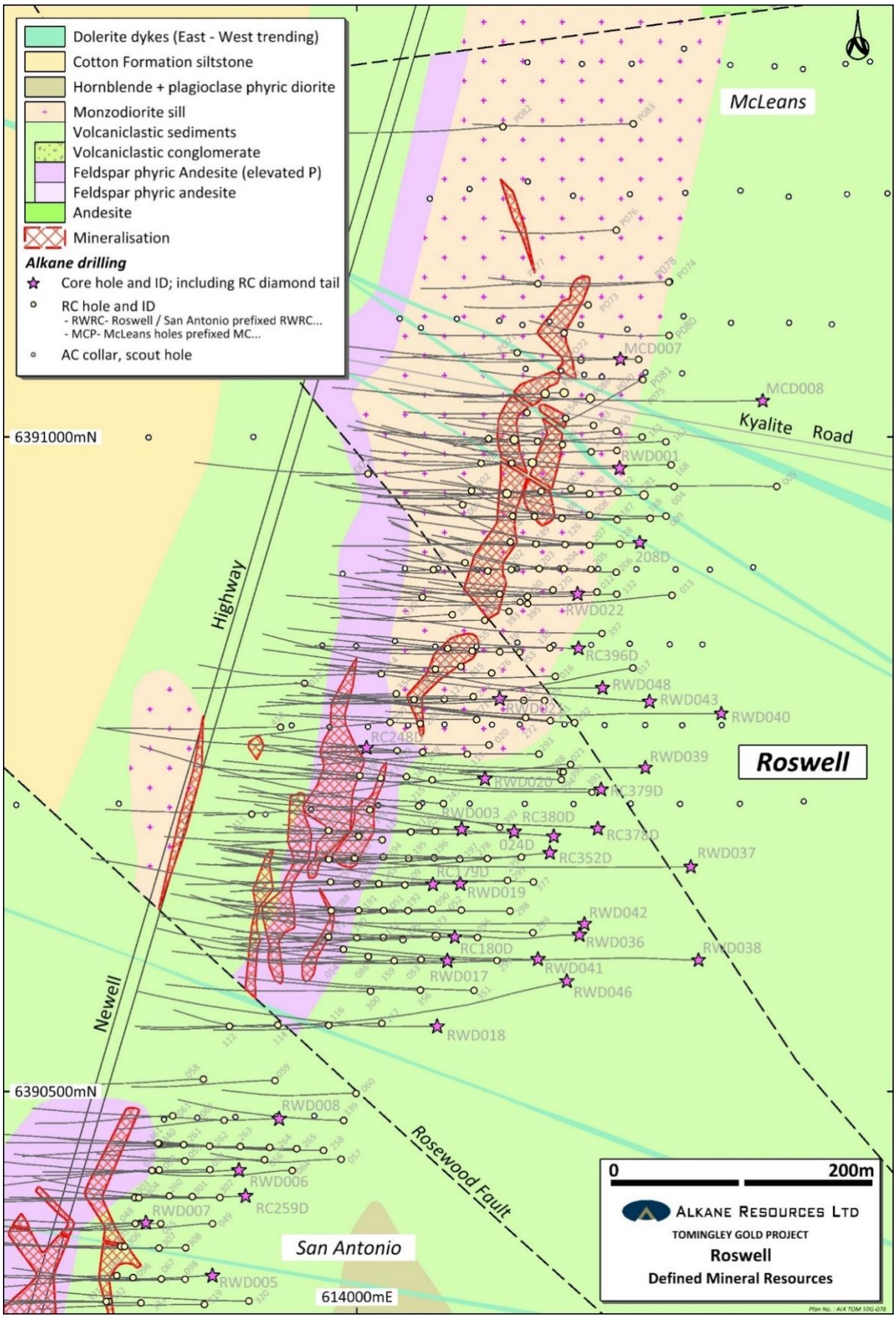
Exploratory data analysis of the capped and declustered composited gold variable within each domain was undertaken by Cube Consulting with variograms being produced using Datamine/Snowden Supervisor software. Sample data was composited into one metre downhole lengths using a best fit methodology.

Cube conducted an estimation search neighbourhood analysis to determine optimal search parameters for Ordinary Kriging (OK) estimation of gold grade. This analysis was carried out on only the well informed domains. This determined an optimum block size to be 5mX x 10mY x 10mZ and sub-blocking down to 2.5mX x 2.5mY x 2.5mZ. Less well-informed domains utilised variogram model parameters substituted from other, better informed lodes based on statistical similarity. Blocks in very poorly informed domains (i.e. due to small volume and very few samples) were assigned the mean sample grade of that domain.

A top cut analysis was carried out by a visual inspection of the data using histograms, log-transformed probability plots, percentile analysis and sensitivity analysis for individual domains to identify population outliers. The spatial location of the outliers was also taken into consideration for the application of the grade caps. The sensitivity analysis involved analysing varying cap values, to estimate the contribution of each sample to the overall metal content. Capping was deemed necessary for most of the well informed domains.

Estimation utilised a 2-way skin within 5 m either side of the modelled oxide surface between the oxide and fresh domains. All other domain boundaries are hard boundaries where only composite samples within that domain were used to estimate blocks coded as within that domain.

Validation of the modelling parameters and processes of estimation included visual inspections in section, plan and in 3D; swathe plot validation; and a comparison of an ID2 model vs the OK model. In the competent persons opinion, all methods of validation produced acceptable results.



***Classification Criteria***

Mineral Resources were classified as Inferred or Indicated to appropriately represent confidence and risk with respect to data quality, drill hole spacing, geological and grade continuity, mineralisation volumes, as well as metal distribution. There is no material classified as Measured.

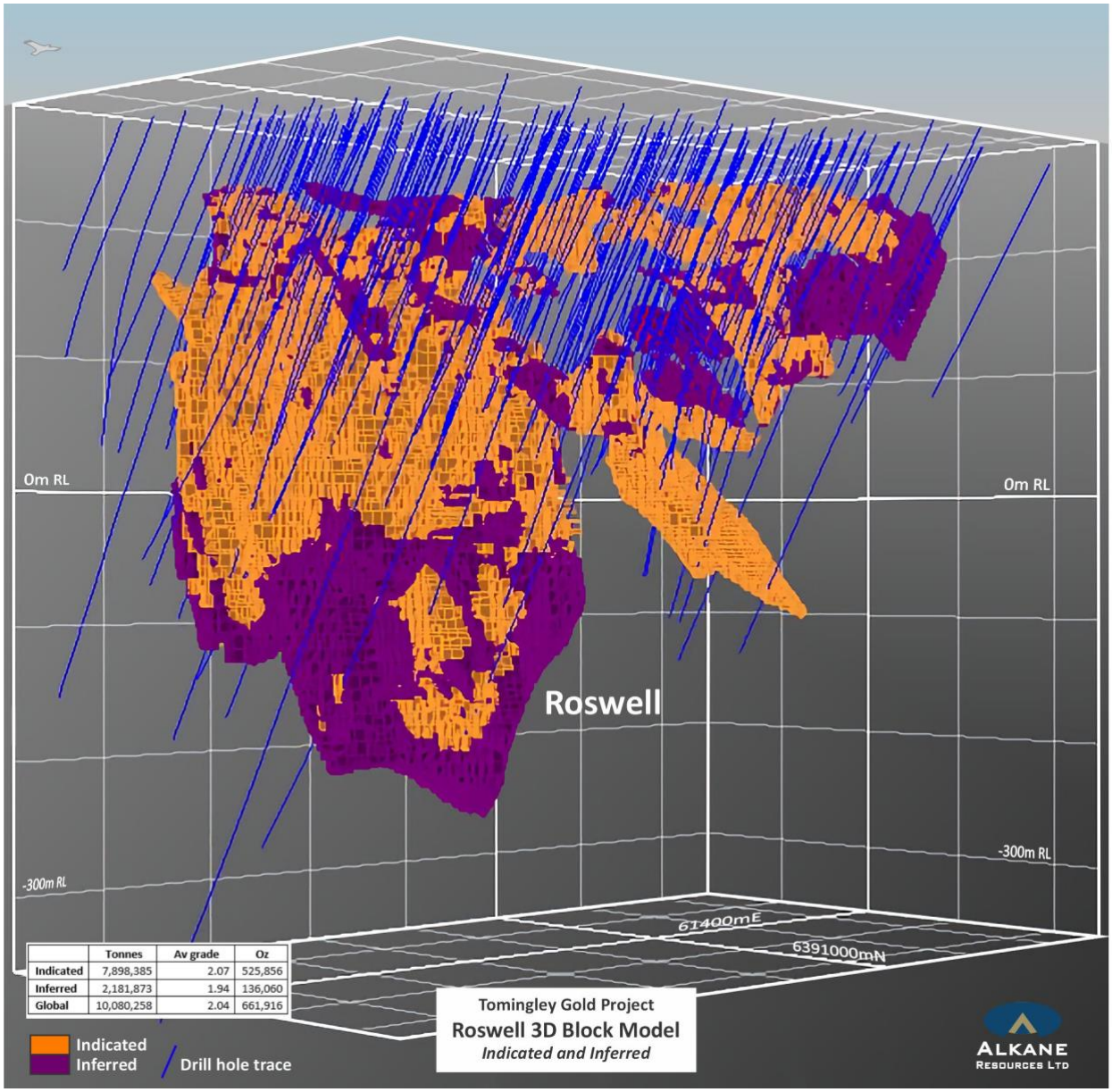
Indicated Mineral Resources were defined where a high level of geological confidence in geometry, continuity, and grade, was demonstrated, and were identified as areas where:

Drill spacing was averaging a nominal 20m, or where drilling was within 20m of the block estimate;

- Estimation quality is considered to be of high confidence in respect to low kriging variance; and

- Higher number of samples used to estimate individual domains.

Remaining estimated blocks within the defined mineralisation domains were classified as Inferred Resources (this included most blocks in the less well-informed domains and all blocks in the very poorly-informed domains). The dimensions of the search ellipse were based on the recommended search neighbourhood parameters.



***Cut-Off Grade***

The Mineral Resource cut-off grade for reporting of global gold resources for the Roswell deposit chosen as 0.5 g/t gold for open cut mining. This was based upon economic parameters utilised at Tomingley Gold Operations where deposits of the same style, commodity, comparable size and mining methodology are currently being extracted.

**Mining**

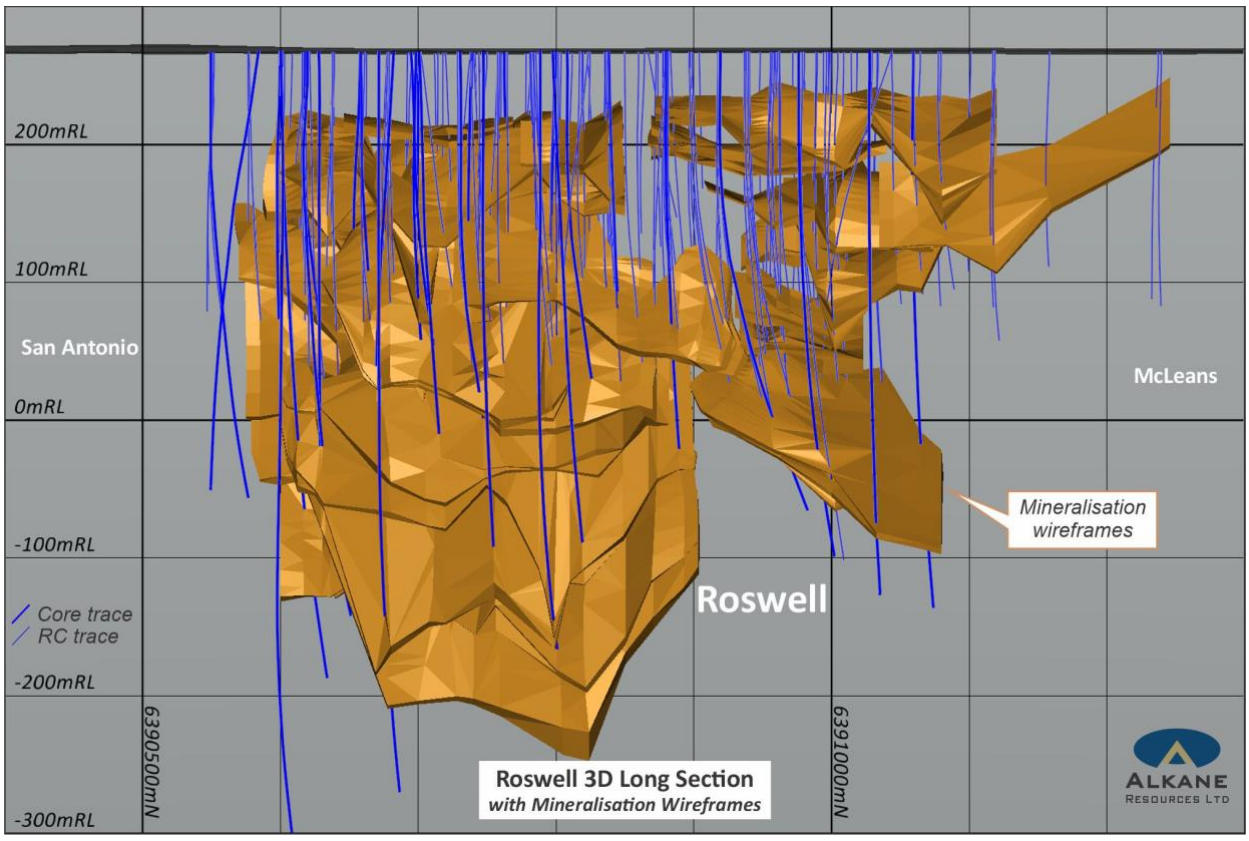
It was assumed that mineralisation at the Roswell deposit would be extracted using open cut methods of a similar scale and size as per the Tomingley Gold Operations (TGO). Underground could be potentially mined via medium to small scale mechanised underground mining methods, similar to that currently being implemented at TGO.

No dilution or cost factors were applied to the estimate.

**Metallurgy**

The metallurgy of the Tomingley deposits is well studied. Tomingley Gold Operations has been processing ore since 2014 from its four deposits and during this time no metallurgical issues have arisen, with recoveries ranging between 92% - 94%. Preliminary metallurgical work on Roswell ore suggests it has similar metallurgical qualities as per the Tomingley deposits. Further metallurgical test work is underway.

No metallurgical recovery factors were applied to the Mineral Resources or Resource Tabulations.



### *Competent Person*

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

### *Disclaimer*

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

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

**ABOUT ALKANE - www.alkane.com.au - ASX: ALK and OTCQX: ANLKY**

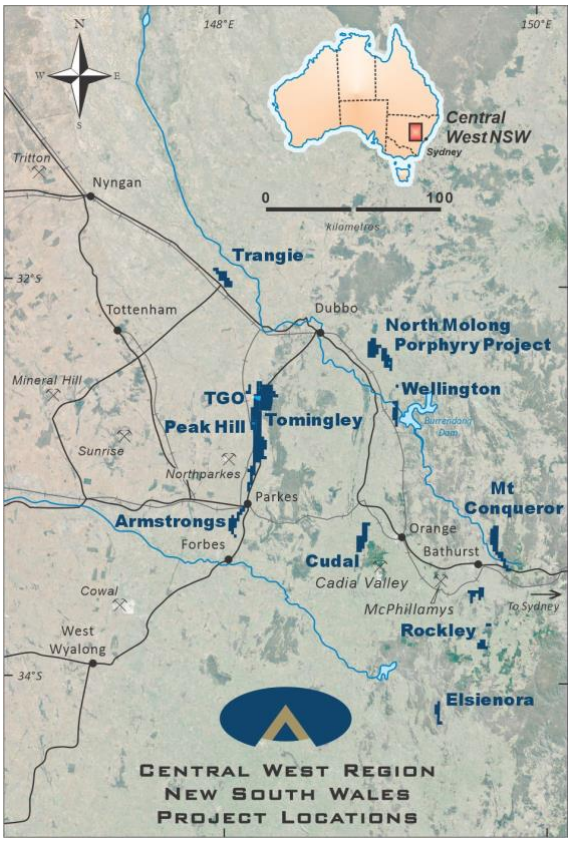
Alkane Resources is poised to become Australia's next multi-mine gold producer.

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 underground and open pit potential.

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 throughout 2020, 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 ~19.9% of Genesis Minerals (ASX: GMD) and ~12.7% of Calidus Resources (ASX: CAI).



*The following tables are provided to ensure compliance with the JORC Code (2012) edition requirements for the reporting of exploration results.*

# APPENDIX 1

## JORC Code, 2012 Edition – Table 1 report – Roswell November 2020

### 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 Roswell deposit has been evaluated using reverse circulation and diamond drilling techniques.<br>Reverse Circulation (RC) samples are collected at one metre intervals via a cyclone and riffle or cone splitter. Intervals outside of visual ore zones are composited to 3 metres.<br>Diamond Drilling (DD) sample intervals are defined by geologist during logging to honour geological boundaries. |
| | • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* | RC drilling completed to industry standards.<br>Core is laid out in suitably labelled core trays. A core marker (core block) is 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 is aligned and measured by tape, comparing back to this down hole depth consistent with industry standards. |
| | • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.* | RC Drilling - approximately 10% (3kg) of total sample is delivered via cone or riffle splitter into a calico bag with the remaining sample delivered into a large plastic bag and retained for future use if required.<br>DD Drilling – sample intervals defined by geologist during logging to honour geological boundaries.<br>All samples sent to laboratory are crushed and or pulverised to produce a ~100g pulp for assay process.<br>All samples are fire assayed using 50g charge.<br>Visible gold is occasionally observed in core. |
| *Drilling techniques* | • *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).* | The resource is based on 165 RC drill holes totalling 46,728 metres (including diamond pre-collars) and 33 diamond core (DD) drill holes totalling 8,698 metres of core.<br>Conventional RC drilling using 100mm rods and 144mm face sampling hammer.<br>Diamond drill holes were pre-collared using either air core or RC drilling through to competent material averaging 110 metres depth and cased down to triple tube HQ3 (61mm diameter) core tails. HQ3 core is oriented using the "Reflex" core orientation tool. |
| *Drill sample recovery* | • *Method of recording and assessing core and chip sample recoveries and results assessed.* | RC - sample recovery is visually estimated and generally very good (>90%) aided by the use of oversized shrouds through oxide material. Samples are even sized. Samples are occasionally damp or wet in RC holes drilled below 250 metres. Sample quality is assessed by the sampler by visual approximation of sample recovery and if the sample is |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | dry, damp or wet. Riffle and cone splitters were used to ensure a representative sample was achieved on all 1 metre samples.<br>DD - core loss is identified by drillers and calculated by geologists when logging. Generally ≥99% was recovered. |
| | • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* | RC drilling completed using oversized shrouds to maintain sample return in oxide zone and all samples are split using riffle or cone splitters. Use of RC rigs with high air capacity assists in keeping samples dry.<br>Triple tube coring is used at all times to maximise core recovery. |
| | • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.* | There is no known relationship between sample recovery and grade. |
| *Logging* | • *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* | RC - each one metre interval is 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).<br>DD - all core is 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 detailed geotechnical log is also undertaken collecting parameters such as core recovery, RQD, fracture count, and fracture type and orientation. |
| | • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* | All logging is qualitative with visual estimates of the various characteristics.<br>RC - A representative sample of each one metre interval is retained in chip trays for future reference.<br>DD - Core is photographed and all unsampled core is retained for reference purposes. |
| | • *The total length and percentage of the relevant intersections logged.* | All DD core and RC chip samples have been geologically and geotechnically logged by qualified geologists. |
| *Sub-sampling techniques and sample preparation* | • *If core, whether cut or sawn and whether quarter, half or all core taken.* | DD - zones of visual mineralisation and/or alteration are marked up by the geologist and cut in half using a Corewise automatic core cutting saw. The right half is sampled to sampling intervals that are generally based on geology but do not exceed 1.3 metres in length. The left half is archived. All mineralised zones are sampled, plus >5m of visibly barren wall rock.<br>Laboratory Preparation – drill core is 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 are discarded. A pulp packet (±100g) is stored for future reference. |
| | • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* | RC - for each one metre interval with visual mineralisation and/or alteration the calico sample bag is numbered and submitted to the laboratory for analysis. Intervals without visual mineralisation and/or alteration are spear sampled and composited over three metres. Damp or wet samples are recorded by the sampler. For composited intervals returning grades >0.2g/t Au the calico bags are retrieved for assay. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | Laboratory Preparation – the entire RC sample (3kg) is dried and pulverised in an LM5 (or equivalent) to ≥85% passing 75µm. Bulk rejects for all samples are discarded. A pulp packet (±100g) is stored for future reference. |
| | • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* | ALK sampling techniques are of industry standard and considered adequate. |
| | • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* | RC – field duplicate samples collected at every stage of sampling to control procedures<br>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 are riffle split from the riffle/conical split calico from the drill rig. Duplicates show generally good repeatability, indicating a negligible "nugget" effect. |
| | • *Whether sample sizes are appropriate to the grain size of the material being sampled.* | Sample sizes are assumed to be within industry standard and considered appropriate. |
| *Quality of assay data and laboratory tests* | • *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* | Gold is determined using a 50g charge fused at approximately 1100°C with alkaline fluxes, including lead oxide. The resultant prill is dissolved in aqua regia and gold determined by flame AAS.<br>For other geochemical elements samples are digested in either aqua regia or a multi-acid digest with each element concentration determined by ICP Atomic Emission Spectrometry or ICP Mass Spectrometry. These additional elements are 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) are inserted at 1 in 40 samples. CRM's are not identifiable to the laboratory.<br>Field duplicate samples are inserted at 1 in 40 samples (alternate to CRM's).<br>Laboratory QAQC sampling includes insertion of CRM samples, internal duplicates and screen tests. This data is reported for each sample submission.<br>Failed standards result in re-assaying of portions of the affected sample batches.<br>1.4% of gold assay results from ALS Orange were checked using SGS West Wyalong as an external umpire laboratory. |
| *Verification of sampling and assaying* | • *The verification of significant intersections by either independent or alternative company personnel.* | Drill data is compiled and collated, and reviewed by senior Alkane staff. Cube Consulting was used to verify exploration data to determine the resource estimation parameters. |
| | • *The use of twinned holes.* | Twinned holes have not been used at Roswell |
| | • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* | Early drill hole logging and sampling data is hard keyed into excel spreadsheet for transfer and storage in an access database with verification protocols in place. More recent data is verified in the field and uploaded using Geobank.<br>All primary assay data is received from the laboratory as electronic data files which are imported into sampling database with verification procedures in place. QAQC analysis is undertaken for each laboratory report. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | Digital copies of Certificates of Analysis (COA) are stored in a central database with regular (daily) backup.<br>Data is also verified on import into mining related software. |
| | • *Discuss any adjustment to assay data.* | No assay data was adjusted. In the case of assay checks the original assay is utilised as there was no statistical variability. |
| *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 are laid out using hand held GPS (accuracy ± 2m) then surveyed accurately with DGPS_RTK (± 0.1m) by surveyors on completion.<br>RC drill holes are surveyed using a single shot electronic camera at a nominal 30m down hole interval.<br>DD are surveyed at nominal 30m down hole during drilling to maintain drilling direction and then at 6m intervals on retrieval of rod string using a multi shot electronic camera. |
| | • *Specification of the grid system used.* | MGA94 grid system was used. |
| | • *Quality and adequacy of topographic control.* | 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.* | Nominal drill hole spacing is 20m x 20m, moving out to variable spacing approaching 40m at depth.<br>The data spacing is deemed to be sufficient in reporting a Mineral Resource. |
| | • *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 variography. |
| | • *Whether sample compositing has been applied.* | RC – samples with no visible mineralisation or alteration are 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.<br>DD – core is sampled to geology with sample sizes ranging from 0.3m to 1.3m. |
| *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 is given to attempt to intersect structure at an optimal angle but in complex ore bodies this can be difficult. Intersections are approximately 60% of true widths. |
| | • *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 Roswell. |
| *Sample security* | • *The measures taken to ensure sample security.* | All samples are bagged in tied numbered calico bags, grouped into larger tied polyweave bags and transported 5 minutes away to Tomingley Gold Mine. The samples are placed in large sample cages with a sample submission sheet and couriered to ALS in Orange via freight truck. All sample submissions are documented via ALS tracking system and all assays are reported via email.<br>Sample pulps are returned to site and stored for an appropriate length of time (minimum 3 years). |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | 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 sampling techniques. The Company has provided accurate resource estimations at Tomingley Gold Operations using these described sampling techniques.<br>Cube Consulting was used to verify exploration data to determine the resource estimation parameters. |

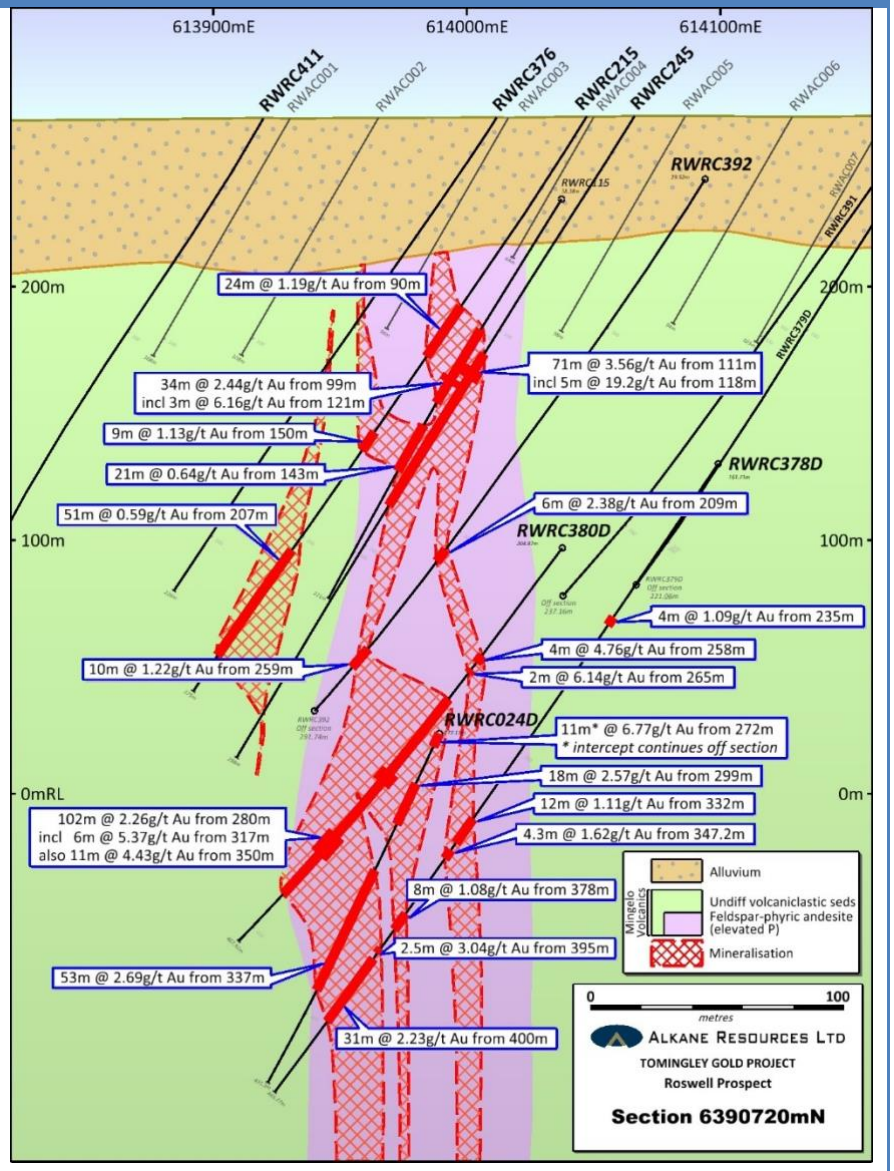
Section 2 Reporting of Exploration Results

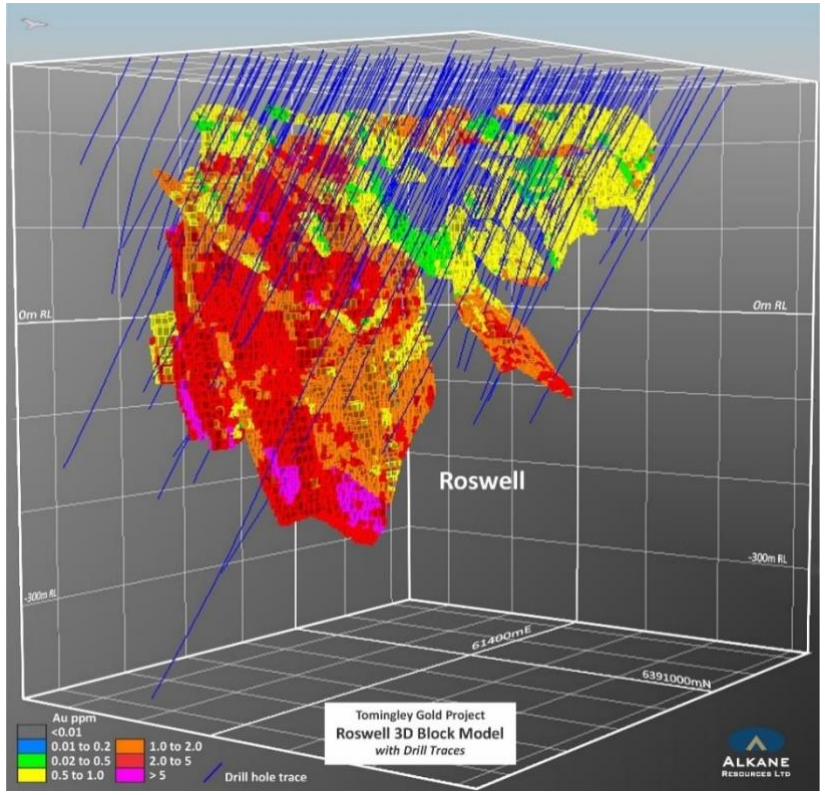
(Criteria listed in the preceding section also apply to this section.)

| 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.* | EL5675 wholly owned by Alkane Resources Ltd (ALK). |
| | • *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.* | EL5675 is due to expire 17 January 2023. |
| *Exploration done by other parties* | • *Acknowledgment and appraisal of exploration by other parties.* | All reported drilling completed by ALK. |
| *Geology* | • *Deposit type, geological setting and style of mineralisation.* | Mineralisation at Roswell is similar to the well documented Tomingley Gold Deposits. Roswell like Tomingley is associated with quartz veining and alteration focused within andesite volcanics and adjacent volcaniclastic sediments. The deposits appear to have formed as the result of a competency contrast between the volcanics and the surrounding volcaniclastic sediments, with the volcanics showing brittle fracture and the sediments ductile deformation, and have many similarities to well documented orogenic - lode-style gold deposits. |
| *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:*<br>o *easting and northing of the drill hole collar*<br>o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>o *dip and azimuth of the hole*<br>o *down hole length and interception depth*<br>o *hole length.* | Too many, not practical to summarise all drill hole data used.<br>All material information has been previously reported in the following announcements:<br>11 July 2018, ASX Announcement;<br>19 October2018, ASX Announcement;<br>1 February 2019, ASX Announcement;<br>12 June 2019, ASX Announcement;<br>12 August 2019, ASX Announcement;<br>23 September 2019, ASX Announcement; |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | 6 November 2019, ASX Announcement;<br>5 December 2019, ASX Announcement;<br>17 January 2020, ASX Announcement;<br>9 March 2020, ASX Announcement;<br>22 June 2020, ASX Announcement;<br>16 July 2020, ASX Announcement;<br>28 August 2020, ASX Announcement;<br>28 October 2020, ASX Announcement. |
| | • *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 near a developed mining 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.* | Exploration results previously reported –<br>for uncut gold grades;<br>Intercepts are defined (bounded) by 0.25g/t gold outer limit and may contain some internal waste;<br>Only intervals grading ≥0.5 g/t gold are reported;<br>Grades are 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 previously reported as length weighted average grades with internal high grade intercepts reported separately. |
| | • *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | No metal equivalents are reported. |
| *Relationship between mineralisation widths and intercept lengths* | • *These relationships are particularly important in the reporting of Exploration Results.*<br>○ *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>○ *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 an estimate of true width. The mineralisation is structurally complex and true widths are variable depending on the ore zone intersected however range between 60% and 80% of drill intersection. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | |
| *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 detailing the unfolding significant discovery.<br>Various plans and sections illustrating the modelled ore zones with all drill traces are attached. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | |  |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Balanced reporting* | • *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.* | Data relating to all exploration drill holes has been reported in previous documentation of exploration results. |
| *Other substantive exploration data* | • *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.* | No additional or new drilling results are being reported at this time. |
| *Further work* | • *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* | Additional drilling is planned into the deeper parts of the deposit to infill the drilling to 20m x 20m spacing to convert the inferred resources to Indicated and Measured. Deep core drilling is also being planned to test the continuation high grade mineralised structures at depth. |
| | • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* |  |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | The attached image above shows estimated blocks coloured showing different grades of mineralisation highlighting the high grade potential down dip for further exploration. |

## 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.* | In the early stages of the exploration at Roswell logging data is entered into Excel via drop down menus. All raw data is loaded directly to the Datashed database from the assay, logging and survey derived files. More recent data is captured directly through Geobank Mobile and validated before uploading into the Geobank database. |
| | • *Data validation procedures used.* | There are validation checks to avoid duplications of data.<br>The data are further validated for consistency when loaded into Geobank and desurveyed. |
| *Site visits* | • *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*<br>*(If no site visits have been undertaken indicate why this is the case.)* | The Competent Person has visited drill sites, regularly visits the exploration office for geological discussions, drilling updates, viewing of the data and of the core. The deposit is completely covered by 30m to 55m of barren alluvium and there is nothing to see on the surface. |
| *Geological interpretation* | • *Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.* | The geological model is built on structural data from core and lithological logging. The lode strike orientations are similar to Tomingley which approximate the strike of the volcanic bodies. The domain wireframes were built by Alkane geologists. |
| | • *Nature of the data used and of any assumptions made.* | Structural measurements from oriented drill core was used to assist in the geological interpretation along with lithological, alteration and mineralisation logging of RC chips. Lithogeochemistry was used to help define the different lithologies. |
| | • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* | A shallow – moderate dipping interpretation was initially proposed over the entire Roswell deposit however this was inconsistent with structural measurements obtained from oriented drill core in the south of Roswell and mineralisation is now mapped more steeply there. |
| | • *The use of geology in guiding and controlling Mineral Resource estimation.* | Geological (lithological) logging together with lithogeochemistry was used to develop a geological model. Alteration and mineralisation estimates along with grade guided the interpretation of the ore envelope wireframes.<br>The majority of mineralisation is hosted by a quartz veined and altered andesite, however there is evidence along the western margin that mineralisation is also hosted within the volcaniclastics. A lesser portion of mineralisation is hosted within the monzodiorite positioned in the northeast of the Roswell deposit. A third volcanic body was identified by recent deeper drilling west of the andesite that also hosts a small portion of mineralisation. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | Dolerite dykes post-date mineralisation and all mineralised lodes are truncated and stoped out by the modelled dolerites. |
| | • *The factors affecting continuity both of grade and geology.* | Mineralisation is directly associated with alteration and veining. |
| *Dimensions* | • *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.* | Strike length ~ 600m<br>Width ~ 100m<br>Depth ~ 30m from below surface to ~ 350m below surface from deepest drilling intercept. |
| *Estimation and modelling techniques* | • *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* | The resource model has used all the exploration drill data.<br>23 mineralisation wireframes (domains) and 3 dolerite wireframes were interpreted and used as constraints for the resource modelling. Three surfaces were also used to separate material types - topography, alluvium and base of oxidation surfaces.<br>The material type classification was used to allocate density values.<br>The drillhole data was flagged by the domain wireframes in priority order, to prevent double use of the data in any intersecting zones.<br>The drill hole data was flagged by dolerite and mineralised domain wireframes in priority order, to prevent double use the data in the intersecting zones. The mineralised zones of greater than 0.20g/t gold were wireframed and the samples within their respective zones were flagged, in order to prevent any overestimation that could be caused by use of assays outside these boundaries.<br>Top-cuts were selected for each domain based on a visual inspection of the data using histograms, log-transformed probability plots, percentile analysis and sensitivity analysis for individual domains. Spatial location of the outliers was also taken into consideration for the application of the grade caps. The sensitivity analysis involved analysing varying cap values, to estimate the contribution of each sample to the overall metal content. Capping was deemed necessary for most of the domains.<br>An estimation search neighbourhood analysis was used to determine optimal search parameters for Ordinary Kriging (OK) estimation of gold grade. This analysis was carried out on only the well informed domains. This determined an optimum block size to be 5mX x 10mY x 10mZ and a sub-blocking size of 2.5mX x 2.5mY x 2.5mZ.<br>Grade estimation was completed using Ordinary Kriging (OK) with dynamic anisotropy. All wireframing and estimation was completed with Datamine Studio RM and checked using ID2. |
| | • *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 previous estimate was an Inferred Resource calculation based on shallower broadly spaced drilling. There is no previous production data to provide any validation. |
| | • *The assumptions made regarding recovery of by-products.* | No assumptions made - estimates were made only for gold. |
| | • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* | No deleterious elements identified for estimation. |
| | • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* | An optimum block size to be 5mX x 10mY x 10mZ and a sub-blocking size of 2.5mX x 2.5mY x 2.5mZ was determined as appropriate for a 20m x 20m drilled resource. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | The average drill hole spacing was 20m.<br>Variogram model parameters were determined for the majority of the domains. Where there were poorly informed domains and where variogram models were not produced recommended variogram substitution was based on statistical similarity. |
| | • *Any assumptions behind modelling of selective mining units.* | No assumptions made |
| | • *Any assumptions about correlation between variables.* | No assumptions made |
| | • *Description of how the geological interpretation was used to control the resource estimates.* | Only data form the same domain were used to make estimates. |
| | • *Discussion of basis for using or not using grade cutting or capping.* | Top-cuts were selected for each domain based on a visual inspection of the data using histograms, log-transformed probability plots, percentile analysis and sensitivity analysis for individual domains. Spatial location of the outliers was also taken into consideration for the application of the grade caps. The sensitivity analysis involved analysing varying cap values, to estimate the contribution of each sample to the overall metal content. Capping was deemed necessary for most of the domains. |
| | • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.* | Validation of the modelling parameters and processes of estimation included visual inspections in section, plan and in 3D; swathe plot validation; and a comparison of an ID2 model vs the OK model. |
| *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 0.5 g/t gold is above the cut-off used for the low grade stockpiles calculated for the Tomingley deposits 3km to the north. This takes into account likely mining costs and metallurgical recovery for similar material. |
| *Mining factors or assumptions* | • *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.* | No mining factors were invoked into the Roswell Resource estimation process. |
| *Metallurgical factors or assumptions* | • *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.* | The metallurgy of the nearby other Tomingley deposits is well studied. A preliminary metallurgical study suggests Roswell has similar metallurgical characteristics. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Environmental factors or assumptions* | • *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.* | The Tomingley Gold Operations has been operating since 2013 with an approved EIS plan and environmental licences. A new EIS would need to be conducted over the Roswell Deposit. Roswell deposit is positioned in highly modified agricultural land and a new mining development will have little potential environmental impacts. |
| *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.* | Density determinations for the fresh rock were based on 540 measurements from 33 diamond core holes. A downhole density gamma probe which collects a density reading every 0.1m down hole was used to calculate an average density for the alluvium and oxide material. Surficial alluvium was given a density of 2.10t/$m^3$ (119 measurements), oxide material was calculated a density of 2.07 t/$m^3$ (1104 measurements), and fresh host rock was calculated a density of 2.75t/$m^3$ (540 measurements). |
| | • *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 wireframed surfaces. |
| *Classification* | • *The basis for the classification of the Mineral Resources into varying confidence categories.* | *Resource Model*<br>Mineral Resources were classified as Inferred or Indicated to appropriately represent confidence and risk with respect to data quality, drill hole spacing, geological and grade continuity, mineralisation volumes, as well as metal distribution. There is no material classified as Measured.<br>Indicated Mineral Resources were defined where a high level of geological confidence in geometry, continuity, and grade, was demonstrated, and were identified as areas where:<br>- Drill spacing was averaging a nominal 20m, or where drilling was within 20m of the block estimate;<br>- Estimation quality is considered to be of high confidence in respect to low kriging variance; and<br>- Number of samples used to estimate individual domains.<br>Remaining estimated blocks made within the defined mineralisation domains in the first search pass were classified as Inferred Resources (this included most blocks in the less well-informed domains and all blocks in the very poorly-informed domains). |
| | • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* | The use of RC drilling limits the amount of geological information that can be logged, and boundaries of mineralisation zones cannot be precisely located. |
| | • *Whether the result appropriately reflects the Competent Person's view of the deposit.* | The classification reflects the Competent Persons view of the deposit and its supporting data. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Audits or reviews* | • *The results of any audits or reviews of Mineral Resource estimates.* | There have not been any audits or reviews. |
| *Discussion of relative accuracy/ confidence* | • *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* | No statistical or geostatistical method (non-linear or simulation) was used to quantify the relative accuracy of the estimate within confidence limits. Accuracy of the estimate is dependent on:<br>accuracy of the interpretation and geological domaining;<br>accuracy of the drill hole data (location and values);<br>orientation of search ellipses used; and<br>estimation parameters which are reflected in the variogram model used. |
| | • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* | The resources are Indicated and Inferred, being based on drill hole spacing and geological continuity.<br>To ensure the resources have 'reasonable prospects of eventual economic extraction' the resources have been restricted to all material above a gold cutoff grade of +0.5g/t Au. |
| | • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.* | There has not been any production from Roswell. |